FROM THE LAST MILE
TO THE NEXT MILE

2022
VIETNAM POVERTY AND EQUITY ASSESSMENT

WORLD BANK GROUP

Australian Aid

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Acknowledgments

and Hoa Chau Nguyen (Program Assistant) for their contributions.

In addition to these contributions, the Poverty & Equity Assessment builds upon a large foundation of World Bank knowledge products produced over the last decade since the 2012 Poverty Assessment *(Well Begun, Not Yet Done)*.

First, several influential poverty updates have been published documenting Vietnam's poverty reduction story. Recent reports include *Climbing the Ladder* (World Bank, 2018), *Better Opportunities for All* (World Bank, 2019a), and *Shared Gains* (Pimhidzai and Niu 2020). *Climbing the Ladder* discusses trends and constraints in economic mobility, and profiles of those left behind. *Better Opportunities for All* zooms into the development story of rural households and discusses ways to improve their economic opportunities through better market integration. The most recent poverty update report, *Shared Gains*, updates our understanding of rural poverty using data from 2018. It emphasizes the need to increase off-farm opportunities by reducing distances through investments in physical, digital, and human capital; lowering costs of migration; making better use of agricultural land; and increasing women's empowerment. The report also addresses the issue of targeting the poor and assesses the strengths and weaknesses of the National Targeting Programs in Vietnam. Moreover, the conditions and development challenges of ethnic minorities are examined in *Drivers of Socio-economic Development among Ethnic Minority Groups* report (World Bank, 2019b).

A series of reports also examine constraints and challenges in relation to labor, skills, and impacts of COVID-19. S*killing Up Vietnam* discusses the education and skills challenges to meet labor demands of a modern market economy (Bodewig et al. 2014). The jobs challenge is updated and well discussed in *Vietnam's Future of Jobs* report (Cunningham et al. 2018). While the share of wage jobs has increased dramatically, many of these off-farm jobs tend to be low in productivity, wages, and chances of advancement and will not be sufficient to achieve middle-class aspirations. More recently, a World Bank Vietnam COVID-19 report (*A Year Deferred – Early Lessons and Experiences from COVID-19 in Vietnam*) uses data from June 2020–March 2021 to illustrate the changing economic conditions of households and firms since the beginning of the pandemic (World Bank 2021a). However, in Vietnam and the Southeast Asia region, COVID-19 quickly escalated in severity in April 2021. These new developments in 2021 will lead to worse outcomes than could have been predicted.

Vietnam 2035: Toward Prosperity, Creativity, Equity, and Democracy (World Bank and MPI 2016) is a sweeping examination of 2035 development goals and targets. A Systematic Country Diagnostic and an update were also completed within the last decade (World Bank 2016, 2021b). The latest macroeconomic conditions and developments in Vietnam are discussed regularly in semiannual *Taking Stock* reports as well as monthly Vietnam Macro Monitors.

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Currency Equivalents

Exchange rate, 2020 average
Currency unit = Vietnamese dong (VND)
US$1 = 23,208.37 dong

Abbreviations and Acronyms

ADB	Asian Development Bank
ALMP	Active Labor Market Program
ASEAN	Association of Southeast Asian Nations
ASPIRE	Atlas of Social Protection Indicators of Resilience and Equity
CEQ	Commitment to Equity
CIT	Corporate Income Tax
EAP	East Asia and Pacific
EET	Exempt-Exempt-Taxed
EM	Ethnic Minority
EPT	Environmental Protection Tax
ESC	Employment Service Center
ETS	Emissions Trading System
FDI	Foreign direct investment
FGT	Foster-Greer-Thorbecke
FLFP	Female Labor Force Participation
G2P	Government-to-person
GDP	Gross domestic product
GIC	Growth incidence curve
GNI	Gross national income
GSO	General Statistics Office
HCI	Human Capital Index
HCMC	Ho Chi Minh City
HIV	Human immunodeficiency virus
HOI	Human Opportunity Index
ICT	Information and communication technologies
ILO	International Labor Organization
IO	Input-output
IPL	International poverty line
ISAS	Integrated Social Assistance System
ISCED	International Standard Classification of Education
LCU	Local currency unit
LFS	Labor Force Survey
LIC	Low-income country
LMIC	Lower-middle-income country
LMIS	Logistics Management

	Information System
LUR	Land use right
MOET	Ministry of Education and Training
MOF	Ministry of Finance
MOH	Ministry of Health
MOLISA	Ministry of Labor, Invalids and Social Affairs
MPI	Multidimensional Poverty Index
MPI	Ministry of Planning and Investment
MPS	Ministry of Public Security
MPSARD	Master Plan for Social Assistance Reform and Development
NDC	Nationally Determined Contribution
NLSA	National Large-Scale Assessment
NRD	New Rural Development
NTP	National Targeting Program
NTPRP	National Target Poverty Reduction Program
OECD	Organisation for Economic Co-operation and Development
O-NET	Occupational Information Network
OOP	Out-of-pocket
OPHI	Oxford Poverty and Human Development Initiative
PAPI	Public Administration Performance Index
PISA	Programme for International Student Assessment
PIT	Personal income tax
PL	Poverty line
PPP	Purchasing power parity
PREM	Poverty Reduction and Economic Management
R&D	Research and development
RISE	Research on Improving Systems of Education
SA	Social assistance
SCOLI	Spatial Cost of Living Index

SDRSP	Sustainable Poverty Reduction Support Program
SEDEMA	Socio-economic Development in Ethnic Minority Areas
SEDP	Socio-Economic Development Plan
SEDS	Social Economic Development Strategy
SES	Socioeconomic status
SME	Small and medium enterprise
SNG	Subnational government
SPR	Sustainable Poverty Reduction
STC	Special Tax Code
STEP	Skills Toward Employment and Productivity
TFP	Total factor productivity
TIMSS	Trends in International Mathematics and Science Study
TTE	Taxed-Taxed-Exempt
TVET	Technical and vocational education and training
U-HCI	Underutilization-Adjusted Human Capital Index
UMIC	Upper-middle-income country
UNDP	United Nations Development Programme
UNESCO	United Nations Education, Scientific and Cultural Organization
USD	United States dollars
VAT	Value-added tax
VHLSS	Vietnam Household Living Standards Survey
VND	Vietnamese dong
VSS	Vietnam Social Security
WB	World Bank
WDI	World Development Indicators
WHO	World Health Organization
WTO	World Trade Organization
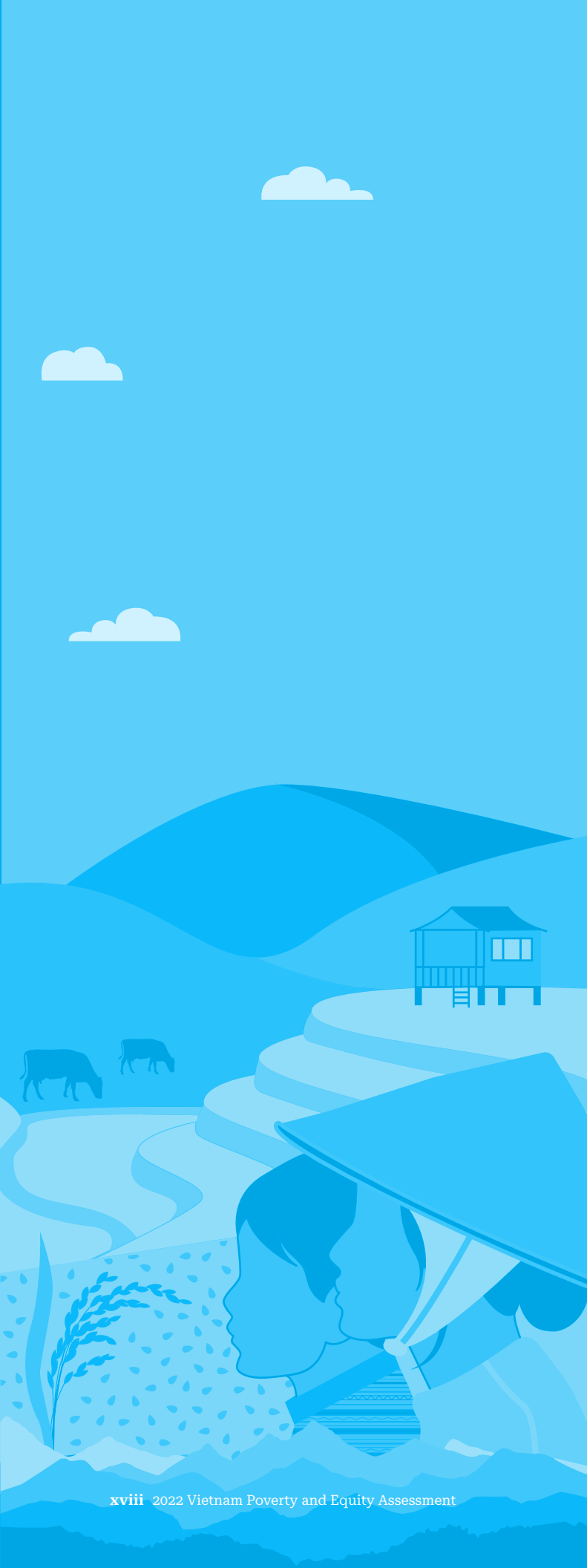
Overview

Introduction

Vietnam is a country on the move and in transition. Indicators are pointing in the right direction, with many positive economic and social developments. The amount of progress that Vietnam has achieved in less than half a century since the war ended in 1975 has been nearly without parallel. At the same time, Vietnam is a lower-middle-income country facing a challenging and uncharted road ahead to reaching upper-middle- and high-income country levels in a shifting global economic and climatic landscape.

In less than half a century since the end of the Vietnam War and 35 years since the Doi Moi reforms, Vietnam has become a vibrant economy and a sought-after market to the outside world. Gross domestic product per capita (2015 US$) grew from $481 in 1986 to $2,655 in 2020. Rapid economic growth was broadly inclusive, and livelihoods in Vietnam improved dramatically. Based on the World Bank's Lower-Middle Income Class ($3.20/day 2011PPP) poverty line, poverty rates declined from 16.8 percent in 2010 to 5.0 percent in 2020 (figure O.1). According to preliminary General Statistics Office estimates for 2019, 5.7 percent of Vietnamese are considered multidimensionally poor.

At the same time, despite remarkable progress, poverty remains a key concern among the population. In a survey of citizens, from 2015 to 2020 poverty/hunger was selected as the main issue that the government must tackle (figure O.2). When asked why poverty was the main concern, while many people worried about falling back into poverty, even more felt that poverty is an overall drag on the economy and reduces national prestige (based on data from the 2018 United Nations Development Programme's Public Administration Performance Index [UNDP PAPI]). Half of those who said that hunger and poverty were their top concern earned more

than 8 million VND per month,[1] highlighting concerns over economic security, even among higher-earning individuals.

Concerns over poverty amid high economic growth are not inconsistent; together they illustrate an absolute and inclusive rise in living standards, but also a population that seeks economic security and aspires for more. Rapid developmental changes left some behind who did not have the opportunity to join the most dynamic sectors of the economy, and also created a large segment of the population that is no longer poor but not yet rich. About 85 percent of households report that their *living* conditions got better in 2020 compared to 2016 (VHLSS). On the other hand, 63 percent of households felt their *economic* conditions were better in 2018 than what they were five years ago, according to UNDP PAPI data. Thus, household perceptions on changes in economic conditions are slightly more pessimistic than perceptions on changes in living conditions; in both cases the degree of perceived improvement was more minor than major.[2]

These concerns and aspirations reflect the need to simultaneously address Last Mile chronic poverty challenges, while ensuring there are sustainable economic mobility pathways to fulfill the country's Next Mile upper-middle- and high-income aspirations

The Vietnam Poverty and Equity Assessment is organized into two parts motivated by addressing both Last Mile and Next Mile issues.

Part I reviews poverty and inequality trends over the last decade, 2010–2020. The decade saw high growth, great success in poverty reduction, and household profiles shifting toward higher levels of education and more people working outside of agriculture (Chapters 1 and 2). Higher wages and the creation of off-farm jobs largely drove improved living standards and provided better economic opportunities for large numbers of youth entering the labor force. But poverty rates are still much higher among rural and ethnic minority families and households primarily engaged in agriculture (Chapter 3). These groups face persistent challenges of lower human capital, lower-quality local public services, longer distances to economic opportunities, and less access to financing and training. Policy is well aligned to tackle Last Mile chronic poverty; three NTPs will be implemented during the 2021–2025 Socioeconomic Development Phase.

Figure O.1. Economic growth and poverty reduction, 1993–2020
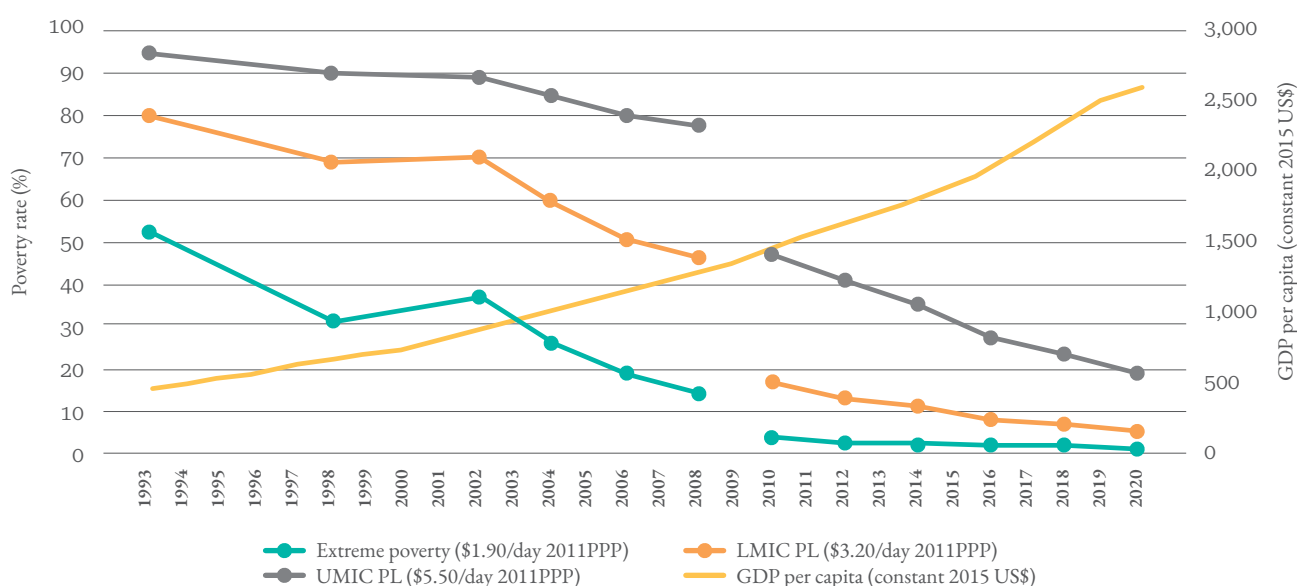
Note: Poverty measurement methodology changed in 2010, rendering a break in series comparability. LMIC = lower-middle-income country; PL = poverty line; PPP = purchasing power parity; UMIC = upper-middle-income country.
Source: World Bank World Development Indicators, PovcalNet.

Figure O.2. Issues of greatest concern, 2015–2020
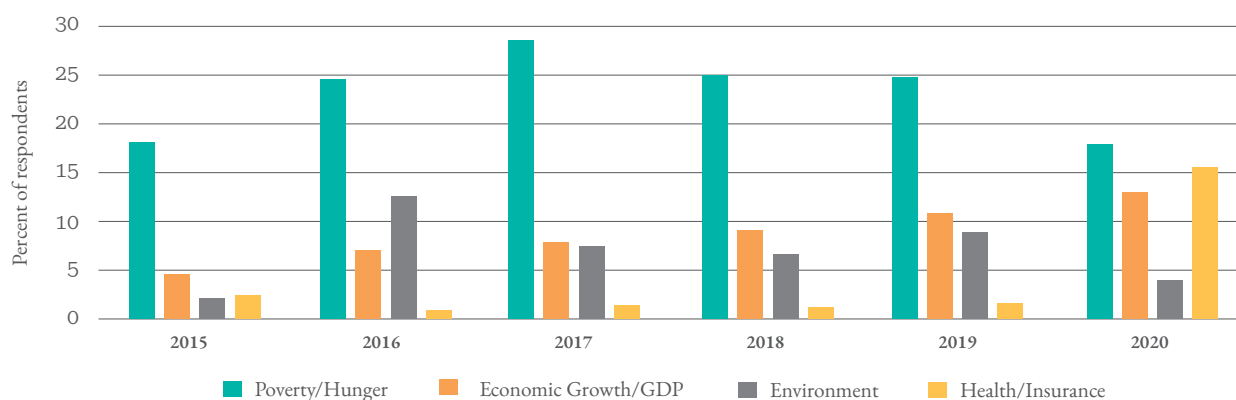
Source: CECODES et al. 2021.

Part II assesses opportunities for and challenges to Vietnam's path to achieving its Next Mile aspirations and creating greater prosperity for households and workers. During the 13th National Congress in 2019, the government announced its goal to become a high-income country by 2045. This is an ambitious target befitting a country with a proven track record of inclusive growth, but it requires new approaches and even greater achievements. The *Next Mile* is the road to upper-middle- and high-income country standards. What will be needed to sustain the upward economic mobility of the millions who have left poverty and now seek greater economic security in the face of new risks and challenges? Equitable human capital formation is a key ingredient to Asia's economic success. While completion gaps are narrowing, some still remain for the most vulnerable groups (Chapter 4). To achieve high-income status by 2045, real GDP will have to grow by nearly 7 percent per annum. Of those entering the work force, today's youth are better educated, but are they ready to lead a high-skill and high-productivity transition and grow the middle class? Some indicators point to challenges to such a transition without continuing reforms and improvements in education and skills (Chapter 5). Moreover, in a world with unpredictable risks and challenges, promotion policies to boost upward economic mobility must be complemented by protection strategies to preserve gains. The current social protection system does not adequately protect all households against all risks and should

be modernized (Chapter 6). At the same time, investments in better skills and higher-quality education, as well as a stronger safety net which protects all, will require public investment. How this investment can be financed and how fiscal policy in general can drive prosperity more broadly is the subject of Chapter 7. Lastly, policy recommendations covering both Last Mile and Next Mile agendas are presented in Chapter 8.

Part I. A Decade of Significant Progress, but Last Mile Challenges Remain

A decade of continuous poverty reduction but inequality is rising

Over the last decade, poverty declined impressively. On average, household consumption growth was strong at about 5 percent per year. Based on the World Bank's lower-middle-income country (LMIC) poverty line ($3.20/day 2011PPP), poverty declined from 16.8 in 2010 to 5 percent in 2020 (Figure O.3).[3] This equates to 10 million people having moved out of poverty, reducing the number of poor to 5 million in 2020 (Figure O.4).

Figure O.3. Poverty rates across different thresholds
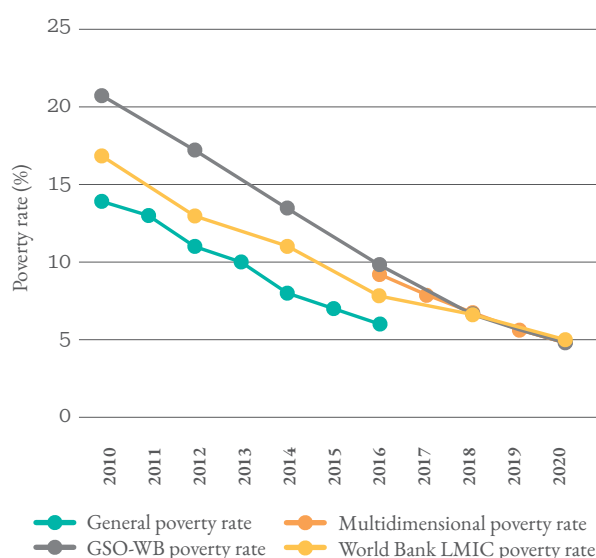
Note: See chapter 1 for definitions of the various lines.
Source: Vietnam GSO and World Bank.

Figure O.4. The number of poor, 2010–2020
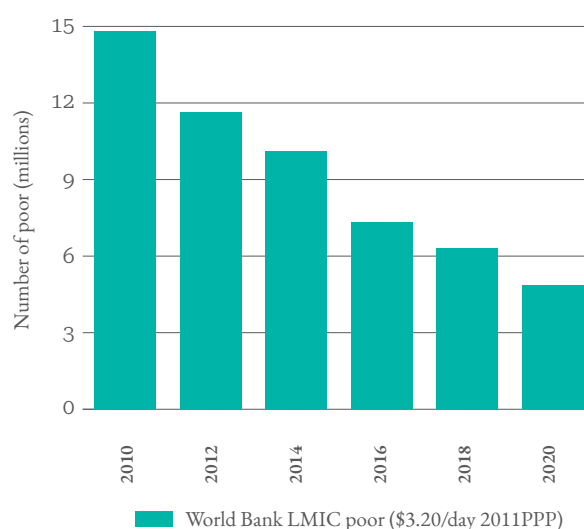
Note: LMIC = lower-middle-income country; PPP = purchasing power parity.
Source: World Bank staff calculations.

Growth over the last decade in Vietnam was broadly inclusive, as welfare improved across the entire economic distribution of households. Pathways out of poverty were widespread across most groups, as many families moved out of poverty within a single generation. Some groups had greater chances of climbing up to a higher economic class group as well as lower rates of sliding down; these groups left agriculture completely or gained formal employment over a two-year period.

Inequality, however, increased marginally in the latter half of the decade. The Gini index was at its highest at the beginning of the decade, coinciding with the global financial crisis, but quickly reverted (Figure O.5). Declining inequality was consistent with households at the lower ends of the welfare distribution experiencing higher-than-average growth rates from 2010 to 2014 (Figure O.6). In the latter half of the decade, however, consumption among richer households grew at faster rates than among poorer ones, resulting in a negative shared prosperity premium[4] and increasing inequality. Since the poorest households are increasingly concentrated in low-income agricultural activities, these groups risk falling further behind and being less connected to the more vibrant sectors of the economy.

A decade of district-level poverty trends illustrates more progress near economic centers than in remote areas

District-level poverty maps produced over a decade show overall progress, but pockets of chronic poverty remain. The 2009 poverty map reveals high concentrations of poverty throughout the high mountainous areas in the north and central regions of the country (Figure O.7). Over the decade, poverty has declined impressively but has remained in lagging areas in the northwest and central highlands. The region that has achieved the largest absolute poverty reduction is the northeast, which has benefited from expanding industrial activity.

Job creation and rising wage income were the main drivers of poverty reduction, but these channels were interrupted by COVID-19

The patterns of poverty reduction over the last decade are strongly linked to economic growth. Rising wages, an increasing share of formal employment, and movement out of low-productivity agriculture raised labor incomes. Due to a demographic dividend—the large young generation entering working age—the labor force expanded by 4.5 million net workers from 2010 to 2020, even accounting for large exits from agriculture. Overall, the manufacturing and services sectors increased by 5.8 million and 4.8 million net workers,

Figure O.5. Household consumption inequality, 2010–2020
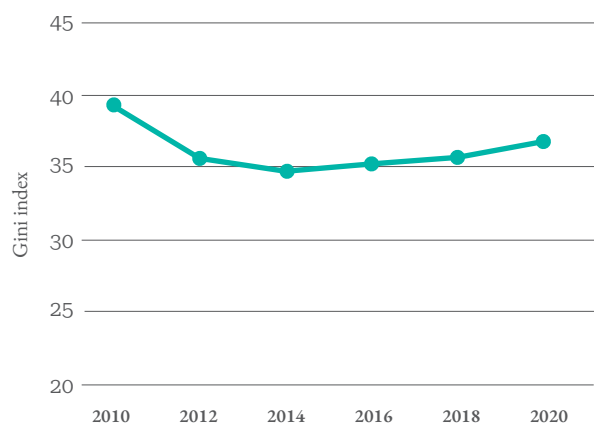
Source: World Bank, PovcalNet.

Figure O.6. Growth at the bottom of the distribution
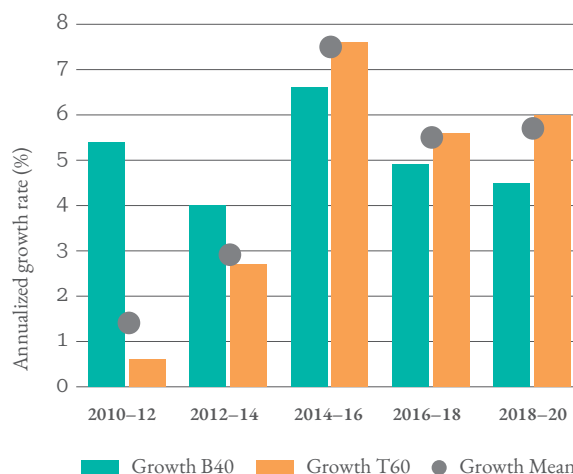
Note: B40 = bottom 40 percent of the income distribution; T60 = top 60 percent of the income distribution.
Source: World Bank staff calculations using VHLSS 2010–2020.

Figure O.7. District level estimates of poverty

2009   2015   2019

Poverty rate (%)
0.0   100.00
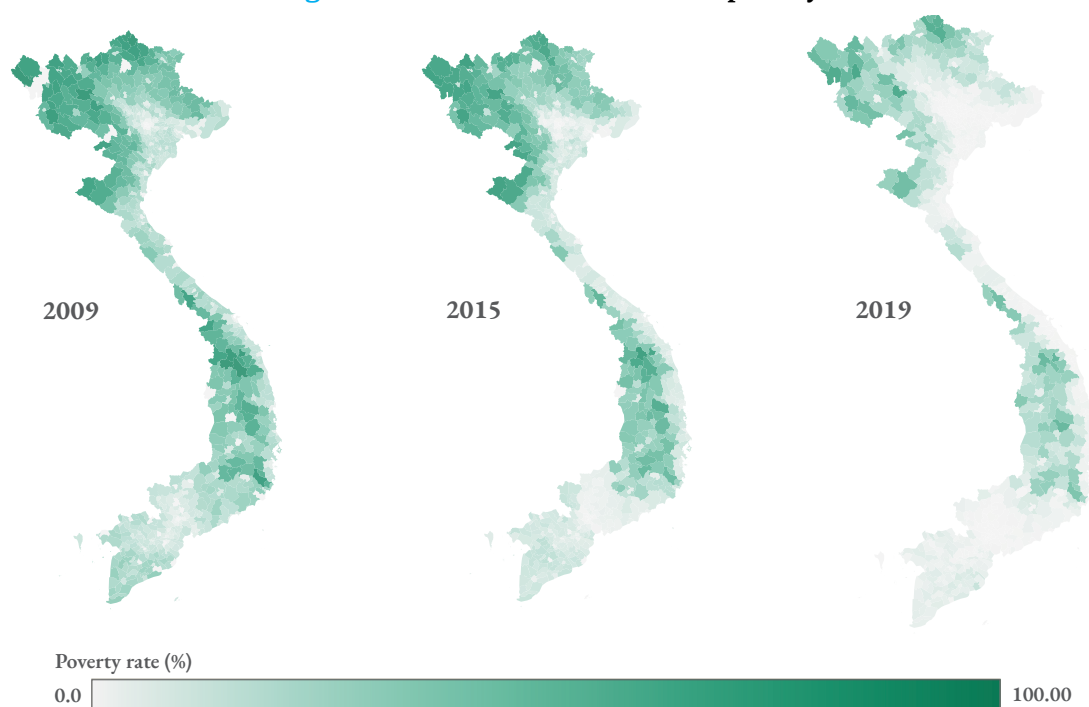
Note: Poverty rates based on the poverty line.
Source: World Bank staff and GSO calculations using Census and VHLSS.

respectively. Agricultural employment declined only in the latter half of the decade, with its workforce declining from 24.5 million to 17.7 million workers from 2015 to 2020.

Importantly, the new jobs created were mostly better than those for generations before (Figure O.8). In the first half of the decade, employment grew rapidly in the services sector, but this was largely in unskilled occupations (Figure O.9). Patterns shifted halfway through the decade when more medium-skilled jobs in services and manufacturing were created. Foreign direct investment was important in transforming jobs because most jobs in foreign-owned enterprises are formal with higher wages compared to domestic firms. The services sector was also invigorated, as the number of international visitors increased from 5 million in 2010 to 18 million in 2019, most of them tourists. Wage growth was also faster in the first half of the decade than the second, coinciding with slower poverty reduction in the latter period.

From a gender perspective, job opportunities have been mostly inclusive. The rate of women working in Vietnam is 73 percent, much higher than the regional average and averages of lower-middle-, upper-middle-, and high-

income countries, which has contributed significantly to the sustained growth to date. However, with a much greater share of care responsibilities due to social norms, women have less freedom to pursue more labor-intensive occupations, while family business income for women is lower than for men because of fewer hours worked. The types of jobs available to women differ from those for men, and, even where men and women are eligible from both legal and sociocultural standpoints, employers tend to prioritize male candidates in job advertisement.

The increase in household wage income was substantial, increasing by nearly 100 million VND in nominal terms, or nearly tripling over the decade. Household wages also tripled in the lowest quintile, but the absolute increase amounted to just over 50 million VND. Incomes from family businesses increased by similar levels, but participation in family businesses was less common among poorer households. For example, 16 percent of households in the bottom quintile earn income from family businesses compared to 73 percent earning wage incomes in 2020. The share of households receiving wage income increased from 64 to 70 percent over the decade. In particular, participation in medium-skilled and

nonfarm wage employment increased, providing households with more predictable and higher incomes. In the poorest decile, the share of households engaged in manufacturing increased from 26.7 percent in 2010 to 35.8 percent in 2020. There was a comparable increase in households working in services overall (9.4 to 15.2 percent), but less of an increase among poor households.

The sudden emergence of COVID-19 at the end of the decade halted wage growth and improvements in job quality. By the end of 2020, the spread of COVID-19 was still manageable, but the labor market nonetheless experienced a rise in informality and underemployment.[5] By the fourth quarter of 2020, about 830,000 people were estimated to be underemployed, with the highest rates among those in the agriculture sector, their ranks swollen with returning manufacturing and services workers whose jobs in the cities had disappeared or been put on hold. The informality rate at the end of 2020 was 56.2 percent, an uptick following a continuous decline in informality from 2016 to 2019 (GSO 2021). Official statistics also reported that 9.1 million workers (12.8 percent of all workers) had either lost their jobs or had reduced wages in the first quarter of 2021, and average labor incomes were 2.3 percent lower compared to the previous year (Ha and Minh 2021). Unemployment rates also rose, more so for women. COVID-19 has taken an outsize toll on female participants in the labor force, many of whom are in the informal services sector, which was hardest hit by the COVID-

19-related lockdowns. Due to school closures and caregiving responsibilities, women were more likely to experience reduced working hours or to quit their jobs altogether.

COVID-19 will lead to setbacks in poverty reduction and widen inequality across both monetary and nonmonetary dimensions

The COVID-19 pandemic has set back progress in poverty reduction. In Vietnam, COVID-19 halted a decade of rapid wage growth, although progress in reducing poverty was sustained in 2020 over a two-year period compared to 2018. This was a better outcome than for most developing countries in the region and globally (World Bank, 2020a). Some impacts were still hard felt, as poverty rates among the Kinh majority and in urban areas increased slightly in 2020 compared to 2018. Furthermore, the emergence of the Delta variant in mid-2021 led to further setbacks. Based on updated 2021 growth forecasts after the arrival of Delta, poverty rates are expected to be about 0.5 percentage points higher, and poverty reduction will likely slow in 2021 under a scenario with a 1 percent increase in inequality (Figure O.10).

COVID-19 highlighted existing inequalities and differences in coping and adaptation. Even before the onset of the COVID-19 pandemic, new signs of widening inequality were emerging. The absolute difference in annual per capita consumption between the poorest and richest

Figure O.8. **Change in number of wage jobs, 2010–2020**
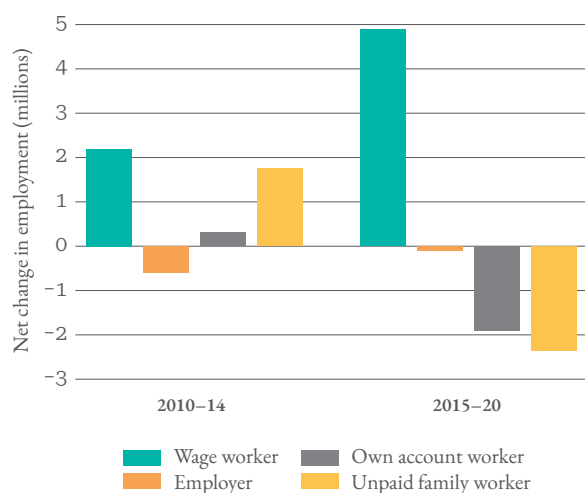
Source: GSO, Labor Force Survey.

Figure O.9. **Number of jobs by skill level, 2010–2020**
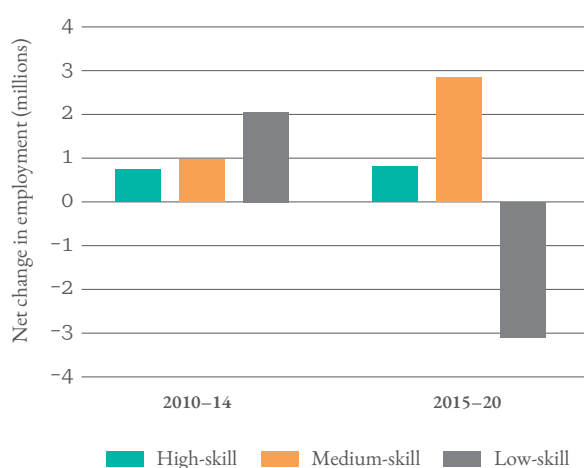
Source: GSO, Labor Force Survey.

Figure O.10. Distribution-sensitive poverty projections for Vietnam, 2018–2023
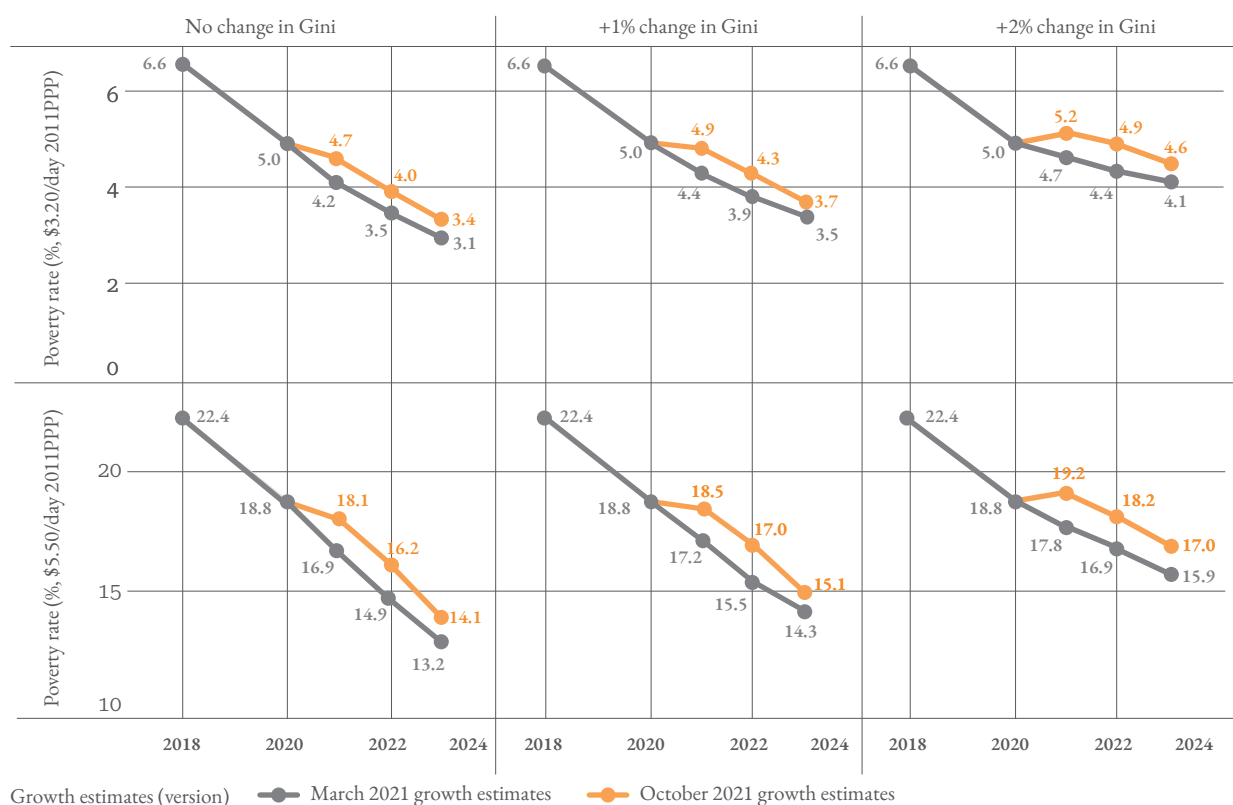
Note: Poverty rates in 2018 and 2020 are based on survey data. Poverty rates in 2021 and onwards are projections. Simulations of changes in inequality, if any, are assumed to start in 2021. Distributionally sensitive simulations methods are based on Lakner et al. (2020). See Annex 1.3 for details. PPP = purchasing power parity.
Source: World Bank staff estimations using VHLSS, 2018, 2020.

10 percent of the population increased from VND 48.5 million in 2010 to VND 123.8 million in 2020. Over the last half decade, the household consumption growth of the bottom 40 percent of the population was lower than the national average. Education outcomes in Vietnam vary by socioeconomic status,[6] and progress in reducing stunting had also stagnated. Women, those in the informal sector, and households in the bottom 20 percent experienced the slowest recovery in household income between June 2020 and March 2021 (World Bank, 2021a). In terms of coping during COVID-19, poor households were more reliant on external sources such as borrowing, while rich households were better able to cope through their own means such as by tapping into savings.

Inequality is expected to increase during COVID-19 for a range of reasons. Women bear a larger share of care responsibilities, and their labor market activities were more adversely impacted than men's. Informal workers have the least access to safety nets and experienced the greatest challenges when seeking government cash support. The continuity of education was uneven during COVID-19, and the pandemic has potentially widened gaps in human capital formation because of the unequal capacity of schools across the country. Jobs of the future will require greater digital skills, but there are gaps in digital use and inclusion. Wealthier households are better able to participate in the digital economy both as sellers and as buyers on digital platforms. In the longer term, COVID-19 has widened inequality and disparities in opportunities, potentially affecting future economic growth while limiting upward mobility for many.

Chronically higher poverty rates among certain groups present a Last Mile challenge, but some positive trends have emerged

There is a persistent interplay between ethnicity, agriculture, geography, and high rates of poverty in Vietnam. Remote mountainous areas where the poor are concentrated are heavily populated by ethnic minorities, who are also disproportionately more engaged in agriculture than

the Kinh majority. These remote areas are located far from economic centers and, partly due to unfavorable topology, agriculture is also less productive there. Among the remaining poor in 2020, these groups are overrepresented; 79 percent are ethnic minorities (just 15 percent in the population), and 66 percent are engaged solely in agriculture (16 percent in the population). The share of the national population in the Central Highlands and the Midlands and Northern Mountains regions is 6 and 13 percent, respectively, but these regions are home to 21 and 42 percent of the poor.

At the end of the decade, the poverty rate of ethnic minorities was still higher than that of the Kinh majority at the start of the decade, although the gaps are closing (Figure O.11). Kinh poverty rates were low in 2010 at 9 percent and had fallen to near zero by 2020, while poverty among ethnic minorities was still 27 percent. However, the absolute gap in poverty had narrowed considerably, from 47.4 percentage points in 2010 to 26 percentage points in 2020, as minority poverty rates have declined from 57 percent in 2010.

Despite persistently high poverty rates among some groups, there are new developments and progress for some. Ethnic minority workers are shifting into manufacturing work, with their share in manufacturing increasing to 23 percent by 2020, similar to the rate of Kinh in manufacturing in 2010. However, geographic mobility remains limited, with the distribution of the ethnic minority population across regional and urban divides largely remaining constant over the decade.

Some regions exhibited lower increase in income growth, particularly in the Central Highlands region, where wage employment with contracts is the least common. Moreover, this was the only region where household economic participation declined in wage jobs, family business, and family farms from 2010 to 2020. The Midlands and Northern Mountains region, by contrast, saw strong growth in the share of the households entering wage employment. These income dynamics are consistent with recent developments in regional poverty rates in 2020. Slow progress in the Central Highlands region has resulted in re-ranking: where it is now poorer than the Midlands and Northern Mountains, if by only a small margin. The Mekong Delta region saw higher poverty rates in 2020 than 2018, a result of severe droughts and disruption to the agriculture sector.

NTPs are a long-standing policy instrument that still play a role in poverty reduction

Chronic dimensions of poverty are well known, and assistance to groups with high poverty is well reflected in policy priorities. In the 2021–2025 Socio-Economic Development Plan (SEDP) phase, three NTPs are aimed at individuals, households, and geographic areas across the dimensions highlighted in this chapter (rural, agricultural, and ethnic minorities). NTPs provided high levels of investments to communes, with nearly VND 560 trillion (approximately $25 billion) of this for commune level programs under NTPs from 2010 to 2019.

The design, targeting, and financing allocations of NTPs could be further refined to improve impact and results. Based on a survey of NTP-National Rural Development (NTP-NRD) projects and implementation over the period 2016-20, NTP-NRD provided high commune-level investments, but a smaller share went to the poorest communes because these were more reliant on direct central government transfers and had more limited external financing options (Pimhidzai and Niu, 2020). Much of the NTP spending was devoted to socioeconomic infrastructure investments rather than spending on other basic social services. However, lifting the remaining poor to the poverty line can be efficient under well-targeted household-level programs. For instance, in 2020, the monetary gap to lift all poor[7] above the poverty line was 15 trillion VND. Thus, the cost of sufficient cash to the poor to raise them to the poverty line can be smaller compared to the overall NTP budget.

Beyond the poor, a more diverse share of the population is economically vulnerable

Rapid economic growth has lifted many Vietnamese out of poverty, but a large group of the population remains economically vulnerable. The rapid speed of developmental change nonetheless left behind those with less opportunity to join the most vibrant sectors of the economy and created a large class of people who are not poor but are not yet middle class. Thus, the poverty and equity agenda going forward is not just about raising minimum living standards and tackling chronic poor; it is also about creating new and sustainable economic pathways for a more aspirational population and guarding these hard-won economic gains from shocks or crises. Furthermore, sustaining upward economic mobility at higher income levels

has been challenging. While the risk of falling into extreme poverty is now low, achieving economic stability at higher levels is still a relevant concern. In 2016, nearly 40 percent of the middle class slid to a lower economic group by 2018.

As the country aspires to greater prosperity, a higher minimum standard of living is warranted. The current national monetary poverty lines represent the concept of minimum basic needs—a bare subsistence level—and not a higher minimum level of consumption befitting a country

aspiring to higher standards of living. For the 2021–2025 SEDP period, MOLISA significantly raised the monetary threshold line for the classification of poor and near-poor groups (1.5 and 2 million VND per month, respectively), in recognition of higher aspirations and better living standards. These higher monetary thresholds are close to the UMIC PL ($5.50/day 2011PPP, or 1.8 million VND per month). At this poverty line, poverty is higher at 18.8 percent, or 18.3 million people.

Figure O.11. **Poverty rates by dimensions revealing chronic poverty**
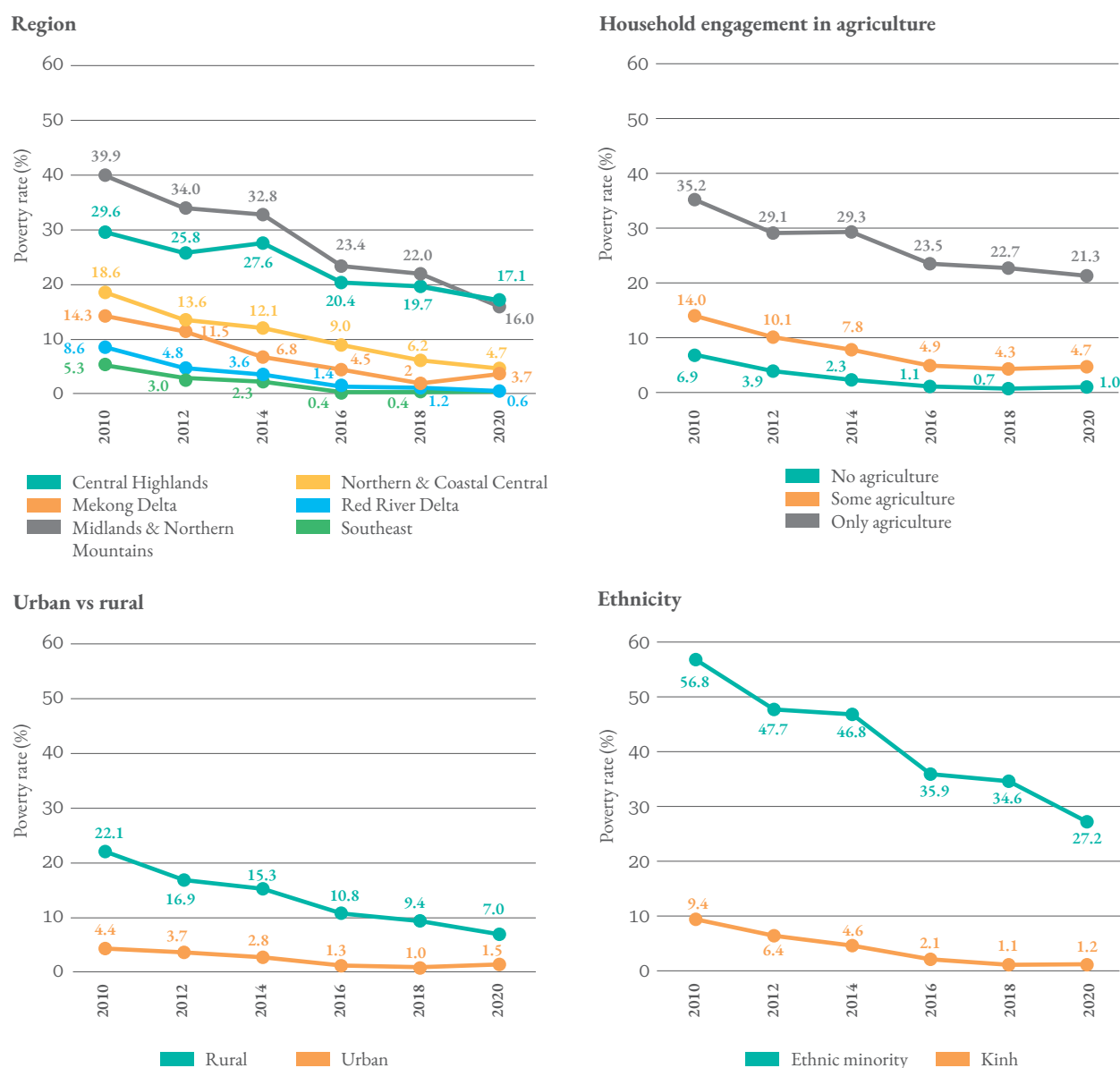
Note: Poverty rate according to the $3.20/day 2011PPP poverty line. PPP = purchasing power parity.
Source: World Bank staff calculations using VHLSS 2010–2020.

Figure O.12. The distribution of poor varies at different thresholds of poverty

Region
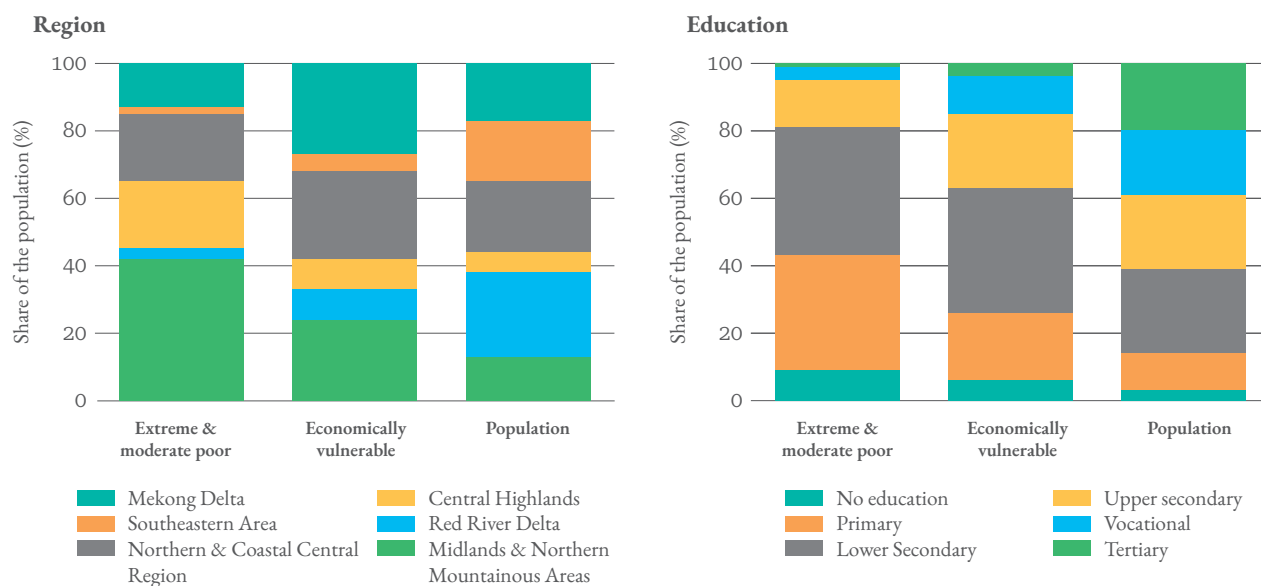
Note: The extreme and moderate poor are those living below the LMIC poverty line ($3.20/day 2011PPP). The economically vulnerable are those living between the LMIC and UMIC poverty lines. Household education categorization is based on the maximum level of education in the household. See World Bank 2018 for more details.
Source: World Bank staff calculation using VHLSS.

The population of the economically vulnerable[8] is more than double the size of the population of poor. Moreover, this group has a different profile, requiring different policies to sustain their well-being at higher levels. The population's geographic distribution means that the economically vulnerable are more prevalent in regions outside of the traditionally poor mountainous areas, with the difference in the share of the economically vulnerable compared to the poor is greatest in the Mekong Delta (Figure O.12). The share of the economically vulnerable with higher levels of education is also higher than it is for the poor. A more diverse economically vulnerable group also poses additional challenges to attaining Next Mile aspirations.

Part II. The Next Mile Is the Road Ahead

The *Next Mile* is the road to upper-middle- and high-income country living standards

Only a handful of developing economies in the last half-century have successfully made the leap to high-income status. Their success was partly based on a continuous structural transformation into ever more modern and productive sectors. Their populations had the education and skills ready to take

on more complex jobs with higher productivity as well as the ability to effectively manage risks; in addition to growing the economy, this allowed for inclusive upward household mobility. Today, this transition is as challenging as ever. Part II of the report reviews forward-looking themes related to these aspects for the Vietnam context.

Human capital formation for inclusive poverty reduction and breaking intergenerational poverty patterns

Human capital—a combination of the education, skills, and health factors that largely determine labor productivity—has been a major driver of sustained economic growth and is also a key ingredient in breaking intergenerational poverty traps. For children, the education they receive and how healthy they grow up to be affect their future earnings, life expectancy, and human capital as adults (World Bank, 2019). Falling short on human capital formation can limit their economic mobility in adulthood (Narayan et al., 2018). While indicators of early human capital formation in Vietnam at the national level are mostly in line with regional peers, there are gaps within Vietnam between different groups. For example, performance gaps between the bottom and top 20 percent of children

are larger than average compared to other countries. Gaps in the Vietnam socioeconomic status disaggregated Human Capital Index, harmonized test scores, and stunting rates are all larger than the average gap in a comparative study across 50 developing countries (D'Souza, Gatti, and Kraay, 2019).

Education completion varies with household characteristics, especially ethnicity and economic status (as measured by household per capita consumption quintiles). Private expenditures in education vary substantially by household background, even at compulsory grade levels in public schools. In 2020, households in the top quintile spent 5.6 times more than households in the bottom quintile on extra classes for children attending public primary and lower-secondary grades (Figure O.13). The Kinh spend over seven times more than ethnic minorities. At the upper-secondary level, the gap widens with the top quintile spending as much as 10 times more on extra education courses, while as many as 80 percent of their children are enrolled in education up to their early 20s, compared to almost none in the bottom 20, and only 20 percent in the second and third wealth quintiles.

Differences in household finances consistently explain the largest proportion of the differences in on-time education completion across children of different backgrounds. By level of education, the importance of household finances as a driver is greatest for on-time completion at higher levels. The association between student learning and household characteristics is well established in both developed and developing countries, as it is for gaps in educational outcomes between children from high and low socioeconomic backgrounds.[9] In Vietnam, children education outcomes relative to their parents' tend to persist, indicating less intergenerational economic mobility. For example, across the East Asia and Pacific region, Vietnam has the smallest share of the 1980s generation that ascended to the top quartile of education completion if their parents had low levels of education[10] (Narayan and Yang, 2019). Thus, narrowing gaps in education is important to realize human capital potential for disadvantaged students.

Education is a pathway out of poverty, but COVID-19 has created large learning losses

COVID-19 has added further challenges to equitable human capital development, affecting nutritional attainment, health, and educational continuity and outcomes (World Bank, 2021a). Between September 2020 and March 2021, 72 percent of households with a child between 6 and 18 years of age experienced school closures. School closures hit poor, ethnic minority, and low-achieving students particularly hard, many of whom lacked access to digital technologies. Over 60 percent of households in the lowest welfare quintile and ethnic minorities, and close to 59 percent of those living in the Midlands and Northern Mountainous Areas, Central Highlands, and the Mekong Delta regions, did not have online learning offered during school closures (Figure O.14). Public investment in human capital is now more important than ever to prevent a reversal of the progress that has been made, as well as to prepare future generations for a rapidly evolving economic landscape.

Graduating to high-income status requires higher labor productivity

Continuing on the path of a growth-driven welfare-enhancing process will require higher productivity per worker to reach high-income country status. With participation and employment rates unable to increase much beyond that of 2012-18 and if the population continues to age as projected, then the number of workers will fall and the productivity of those who do work will need to increase to sustain growth. Average real per capita GDP growth from 1991 to 2018 was 5.6 percent per annum; 6.7 percent would be required until 2045 to reach high-income status. To achieve this, growth in productivity per worker will need to increase from the 2012–2018 annual rate of 5.3 percent—already the highest of the last three decades—to 6.6 percent per annum, an acceleration of around 20 percent every year (Figure O.15). At the rate observed from 2012 to 2018, Vietnam would be comfortably upper-middle income in 2045, but around $4,000 per capita short of high-income status (Figure O.16).

Figure O.13. Household expenditure on extra education courses at compulsory grade levels in public schools, by household quintile

1(=poorest)   2   3   4   5 (=richest)
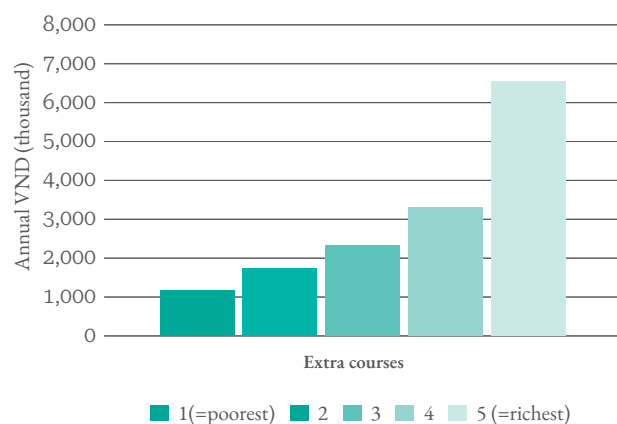
Note: Categories by household quintiles. Average expenditures among households with children in public primary or lower-secondary education.
Source: World Bank staff calculations using VHLSS 2020.

Figure O.14. Variation in continuity of education across Vietnam's regions

Red River Delta
Midlands & Northern Mountainous Areas
Northern & Coastal Central Region
Central Highlands
Southeastern Area
Mekong Delta
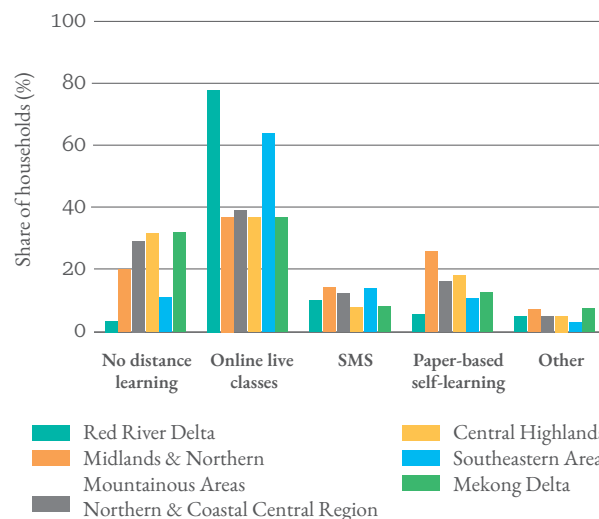
Note: SMS = Short Message Service.
Source: World Bank Vietnam COVID-19 household monitoring surveys (round 5).

Figure O.15. Projected growth under different productivity scenarios, 1991–2045

Productivity   Employment   Participation
Demographics   GDP per capita

Figure O.16. Projected income under different productivity scenarios, 2018–2045

GDP - Baseline   GDP - HIC
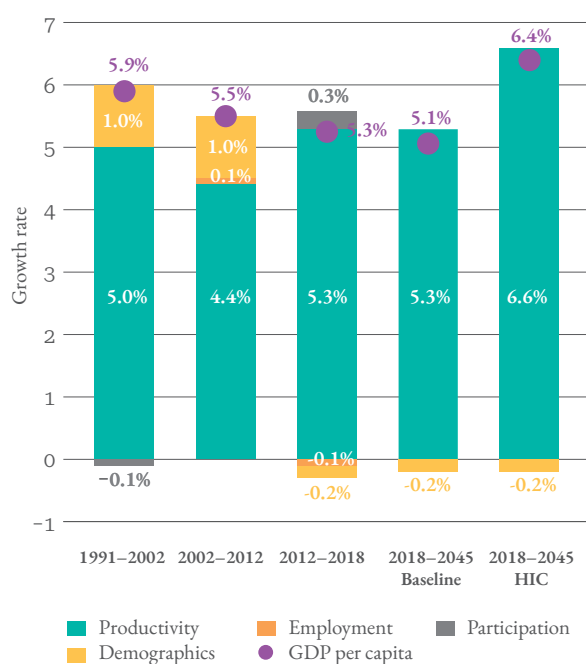
Note: Both projected periods use UN projected total and working-age populations, and hold employment and labor force participation constant. Baseline uses 2012–2018 average worker productivity growth; HIC uses the growth required to achieve high-income status by 2045. See Annex of Chapter 5 for methodology. Income levels are converted from GNI per capita to GDP per capita based on the 2018 ratio of the two in Vietnam.
Source: World Development Indicators and World Bank calculations.

Sustaining upward economic mobility – challenges ahead

High rates of economic growth have transformed households, but future labor market challenges have been looming on the horizon that may affect upward economic mobility at higher income levels[11] (Bodewig et al., 2014; Cunningham et al., 2018; Pimhidzai and Niu, 2020; Mason and Shetty, 2019). These reports illustrate how changing domestic and global conditions will require a more skilled and productive labor force to sustain growth. The many challenges include low completion at higher education levels, high labor informality, low labor productivity, low wages, low skills, and an aging society. Informality has declined but remains widespread: in 2020, only 23.5 percent of households had a household member employed with a formal wage contract. Low-cost labor was one of the principal reasons behind increasing foreign direct investment, primarily into manufacturing. While wages in Vietnam doubled from 2010 to 2020, they remain low at just under $300 per month. Projections estimate that the number of people aged 65 and over will increase from 10 percent of the population today to 20 percent in 2045 (World Bank, 2021b).

The challenges of reaching higher-productivity growth are reflected in the characteristics of the current youth workforce. Today's youth in Vietnam are better educated than previous generations, but some indicators point to challenges in transitioning to higher-skilled jobs without continuing reforms in education, skill development, and a transformation of the labor market. Despite higher education completion, the youth cohort is concentrated in medium-skilled occupations, more so than youth cohorts in other countries in the region. Employers in Vietnam report difficulty finding skilled labor. Based on the World Bank's Enterprise Survey on Innovation and Skills in Vietnam conducted in 2019, 22 percent of managers reported that the biggest obstacle faced by the firm was an inadequately educated workforce (World Bank, 2021d). However, challenges are not purely from the labor supply side; the domestic private sector faces challenges in innovation and competition.

Addressing these challenges is necessary to sustain continuous economic transformation toward higher income. Only a handful of developing economies in the last half century have successfully made the leap to high-income status, requiring a continuous structural transformation into

ever more productive sectors. Their populations had the education and skills to take on more complex jobs with higher productivity; in addition to growing the economy, this allowed for inclusive upward household mobility. Productivity gains can be achieved with better management and agglomeration in urban areas, shifts toward higher-value-added economic activity, and more widespread use of sophisticated technologies, all which are well acknowledged but often face challenges in implementation (World Bank, 20201b).

Promotion policies to sustain economic mobility must be complemented by protection strategies to preserve gains

Vietnam is facing new vulnerabilities that require more sophisticated social protection systems. As the economy becomes increasingly globalized and in the face of changing global and regional trade patterns, households are becoming more vulnerable to economic volatility and shocks. At the same time, environmental risks exist in different forms throughout the country; for poor households, which have the least savings and personal safety nets, natural disasters or accidents can become poverty traps. In addition, COVID-19 cast light those who are economically insecure, even if they are not poor in absolute terms. Even the relatively small shock of COVID-19 in the early phases in Vietnam led to lingering longer-term impacts. Before the arrival of the Delta variant in March 2021, about 30 percent of households still reported lower household incomes than a year before (World Bank, 2021a). COVID-19 has also been a "gender-biased" crisis, as increased childcare burdens due to prolonged school closures disproportionately affect women's work. All these issues are likely contributing to expanding inequalities. They also trap some groups in near-poverty situations.

While some households face chronic economic insecurity because of lack of livelihood-generating capacity, others are insecure because of the risks they are exposed to. In addition to understanding why some households still live in poverty, as Part I of the report discusses, it is important to also examine those living below the higher and more aspirational "economic security" line ($5.50 per day, 2011PPP). This much larger group of households can be divided into those whose economic insecurity is "chronic" and those whose insecurity is "risk-induced." The chronically insecure live below the economic security line most of the time because they lack the human capital and physical assets to earn a

sufficient living even in good years. These households most likely need better access to economic opportunities, support with cash transfers, and better delivery of basic services to facilitate investments in physical and human capital. Those who face risk-induced economic insecurity consume enough to live above the economic security line, but this consumption can be highly variable because of idiosyncratic or covariate shocks (the former affecting individuals or specific households and the latter affecting whole communities, regions, or the country), meaning that sometimes they fall below the line and into insecurity. These households do not necessarily need the same investments in assets but do need protection from shocks, which might mean insurance programs to increase resilience.

About one in five Vietnamese usually lives below the economic security line, and another one in ten is vulnerable to occasionally falling below it due to shocks. In Vietnam, the rate of chronic insecurity is twice that of risk-induced insecurity, but this difference varies significantly by region. In addition, idiosyncratic risks contribute more to insecurity than covariate risks do. The rate of chronic insecurity is 1.9 times greater than that of risk-induced insecurity (Figure O.17). Regional outcomes vary widely. With so many chronically insecure in the Midlands, there are fewer people left to experience risk-induced insecurity.

Conversely, in the Red River Delta, where chronic insecurity is low, risk-induced insecurity is twice as prevalent as chronic insecurity. Other regions where risk-induced insecurity is higher than the national average are the Southeast and the Mekong Delta. Nationally, idiosyncratic risk contributes to risk-induced insecurity 1.2 times more frequently than covariate risk (Figure O.18). The Red River and Mekong Deltas are regions where idiosyncratic risk matters a lot more (1.7 and 1.5 times, respectively), while in the Midlands and North and Central Coast, covariate risk is nearly as important. These differences in chronic insecurity and risk profiles have important implications for operational and policy design.

The social protection system does not adequately protect all households against all risks. Social assistance is fragmented and underfunded, and has a delivery system with implementation issues (Nguyen and O'Keefe, 2019). Social assistance programs are concentrated on particular categories of households, such as the very old, ethnic minorities, and those with disabilities. Consequently, many poor households not meeting these criteria are excluded. Instead of a flagship social program such as those in China, Indonesia, and the Philippines, Vietnam has many smaller individual programs, which leads to different systems for implementation and inefficiencies. Relatively low spending compared to other

Figure O.17. Rates of chronic insecurity and risk-induced insecurity by region, 2020

Source: VHLSS 2020 and World Bank's Vulnerability Tool.

Figure O.18. Relative importance of idiosyncratic and covariate risk by region, 2020
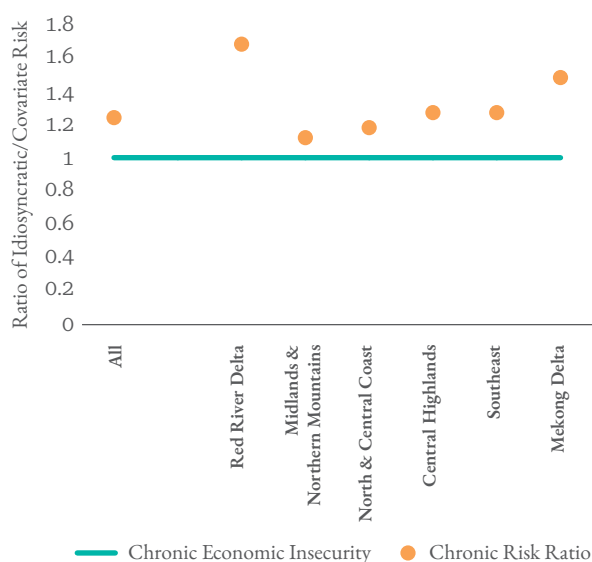
Source: VHLSS 2020 and World Bank's Vulnerability Tool.

middle-income countries compounds these inefficiencies. Low spending is largely the result of low benefit levels, which are spread thin and consequently have relatively little impact on poverty. In addition, the response to the pandemic highlighted weaknesses in delivery systems, specifically their inability to respond quickly to large shocks. The first relief package, which targeted 5 million informal sector workers, ended up reaching only 1 million. A significant problem was the inability to leverage administrative data and the national ID database (currently being digitalized) as many other countries did. Meanwhile, social insurance, which is designed to cushion shocks, is constrained by inadequate coverage of households, particularly those with informal workers. Coverage extends almost exclusively to workers in the formal sector—a serious constraint given the country's high informality rate. A voluntary contributory scheme was introduced in 2006 but has failed to attract many informal workers. Most workers have little recourse when subjected to shocks such as unemployment or disability. This gap was exposed by COVID-19, as millions of nonpoor and mostly urban informal sector workers in sectors such as transport and tourism suddenly lost their incomes and were without insurance to soften the impact on their incomes. Women are also not as well protected against shocks, with women-headed households tending to be more vulnerable than those headed by men. Agriculture and services make up about 73 percent of female employment (ILO, 2021), the latter of which is also concentrated in informal services, limiting their access to the formal social insurance system.

Fiscal policy is a key government instrument that can enable inclusive prosperity in both the short and the long term

Fiscal policy can support the development of a prosperous and inclusive middle-class society. It can be used to provide public goods and services, for macroeconomic stabilization, to stimulate economic growth, and to reduce poverty.

In many countries, COVID-19 highlighted the role that fiscal policy can play in mitigating shocks. It is also an important part of financing public investment in physical and digital infrastructure and human capital that countries need to make the transition to upper-middle- and high-income status. At the same time, fiscal policy is one of the few instruments that governments can use to reduce inequality in the short term. Households pay various taxes and benefit from public spending in different ways. The net effect determines the extent to which fiscal policy directly reduces poverty and inequality. The choice of public spending can also affect the extent to which poverty and inequality are reduced in the longer term.

This report uses the Commitment to Equity fiscal incidence analysis to trace how household income changes when taxes are paid and benefits received. Many poorer households benefit from direct cash transfers, which by themselves would reduce poverty by 1.05 percentage points, and electricity subsidies by another 0.15 points. However, taxes and payroll contributions, particularly value added tax, excises, and social security and health insurance contributions, mean that the benefits received by the poor are outweighed by what they pay into the fiscal system.[12] The impact on inequality is more positive (Figure O.19); taxes are either largely neutral or progressive (in the case of personal income taxes and insurance contributions), while spending on health and especially education is also quite progressive. Therefore, the Gini coefficient of inequality drops by five points from its prefiscal to its postfiscal measure.

This reduction in inequality is about average for lower-middle-income countries, but many countries are more progressive. A five-point reduction in inequality (as measured by the Gini index) puts Vietnam in the middle range of lower-middle-income countries with respect to fiscal progressivity (Figure O.20), but this would place the country in the bottom third of upper-middle-income countries.

Figure O.19. Impact of fiscal policy on inequality, 2018
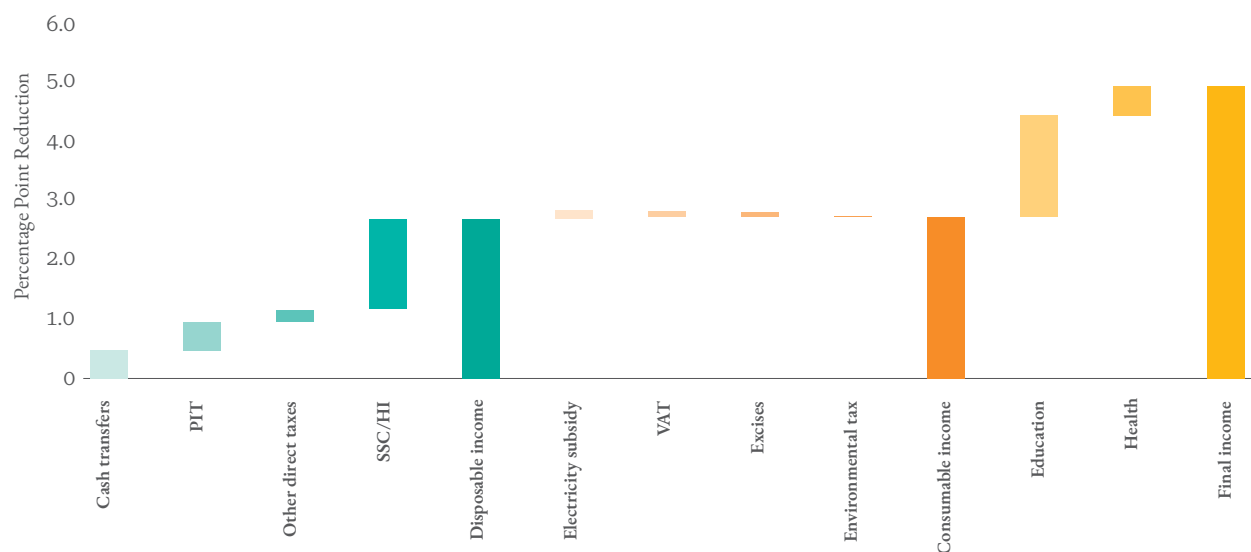
Note: The blue bars are direct taxes and transfers. The green bars are indirect transfers and taxes. The orange bars are in-kind. Poverty is measured at the $3.20 per person per day in 2011PPP terms used for LMICs.

Figure O.20. Reduction in inequality due to fiscal policy in international context
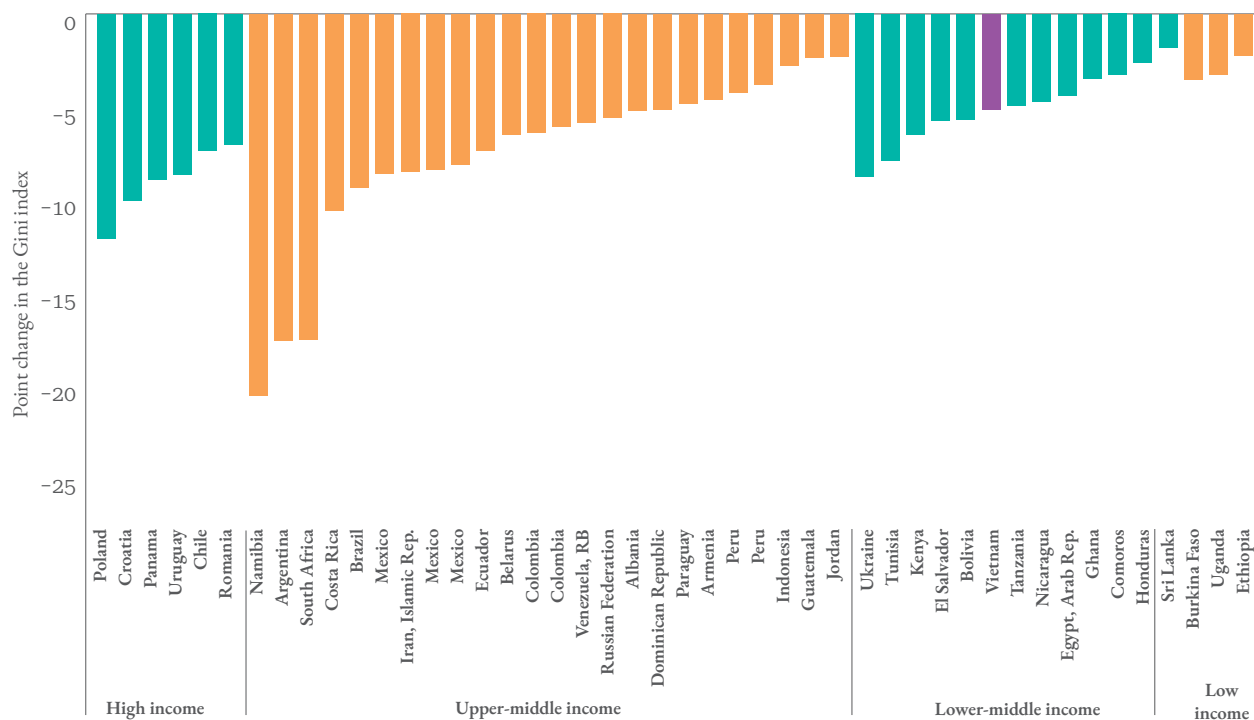
Note: Pensions treated as deferred income.
Source: CEQ and World Bank databases and World Bank calculations (see Rodriguez and Wai-Poi, 2020).

There is significant potential for Vietnam's fiscal policy to do more in terms of investing for inclusive growth by adopting lessons from other countries. International experience suggests that countries become richer in part through greater public investment in drivers of economic growth and inclusive prosperity, increasingly financed by relying more on progressive direct taxation such as personal income taxes rather than indirect taxation such as goods and services taxes. In lower-middle-income countries, where indirect taxation underpins the majority of tax revenue, some choose to offset the tax burden on poorer households by applying lower rates or exemptions on staples consumed by the poor such as food and clothing, as Vietnam does. However, this means sacrificing significant revenue, the benefits of which go mainly to richer households who also purchase these goods, and in greater amounts. Other LMICs raise more revenue by closing such exemptions and are able to nonetheless reduce poverty and inequality to a greater degree and at lower cost by spending some of the extra revenue on targeted direct transfers to poorer households. Similarly, Vietnam's approach of subsidizing energy is much less cost-effective at reducing poverty and inequality than broader social assistance coverage with more generous benefit levels.

The path to fiscal and economic recovery from COVID-19 will need to address fiscal deficits while maintaining adequate support for vulnerable households and protecting key spending on human capital. With the fourth wave of COVID-19 beginning in April 2021 and never fully under control and the emergence of the Omicron variant in late 2021, the country (and the world) are still very much in the middle of the pandemic at the time of writing, with great uncertainty over future health, economic, and social trajectories. Nonetheless, key questions can begin to be asked. Is the current fiscal support package for households adequate? When and how should it be tapered, so that vulnerable households that may have exhausted their resilience do not resort to bad coping mechanisms, but emergency spending does not continue for longer than is needed? How should fiscal gaps (deficits and debt) be closed as the recovery accelerates? How can revenues be increased? What spending can be consolidated and what spending needs to be protected? What should the long-term fiscal framework look like in Vietnam to facilitate public investments in growth for tomorrow while reducing poverty and inequality today? In particular, the limited role cash transfers have traditionally played in Vietnam is evident in the lack of fiscal poverty reduction before COVID-19 and in the scale and nature of its response.

Policies for the Way Forward

Policies are discussed following the Last Mile to Next Mile framework of this report. Over the last decade, rapid economic growth was broadly inclusive and livelihoods in Vietnam improved dramatically. The rapid speed of developmental change, however, left some behind who did not have the opportunity to join the most vibrant sectors of the economy and has also created a large class of the population that is not poor but also not yet middle class. Thus, the poverty and equity agenda is no longer only about raising minimum living standards and tackling chronic poverty; it is also about creating new and sustainable economic pathways for a more aspirational population. The emergence of COVID-19 added to challenges looming in regard to skills, productivity, climate change, and an aging society.

Last Mile

Tackling poverty for groups with persistently high poverty rates is the *Last Mile* challenge.

Next Mile

The *Next Mile* is the road to upper-middle and high-income country standards.

Addressing Last Mile chronic poverty reduction challenges

The concentration of poverty among geographically disadvantaged regions calls for strengthening of area-based anti-poverty intervention, modernizing the agricultural sector, and improving education for disadvantaged students. Analysis suggests that past NTPs helped improve access to services and achieved some positive impacts on improving welfare, but large gaps were also identified (Pimhidzai and Niu, 2020). Strengthening of NTPs can include (i) ensuring that additional resources reach lagging communes; (ii) ensuring that resource allocation is based on deprivations at the commune level, so that communes that are more deprived receive more investment; (iii) earmarking resources across subsectors to ensure that adequate resources are devoted to improving quality of human development services and livelihood interventions; and (iv) strengthening commune-level monitoring by deploying online data collection and aggregation tools to construct a centralized NTP database. Supporting agricultural productivity growth is key to maintaining livelihoods for those remaining in the rural economic system in the face of significant structural change. Access to new knowledge and innovations, including application of appropriate digital technologies, would support productivity growth by substituting for labor intensity. Moreover, the social protection system can play a larger role (discussed as part of the Next Mile agenda).

To improve the participation of ethnic minorities in the labor market, laws protecting the rights of ethnic minorities can be further strengthened. The existing Ethnic Minorities Law, which was designed to advance the policy agenda by recognizing ethnic minorities and improving conservation of language and culture, has yet to be enacted (World Bank, 2021c). The Labor Code and related legislation could be strengthened to prevent exploitation and discrimination of ethnic minorities (World Bank, 2021c).

Achieving Next Mile aspirations

The millions who have escaped poverty over the last decade now need to continue climbing up to higher economic classes. The economically insecure require different policy support than do the poor, such as being provided safety nets to prevent falling back into poverty, and

becoming equipped with the necessary human capital and skills to engage in more productive and sophisticated jobs. Broad policy areas include investing in skills for the future, investing in higher-quality education, modernizing social protection systems for idiosyncratic shocks, and leveraging fiscal policy to fund inclusive investments.

Continuing improvements in higher education access and quality will be needed. Improving the relevance and quality of tertiary education curriculum and staffing can help reduce skill gaps and improve perceptions by businesses that report difficulties recruiting for certain skills. In particular, businesses find it difficult to recruit for leadership, managerial, socio-emotional, or job-specific technical skills. To enhance curriculum quality, policies can be pursued to improve funding of university research, improve staff quality and qualifications, design programs to recruit and retain high-quality staff, and convert higher education teaching status from administrative staff to public servants. The quality of curriculum can also be improved through centrally coordinated investments to increase international accreditation of programs, international exchange of students and staff, and the internationalization of curriculum (World Bank, 2020b).

A modern social protection system is needed. A decade ago, Vietnam's social assistance coverage was in line with or higher than many East Asia and Pacific neighbors, but it now lags. Vietnam needs to provide more effective social assistance for poorer households, with increased coverage and benefit levels to achieve greater poverty and inequality reduction and greater overall spending while consolidating the currently fragmented mix of programs to achieve greater efficiency (Nguyen and O'Keefe, 2019). Greater coverage of social insurance to protect all households from all risks can be achieved by expanding coverage to non-poor informal workers by blurring the line between social assistance and insurance; workers make the contributions they can afford while the state subsidizes the remainder. Finally, a more flexible and adaptable delivery chain for both social assistance and insurance will improve effectiveness, including better data collection and use to determine who is in need and how this changes over time, and adoption of digital payment systems so that payments occur quickly and safely, reaching those who need them when they need them.

Fiscal policy can play a critical role in both driving Vietnam toward high-income status and doing so in an inclusive manner to assist the movement of people into a prosperous middle class. To finance the public investments needed to eliminate poverty and grow the economically secure and middle classes, Vietnam can broaden its tax revenue base (personal income tax, property tax), explore the use of new taxes that both raise revenue and address negative externalities (such as health taxes on alcohol, tobacco, and sugar-sweetened beverages, as well as environmental taxes such as on carbon), or that encompass the growing digital economy, and eliminate regressive tax expenditures. In addition, public expenditures need to be directed in the right way. Inefficient and inequitable expenditures such as electricity subsidies, which encourage wasteful energy use while mostly benefitting richer households, could be redirected for more productive and inclusive purposes. For example, Vietnam needs to bring social protection spending in line with international norms to develop a modern system that helps households manage the many risks they face.

Policies should have the dual objectives of tackling remaining Last Mile chronic poverty challenges, as well as setting the foundation to reach Next Mile aspirations. Whether or not these challenges end up being short-term growing pains or long-term bottlenecks to the welfare trajectory of Vietnam's households will depend on policy action and prioritization.

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Notes

[1] This is equivalent to about $350 per month, and average monthly wages are 6 million VND per month.

[2] On living conditions, 32.7 percent responded significantly better, 51.7 percent slightly better, 8.5 percent the same, and 6 percent worse, based on the VHLSS. On economic conditions, most respondents indicated that conditions were "a little better" versus "much better," based on UNDP PAPI surveys.

[3] This report describes the poverty and inequality story of Vietnam primarily using the World Bank's global absolute poverty lines. Based on Vietnam's level of development, the natural choice for the poverty threshold is the LMIC Poverty Line ($3.20/day 2011PPP). This line also makes sense when converted to Vietnamese dong, which converts to about 1 million VND per person per month in January 2020 prices. At this level, the threshold is similar to the MOLISA (general poverty rate) monetary near-poor threshold over the 2016-2020 Socio-Economic Development Phase (SEDP) period. Alongside this line, the report also examines poverty rates at the Upper-Middle Income Class (UMIC) Poverty Line ($5.50/day 2011PPP), which is equivalent to about 1.8 million VND per person per month in January 2020 prices. The UMIC PL is in between the urban and rural monetary poverty thresholds for the 2021-2025 SEDP and is also relevant for higher aspirations.

[4] The shared prosperity premium is negative if growth of the richest 60 percent ("Top 60") is higher than that of the poorest 40 percent ("Bottom 40").

[5] An individual is underemployed if they work less than 35 hours a week and would like to work more.

[6] The Human Capital Index is 0.85 for children in the richest 20 percent of households, compared to 0.58 for children in the poorest 20 percent. Unsurprisingly, children in the top 20 percent have better nutrition, health, and education outcomes. For some outcomes, the gap between the top and bottom is larger in Vietnam than the average gap among other countries. For example, the gap in the Human Capital Index between the top 20 and bottom 20 in Vietnam is 0.27 points, higher than the average gap among 50 countries (0.15 points). See D'Souza, Gatti, and Kraay (2019).

[7] As defined by the World Bank LMIC poverty line ($3.20/ day 2011PPP).

[8] By World Bank regional definitions, the "economically vulnerable" are those that subsist above the LMIC PL but below the UMPC PL (World Bank, 2018).

[9] In terms of gender, girls in Vietnam are better educated than their male counterparts on average. Girls outperform boys across multiple metrics: the Human Capital Index, scores on standardized tests, and expected years of schooling. Girls also exceed boys in childhood health indicators, such as survival and stunting indicators. While this was already the case in 2010, the gains made by girls in the decade since have outpaced those made by boys, widening the gap even further. Scrutinizing variations in access to opportunities across socioeconomic and demographic factors, gender plays a negligible role, and where it has a more significant impact is to the benefit of women.

[10] The Poverty-to-Privilege indicator measures the share of the 1980s generation that attained education completion in the top quartile when their parents had only attained education in the bottom half.

[11] This report primarily reviews labor supply-side constraints.

[12] However, it is important to note that the analysis covers only 57 percent of all tax revenues and around a third of all central government expenditures; other spending, such as investments in infrastructure, may indirectly reduce poverty by boosting economic growth and creating more economic opportunities for poorer households.

Part 1.
A Decade of Significant Progress, but *Last-Mile* Challenges Remain

Part I of this report reviews poverty and inequality trends over the last decade, 2010–2020, and discusses their underlying drivers and remaining challenges. The decade saw great success in poverty reduction, but also widening inequality (Chapter 1). As the world was hit with the COVID-19 pandemic in 2020, poverty still fell compared to 2018. However, with the emergence of the Delta variant in Vietnam in early 2021, there will likely be additional setbacks to poverty reduction and increases in inequality in both monetary and non-monetary dimensions.

Improving standards of living were driven to a large extent by the creation of off-farm jobs, filled by a large youth population entering the labor force and enjoying increasing wages (Chapter 2). While structural shifts out of agricultural activities is occurring, the poor are still concentrated in low-productivity and low-income agriculture. Poverty rates remain higher among rural and ethnic minority families and households primarily engaged in agriculture (Chapter 3). These groups face persistent challenges of lower levels of human capital, lower-quality local public services, and farther distance to economic opportunities.

CHAPTER 1.	Taking stock of welfare trends over a dynamic decade
CHAPTER 2.	A review of the drivers of poverty reduction
CHAPTER 3.	Challeneges to reducing poverty among the remaining poor

Chapter 1.
Taking stock of welfare trends over a dynamic decade

Key Messages

- Over 10 million people in Vietnam moved out of poverty over the last decade (2010–2020), based on the World Bank's Lower-Middle Income Country (LMIC) poverty line ($3.20/day 2011PPP), and LMIC poverty rates dropped from 16.8 to 5 percent.

- However, inequality is also rising, especially in the latter half of the decade. The shared prosperity premium has also been negative, meaning that the growth of household consumption among the bottom 40 percent is lower than the average.

- In 2020, COVID-19 did not reverse the progress made on poverty reduction compared to 2018, but a more severe emergence of the Delta variant in April 2021 will lead to larger setbacks and possibly longer-term consequences from widening inequality.

1.1. Introduction: From the Last Mile to the Next Mile

Chapter 1 documents poverty and inequality trends in Vietnam over the last decade. The chapter's subsections describe broad trends and patterns in monetary poverty, economic mobility, subnational poverty, distributional indicators of inequality, and the impacts of COVID-19 on poverty projections. A review of key principles of poverty measurement, in particular the poverty line and welfare aggregate are discussed in the annexes. Deeper analyses of the drivers of poverty reduction and poverty profiling across dimensions of chronically high poverty rates are described in subsequent chapters.

Vietnam is at a pivotal stage: it has not completely outgrown Last Mile challenges but also needs to lay a foundation for Next Mile aspirations. Progress in the last decade was substantial, and the Vietnamese economy averaged 6–7 percent growth rates per year. Household consumption per capita, the basis of poverty measurement, also increased by about 5 percent annually. Across different thresholds, poverty has declined considerably (Figure 1.1).

Although poverty has declined amid rapid economic growth, there is now also a large share of the population that is no longer poor but is not yet middle class. Poverty and hunger was selected as a top issue that the government must tackle (Figure 1.2). The 2018 PAPI probed why poverty was the main concern and found that many worried about falling back into poverty, but even more felt that poverty is an overall drag on the economy and reduces national prestige. Half of all respondents selecting hunger and poverty as their top concern in 2018 earned more than 8 million VND per month,[13] highlighting apprehensions over economic security. Statistics of high economic progress but also public concern on poverty can be consistent; together they describe an absolute and inclusive rise in living standards, but also a population that seeks economic security and is still aspiring for more. These worries and aspirations reflect the need to simultaneously solve Last Mile chronic poverty challenges and to create reliable upward economic mobility pathways to fulfill Next Mile upper-middle and high-income aspirations.

Figure 1.1. Economic growth and poverty reduction, 1993–2020
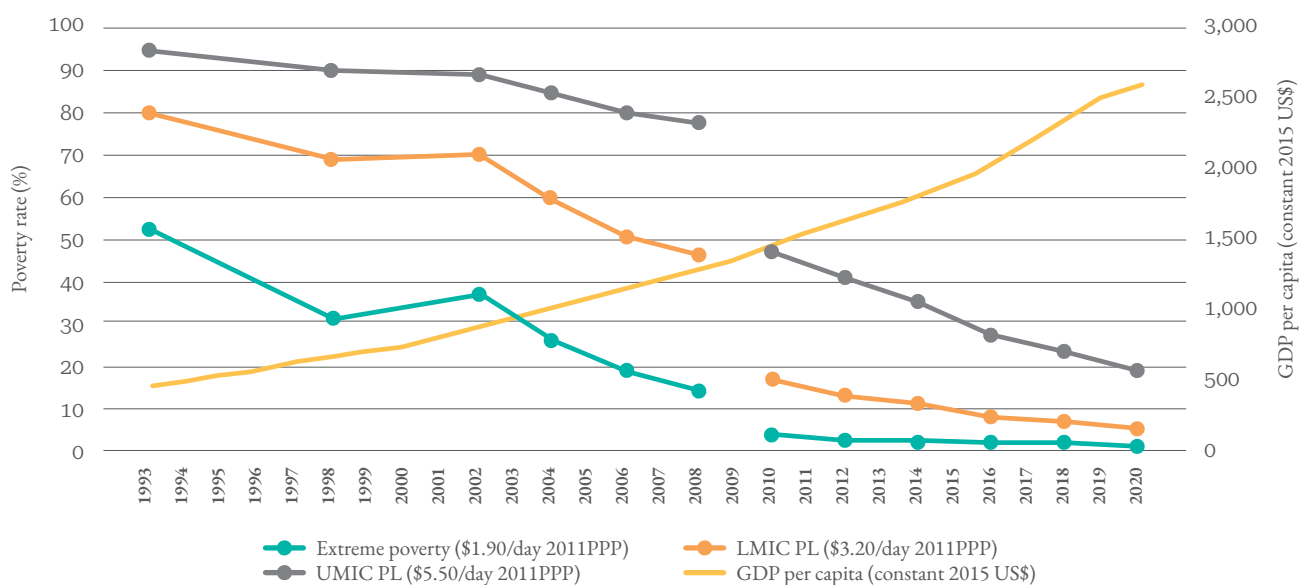
Note: Poverty measurement methodology changed in 2010, rendering a break in series comparability. LMIC PL = lower-middle-income country poverty line; PPP = purchasing power parity; UMIC PL = upper-middle-income country poverty line.
Source: World Bank World Development Indicators, PovcalNet.

Figure 1.2. Issues of greatest concern, 2015–2020
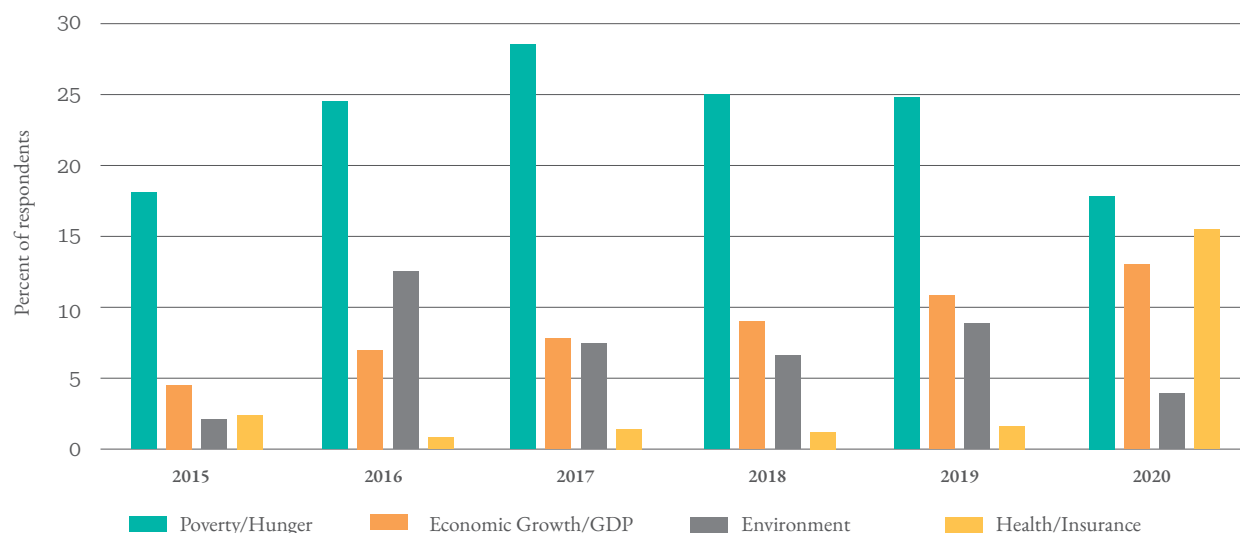
Source: CECODES et al. 2021.

1.2. Monetary poverty rates illustrate a decade of significant progress in poverty reduction

The determination of who is poor affects an array of policy decisions. Public investment, cash support, and social assistance are some examples of direct government policies and actions that inform resource allocation and budgets. From a welfare monitoring perspective, poverty trends track the progress of improvement in livelihoods and living standards among the most vulnerable population. Differences in poverty reduction trends across population groups inform the design and targeting strategies for poverty reduction and social assistance programs (see Chapter 6 for a discussion of the social protection system).

This report describes poverty and inequality trends using the World Bank global poverty lines and household consumption

What should the poverty threshold be? The threshold of poverty is not dogmatic. Household incomes, consumption, and livelihoods exist on a spectrum. For the objective of describing trends in this report, there are two primary considerations. The first is that the threshold of an appropriate standard should reflect Vietnam's minimum necessary living

standards, and the second is that the threshold should be comparable across time to provide a consistent time series. The value of the World Bank global poverty lines when converted to VNDs is meaningful and relatable to the government's own income thresholds. Thus, the trends and drivers of poverty reduction that will be described using World Bank global poverty lines in this report are relevant for monitoring and policy. Annex 1.3 reviews and compares poverty lines based on Vietnam's national and World Bank definitions.

The World Bank's working poverty measurement methodology is the Cost of Basic Minimum Needs Approach (Ravallion, 2015). In the case of household consumption as a welfare measure, welfare is measured practically by valuing a basket of commodities or goods that a household consumes based on expenditure data from household surveys.[14] Households are assumed to gain value from consuming these goods and services, which increases their welfare or their utility function.[15] See Annexes 1.1 and 1.2 for additional information on household expenditure data and global poverty measurement.

Poverty reduction was impressive throughout the decade

By 2020, 1 percent of Vietnamese lived in extreme poverty as defined by the International Poverty Line (IPL) ($1.90/day 2011PPP). In Vietnam, extreme poverty

is now almost eradicated (Figure 1.3). Most of the success in *extreme* poverty reduction occurred before 2010, when it fell the most, from 51.9 percent in 1993 to 14.1 percent in 2008 (Table 1.1[16]). In equivalent monetary terms, the value of the IPL is closer to MOLISA monitoring standards from earlier SEDP phases, and the remaining households living at these levels are of high concern.

By the end of 2020, the LMIC ($3.20/day 2011PPP) poverty rate was 5 percent, a 1.6 percentage point reduction from 2018. This was a remarkable accomplishment, as poverty rose in many other countries amid the COVID-19 pandemic (World Bank, 2020). Nearly 10 million people escaped LMIC poverty over the last decade; the LMIC ($3.20/day 2011PPP) poor numbered 14.5 million in 2010 and 4.9 million in 2020. The remaining population living below the LMIC global poverty standard in 2020 are perceived to be at risk of meeting basic necessities at a standard that is relevant for the Vietnam context, bearing in mind that the equivalent value of the global LMIC poverty line converted into local currency is about 1 million VND per person per month, which is the upper limit of the MOLISA near-poor threshold from the 2015–2020 SEDP period.

Poverty reduction remained resilient even amidst the initial outbreaks of COVID-19 in 2020. While poverty impacts may appear mild in 2020, with the onset of the fourth wave in April 2021, the pandemic is expected to last for much longer (see Section 1.7 for poverty projections under COVID-19 scenarios). Another potential reason for lower adverse impacts measured in the 2020 VHLSS is the reference period for household expenditure in the surveys. For some components of consumption, households provide information over a 12-month recall period. For households interviewed in the first three quarters of 2020, their consumption patterns would include periods in 2019 that are pre-COVID.

The number of UMIC (US$5.50/day 2011PPP) poor is much larger than the LMIC poor (Table 1.2). Due to the distribution of household consumption, an increase in the poverty line from $3.20 to $5.50/day 2011PPP more than triples the poverty rate and the number of poor. Small increases in the poverty line will lead to sizeable increases in the populations being classified into poverty, because of the large concentration of the population living near these standards. In 2020, the UMIC poverty rate was 18.9 percent, and the number of poor was estimated to be 18.3 million people. The UMIC poor population is slightly higher than MOLISA's estimate of poor based on the 2021–2025 SEDP standard, which was estimated at 17.4 million.[17] Thus, the UMIC threshold can also be used as an aspirational target.

Figure 1.3. Poverty rates declined consistently
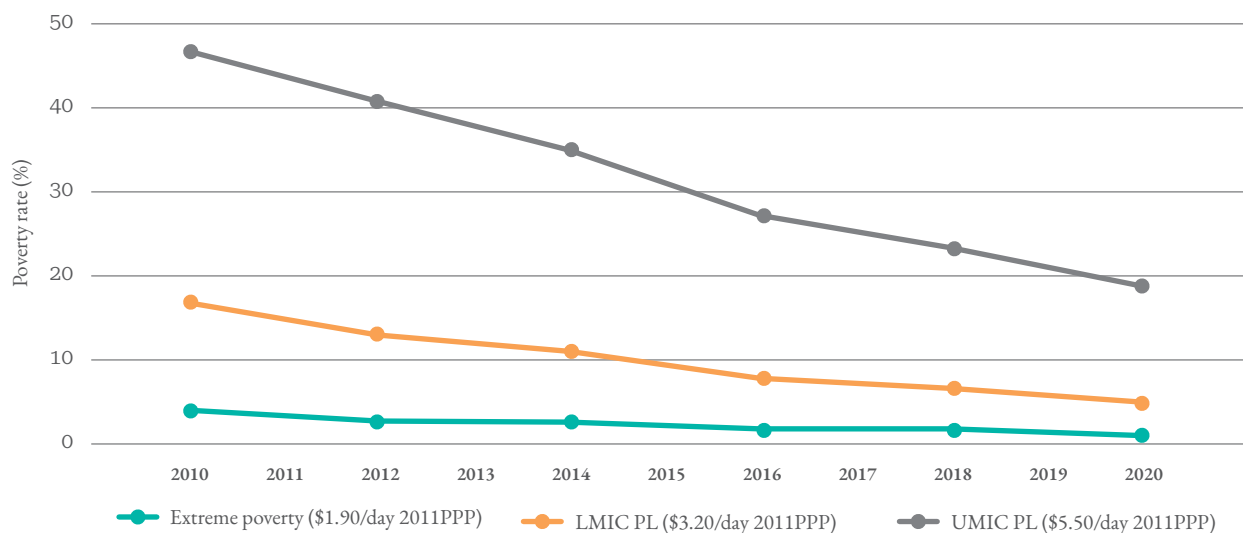
Note: LMIC PL = lower-middle-income country poverty line; PPP = purchasing power parity; UMIC PL = upper-middle-income country poverty line.
Source: World Bank staff calculations using VHLSS 2010–2020.

Table 1.1. Poverty rates (2010–2020)

World Bank Global Poverty Lines Units: 2011PPP per capita, per day	POVERTY RATES (%)		
	$1.90/day 2011PPP - IPL	$3.20/day 2011PPP - LMIC	$5.50/day 2011PPP - UMIC
Approximate equivalent value in VND Units: January 2020 VND in millions, monthly and per person	0.6	1.0	1.8
1993	52.3	79.7	94.3
1998	31.4	68.7	90.0
2002	37.0	70.1	89.0
2004	25.8	59.3	84.2
2006	18.8	50.6	79.9
2008	14.1	45.9	77.8
Significant change in consumption-based welfare measurement, new poverty data series is not comparable			
2010	4.0	16.8	46.8
2012	2.7	13.0	40.8
2014	2.6	11.0	35.0
2016	1.8	7.8	27.2
2018	1.8	6.6	23.4
2020	1.0	5.0	18.8

Source: PovcalNet and World Bank staff calculations.

Table 1.2. Number of poor (2010–2020)

World Bank Global Poverty Lines Units: 2011PPP per capita, per day	NUMBER OF POOR		
	$1.90/day 2011PPP - IPL	$3.20/day 2011PPP - LMIC	$5.50/day 2011PPP - UMIC
Approximate equivalent value in VND Units: January 2020 VND in millions, monthly and per person	0.6	1.0	1.8
1993	37.8	57.6	68.2
1998	24.6	53.6	70.3
2002	30.2	57.1	72.5
2004	21.4	49.3	69.9
2006	15.9	42.8	67.6
2008	12.2	39.6	67.1
Significant change in consumption-based welfare measurement; new poverty data series is not comparable			
2010	3.5	14.8	41.2
2012	2.5	11.6	36.6
2014	2.4	10.1	32.1
2016	1.7	7.3	25.5
2018	1.7	6.3	22.3
2020	1.0	4.9	18.3

Source: PovcalNet and World Bank staff calculations.

The average distance to the poverty line is also shrinking

The average poverty gap illustrates the amount of additional consumption necessary to raise the poor to the poverty line (Figure 1.4). The gap is measured in terms of the percentage of the poverty line on a per person basis that would raise everyone in poverty to the minimum threshold. For example, an average poverty gap of 1 percent means that if an amount of 1 percent of the poverty line is contributed from the entire population and transferred to only the poor population, it would be enough to raise the poor population up to the poverty line (each poor person would need to receive a different amount depending on how far they are from the line). In the case of Vietnam, the poverty gap in 2020 is 1.2 percent of the LMIC poverty line (panel A, Table 1.3). The total monetary gap is calculated as the value of the poverty gap over the entire year per person on average (panel B, Table 1.3). In 2020, the monetary gap to lift everyone above the LMIC poverty line equals 15 trillion VND, and the total monetary gap for the UMIC poor is 116.9 trillion VND.

Figure 1.4. Illustration of poverty and poverty gap (LMIC poverty line)

A. Illustration of poverty

B. Illustration of the poverty gap
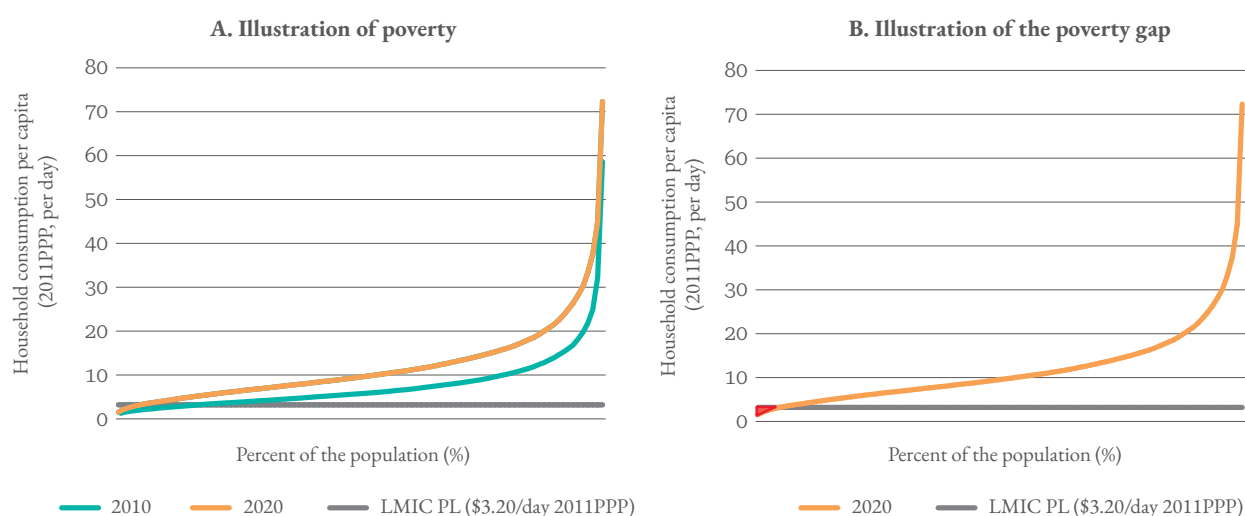
Notes: In Panel B, the red shaded areas depict the poverty gap.
Source: World Bank staff calculations using VHLSS.

Table 1.3. Average poverty gap

A. AVERAGE POVERTY GAP (SHARE OF THE POVERTY LINE, FGT(1))

	2010	2012	2014	2016	2018	2020
IPL ($1.90/day 2011PPP)	0.008	0.005	0.005	0.004	0.003	0.002
LMIC – PL ($3.20/day 2011PPP)	0.046	0.032	0.029	0.021	0.018	0.012
UMIC – PL ($5.50/day 2011PPP)	0.161	0.131	0.111	0.084	0.069	0.055

B. ANNUAL TOTAL GAP (2020 VND, TRILLION)

	2010	2012	2014	2016	2018	2020
IPL ($1.90/day 2011PPP)	5.38	3.02	3.64	2.48	2.43	1.44
LMIC – PL ($3.20/day 2011PPP)	49.98	36.13	33.88	24.59	22.38	15.02
UMIC – PL ($5.50/day 2011PPP)	302.13	254.08	221.65	169.84	146.29	116.91

Note: Currency conversions use 2011PPPs, not exchange rates. VND = Vietnamese dong; FGT1 = the average distance to the poverty line according to Foster, Greer, and Thorbecke (1984); IPL = International Poverty Line; LMIC = lower-middle-income country; PPP = purchasing power parity; UMIC = upper-middle-income country.
Source: World Bank staff calculations using VHLSS.

| BOX | 1.1. | Foster, Greer, and Thorbecke (FGT, 1984) class of indicators |

The Foster, Greer, and Thorbecke family of indexes with parameter α. As the parameter increases, more importance is given to those below the poverty line. The poverty line is denoted as z and a household i's consumption, or income is y_i.

$$FGT_\alpha = \frac{1}{N} \sum_{i=1}^{H} \left(\frac{z - y_i}{z} \right)^\alpha$$

The index measures the proportion of people in poverty (FGT0), the average distance (in monetary terms) to the poverty line (FGT1), and the dispersion in standards of living among the poor (FGT2, that is, the square of the average distance, in order to give more importance to those far from the line and underline inequality among the poor).

Compared to national poverty reduction budgets, the poverty gap is small. For example, the New Rural Development National Targeting Program (NTP) implemented by the Ministry of Agriculture and Rural Development has a budget of 2,600 trillion VND over a five-year period from 2021 to 2025 and does not cover all regions of the country. This is just one of three concurrent NTPs that will be implemented over the 2021–2025 SEDP phase (See Chapter 3 for more discussion on NTPs). Poverty reduction budgets include a much broader set of programs than simply cash support, including public investments, infrastructure, and other indirect expenditures. With well-defined targeting, the government could afford the amount of direct cash support needed to raise immediate cash flows to poor households to a minimum level, and also continue to invest in medium- and long-term development projects.

1.3. Subnational poverty trends[18]

The traditionally poor regions in Vietnam are the Central Highlands and the Midlands and Northern Mountains, where poverty rates were the highest throughout the decade (Figure 1.5). The Central Highlands region stands out as a region where poverty is decreasing but the number of poor are not declining as quickly. Poverty also increased in 2014 in the Central Highlands, but this was temporary, and poverty continued to decline consistently into 2020. However, the number of poor in the Central Highlands declined by about only half a million people over the last decade, the smallest amount across the six regions (Figure 1.6). Slower poverty reduction progress in this region also affected its relative ranking. In 2010, the regional poverty rate in the Midlands was

the highest in the country. In 2020, the Central Highlands had the highest regional poverty rates, if even by a small margin.

There are relevant concerns that economic vulnerability in the Mekong Delta will continue to worsen. While the increase in poverty in the Central Highlands in 2014 appeared to be a one-time occurrence, the Mekong Delta is facing continuous stresses and challenges. In 2020, the region suffered a dual crisis, from droughts and COVID-19. Concurrently, both consumption and income based poverty rates increased in this region. The region has also received attention in the past years as a source of climate migrants. In 2020, migrants from the Mekong Delta accounted for about 37 percent of all migrants in the country (GSO, 2021). See Chapter 6 for a discussion on resilience and the intersection between poverty and natural hazards.

Small area poverty estimates at the district level reveal more heterogeneous variation in the success of poverty reduction

Measuring poverty at the regional level is insufficient. Prominent inter-regional differences call for more granular statistics of poverty and welfare. For example, the Southeast region comprises only six provinces and municipalities, including Ho Chi Minh City (HCMC), and is the smallest by land size. Moreover, HCMC accounts for more than half of the population of the region. However, the Midlands and Northern Mountains region is much larger by area (even if it is small by population) and has the largest variation in provincial poverty based on the multidimensional index, ranging from 2.8 percent in Bac Giang to 36.7 percent in Dien Bien in 2020. A similar observation is made for the Northern

and Coastal Center region, which includes Da Nang city. Da Nang city on its own is a vibrant economic area but is part of the larger Northern and Central Coast area, characterized by varying levels of economic activity.

For over a decade, the World Bank has worked with the General Statistics Office (GSO) on producing small area estimates of poverty at the district level. This level of disaggregation is extremely powerful, greatly enhancing the understanding of spatial poverty and dynamics since direct estimates of poverty from the household survey are only representative across six broad regions; the country had 63 provinces and over 700 districts in 2019. Many policies and decisions are made at the local level, which requires a local-

level understanding of poverty trends. Over the decade, as the populations and settlements grew, some districts have been split. There were 27 more districts in 2019 than in 2009 (Table 1.4). (See Box 1.3 for additional history on the World Bank-developed small area poverty estimation tools.).

A comparison of small area poverty maps over a decade shows overall progress, but pockets of chronic poverty remain. Figure 1.7 illustrates district-level poverty maps from 2009, 2015, and 2019. The 2009 map shows initially high concentrations of poverty throughout the majority of the high northern mountains and central regions of the country. Over the decade, poverty has declined impressively but has not disappeared in some lagging regions such as the Northwest

Figure 1.5. Poverty rates ($3.20/day 2011PPP) , by region
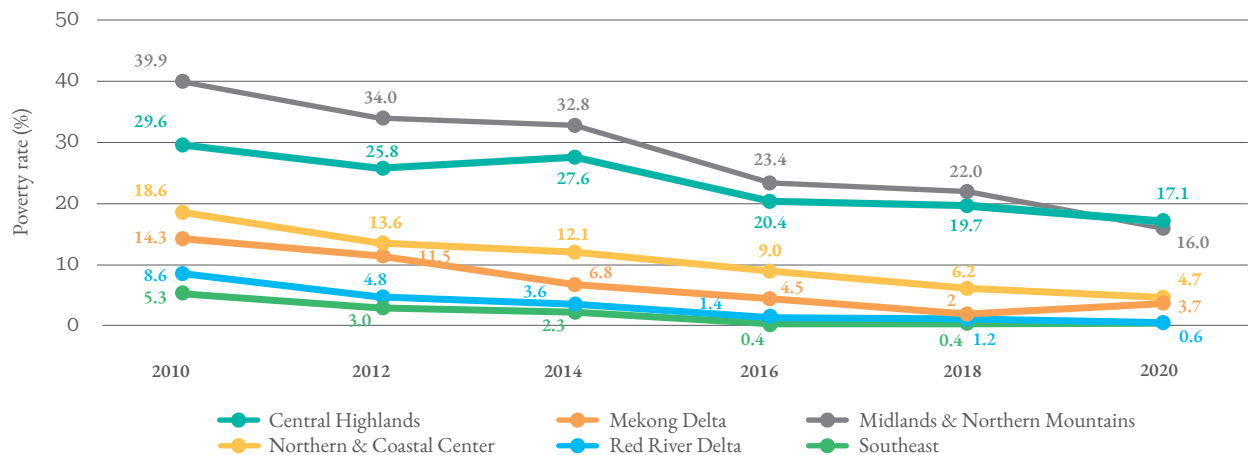
Source: World Bank staff calculations using VHLSS.

Figure 1.6. Number of poor ($3.20/day 2011PPP) , by region
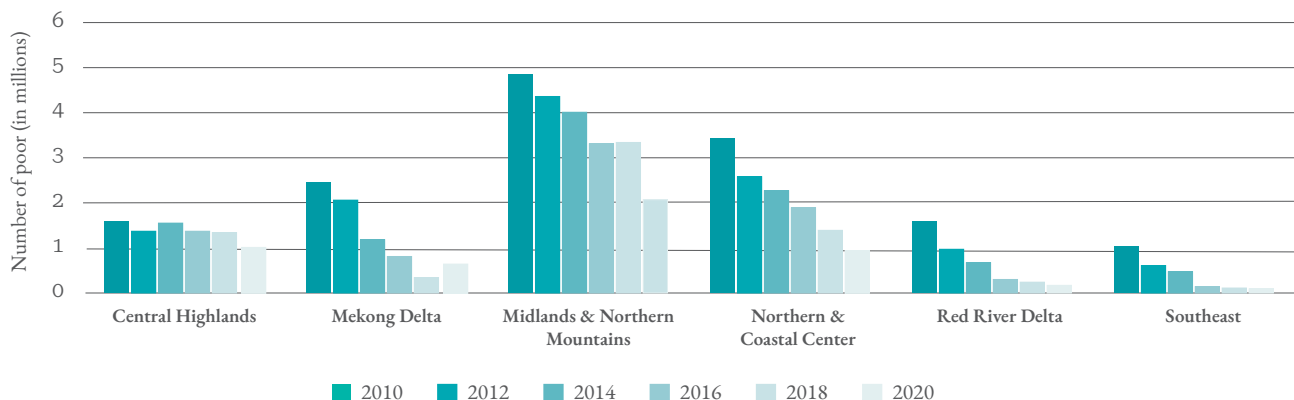
Source: World Bank staff calculations using VHLSS 2010–2020.

and Central Highlands. The region that has achieved the largest absolute poverty reduction is the Northeast, which has benefited from expanding industrial activity (see Chapter 6 for bivariate maps of poverty and environmental factors).

A scatter plot of district-level poverty rates highlights areas with the slowest poverty reduction progress. Across all districts, wealthier districts with the lowest initial poverty rates in 2009 exhibited more poverty reduction when measured in percent terms (these districts had lower absolute changes in poverty rates due to their low starting point). Thus, poverty reduction among chronically poor areas continues to be a challenge. Regions with districts exhibiting the slowest poverty reduction in precent terms include the Central Highlands, Northwest, and Mekong Delta (Figure 1.8).

Table 1.4. Summary of a decade of small area poverty estimates

YEAR OF ESTIMATE	VHLSS	CENSUS	POVERTY LINES	NUMBER OF DISTRICTS IN MAP
2009	2010	2009 Census	• GSO-WB Poverty Line • $1.25/day 2005PPP	685
2015	2014	2015 Inter-census	• GSO-WB Poverty Line • $1.90/day 2011PPP • $3.10/day 2011PPP	699
2019	2020	2019 Census	• GSO-WB Poverty Line • $3.20/day 2011PPP	712

Note: An interim LMIC poverty line valued at $3.10/day was used before a finalized line was valued at $3.20/day (Joliffe and Prydz, 2016).
Source: World Bank (2012), World Bank (2016), and Nguyen and Yang (2022)

Figure 1.7. District level estimates of poverty
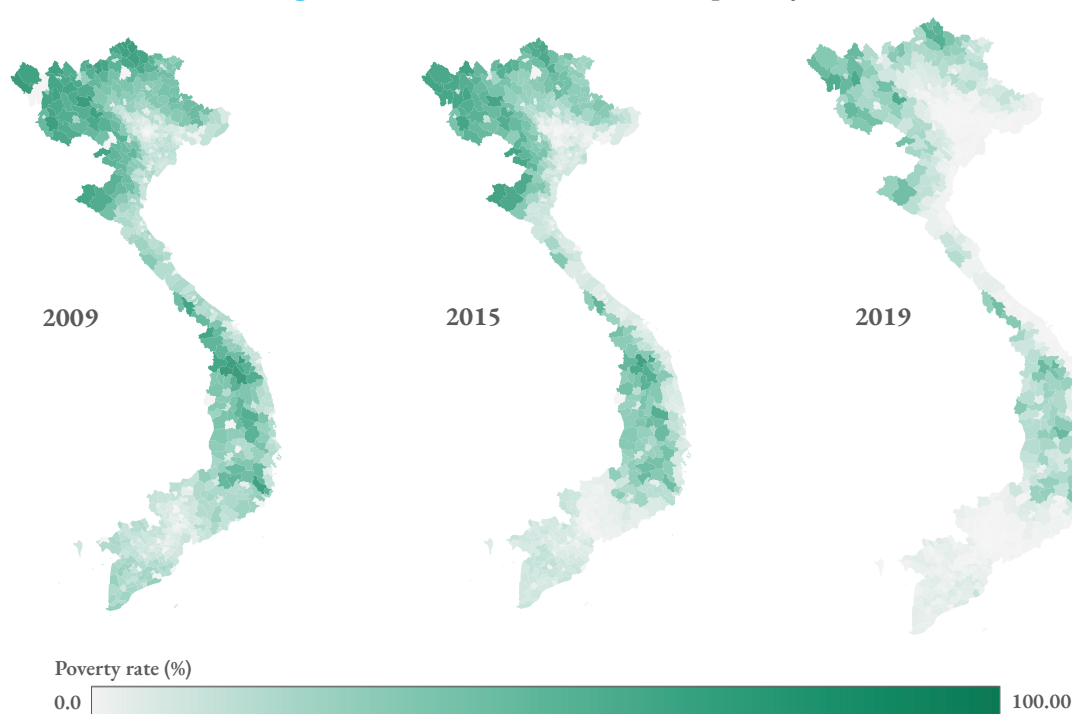
Note: Poverty rates based on the GSO-WB poverty line. The consumption aggregates are comparable across all years.
Source: World Bank staff and GSO calculations using Census and VHLSS.

Figure 1.8. District level poverty comparison, 2009 vs. 2019

Absolute change in poverty rate (percentage point)

Percent change in poverty rate (%)

Change in population of poor

Legend:
- Central
- Mekong River Delta
- North Central Coast
- North East
- North West
- Red River Delta
- South Central Coast
- Southeast South
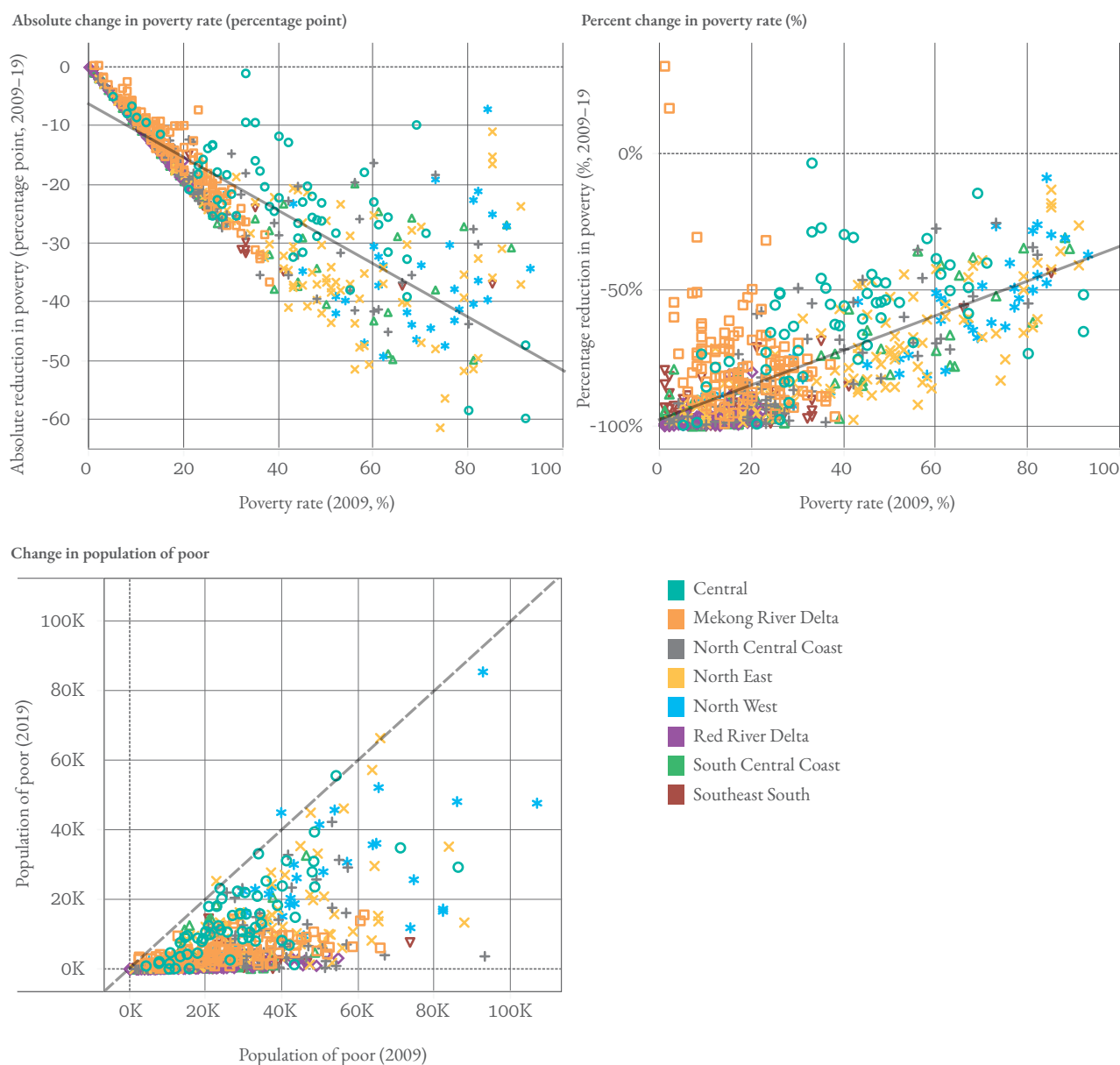
Source: World Bank staff and GSO calculations using Census and VHLSS.

Progress can also be visualized by the distribution of districts that have poverty rates below or above the national average (Figure 1.9). The Northwest and Central Highlands remain the primary areas where progress is lagging. Nearly 90 percent of their districts in these two regions in 2019 had poverty rates higher than the national average. The Mekong Delta has a low level of poverty compared to other regions, but the share of districts with poverty rates above

the national average has increased from 2015 to 2019. This is consistent with rising regional poverty rates in the Mekong Delta in 2020. In contrast, the share of districts with higher-than-average poverty rates in the Northeast Mountains region declined considerably in the latter half of the decade. This area is part of the Midlands and Northern Mountains region and is the source of its regional poverty reduction owing to an influx of manufacturing jobs.

Figure 1.9. **Share of districts with poverty rates above the national average, 2019**
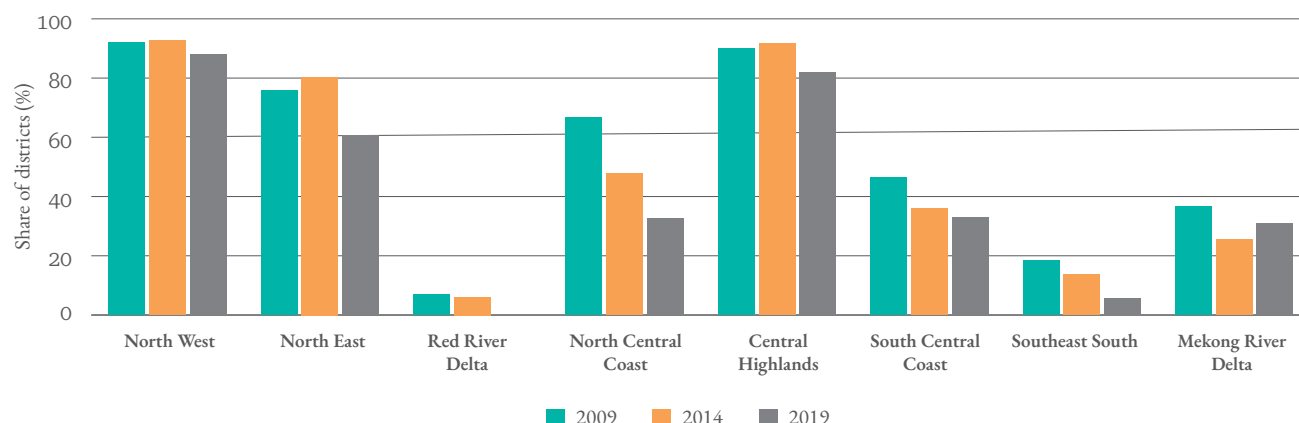
Note: Poverty rates based on the GSO-WB poverty line. The consumption aggregates are comparable across all years.
Source: World Bank staff and GSO calculations using Census and VHLSS.

BOX	1.2.	A history of small area poverty estimates

Poverty and welfare indicators are measured from household surveys that only sample selected enumeration areas. These samples, while carefully selected, can only be used to estimate poverty statistics at geographic levels that are representative in the surveys. Since household survey samples are small and do not have the coverage of a Census, poverty rates cannot be estimated in small areas.

The methodology to produce small area estimates of poverty has a long and fruitful history with several notable updates. To solve the small and missing sample problem, Elbers et al. (2003) originally proposed a so-called "small area estimation" method to estimate poverty measures at small areas by combining a household survey and a census. This method is widely applied to estimate disaggregated poverty and welfare measures, especially in developing countries (see Bedi et al., 2007, and Bigman and Fofack, 2000, for review of applications). ELL's estimates can be computed using the World Bank's PovMap software. An intermediate theoretical update involving sample conditionality and sampling weights was applied in 2014 and accompanied an update to the PovMap software.

New improvements have been made to the method to increase precision and reduce bias. Most recently, Corral, Molina, and Nguyen (2021) introduced a new method that improves the precision and reduces bias in small area estimates using updated Monte Carlo and imputation techniques. These estimates are referred to as the Census-EB estimates and can be produced using the World Bank-developed sae Stata package.

Table B.1.2.1. **Evolution of small area poverty estimation techniques**

ESTIMATES	ELL (2003)	H3- CBEB (2014)	CENSUS EB (2021)
Notes	Original theoretical paper with estimates based on multiple imputation	Conditioned on survey sample available, and results are more precise than ELL. Added survey weights following Molina/ Rao (2010)	Assumes survey data is not a subsample of the census; estimates are based on Monte Carlo and multiple imputation techniques
World Bank-developed tools	PovMap software	PovMap software update v2.5 / sae Stata package	sae Stata package

1.4. Grouping households into economic classes to monitor changes across the entire welfare distribution

A more complete view of household economic transitions and dynamics can be obtained by examining population groups defined by intervals of consumption, or economic classes. The intervals of consumption pertaining to economic classes are purely based on household consumption per capita, without regard to social class. Examining progress by different groups is also useful since groups in different welfare brackets benefit from different types of support and policies. Managing prosperity and stability requires supporting not only the poor, but also the aspirations of the middle class. To categorize households at higher ends of the distribution, this report uses definitions of economic classes from the World Bank's East Asia and Pacific regional report (see Box 1.4 for definitions of economic classes).

Poverty reduction was not only remarkably successful over the last decade, but the middle class grew quickly as well. Over the last decade, upward economic mobility occurred even faster for households at higher income levels.

More people became economically secure from 2010 to 2020 than between 1993 and 2008. The size of the middle class also tripled from 2010 to 2020, increasing from 7.3 million people in 2010 to 22.6 million in 2020 (Figures 1.10 and 1.11). Growth occurring at higher and higher levels of income illustrates a population whose consumption patterns, aspirations, and living conditions are rapidly changing.

A disaggregated view by region reveals that most of the expansion of the middle class occurred in the Red River Delta and Southeast regions (Figure 1.12). These regions are where the country's largest cities are located (Hanoi and HCMC). The Southeast region is the only region where the middle class is growing and the absolute number of people in other economic classes is declining, illustrating high rates of absolute upward economic mobility. While the Red River Delta has an increasing share of the middle class, the absolute population in other economic groups is still similar in number to a decade ago. This may be due to increasing migration, which is also quickly increasing the region's population. The poorer regions exhibited smaller expansions of higher economic classes. The populations of extreme poor, moderate poor, and economically vulnerable have remained relatively constant in the two poorest regions.

Figure 1.10. **Distribution of economic classes (share of the population)**
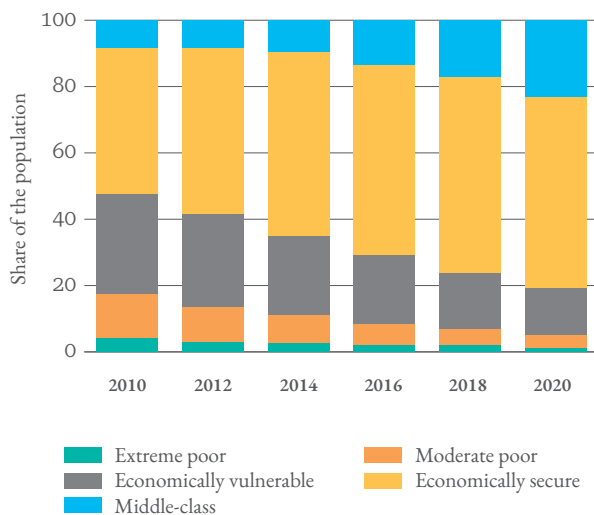
Figure 1.11. **Distribution of economic classes (population in millions)**
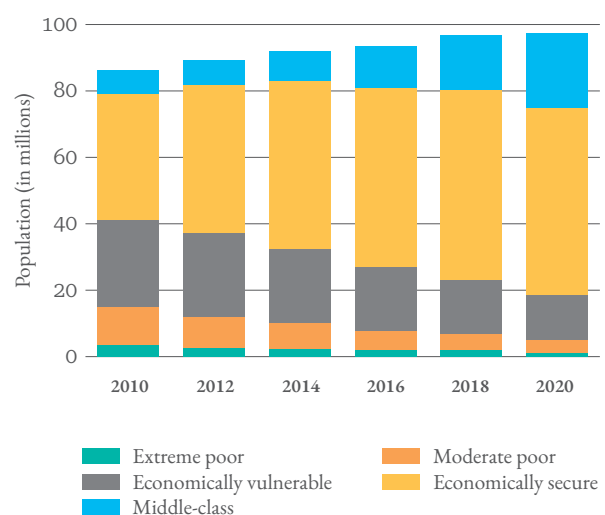
Source: World Bank staff calculations using VHLSS 2010–2020.

Figure 1.12. Population by economic class and by region, 2010–2020
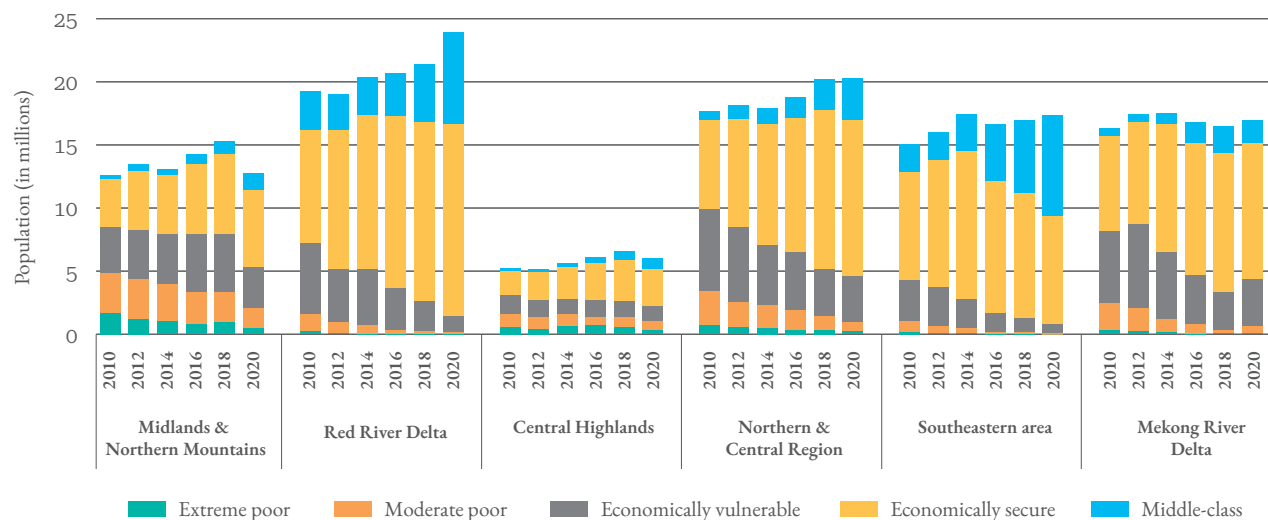
Source: World Bank staff calculations using VHLSS 2010–2020.

| BOX | 1.3. | World Bank East Asia and Pacific regional economic class groups |

To highlight the evolution of households along the entire welfare distribution, this paper uses the economic class definitions defined in the World Bank's Riding the Wave report (World Bank, 2018b). These economic class thresholds were developed for economies in the East Asia and Pacific region based on global poverty lines. Lower economic classes are bounded by the World Bank's $1.90, $3.20, and $5.50/day 2011PPP poverty lines. The middle-class threshold of $15.00/day 2011PPP is similar in value to other thresholds for large regional analyses (Ferreira et al., 2013; World Bank, 2018b). In high-income countries, middle-class lines can be even higher (e.g., $50.00/day), but upper ends of the welfare distribution do not translate well in household surveys, where the tail distributions are the most problematic.

The World Bank's regional and global poverty thresholds are intended to be used for cross-country comparisons, but these thresholds are also suitable for examining the welfare story of Vietnam. While some of the lower-level World Bank poverty lines are comparable in monetary value to the MOLISA monetary dimension of poverty thresholds, these definitions do not reflect government definitions of economic classes. Rather, they are created to help illustrate the discussion on welfare distribution dynamics.

Table B.1.3.1. Summary of economic class definitions

DEFINITION OF ECONOMIC CLASSES	VALUE IN 2011 PPP PER DAY AND PER CAPITA	APPROXIMATE VALUE VND [1]	NOTES
Extreme poor	< $1.90	< 626.5	This threshold is the World Bank's international poverty line.
Moderate poor	(1.9-3.2)	626.5 - 1,055	The upper threshold is the moderate poverty line traditionally used by the World Bank in analyzing trends in developing East Asia and Pacific.
Economically vulnerable	($3.2-$5.5)	1,055 – 1,813	Between the World Bank's LMIC and UMIC poverty lines
Economically secure	($5.5-$15)	1,813 – 4,946	Above the World Bank UMIC poverty line, but not yet middle class (see below).
Middle class	$15+	4,946+	Those living on more than US$15.00 a day. This threshold is broadly consistent with the values used by other studies (World Bank, 2018b).

[1] Units: Jan 2020 VND in thousands, monthly, and per capita. *Summarized from World Bank (2018b).*

1.5. Upward economic mobility within a lifetime for most

This section utilizes the panel sub-sample of the VHLSS over available two- and four-year periods to better describe economic transitions across time and their drivers (see Box 1.5 for information on the VHLSS panel).

Absolute changes in household consumption over the decade

Upward economic mobility was widespread, as most households experienced increasing consumption. Across various two-year periods, the share of panel households experiencing increasing real consumption ranged from 57 percent (2012–2014) to as high as 70 percent (2014–2016) (Figure 1.13). Increases in consumption were stronger over a longer four-year period, as might be expected. From 2014 to 2018, almost three-quarters of the panel sample had greater absolute consumption. These transitions of households illustrate a more mobile society in the short run, but more stable absolute gains over longer horizons.

Changes in household consumption were large enough for about one-third of households to move into another economic class, with most but not all moving upward.

The majority of households, 65–70 percent, stayed within the same economic class over a two-year period. For some, changes in consumption were large enough to cross economic class groups. On average over the various selected periods, about 20 percent of households moved up into a higher economic class, but about 15 percent slid down (Figure 1.14). Between 2016 and 2018, 38 percent of the population changed economic classes, with 20 percent moving to a higher economic class. Upward economic mobility was stronger over a four-year period, but increases that moved a household up two economic classes were rare.

Stronger upward economic transitions at the bottom, but less stability at the top

By the end of the decade, falling back into poverty was less common. Between 2016 and 2018, less than 2 percent of the nonpoor fell into poverty, half the likelihood from 2010 to 2012 (Figure 1.15.A). Even though fewer households at the bottom of the distribution experienced absolute increases in household consumption toward the end of the decade, absolute minimum living standards had already improved, and the risk of falling into extreme poverty was low. However, despite the low rates of people sliding into extreme or moderate poverty, this still amounted to about 640,000 households in 2018. Therefore, managing the risk of people falling back into poverty cannot be neglected.

Figure 1.13. Increases in consumption in panel households observed over two-year and four-year periods
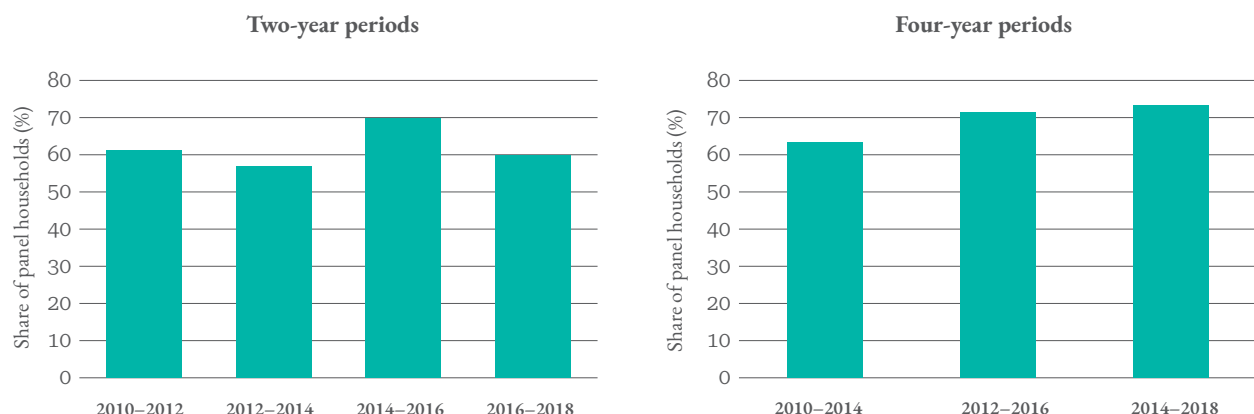
Notes: Share of panel households experiencing an increase in real consumption per capita.
Source: WB calculations using VHLSS panel

Churning at the higher end of the distribution was more evident at the end of the decade. Later in the decade (2016–2018), while the likelihood of falling into poverty had substantially diminished, most of those who slid were at the top. Maintaining middle-income status remains challenging, at least over short time horizons. Close to a third of the middle-class slid to a lower class during 2016–2018, with most sliding down just one class (Figure 1.15.B).

Better jobs were key pathways to upward economic mobility over the last decade

Overall, location, economic activity, and education are all strong determinants of increasing welfare and upwards economic mobility. Based on time-invariant characteristics, households in urban areas, Kinh majority, and Southeast or Northern and Central coast regions were most likely to experience increasing welfare between 2016 and 2018 that was large enough to move them to a higher economic

Figure 1.14. Share of panel households moving up or sliding down an economic group
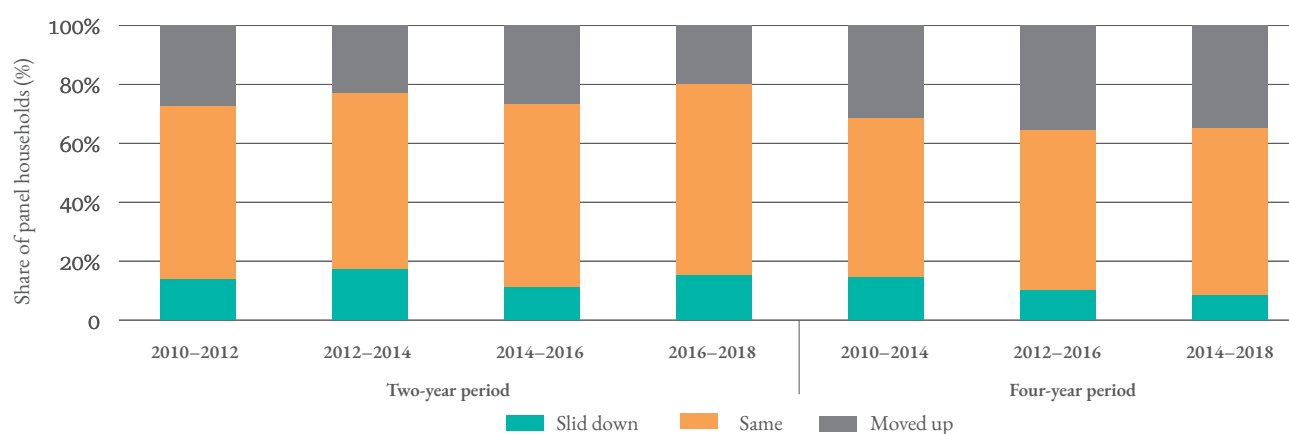
Source: World Bank staff calculations using VHLSS panel.

Figure 1.15. Economic class transitions over a two-year period

A. 2010–2012 Transitions

B. 2016–2018 Transitions
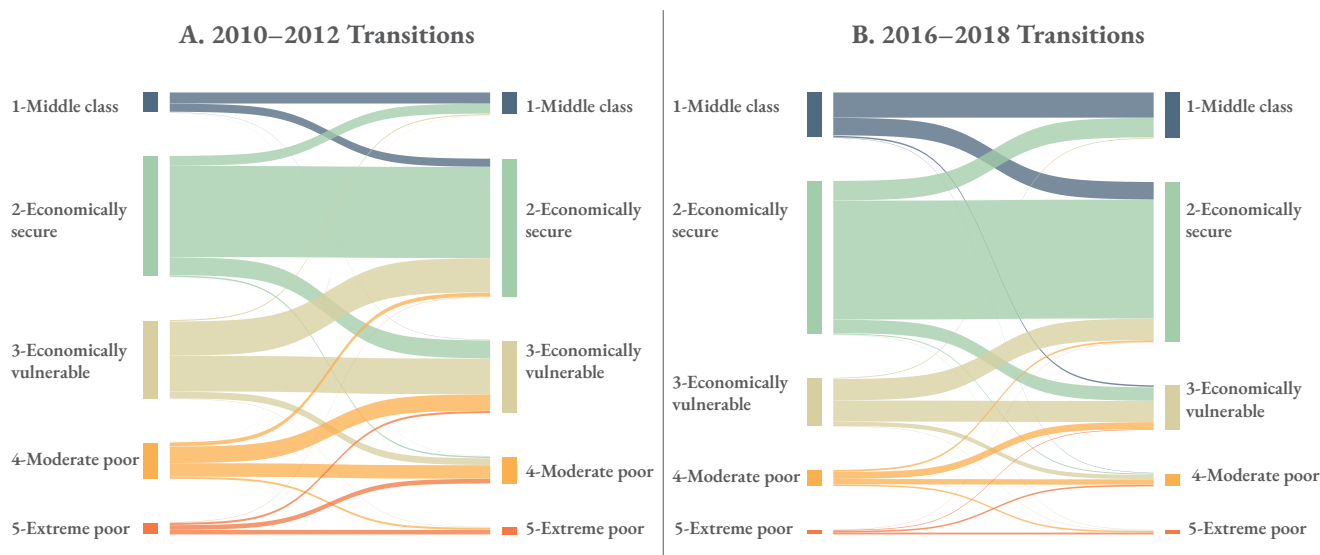
Notes: The extreme poor, living on less than the international poverty line ($1.90/day, 2011 PPP); The moderate poor, living on $1.90 to $3.20 / day (2011 PPP); The economically vulnerable, living on $3.20 to $5.50 a day (2011 PPP); The economically secure, living on $5.50 to $15 a day (2011 PPP). The middle class, living on more than $15 a day (2011 PPP).
Source: World Bank staff calculations using VHLSS panel.

class (Table 1.5). The location of households is a primary determinant of the likelihood of experiencing improving economic conditions related to access to better economic opportunities. Stable and sustainable upward economic mobility requires not just access to jobs but also to good jobs that can provide economic security. Groups that experienced high rates of climbing and low rates of sliding are those which exited agriculture completely or gained employment with a formal contract. Households that have lower than average rates of sliding include those that were not engaged in agriculture over the entire period, exited agriculture, or worked in manufacturing (see Chapter 2 for more discussion on poverty reduction drivers).

Table 1.5. Economic mobility transitions from 2016 to 2018, by household characteristics

| | % | | |
	STAY	CLIMB	SLIDE
National	66.0	21.4	12.6
Geographic area (time invariant)			
Central Highlands	59.5	24.2	16.3
Mekong Delta	67.7	20.1	12.2
Midlands and Northern Mountains	57.4	26.3	16.4
Northern and Coastal Center	64.8	23.6	11.7
Red River Delta	71.4	17.7	10.9
Southeast	68.6	19.3	12.1
Rural	64.2	23.2	12.7
Urban	70.3	17.2	12.5
Ethnicity (time invariant)			
Kinh majority	69.3	19.4	11.4
Ethnic minority	49.9	31.2	18.9
Employment characteristics and dynamics			
No participation in agriculture	72.5	17.2	10.3
Exited agriculture in 2018	62.9	26.9	10.3
Entered manufacturing in 2018	61.8	20.7	17.5
Has formal contract in 2016	73.3	15.4	11.3
Gained formal contract in 2018	61.3	29.3	9.4

Note: Climbers are households that are in a higher economic class in 2018 than in 2016. Sliders are households in a lower economic class in 2018 than in 2016. Stayers are in the same economic class in 2018 as in 2016. Economic class definitions are based on World Bank global definitions as defined in Box 1.4.
Source: World Bank staff calculation using VHLSS panel sub-samples.

Challenges exist for sustainable upward economic mobility

Among some groups, poverty reduction still faces challenges of sustainability and resilience. Traditionally poor regions experience high rates of churning—that is, high rates of both upward (climbers) and downward (sliders) transitions—tempering net overall poverty reduction. Characteristically poor groups such as households in the Midlands and Northern Mountains and ethnic minorities experienced rates of climbing and sliding that were higher than the national average. This complicates persistent poverty alleviation since not necessarily the same households are chronically poor from year to year (see Chapter 3 for a review of groups with chronically high poverty rates).

BOX	1.4.	VHLSS Panel sub-sample

Across the biennial household expenditure modules, about half of the sample are re-interviewed and half are rotated. Furthermore, a quarter of the samples are re-interviewed over three consecutive rounds spanning four years. The VHLSS 2010–2018 samples were drawn from a master sample frame based on the 2009 Census. Since the 2020 VHLSS was sampled from the 2019 Census, a panel does not exist for this year.

Table B.1.4.1. Number of panel households (over two-year periods)

	2012	2014	2016	2018
2010	4,231	1,951		
2012		4,226	1,895	
2014			4,275	1,936
2016				4,281

The selection of the panel sub-sample appears well randomized. Since the panel does not follow migration or split households, there may be attrition bias. However, Pimhidzai et al (2019) compared outcomes between the rolling panel sub-sample and the full sample and did not find evidence of such a bias.

1.6. Trends across the welfare distribution

The concepts of poverty reduction, inequality, and inclusive growth are connected. The literature notes the importance of the impact of inequality on poverty reduction, highlighting a double-dividend effect (Alvaredo and Gasparini, 2015; Bourguignon, 2004). At a macro level, changes in poverty can be decomposed into a combination of growth and redistribution effects (Bourguignon, 2003, 2004; Datt and Ravallion, 1992; Ferreira, 2012). Through a growth effect, growth in mean income or in consumption can drive poverty reduction. The second channel is redistribution or through changes in inequality. Reducing inequality has a double-dividend effect because it promotes poverty reduction today and accelerates poverty reduction in the future by breaking cycles of intergenerational poverty traps. Lower levels of inequality have been empirically associated with higher growth elasticity of poverty reduction; however, the empirical evidence is not conclusive (Bergstrom, 2020).

Consumption growth was consistently high over the decade, but in recent years it is higher among the rich

Higher rates of consumption growth has shifted from the lower to the upper ends of the distribution. On average, household consumption growth was strong at about 5 percent per year over the entire decade. A low cost of living relative to the rest of the East Asia and Pacific (EAP) region, based on international price comparisons (PPPs), also stretched purchasing power. With low taxation and relatively inexpensive living costs such as rent or mortgages, these rising incomes were channeled into increasing household discretionary consumption. At the beginning of the decade, households at the lower ends of the welfare distribution enjoyed higher-than-average growth rates (Figure 1.16). Higher growth rates at the bottom of the distribution were evident between 2010 and 2014. In later periods (2014–2016, 2016–2018, and 2018–2020), the highest rates of growth were observed among households at the higher ends of the distribution.

The cost of maintaining decent living standards is increasing. Rising expenditures also reflect an increase in the cost of living, changes in what is considered to be necessary to sustain a quality life in a richer country, and redefined concepts of minimum standards. As is to be expected in a rapidly growing economy, the costs of basic necessities begin to accumulate with higher utilities, transportation needs, health expenditures, and housing costs. Households are spending a larger share of their income on non-food items, reflecting higher amounts of discretionary income. Expenditures on housing,[19] durables, education, health, and other non-food items are all increasing across the entire welfare distribution. Ownership in durables and assets is also increasing, consistent with higher expenditures. However, ownership of some higher-end items such as cars and computers is still uncommon or limited to the wealthiest households. This is also seen through changes in household assets, where

Figure 1.16. Household consumption growth across the welfare distribution
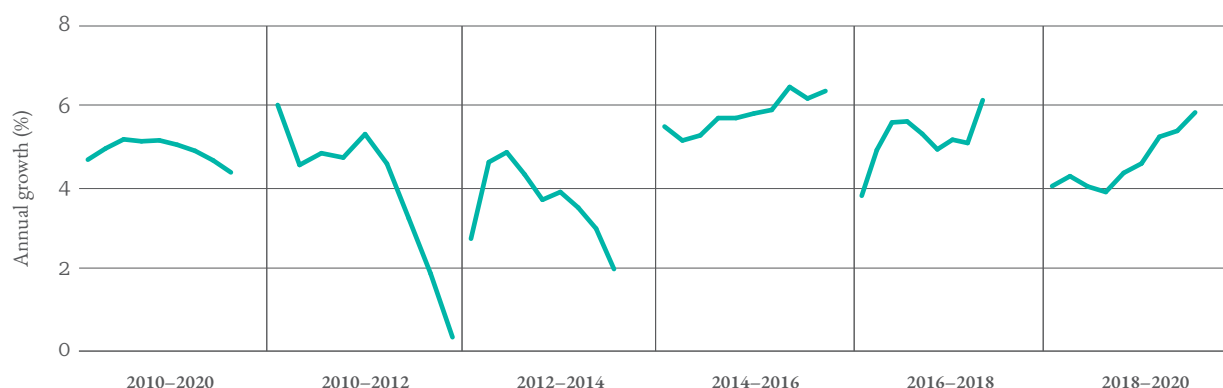
Note: Growth incidence curves illustrate the trends in annualized household consumption growth per capita across different points of the welfare distribution. Due to the small sample size of the household survey, and also less precision in the tails, these curves are constructed from 10 points, each representing a welfare decile.
Source: World Bank staff calculations using VHLSS.

ownership of landline phones and bicycles are decreasing, but cell phone and motorcycle ownership is increasing. Diversity in food consumption has also increased, with more purchases notably in dairy and eating out. There is still some variation across geographic areas, with the poorest regions spending the largest part of their food consumption on grains, while wealthier regions have higher shares of food consumed as meat or eating out.

Measures of dispersion illustrate widening inequality

Inequality in household consumption can be measured in a variety of absolute and relative ways. These measures include ratios, standard deviations, Gini coefficients, and absolute gaps. Across these measures, there is a similar story to what was illustrated using the GICs; household consumption between the least and most well-off groups are widening in recent years.

Promoting growth of the bottom 40 percent of the population is one of the World Bank's twin goals. The Shared Prosperity indicator measures the extent to which economic growth is inclusive by focusing on income growth rates of the population at the bottom of the income

distribution (bottom 40 percent) rather than on average or among those at the top. In recent periods, the growth of the bottom 40 percent of the population has been lower than the national average (Figure 1.17). As with the growth incidence curves, average consumption growth for the poorest 40 percent grew more quickly than for the richest 60 percent from 2010 to 2014 before falling behind. In the 7th edition of the Global database of shared prosperity, Vietnam was the only country in the East Asia and Pacific region sample where the shared prosperity premium is negative, of where the growth of the bottom 40 is lower than average growth across all households (Figure 1.18).

Relative inequality has remained remarkably stable over the past decades, but began to increase again in the latter half of the decade. The Gini Index was 35.6 in 1993 and 36.8 in 2020 (Figure 1.19). Between 1993 and 2018, the only instance when inequality increased substantially in Vietnam was in 2010 near the global financial crisis, but it quickly reverted in 2012. In the first half of the decade, inequality declined, as growth was strongest at the bottom of the welfare distribution. But inequality slowly increased in the second half of the decade, and more noticeably in 2020. The absolute difference in annual per capita consumption between the poorest and richest 10 percent has also widened

Figure 1.17. Comparing growth at the bottom and top of the distribution
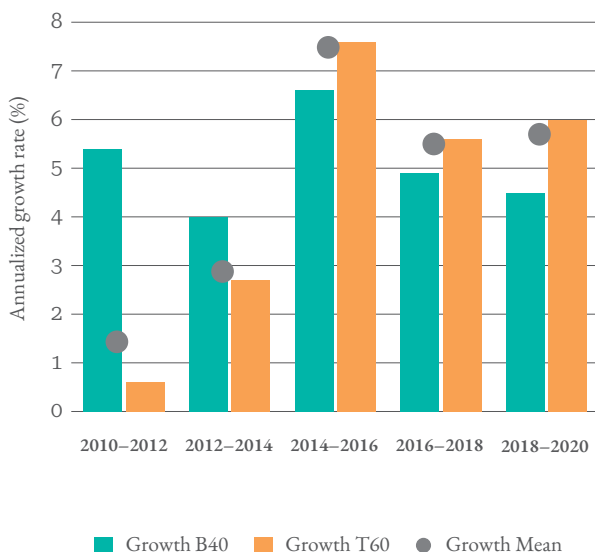
Growth B40   Growth T60   Growth Mean

Note: Measures based on real household consumption per capita.
Source: World Bank staff calculations using VHLSS 2010–2020.

Figure 1.18. Vietnam's shared prosperity vs other East Asia countries

Shared Prosperity (%)   Shared Prosperity Premium (percentage point)
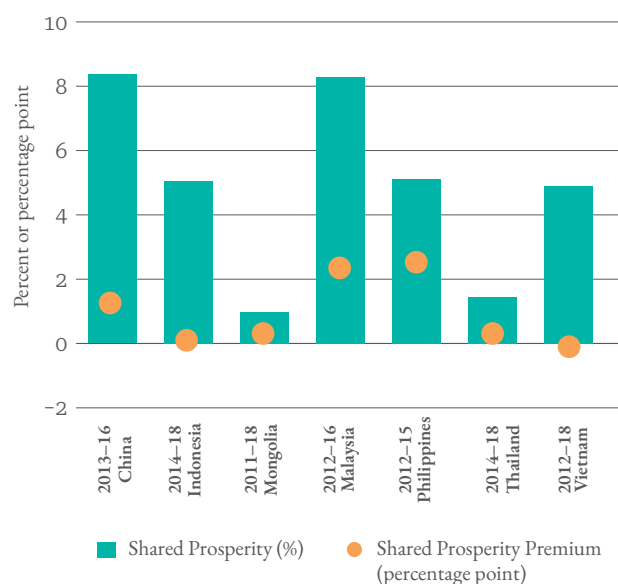
Source: Global database of shared prosperity, seventh edition, World Bank 2020.

considerably (Figure 1.20). From 2010 to 2020, average household consumption per capita among the bottom 10 percent of population increased from 7.4 to 12.1 million VND per month. However, for the richest 10 percent of the population, the increase was from 52.9 to 136 million VND per month over the same period.

Differences in consumption along the distribution in the same year also reveal much faster growth at the top of the distribution

The much higher consumption of the top 10 percent is also seen across consumption sub-components (Figure 1.21). While household expenditures are increasing incrementally across the first nine welfare deciles, the top 10 percent of households have about double the expenditure in some categories as the 9th decile, such as durables and rent. This illustrates a large gap among the fortunes of the top 10 percent compared to the rest of the population. These gaps existed in 2010 as well but are wider in 2020. Thus, absolute gaps and inequality are also increasing.

Figure 1.19. **Relative inequality, Gini Index**
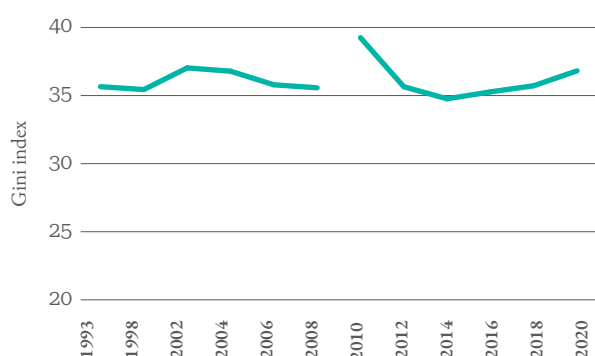
Note: Measures based on real household consumption per capita. Poverty measurement before and after 2010 is not comparable.
Source: PovcalNet.

Figure 1.20. **Widening absolute inequality**
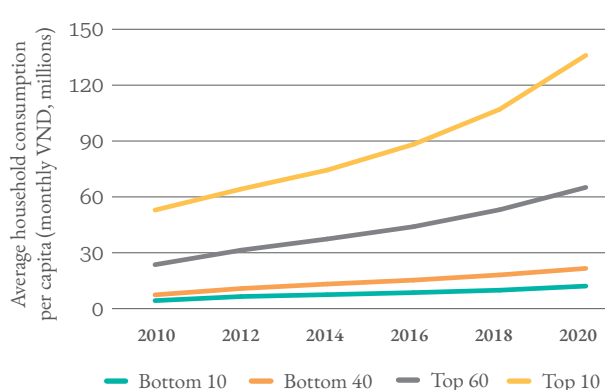
Note: Measures based on real household consumption per capita.
Source: PovcalNet.

Figure 1.21. **Expenditure levels, 2020**
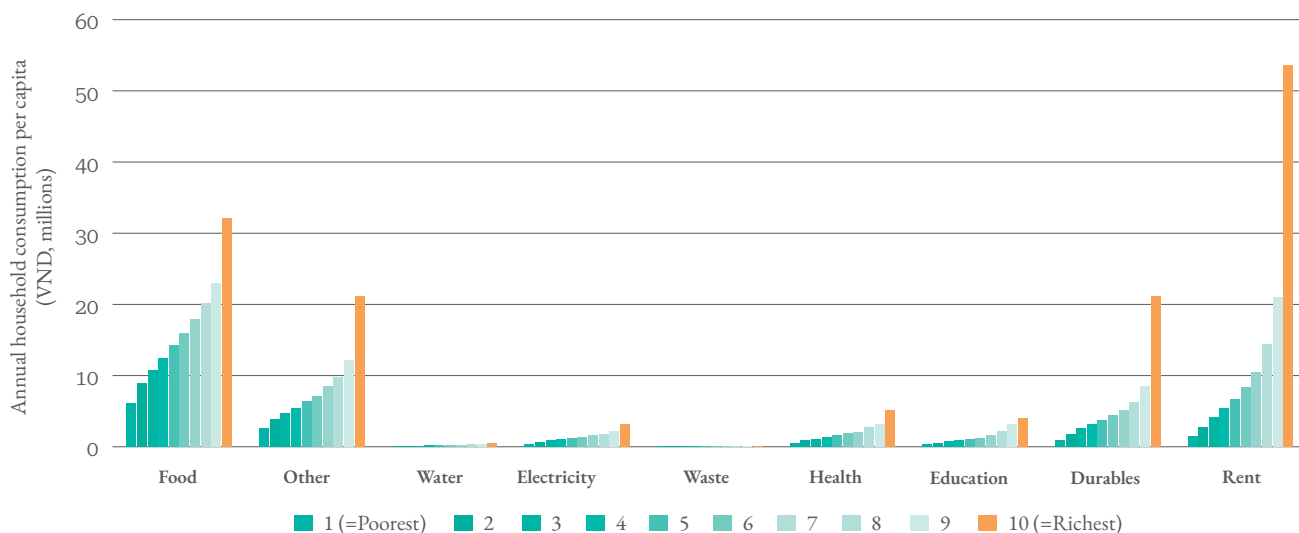
Source: World Bank staff calculations using VHLSS.

1.7. How new developments from COVID-19 have impacted poverty projections and inequality

Before the emergence of the Delta variant in April 2021, Vietnam was expected to enjoy a "V-shaped" recovery, with growth back to pre-COVID levels by Q3 2021. However, the COVID-19 context dramatically and unexpectedly worsened in April 2021, when cases began to accumulate quickly. Within a month the number of COVID-19 cases in Vietnam surpassed the total number from the entire previous year. Cases were concentrated in the HCMC area and surrounding industrial zones at first and remained largely contained until November, when movement restrictions eased, and then spread more widely

across the country. Residents in these urban areas experienced lockdowns that lasted several months. Industrial zones also reduced output, and the economic vulnerabilities of migrant laborers were also highlighted.

Poverty projections using economic growth expectations after the arrival of the Delta variant show stagnation in poverty reduction in 2021. Figure 1.22 compares changes in poverty forecasts based on growth forecasts from March and October 2021, and including scenarios with different distributional assumptions. Projections made in March 2021, before the arrival of more transmissible variants, suggested that poverty reduction would stay on track, but higher inequality could slow the pace of poverty reduction. Downgraded growth projections made in October 2021 estimated are that poverty will be about a half percentage point higher—4.7 vs. 4.2 percent—in 2021 under the $3.20/day 2011PPP poverty line (and under the scenario without increasing inequality) (Figure 1.22). However, this is most likely a lower-bound

Figure 1.22. Distribution-sensitive poverty projections for Vietnam, 2018–2023
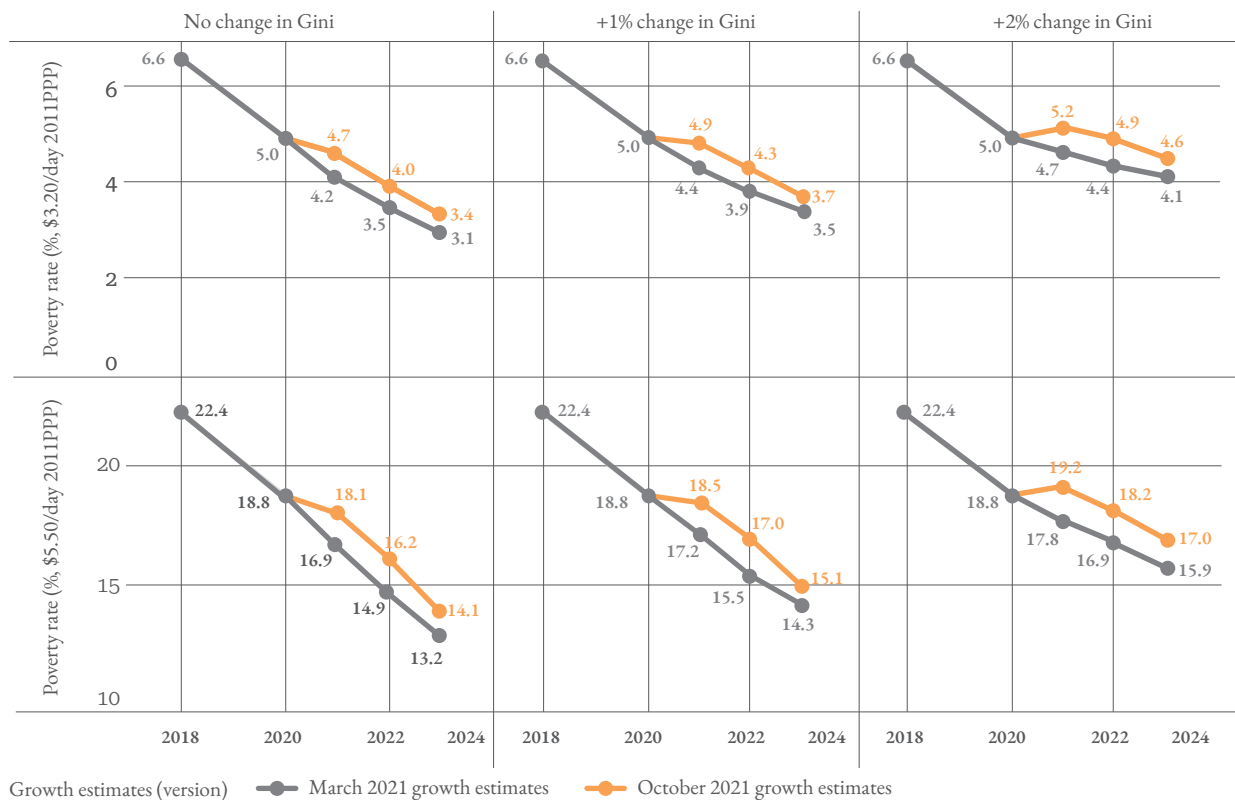
Note: Poverty rates in 2018 and 2020 are based on survey data. Poverty rates in 2021 and onwards are projections. Simulations of changes in inequality, if any, are assumed to start in 2021. Distributionally sensitive simulations methods are based on Lakner et al. (2020). See Annex 1.4 for details.
Source: World Bank staff estimations using VHLSS, 2018, 2020.

estimate of the increase in poverty since this estimate assumes no change in inequality. Inequality is expected to increase because households that are least able to cope and have intermittent sources of income are the most impacted during lockdowns and a period of reduced retail spending (World Bank, 2021b). Under assumptions of a 1 percent increase in inequality, poverty rates in 2021 are expected to stagnate. Moreover, an unprecedented economic slowdown in 2021 coupled with a 2 percent rise in inequality could potentially lead to an increase in poverty.

The adverse impact of inequality on poverty reduction can be just as large as the impact of slower growth (Figure 1.23). Small increases in inequality can slow poverty reduction, especially when accumulated over multiple years. A downgrade in the GDP growth forecast increases poverty estimates 0.5 percentage points in 2021. However, a 1 percent increase in the Gini coefficient would increase poverty about 0.4 percentage points, and a 2 percent increase in the Gini coefficient would increase poverty in 2021 by 0.5 percentage points. Globally, it has been found that a 1-point decrease in the Gini index in every country would lower global poverty by more than a 1 percentage point increase in GDP per capita (Lakner et al., 2020). Bergstrom (2020) also finds that a 1-point reduction in inequality leads to a more than 1 percent increase in mean incomes, based on global analysis. While recovering growth can narrow the differences in poverty projections by 2023 under scenarios of low changes in inequality, larger changes in inequality would lead to longer-term increases in poverty.

Inequality in both monetary and non-monetary dimensions can be expected to increase during the COVID-19 pandemic for a range of reasons. In terms of coping during COVID-19, poor households were more reliant on external sources such as borrowing, while rich households were better able to cope using their own resources such as tapping into savings (World Bank, 2021b). Women bear a larger share of caregiving responsibilities, and their labor market activities were more adversely impacted than men's. Informal workers are the least inclined to have safety nets and experienced the most challenges when seeking government cash support. The continuity of education was uneven during COVID-19, and the pandemic has potentially widened gaps in human capital formation because of the uneven capacity of schools across the country. The future is digital, but there are gaps in digital use and inclusion. Wealthier households are more able to participate in the digital economy as both sellers and buyers on digital platforms.

Increasing inequality can have long-term implications. Inequities can have long-term consequences: lost education is unlikely to be recovered, with consequences for lifetime wages; sold assets cannot produce future income; and employment scarring is also associated with lower lifetime earnings. Larger businesses and wealthier households were also able to make investments to reap larger sales from digital orders, which may lead to widening inequality down the road. Minimizing future disparities will require forward-looking policies and improving existing support systems.

Figure 1.23. Impact of changes in growth and inequality on poverty projections
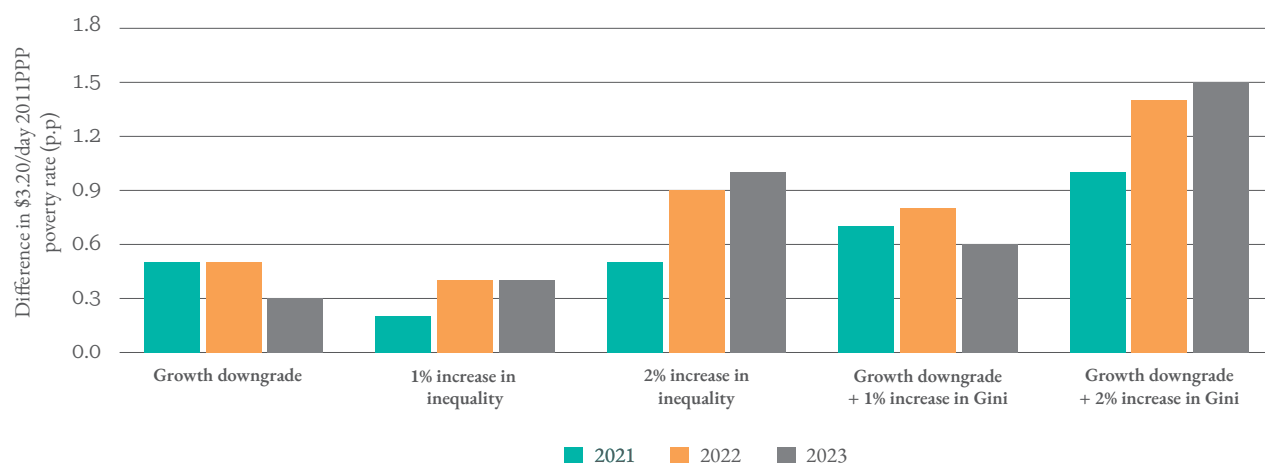
Source: World Bank staff estimations using VHLSS, 2020.

1.8. Summary

The objective of Chapter 1 is to document broad trends in poverty and inequality over the last decade (2010–2020), as well as provide poverty projections under new and evolving COVID-19 developments. This introduction provided a high-level assessment and intentionally deferred some questions, which will be addressed in later chapters. Where to find answers to key questions is described below.

What were the drivers of poverty reduction over the last decade? (Chapter 2)

The drivers of poverty reduction are overwhelmingly attributable to growth factors throughout most of the decade. Chapter 2 describes broad labor market changes over the last decade and the evolution of household profiles and incomes in more detail. With respect to the drivers of poverty reduction, group and income decompositions are used to quantify and explain broad contributing factors from household profiles or income sources.

Why is poverty reduction so challenging for certain groups? (Chapter 3)

There is an interplay between ethnicity, agriculture, geography, and chronic poverty in Vietnam. Remote mountainous areas where the poor are concentrated are heavily populated by ethnic minorities, who are also heavily engaged in agriculture. Chapter 3 further distills the observable differences in poverty reduction across these chronic dimensions and some reasons behind lagging progress. For the poorest households, agriculture is more often the largest source of household income, but agricultural incomes have also shown little growth over the decade.

Human capital and poverty reduction (Chapter 4)

Human capital is a significant driver of sustained economic growth and poverty reduction. Consisting of a combination of education, skills, and health factors, human capital formation in early life is a significant determinant of social and economic outcomes. High-quality education helps break intergenerational cycles of poverty by increasing labor productivity and growth. While education has improved significantly in Vietnam, parental and household characteristics are still highly explanatory of remaining differences in child outcomes in education and health. The trends in human capital development are explored across ethnic, geographic, and socioeconomic groups to determine existing inequalities. The dissimilarity in outcomes of these groups is decomposed and quantified to be attributable to characteristics such as geography, household characteristics, and expenditure quintile.

Pathways for sustaining upward economic mobility (Chapter 5)

Over the past decade, growth in Vietnam has been inclusive, leading to a net reduction in poverty rates, with many moving out of poverty in their lifetimes. This chapter discusses what the upward economic mobility channels of the future may look like, and it highlights potential challenges for Vietnam's economic transition and upward economic mobility going forward. These challenges include high labor informality, low job quality, low labor productivity, the need for upskilling, and an ageing population.

What are the risks to households falling into poverty? (Chapter 6)

COVID-19 has revealed a wider population of vulnerable groups. These groups risk falling into poverty traps when exposed to shocks, without the provision of adequate safety nets. Chapter 6 discusses the broader range of vulnerable groups by the different types of shocks they face, including covariate and idiosyncratic shocks. Covariate shocks are caused by large events that are felt by many households (e.g., climate change), while idiosyncratic shocks are those that may be unique to the household (e.g., accident). The chapter also explores the relationship between poverty, vulnerability, and risk and its policy implications. It concludes with a discussion of Vietnam's social protection system and preliminary insights on how it can be improved to better guard against shocks.

How can public financing be used effectively for the poor? (Chapter 7)

All households pay taxes (whether personal income taxes or indirect taxes such as value-added tax (VAT) and excise taxes), and all benefit from some public spending (whether social assistance transfers, electricity subsidies, or public health and education). For some households the taxes are greater than the benefits, meaning they are net payers

into the fiscal system, while others are net beneficiaries, as they receive more in benefits than they pay in. When the net beneficiaries are concentrated in the lower half of the income distribution and the net payers are concentrated in the upper half, the fiscal system is progressive and can reduce both poverty and inequality. At the same time, the revenues generated from taxes fund investments in physical and digital infrastructure as well as human capital accumulation, which can both increase economic mobility for the children of poorer and vulnerable households and drive economic growth. Chapter 7 addresses how well fiscal policy in Vietnam achieves these aims.

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1.10. Notes

[13] Minimum monthly wages are about 4 million VND per worker. Average wages in 2020 were about 6 million VND per month. Households usually have multiple sources of income and working adults.

[14] First principles and guidelines on the construction of the welfare aggregate are illustrated using data from several countries including Vietnam in Deaton and Zaidi (2002). Almost two decades later, Mancini and Vecchi (2020) conducted an updated review using a wider set of countries and methodologies.

[15] The consumption of commodities is constrained by a household's budget and income. Of course, household preferences are different, and given any amount of money, households may choose to spend it differently. Theoretical underpinnings of consumer choice and welfare assume a utility-based approach. For a given level of income, households will consume items based on a normative utility function (Sen 1980, Nussbaum 2011, Ravallion 2015).

[16] Poverty rates before 2010 are based on a different methodology. The construction of the welfare aggregate was significantly updated in 2010. Trends before and after 2010 are different and not comparable.

[17] MOLISA has forecasted that by January 2021, the country will have about 16.6 percent of the total households, or about 4.473 million households, with about 17.447 million people, having incomes under those poverty levels (2.32 million household more than the figure of 2020). For more information, see: https://en.vietnamplus.vn/20212025-poverty-standards-to-help-better-identify-poor-households/189264.vnp

[18] Regional poverty trends described in this section are part of a high-level discussion on poverty dynamics over the last decade. Poverty profiling across other household characteristics, in particular dimensions that reveal large variations in poverty rates, are further discussed in Chapter 3.

[19] The cost of housing is estimated for most households. Most households do not pay monthly rent, so housing value is imputed using hedonic models based on size, location, and housing quality.

[20] See Gibson (2009) for information on the Spatial Cost of Living Index (SCOLI).

[21] This is often chosen because for many poor households informal incomes can be lumpy and look quite different when measured in one week compared to another, varying with the agricultural season, the amount of business a home enterprise does, or the number of hours of casual labor they can sell. Consumption is often more regular, as savings or borrowing is used to smooth out lumpy incomes. Thus, consumption is a close reflection of their average welfare or living standards. In higher-income countries, national aggregates are often based on household current income. As populations live farther from the concept of minimum needs, households are more likely to have stable formal incomes, and thresholds reflect what is regarded to be needed to maintain middle-class living standards.

[22] For the 2006–2010 and 2011–2015 phases, the monetary poverty threshold for monitoring was fixed at the beginning of each five-year phase, which resulted in welfare trends not being comparable over longer time horizons (Demombynes and Vu, 2015).

[23] The ten non-monetary indicators include: adult education, child education, access to health care services, health insurance, housing quality, per capita housing area, drinking water supply, type of toilet/latrine, use of telecommunication services, and assets for information access.

ANNEX **1.1.**

Expenditure in the Vietnam Household Living Standards Survey

The first consumption module was collected in the 1993 Vietnam Household Living Standards Survey (VHLSS). The VHLSS collects household expenditures on food, non-food, housing, durables, education, and other categories. Food captures essential calories and nutrients. Non-food items encompass everyday essential goods, services such as health and education, utilities, water, and value from using housing or other durable items for extended periods. Consumption categories can be either own-produced, gifted, or purchased, an important distinction that separates the consumption aggregate from current income concepts. Values from housing are estimated since many Vietnamese do not pay rent or mortgage, yet there is still a welfare utility present that needs to be measured. The time reference of consumption varies by item. Expenditures on regular items such as food are asked in relation to the last 30 days, but other items are asked in reference to the last six months or year.

The welfare aggregate is a monetized value of a bundle of goods and services based on household consumption and expenditures. For the purposes of measuring welfare, the welfare aggregate based on household consumption includes adjustments, imputations, and valuations. First, household consumption is measured in per capita terms to account for differences in consumption due to household size. Second, household consumption is spatially adjusted following a geographic price deflator, the Spatial Cost of Living Index, or SCOLI (World Bank, 2012).

The measurement of an expenditure-based welfare concept for Vietnam was updated in 2012 using the 2010 VHLSS and is described in detail in the World Bank 2012 Poverty Assessment Report (World Bank, 2012). Important updates included the measurement of imputed rent and durables, developing the spatial and temporal price deflator index,[20] and updating the reference basket. These changes and improvements were quite substantial, and welfare measurements before and after 2010 are not comparable. The large sample of the VHLSS includes approximately 45,000 households, and since 2015, it has been conducted every year. The collection of household expenditures used for the World Bank's consumption-based poverty measurement is conducted biannually and on a smaller sample of approximately 9,400 households that is representative at the regional level. The 2010–2018 VHLSS were sampled from the 2009 Census. The 2020 VHLSS is sampled from an updated sampling frame based on the 2019 Census.

ANNEX **1.2.**

Global poverty measurement and Vietnam

To measure poverty using the World Bank's global poverty thresholds, the monetary value of the consumption aggregate collected from the VHLSS must be converted from Vietnamese dong to international dollars. Specifically, the units of measurement for global poverty are 2011PPP international dollars and in per capita per day terms.

An important distinction is that conversion to international dollars utilizes purchasing power parity (PPP) conversions rather than exchange rates. PPP allows a country's income and consumption data to be converted into globally comparable terms taking into account cost-of-living comparability across countries. The PPP of currency of an economy is defined as the number of currency units required to purchase a basket of goods and services with one unit of the currency of a reference or base country. The PPP is computed based on price data collected by countries across the world for a common basket of goods and services. For a fixed basket of international goods valued at US$1, those items can be purchased in Vietnam for 7,528.385 Vietnamese dong. The observation that the PPP conversion factor is much lower than the exchange rate means that cost of living is low in Vietnam.

Table A.1.2.1. Conversion rates

	VIETNAMESE DONG (TO US$1)
Purchasing power parity (2011, revised) Households and NPISHS final consumption expenditures	7,528.385
Exchange rate (2011, period average)	20,509.75

Note: The total value of actual and imputed final consumption expenditures incurred by households and NPISHs on individual goods and services. It also includes expenditures on individual goods and services sold at prices that are not economically significant.
Source: World Bank International Comparison Program, World Development Indicators.

ANNEX **1.3.**

Review of poverty lines

There are many concepts of poverty, each with its own merits. The World Bank's bi-annual Poverty and Shared Prosperity Report, *Piecing Together the Poverty Puzzle,* expanded the menu of indicators that it uses to measure globally comparable poverty rates, including higher absolute poverty lines, relative poverty lines, and a multidimensional poverty measure (World Bank, 2018a). Countries also set their own national poverty lines, determined by national governments that are best suited to a country's specific conditions. Some countries explicitly measure happiness, such as in Bhutan, or poverty based on a consensus measure, as in Tonga. In many developing countries, monetary poverty is measured based on household consumption rather than household income.[21]

Vietnam's National Poverty Measurement

National poverty reduction budgeting and goal setting is based on standards set by the Ministry of Labour, Invalids and Social Affairs (MOLISA). MOLISA's poverty lines are also referred to as budgeting lines since national estimates of poor people influences the poverty reduction budget. Standards and targets are set for a five-year Socioeconomic Development Plan (SEDP) cycle. For example, different standards were set for the 2006–2010, 2011–2015, 2016–2020, and 2021–2025 periods (Table A.1.3.3.). However, the identification of poor and near-poor to inform the implementation of poverty reduction programs at local levels may include further conditions defined by local governments. The government in Vietnam is highly decentralized, and while national standards are developed for monitoring targets, household targeting may rely on different criteria determined at local levels.

The definitions of poor and near-poor have changed across SEDPs. For the 2006–2010 and 2011–2015 phases, the poor and near-poor were determined by only household income.[22] The general poverty rate reflected the share of households earning income less than the income threshold for the poor, and was last published in 2016. Today, for policy, planning, and budgeting at the national level, MOLISA identifies the poor and near-poor based on a combination

of non-monetary and monetary principles. In 2015, the government approved a plan to update the country's poverty monitoring basis to include a multidimensional measure. The new multidimensional index includes ten non-monetary indicators and is reported annually by the GSO at the national and provincial levels (UNDP, 2018).[23] From 2016 to 2020, those who subsist below a low monetary threshold based on household income are considered poor, while the near-poor are those living within a higher monetary range and were also deprived in 3 out of 10 non-monetary indicators. These definitions changed again for the 2012–2025 period where the poor and near-poor are now defined by the same monetary threshold but different non-monetary deprivations. Comparing the 2006–2010 and 2021–2025 planning periods, the urban monetary threshold for the poor has increased 5-fold, and the rural monetary threshold has increased about 5.8-fold.

GSO-WB Poverty Line

The World Bank and the General Statistics Office (GSO) jointly developed a monetary consumption-based poverty line following the Cost of Basic Needs methodology. The first monetary poverty line was developed using the 1993 VHLSS (World Bank, 1999). The original GSO-WB poverty line was thus based on economic conditions of households just shortly after the initiation of Doi Moi reforms. Due to rapid economic progress and changes in household consumption patterns, the GSO-WB poverty line was substantially revised using newer consumption patterns and data from the 2010 VHLSS. Cost of Basic Needs poverty lines are constructed by first defining a food poverty line based on minimum calorie requirements, and then a non-food poverty line is calculated based on average non-food expenditures of a baseline group. This update is explained in detail in the World Bank's 2012 Poverty Assessment report (World Bank, 2012). The purpose of the GSO-WB poverty lines is primarily to ensure consistency in poverty monitoring over time and across space. The values of the GSO-WB and World Bank lower middle-income country (LMIC) poverty lines are very similar.

World Bank Global Poverty Lines

The construction of the World Bank global poverty lines was informed by national poverty lines across the developing world. Extreme poverty informing SDG #1 is defined by the World Bank's International Poverty Line ($1.90/day 2011PPP) that represents the average of national

poverty lines from the poorest countries (Ravallion, Chen, and Sangraula, 2009). The global poverty line most suitable for the Vietnam context is the LMIC poverty line, derived as the median of a set of national poverty lines from LMIC countries and valued at $3.20/day in 2011 PPP US dollars (Joliffe and Prydz, 2016). At this value, the LMIC poverty line is representative of local minimum basic needs that LMIC countries themselves define as necessary for day-to-day living (Table A.1.3.1.).

Table A.1.3.1. Median value of national poverty lines, by economy income classification (circa 2011 in PPP terms)

ECONOMY, INCOME CLASSIFICATION	MEDIAN
Low-income economy	1.90
Lower-middle-income economy	3.20
Upper-middle-income economy	5.50
High-income economy	21.70

Note: Values are rounded to the nearest 0.10. Economies are classified on the basis of official World Bank income classifications, which rely on measures of per capita gross national income. Estimates are based on national poverty lines in 126 economies. The selected poverty line for each economy is the one that is closest in time to 2011.
Source: Jolliffe and Prydz (2016).

This report primarily uses the World Bank global poverty lines

It is instructive to understand the value of the World Bank global poverty lines in Vietnamese dong. The value of Vietnam's monetary poverty thresholds has slowly increased, reflecting increasing average standards, aspirations, and costs of living.

• The World Bank's International Poverty Line (IPL) of $1.90/day 2011PPP is equivalent to about 626,512 VND per person per month. At the beginning of the decade during the 2011–2015 SEDP phase, MOLISA's poverty threshold was below the equivalent value of the IPL.
• The upper threshold for the identification of the near poor during 2016–2020 SEDP phase used thresholds in similar equivalent values to the LMIC poverty line of $3.20/day 2011PPP.

• Finally, in the upcoming 2021–2025 monitoring period, income thresholds to identify the poor and near-poor are the same, and near equivalent value to UMIC PL ($5.50/day 2011PPP). The UMIC PL converts to about 1.8 million VND per capita per month, while the 2021–2025 thresholds are 1.5 and 2.0 million VND for rural and urban areas respectively (Table A.1.3.2).

Table A.1.3.2. Conversions of the global poverty lines to Vietnamese dong

	USD 2011PPP PER DAY	VND 2020 (JAN) MONTHLY PER CAPITA
International Poverty Line	1.90	626,512
Lower-middle-income country poverty line	3.20	1,055,178
Upper-middle-income country poverty line	5.50	1,813,588
High income	21.70	7,155,429

Note: Using PPP conversion factors to LCU.

Poverty rates across different thresholds illustrate similar trends in impressive poverty reduction over the last decade (Figure A.1.3.1). From 2010 to 2016, the LMIC poverty rate trended between the GSO-WB poverty rate and MOLISA's general poverty rates. Since 2016, poverty rates across different metrics have converged more closely and describe similar levels of poverty for the remainder of the decade.

Figure A.1.3.1. Comparison of poverty rates, by different lines
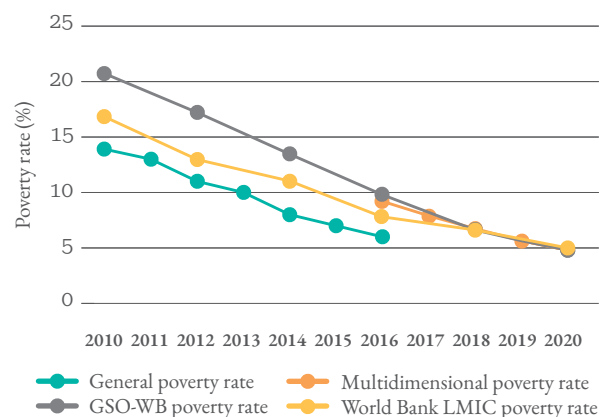
Note: Multidimensional poverty rate is preliminary in 2020.
Source: GSO and World Bank.

Table A.1.3.3. A comparison of poverty lines and monetary thresholds (VND per month per capita, '000)

	MOLISA MULTIDIMENSIONAL POVERTY		GSO MULTIDIMENSIONAL POVERTY		WORLD BANK GLOBAL POVERTY LINES			WB-GSO POVERTY LINE
Welfare concept	An index based on income per capita and non-monetary dimensions		An index based on income per capita and non-monetary dimensions		Consumption per capita			Consumption per capita
	Rural	Urban	Rural	Urban	National			National
	Rural monetary thresholds (poor and near-poor)	Urban monetary thresholds (poor and near-poor)	Rural monetary thresholds (poor, and near-poor),	Urban monetary thresholds (poor and near-poor)	International Poverty Line ($1.90/ day 2011PPP)	Lower-middle income country poverty line ($3.20/ day 2011PPP)	Upper-middle income country poverty line ($5.50/ day 2011PPP)	
2010	2006–10 SEDP Poor < 200	2006–10 SEDP Poor < 260			352	592	1,018	653
2011	2011–15 SEDP Poor: 400 Near-poor: 400–520	2011–15 SEDP Poor: 500 Near-poor: 500–650						
2012					463	779	1,339	873
2013								
2014					522	880	1,512	964
2015								
2016	2016–20 SEDP Poor < 700 Near-poor: 700–1,000	2016–20 SEDP Poor < 900 Near-poor: 900–1,300	700 or 700-1,000	900 or 900-1,300	531	895	1,539	969
2017			725 or 725-1,035	935 or 935-1,350				
2018			755 or 755-1,080	975 or 975-1,400	574	967	1,662	974
2019								
2020					628	1,058	1,819	
2021	2021–25 SEDP Poor < 1,500 Near-poor < 1,500	2021–25 SEDP Poor <2,000 Near-poor < 2,000						1,033

Note: This table only documents the monetary thresholds under various poverty lines and indices. MOLISA and GSO concepts also include non-monetary components that are not listed in this table. Values rounded to nearest thousand. MOLISA standards are only monetary in the 2006–2010 and 2011–2015 periods. Non-monetary dimensions under the MOLISA concepts include basic social services in healthcare, education, housing, clean water and hygiene, and information. The non-monetary components under the GSO Multidimensional Poverty Index includes adult education, child education, access to health care services, health insurance, housing quality, per capita housing area, drinking water supply, type of toilet/latrine, use of telecommunication services, and assets for information access.

ANNEX 1.4.

Distribution-sensitive poverty projections technical information

At a macro level, changes in poverty can be decomposed into a combination of growth and redistribution effects (Bourguignon 2003, 2004; Datt and Ravallion 1992; Ferreira 2012). Poverty projections can be made taking into account these two channels. In a simplified scenario, poverty can be projected on the basis of growth alone, when growth is assumed to be even across the entire distribution under a neutral-distribution assumption. This assumption allows for simplified calculations but may not be accurate in all cases. A distribution-sensitive poverty projection assumes that growth is uneven across the welfare distribution. Calculations of distributional sensitive poverty projections follow the methods described in Lakner et al. (2020), and are calculated using the povsim STATA command documented in Lakner, Negre, and Prydz (2014).

The initial poverty rate is the 2018 $3.20/day 2011PPP poverty rate in Vietnam, based on the most recently available survey data. Poverty projections begin in 2019.

Growth of household consumption is assumed to follow similar patterns of gross domestic product (GDP) per capita growth from national accounts.

- **Actual GDP growth rates are used for poverty projections in 2019 and 2020.** For 2021–2023, growth projections are used for poverty projection calculations.
- **A pass-through rate is fixed at 1.** This assumes that the welfare aggregate grows at the same rate as GDP or private consumption per capita. This is the most optimistic scenario.

Assumptions on the shape of the growth incidence curve and changes in inequality affect the degree of how growth is distributed across households. Inequality is modeled through parameterized assumptions regarding how welfare grows at different rates along the welfare distribution. The shape of this growth curve along the welfare distribution is referred to as the growth incidence curve. On the basis of empirically observed growth incidence curves using the Vietnam Household Living Standards Survey, a linear growth incidence curve is assumed. A linear assumption also yields more conservative projections of poverty rates:

$$g_i = \delta - \theta * p_i$$

where

g_i = the growth rate for percentile group i.

p_i = a percentile group i. The poorest households are percentile group 1, and richest are percentile group 100.

δ and θ = growth parameters that can be considered to reflect a transfer and tax.

The final Gini obtained will depend on the values of δ and θ. The parameters δ and θ are values that solve the following equation that yields the desired change in inequality.

$$\varphi(\delta, \theta) = \frac{Gini^{forecasted}(\delta, \theta)}{Gini} - 1$$

Poverty in 2018 and 2020 is based on the initial welfare values y_i. The final welfare (y_i^*) is determined by the formula below, assuming everyone is taxed in proportion to their initial welfare (y_i) and their rank (p_i):

$$y_i^* = (1 + \delta)y_i - \theta * p_i * y_i$$

where

y_i = the initial value of welfare for a percentile group i.

Chapter 2.
A review of the drivers of poverty reduction

Key Messages

- Livelihoods continued to improve over the last decade (2010–2020), as a large expansion of the economy in off-farm sectors created a net 10.6 million new jobs in the manufacturing and services sectors. Importantly, these jobs became available as a youth bulge in the population came of age, and these jobs were better than for the generation before.

- Wage income was the most dynamic source of household income, but some other sources, in particular household farming income, remained relatively stagnant over the decade.

- Household profiles are also shifting, exhibiting higher education levels and also becoming older.

- Widening inequality is driven by increasing inequality between urban and rural areas.

2.1. Changing household profiles over the last decade (2010–2020[24])

The decade was marked by broad changes not just in the economy but also in the profile and characteristics of households. This section compares the profile of households at the beginning and end of the decade. Profiles and indicators are presented at the household level rather than individual because poverty is a household-level indicator.[25]

The population grew by 11 million people from 2009 to 2019

The Vietnamese population grew by 11 million in the decade between 2009 and 2019 according to Census data, with wealthier regions experiencing higher population growth (Table 2.1). Vibrant economic centers gained the most in population; the Southeast region grew in both absolute and percentage terms, followed by the Red River Delta. The population in the Southeast region increased by 3.8 million people. The Red River Delta region also added about 3 million people. The population grew the least in absolute numbers in the Mekong Delta, which is consistent with recent outmigration trends related to worsening climate conditions.

Table 2.1. Population, 2009–2019

	2009	2019
Central Highlands	5,115,135	5,842,605
Mekong Delta	17,191,470	17,273,621
Midlands and Northern Mountains	11,013,590	12,532,801
Northern and Coastal Central	18,835,154	20,187,228
Red River Delta	19,584,287	22,543,562
Southeast	14,067,361	17,828,818
National	**85,801,996**	**96,208,635**

Source: GSO, Census yearbooks.

In 2020, there were about 26.7 million households in Vietnam, with an average of 3.7 members and 2.2 adults per household. The most common household composition, representing over half of all households, are multi-adult households with at least one child. Sixty percent of households

have at least one child. Single-adult female-headed households with a child are much more common than single-adult male-headed households with a child. Skip-generation households, those with only seniors and children, are less common. About 10 percent of households are multi-generational with at least one child, working age adult, and senior citizen. Yet, as the population is aging, the number of households with older members is also increasing (Figure 2.1).

Figure 2.1. Ageing Vietnam
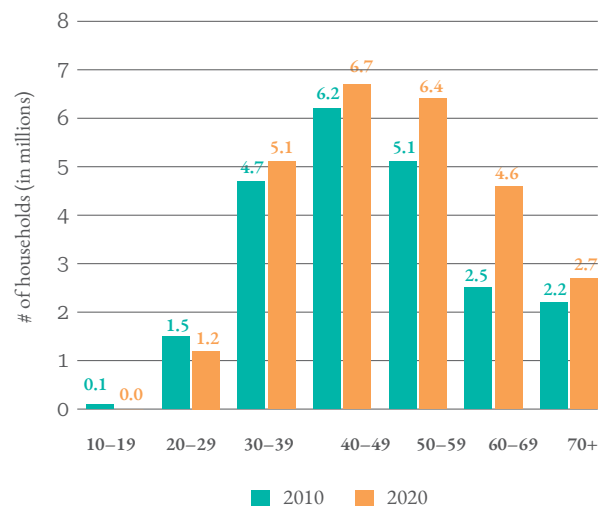
Note: Categories are by the oldest member of the household.
Source: World Bank staff calculations using the VHLSS, 2010-2020.

Most ethnic minorities still live in the Midlands and Northern Mountain region

Households with an ethnic minority head represent less than 13 percent of the population, or about 3.4 million households. The regional distribution of ethnic minorities did not change considerably over the decade. Across regions, they are still most heavily concentrated in the Midlands and Northern Mountain region, where they even outnumber the Kinh majority (Figure 2.2). They are next most concentrated in the Central Highlands region, where ethnic minorities comprise 30 percent of the regional population and the population of Kinh is the smallest. These two regions also have the highest poverty rates. The linkages between ethnic minorities and their locations are discussed in Chapter 3. Ethnic minorities are less represented particularly in regions with large cities and vibrant economies. These households are the fewest in number in the Red River Delta (about 120,000 households).

Figure 2.2. Distribution of households by ethnicity, 2020
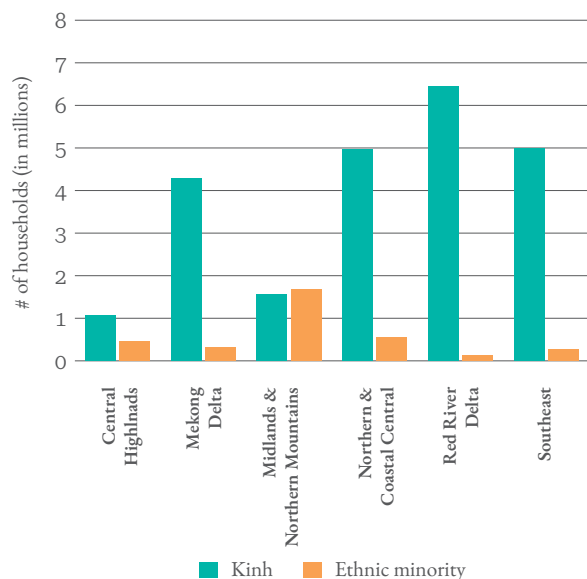
Source: World Bank staff calculations using the VHLSS, 2020

Household profiles of education and sector of economic activity have changed the most

Education completion has increased considerably. The maximum level of education in a household has improved over the past decade. In 2010, in half of all households, the maximum level of education of any member was lower-secondary level or less (Figure 2.3). By 2020, this share fell to about 44 percent of all households. There are now an additional 1.7 million households with a member who has completed tertiary education. However, tertiary-level educated households are still the minority. Chapters 4 and 5 examine education completion in more detail, as well as differences in completion across certain groups, which will affect future labor market profiles.

Households are shifting out of agriculture as a main activity.[26] Over the last decade, the number of households with someone engaging in the manufacturing or services sector increased by nearly 4 million each. In 2010, agriculture was the most common sector in which at least one person in a household was employed as their main job. In 2020, households with primary engagement in agriculture became the least common, a reversal over the decade. In 2020, about 9.7 million households, or 35.6 percent of all households,

Figure 2.3. Education level in Vietnamese households, 2010–2020
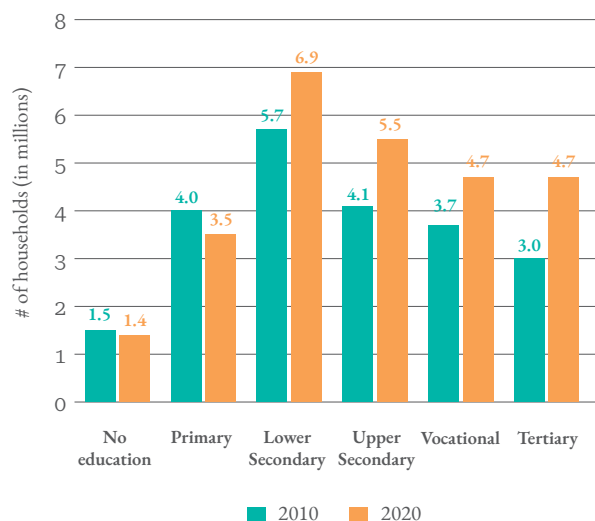
Note: Maximum level of completed education of any household member.
Source: World Bank staff calculations using the VHLSS, 2010 and 2020.

Figure 2.4. Shifts in sector of main employment of Vietnamese households, 2010–2020
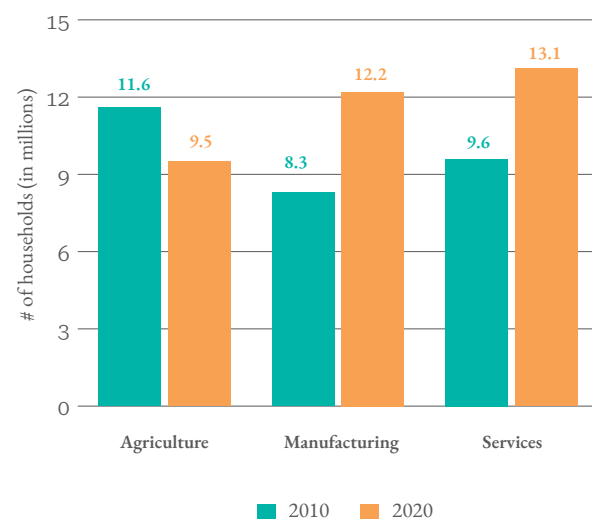
Note: Not exclusive, households with multiple working adults can be engaged in multiple sectors as main jobs.
Source: World Bank staff calculations using the VHLSS, 2010 and 2020.

have some engagement in the agricultural sector (Figure 2.4). This does not necessarily mean these households are reliant on agricultural income (agriculture is one of the lowest-paying income streams); it is more likely that agriculture is an available activity for diversification and income supplementation.

Due to a demographic dividend, the labor force expanded by a net 4.5 million workers from 2010 to 2020. Over the entire decade, the manufacturing and services sector increased in net by about 5.8 and 4.8 million workers, respectively. Larger changes were more pronounced in the latter half of the decade, when growth in manufacturing was more pronounced and agriculture jobs declined dramatically (Figure 2.5). Agricultural employment began to decline significantly between 2015 to 2020, from 24.5 million to 17.7 million workers at about an equal pace annually. The services sector transformed in the latter half of the decade through tourism. Between 2010 and 2015, international visitors increased by 3 million annually (from 5 to 8 million). By 2019, the number of international visitors had reached 18 million, an increase of nearly 10 million.

Consistent with the structural transformation out of agriculture, jobs shifted from low to medium skilled. In the first half of the decade, new jobs were just as likely to be in wage employment as in unpaid family work (Figure 2.6). In the second half of the decade, the number

of unskilled occupations declined dramatically, while the number of medium-skilled jobs increased in net by almost 3 million (Figure 2.7). These new medium-skilled jobs were primarily plant and machine operators and assemblers. While the number of medium-skilled occupations grew, growth in higher-skilled occupations was slower. The size of the high-skilled workforce remained steady at about 10 percent of the total labor force from 2010 to 2020. In absolute numbers, the high-skilled workforce grew by about 1.8 million workers, while the medium-skilled workforce grew by almost 4 million. Despite a more educated youth population, younger workers are moving into manufacturing and manual labor. See Chapter 5 for a more in-depth discussion on skills and education.

Informality is declining, but most jobs are still without contracts (Figure 2.8). The labor market in Vietnam is still highly informal, with only 27 percent of wage workers having a contract through which employers contribute to social insurance and health care. At the household level, over 40 percent of households in 2020 now have a member whose primary wage job has a contract, compared to 31.4 percent in 2010. Having a job contract aligns with being entitled to social insurance, as well as having unemployment insurance. But 21 million households, or 81 percent of all households, still have at least one household member who either has a wage job without a contract, is engaged in self-employed agriculture, or is engaged in a self-employed business.

Figure 2.5. Employment levels, by sector (15+)
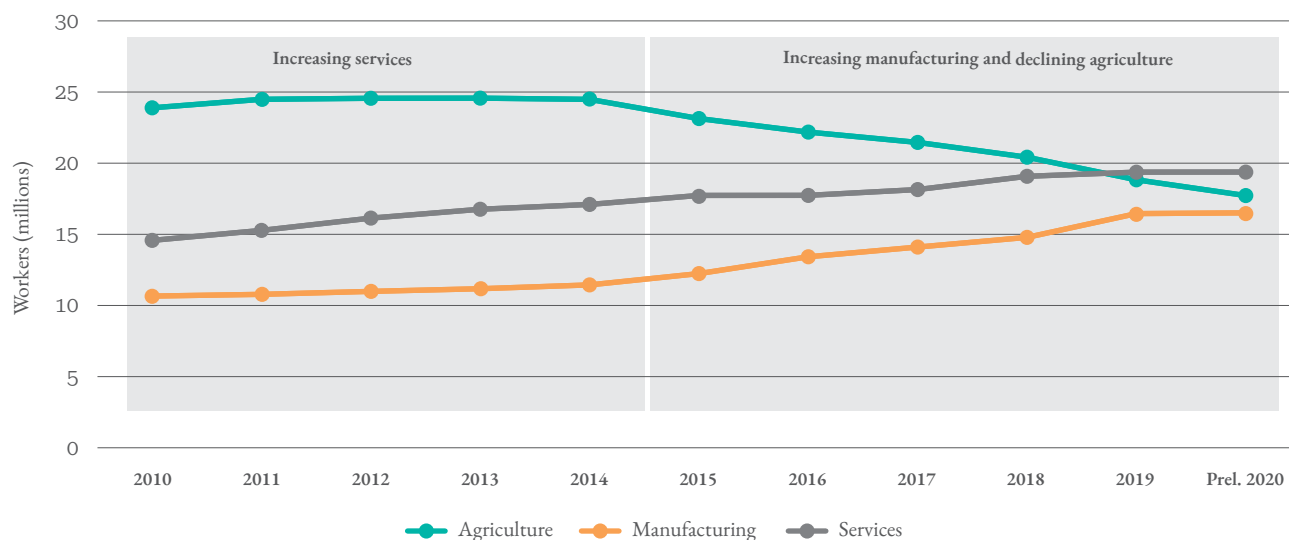
Source: GSO.

Figure 2.6. A substantial increase in wage jobs
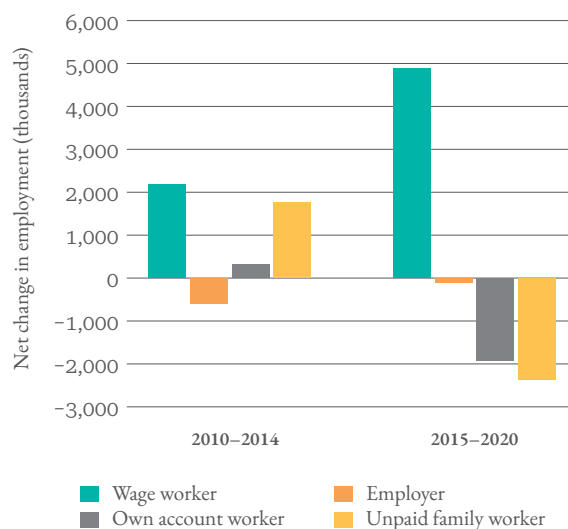
Source: GSO, LFS.

Figure 2.7. More jobs and a shift from low- to medium-skilled jobs
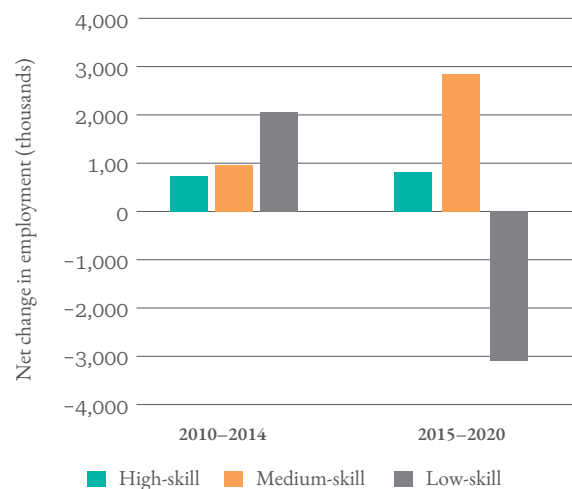
Source: GSO, LFS.

Foreign direct investment (FDI) was important in transforming jobs, since most jobs in foreign-owned enterprises are formal with higher wages compared to domestic firms. At the beginning of the decade, Vietnam was still a new entrant to the World Trade Organization (WTO), having entered in 2007, but timing also coincided with lingering effects from the 2008–2009 global financial crisis. Immediately after entry into the WTO, growth in the share of labor in manufacturing was strong from 2007 to 2010 but stagnated at the beginning of the 2010s. The absolute number of manufacturing workers remained relatively constant, coinciding with a period of stagnant FDI growth. As the foreign ownership cap was raised in 2015, FDI also increased, with the number of net new manufacturing jobs quickly following.

Across different categories of wage employment, there are linkages between the manufacturing sector, formality, and foreign-owned firms. Virtually all jobs in foreign-owned firms are formal in nature, or have a work contract and offer social insurance. In 2020, about half of all jobs with contracts were in the manufacturing sector. The public sector is the only other sector also that has high rates of formal jobs. In net, there were over 2 million more manufacturing jobs in 2020 than 2018, and 1.9 million of them were formal. About half of all domestic private sector firms offer formal work contracts. Foreign companies also pay double the wages that domestic firms do. Thus, there is

a strong correlation between injections of FDI, the increasing number of manufacturing jobs, and higher wages. However, there are also potential challenges to manufacturing jobs, since manual labor jobs prefer younger workers, and these are not necessarily jobs that one works into old age.

A challenging ending to the decade in 2020 with the emergence of COVID-19

COVID-19 halted a period of rapid income and wage growth for workers and households in Vietnam. Real household income per capita measured using the VHLSS in 2020 declined by 5 percent compared to 2019.[27] In comparison, real median household income grew at an average of 7.2 percent per year from 2010 to 2018.[28] Before the full onset of COVID-19, wages were 9 percent higher in the first quarter of 2020 than in the same quarter the year before. However, for the remainder of 2020, wages were lower than in corresponding quarters in the previous year. Unemployment and underemployment rates also ticked up in 2020 (Figure 2.9).

Over a year after the onset of COVID-19, households and firms are still on the path to recovery. The incidence of income loss lightened considerably over time, though it did not disappear completely. According to responses from the World Bank monitoring surveys, about 30 percent of households self-reported still having lower incomes in March

2021 than the year before. Official statistics reported that 9.1 million workers (12.8 percent of all workers) had either lost their jobs or had reduced wages in the first quarter of 2021, and average labor incomes were 2.3 percent lower compared to the previous year (Ha and Minh, 2021). Firms started to

recover, and almost all businesses were open by January 2021. Although sales remained lower than in previous years, the reductions in employment were smaller than at the start of the pandemic. However, a full recovery will be delayed due to more severe outbreaks that emerged in 2021.

Figure 2.8. **Share of jobs by formality**
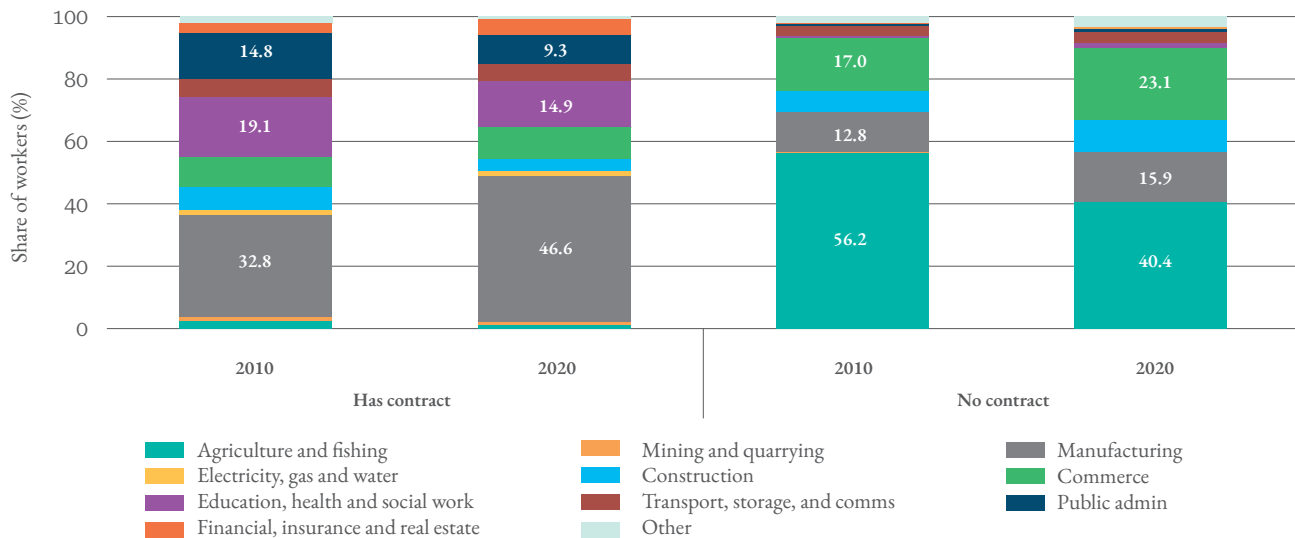
Source: World Bank staff calculations using VHLSS 2010–2020.

Figure 2.9. **Underemployment and unemployment rates rose in 2020**
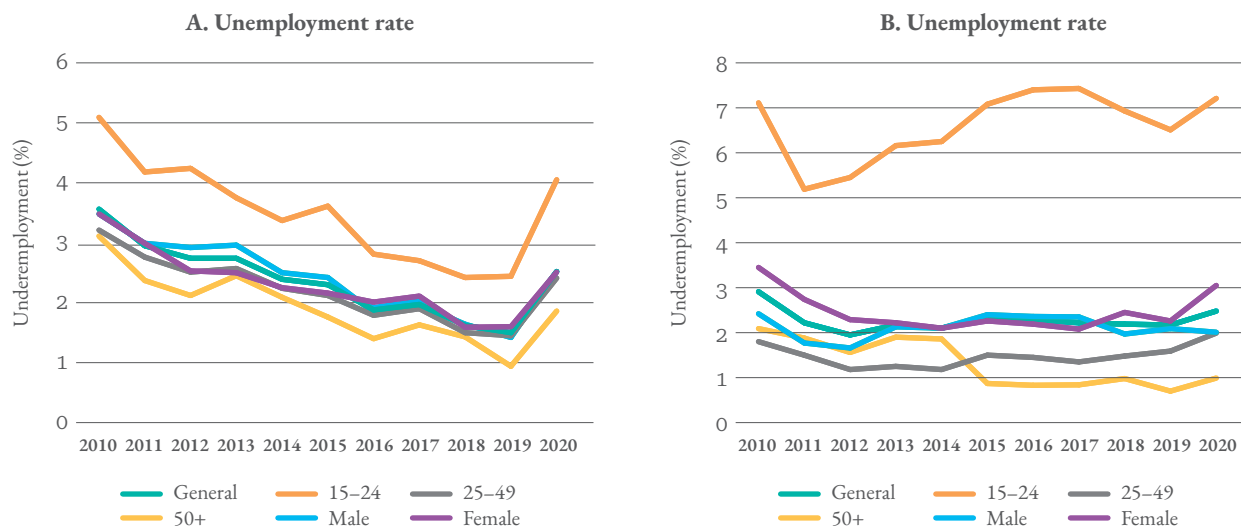
Source: GSO.

BOX	2.1.	Setting the growth foundation in earlier decades

This box reviews the broad policy decisions and events that have led to lasting changes and created the foundations for successful poverty reduction during the most recent decade.

In the immediate post-war period, from 1975 to 1985, Vietnam experienced a sharp economic deterioration. During the reconstruction period, Vietnam continued to adopt a centrally planned economy by expropriating individual properties and nationalizing assets such as land and capital to form cooperatives. However, these initial policies were not successful, and Vietnam plunged into an economic crisis at the end of 1970s and the beginning of 1980s as the country endured soaring inflation, food shortages, damaged infrastructure, and worsening living standards. During this period, about 70 percent of the population was living below the poverty line.

To end a decade of stagnant growth and high levels of extreme poverty, the government implemented policy reforms that greatly improved living standards. A series of market-oriented reforms was launched in the late 1980s and early 1990s under the Doi Moi, which ignited a remarkable period of economic growth and poverty reduction that still continues to this day. The 1993 Land Law was among the most important milestones in terms of rural reform and is credited with successful poverty reduction among farmers during this period. The law granted households five basic rights, including to transfer, exchange, inherit, rent, and mortgage their land, and extended the lease term to 20 years for annual cropland and 50 years for perennial cropland. The change in land ownership created strong incentives for farming households to make long-term investments and expand agricultural production. Farmers' incomes grew as their crops could now be sold at market rather than be collected by the state. Farm income increased by 60 percent between 1993 and 1998.

Since 1991, education has been considered a national priority for both social and economic development and as a vehicle for supporting Doi Moi. The education reform process reached practical ground when a joint study was generated by the Ministry of Education of Training (MOET), United Nations Development Program (UNDP), and

UNESCO held in 1991 that provided a policy framework and strategic direction for improvement in the national education system. The gradual actions included universalization of primary education by 2000, progress toward universal lower secondary education by 2005 with nationwide coverage by 2010, and improved linkages between secondary, technical, and vocational education. Consequently, the government increased its budget dedicated to education and with that, made gradual improvements in the provision of education. Net enrollment rates have increased for all levels.

The country's intensified efforts to integrate deeper into the global economy contributed to further poverty reduction. Beginning in the late 1980s, tariffs were unilaterally reduced and numerous quantitative restrictions on trade abolished. Adoption of the Foreign Investment Law in 1987 opened the country to FDI inflows. Membership in the Association of Southeast Asian Nations (ASEAN) in 1995 and its associated Asian Free Trade Area, and the U.S.-Vietnam Bilateral Trade Agreement in 2001 were important steps in the integration process. Following trade liberalization, the government prioritized exports of labor-intensive industries such as garment, textile, footwear, and sea product industries, creating a favorable environment for off-farm job creation and thereby poverty reduction. Thanks to the government's adjustments to the industrial policy and trade liberalization, structural changes in the labor market became the key pillar to poverty alleviation between 1993 and 2002, with increasing shifts of workers out of the agricultural sector to the industry and construction sectors.

With the introduction of the new Enterprise Law, citizens could establish and operate private businesses with limited intervention from government officials. The most important innovation introduced by the Enterprise Law was the simplification of registration procedures and the associated elimination of many business licenses, which sharply reduced transaction costs for businesses and helped install greater business confidence. The promulgation of the new legislation was considered one of the most important factors facilitating the establishment of new business and generating many jobs in small and medium private firms.

BOX	2.1.	Setting the growth foundation in earlier decades (Continued)

Vietnam accelerated its negotiations for WTO membership and officially ascended to the WTO in January 2007. Becoming a WTO member has had important implications for Vietnam's development, catalyzing the creation of off-farm services and export-oriented manufacturing jobs. The export value of goods and services as a percentage of GDP rose from less than 10 percent in 1986 to 106 percent in 2019. In 2015, aligning somewhat with the lifting of the foreign ownership cap, FDI resurged, corresponding to a further increase in the share of employment in manufacturing. Entry into the global economy coincided with a growing demographic dividend. This synchronization helped to create jobs for millions of young people entering the labor force and drove a strong phase of upward economic mobility.

2.2. Understanding household income dynamics: the key to poverty reduction

The East Asia region and Vietnam stand out for achieving an extremely successful growth-driven poverty reduction process, where high levels of economic growth provided a decade of prosperity through job creation and rising wages, thus lifting households out of poverty. Rising wages lifted all boats and created better jobs. This section provides more detail to enable a deeper understanding of the dynamics of specific income sources and how income patterns look across the entire household distribution, not just among the poor. See Box 2.2 for a description of household incomes.

Households rely on different types of income sources depending on their background

The composition of household income varies across the welfare distribution, and in expected ways. Across the distribution, the average contribution from different income sources is illustrated as a share of total household income in Figure 2.10. The role and importance of labor market income is clear. For the majority of households, labor market income from family farms, non-farm family businesses, or wage employment averages to 90 percent of total household income. At most, for households in the top decile, non-labor market income comprises over 15 percent of average total household income. By labor income sources, the shares evolve across the distribution in expected ways: larger sources of total income from richer households are from family business

Figure 2.10. Average share of household income by source, 2020

Note: Includes zero incomes for households who do not receive a particular income source.
Source: World Bank calculations using VHLSS 2020.

income, whereas family farm income contributes more to poor households. The role of cash from social assistance programs is small as a share of total household income.

Poorer households are more likely to be diversified across broad income sources.

A high share of Vietnamese households receives income from multiple sources (Figure 2.11). Since income sources are recorded over the last 12 months, diversification[29] can be due to either simultaneous or seasonal income streams from multiple employed adults. About 30 percent of households in Vietnam had at least three income streams over the last year since the date of interview across broad categories, reflecting adequate diversification of activities and sources. Poorer households tend to have slightly higher income diversification across broad categories.

Income diversification can be viewed as a coping mechanism or a way to secure additional income. Poorer households tend to have more diversification. Diversification of income can be beneficial when earnings are through passive incomes, but multiple labor-intensive activities can be inefficient. For poor households, diversifying within agriculture may be a way to raise their agricultural incomes or provide more food to the household. In contrast, many households at the upper ends of the distribution are primarily wage earners.

Broad income trends over the last decade reveal the importance of wages

Wage income is the most important source of household income because it provides a high amount of income for a majority of households. Total household wage income includes earnings on the first, second, and third jobs that individuals were engaged in over the last 12 months. At the household level, virtually all households have at least one individual that is employed; only about 5 percent of households in Vietnam do not have any employed adult. In Vietnam, only a subset of those who are working report earning individual wages or salaries. Due to a mix of factors including a large agricultural workforce, informality, and classification of informal activities such as family businesses, earnings are not always reported as wage income. Lottery sellers are a particularly unique occupation, where workers in this sector (sector 92) often report they are employed but not earning wages because they earn income from commissions on tickets sold and thus report business income. Even with these distinctions, there is large variation in the type of work and quality of work associated with wage employment. Wage income can be derived from any sector (agriculture, manufacturing, and services) and obtained through informal work or skilled contract work. Reporting wages from the agriculture sector is uncommon, as the majority of households report it as part of self-employed family farming.

Figure 2.11. Share of Vietnamese households receiving income from multiple sources, 2020

A. Average number of income sources, by decile

B. Distribution of the number of income sources
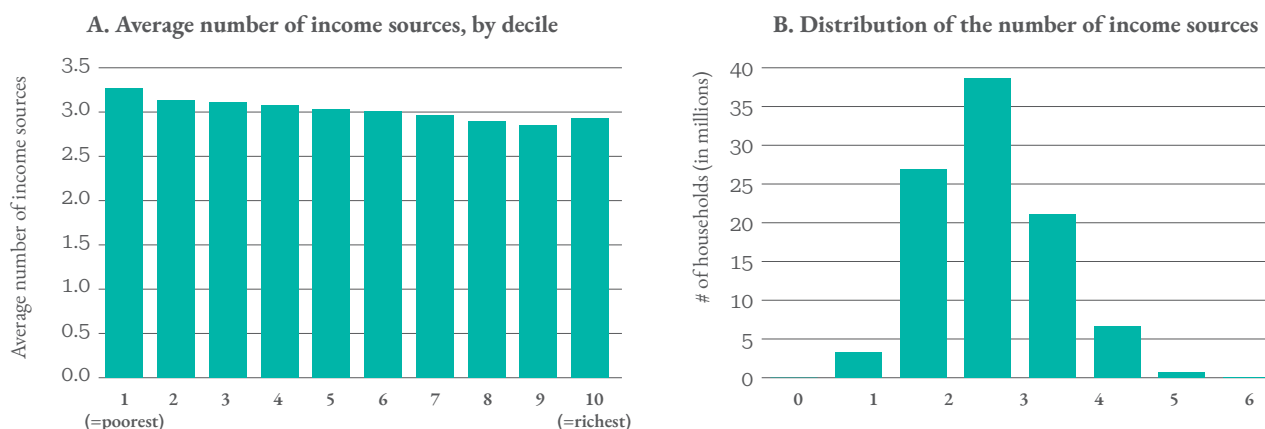
Source: World Bank staff calculations using the Vietnam Household Living Standards Survey, 2020.

| BOX | 2.2. | Measuring household income using the Vietnam household living standards survey |

For the purposes of welfare analysis, income sources are examined at the household unit. The examination of trends at the household level and considering all sources of income is one of the main differences between welfare analysis conducted using the household survey and other labor and income analyses using labor force surveys (LFS). Another difference is that the VHLSS records information on income for the last 12 months, while the LFS records labor market activity over the last month and does not include income sources from non-labor market activity, or detailed sector or business costs. Thus, labor diversification across households is more complete with the VHLSS than the LFS.

Sources of household income are collected from the VHLSS. All income sources are collected at the household level with the exception of wages, which are collected at the individual level (Table B.2.2.1). These concepts are aggregated to construct current household income. This construction is World Bank developed and may not follow official GSO income aggregate construction methods. World Bank concepts are in net, and costs from farming or business operations are deducted. Taken together, income information from the VHLSS is broader and more complete than what is available from other data sources.

Table B.2.2.1. Income categories and definitions

	INCOME CATEGORY	NOTES
1	Family farms	Net farm income. See Chapter 3 for agriculture sub-categories.
2	Non-farm family business	Net household non-farm income.
3	Wages, bonus, and severance	Wages are accumulated across the first, second, and third jobs over the last 12 months. Not all employed activities pay wages and salaries. Where individuals do not provide wage information, they are likely to report income sources under family businesses or agriculture modules.
4	Pensions	Asked to individuals currently not working
5	Social Assistance	Direct cash transfers from Module 4 and unemployment benefits. Does not include indirect benefits such as subsidies or loans.
6	Remittances	Domestic and international remittances
7	Financial	
8	Rent	Rental or leasing incomes.
9	Other	Net hunting, interest revenue, gifts from wedding or funeral, receipts from insurance payments.

Some differences may appear between individual and household-level analysis of incomes and wages. For example, one main difference is that reliance on wages in manufacturing appears higher in the VHLSS, but in the LFS, employment in services is higher than in manufacturing. This is because the sector of activity may be related to wages, farm, or non-farm business incomes. These differences arise from taking into consideration multiple jobs from all working members in households and across the entire year. In the VHLSS, half of all workers in the primary job stated that they were working but did not receive a salary. These earnings may be reflected in family business (non-ag), or agriculture modules. For example, a common case are lottery workers who do not report any wage income. Inconsistency remains in how individuals report their activities, especially when these activities are informal.

Labor market indicators are most accurately represented by the LFS, which details individual-level employment outcomes. Trends found in the household survey are consistent with broad labor trends illustrated earlier in this chapter.

From 2010 to 2020, total household wage incomes increased in importance as the primary source of income for households (Figure 2.12). The share of households receiving wage income increased from 64 to 70 percent. Changes in the amount of household wage income from 2010 to 2020 was also substantial. Annual household wage income increased by nearly 100 million VND in nominal terms, or nearly tripling in one decade. Income from non-farm family businesses also increased at a similar level as wages, but many fewer households are engaged in this activity.

Both public and private transfers comprise a small share of average household income. Remittances and social protection provide smaller amounts of household income, and contributions remained relatively static over the decade. Domestic remittances are the most cited income source (85 percent of all households), but the average amount received

is marginal. Remittances are not a primary transfer as in some countries, such as Thailand (domestic) or Nepal and the Philippines (international), where migration is much more important. Lacking the large-scale worker migration programs such as in the Philippines and Nepal, international migration and remittances are limited to richer segments of the population in Vietnam. Remittances from international sources can be high but are also seldom reported. Over time, a marginally higher share of households in 2020 received remittance and social protection incomes than in 2010. Pension income increased over the last decade, but only about 10 percent of households received any form of pension in 2020. The increase in the share of households with pension income is reflective of an aging population. Pension incomes are primarily received by retirees from public sector positions and wage jobs with contracts.

Figure 2.12. **Trends in household income components, 2010 and 2020**
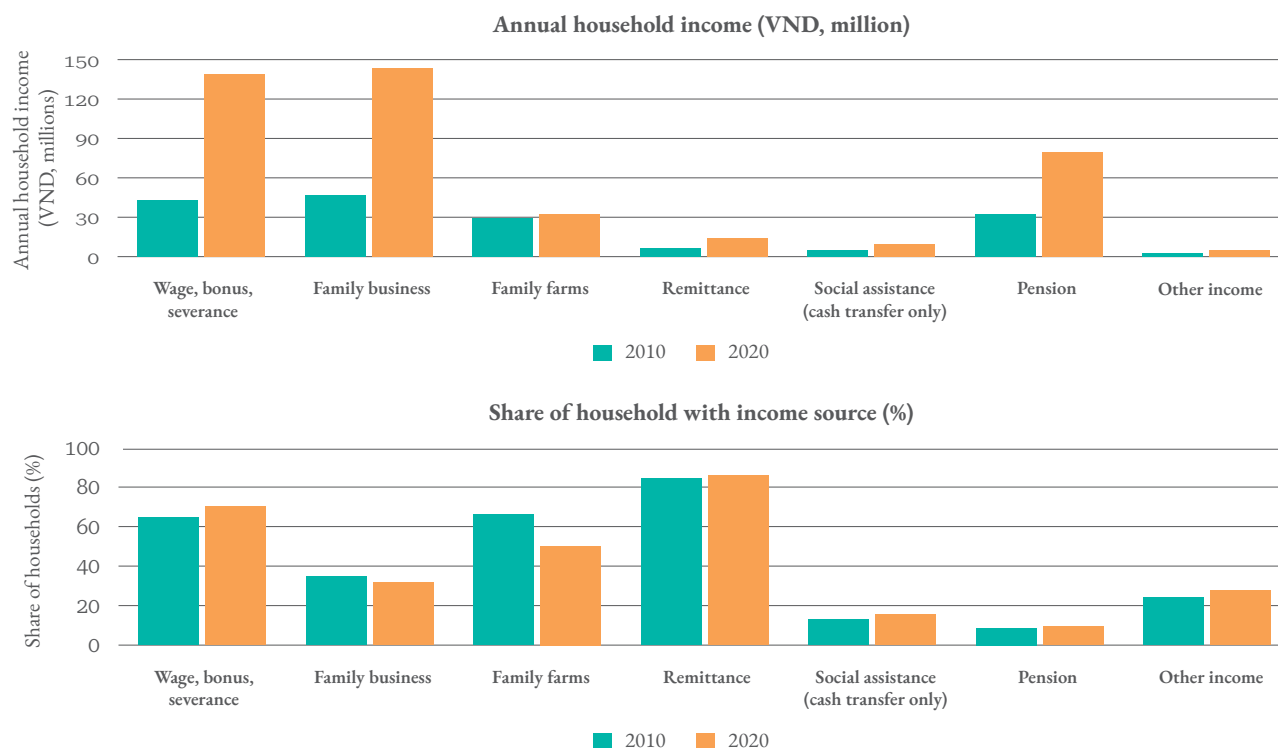
Notes: Nominal values. World Bank-constructed income categories. See Box 2.2 for definitions. Average incomes are only for households who report having the income source. Social assistance income includes only selected direct cash transfers.
Source: World Bank staff calculations using VHLSS 2010 and 2020.

The poorest households remain reliant on agriculture

Agricultural income is still common among poor households and provides these households with only a small amount of income compared to wage income. The gap between household-level agriculture, wage, and business incomes has widened considerably over the last decade. In 2010, total agricultural household income was still lower than total wages or family business incomes, but by no more than 20 million VND. But in 2020, the gap had widened to over 100 million VND per year.

Households are exiting agriculture on average, but the poor still remain significantly engaged. In 2010, 67.2 percent of households received agriculture income, compared to 53.8 percent in 2020. Across the various sub-components of agricultural, participation has fallen across all categories, particularly in low-revenue activities such as by-products or rice (more details in Chapter 3). However, engagement in agriculture remains high for extreme and moderate poor households (Figure 2.13). Agriculture is one of the lowest revenue-generating economic activities that households can be engaged in. When examining dynamics in nominal total earnings, agriculture incomes remain similar in 2010 and 2020.

Figure 2.13. Changes in household engagement in major sectors

Share of households engaged in agriculture

Share of households engaged in manufacturing

Share of households engaged in services
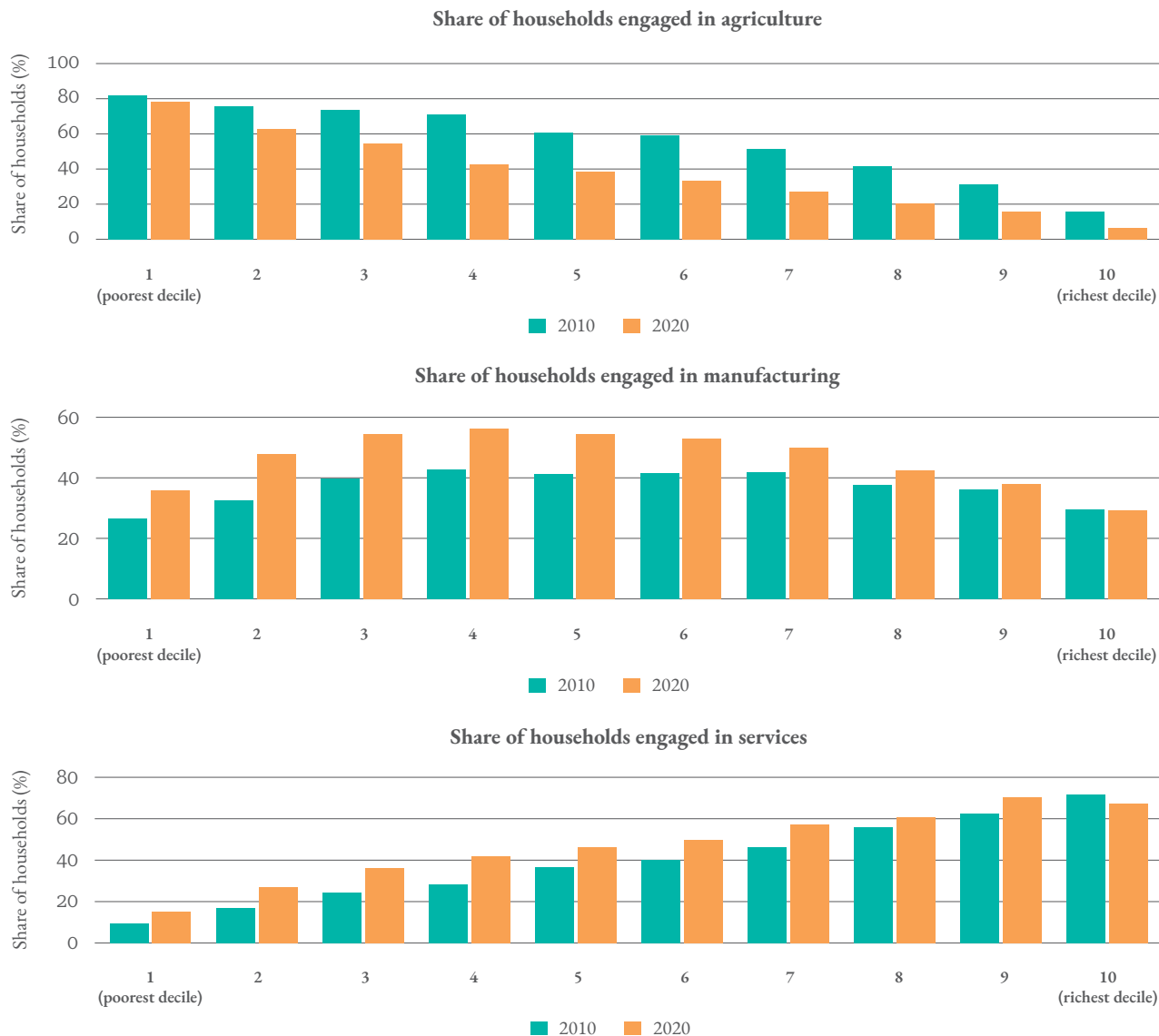
Note: Households can be engaged in more than one major economic sector.
Source: World Bank staff calculations using VHLSS 2010 and 2020.

Unpacking determinants of agricultural incomes is a key aspect to better understanding the chronic nature of poverty. See Chapter 3 for a detailed discussion on agricultural income sources.

Variation in wage growth by job type

Wage growth was high across all sectors over the last decade but highest in manufacturing (Figure 2.14). Statistics are shown at the household level but align with national trends in wages from labor force surveys. Nominal wages increased across all sectors, doubling on average over the decade. Wage growth among poorer households was higher in the first half of the decade than the second, coinciding with faster poverty reduction in the early 2010s. By sector, wages in manufacturing grew the fastest, followed by public sector wages. Nominal wages in manufacturing nearly doubled between 2010 and 2014, and by 2019 they had nearly tripled. Between 2015 and 2020, wage growth slowed down slightly overall, with wages seeing declines in 2017 and then again in 2020.

Participation in wage employment has increased dramatically over the last decade. From 2010 to 2020, the share of households that have at least one member receiving wages or salaries has increased from 53.3 percent to 64.7 percent (Figure 2.15). Participation in wage employment increased substantially in some categories, including medium-skill occupations, contract employment, manufacturing, and services sectors. Even in the early half of the decade, while the number of jobs in manufacturing was not increasing in net, jobs were still transforming and becoming more likely to be formal and were getting better paid. Labor in the services sector expanded more than manufacturing, but services jobs were more likely to be informal. Informality is still high in Vietnam but has declined significantly over time. Thirty-one percent of households had income from formal wage work in 2010, and this increased to 41 percent in 2020.

Growth in occupations by skill level has been primarily in medium-skilled occupations over the last decade. The share of households with a worker in a medium-skilled wage job increased from 31 to 42 percent over the decade. Wages are highest for high-skill jobs (leaders, high-level professionals, and mid-level professionals), but only about 16 percent of households have a working member at this skill level, and only 3 percent of households in the bottom quintile (Figure 2.16). Moreover, the absolute number of high-skill jobs is not increasing as quickly. The stunted growth of high-skill jobs could become a constraint to future growth (see Chapter 5 for a discussion of this issue). Across different categories of wage jobs, the poorest quintile earn only half or a third of the wages as the top quintile. Jobs in the poorest quintile are also more likely to be informal; 18 percent of households in the lowest quintile have income from formal wage employment compared to 52 percent of households in the top quintile.

Figure 2.14. Wage trends for selected sectors (2010–2020)

Agriculture, forestry and fishing
Wholesale and retail trade, repair of motor vehicles
Manufacturing
Public administration and defense; compulsory social security
Construction
All sectors
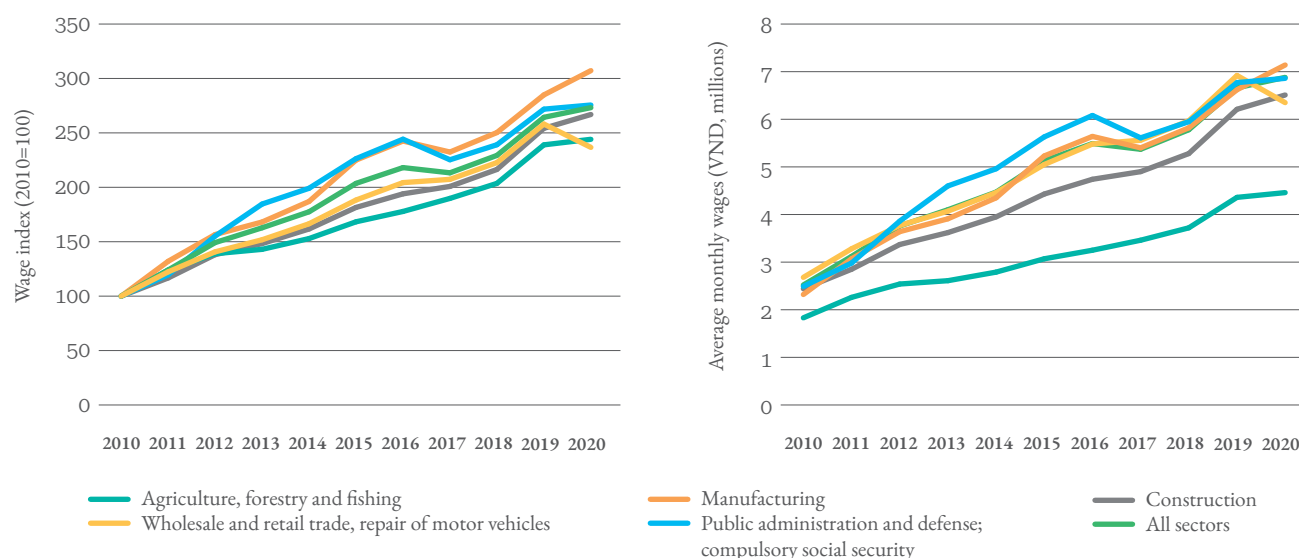
Source: ILO database.

| BOX | 2.3. | Labor and wages, Vietnam vs. other EAP economies |

Compared to neighboring economies, Vietnam now has a larger share of the workforce in manufacturing. This dominance in manufacturing revealed itself in the last few years. Compared to regional neighbors, it is also the only country where the share of the labor force in manufacturing has been increasing in the last few years. In the short run, this is not necessarily a concerning trend since a large share of the services sector in Vietnam is informal and would pay lower wages and provide less stability for its workers. However, relying on a manual and physically demanding sector to provide jobs will become challenging as the population ages, and is also limiting growth in potentially more value-added services sectors.

Figure B.2.3.1. Share of workers by selected sectors and economy
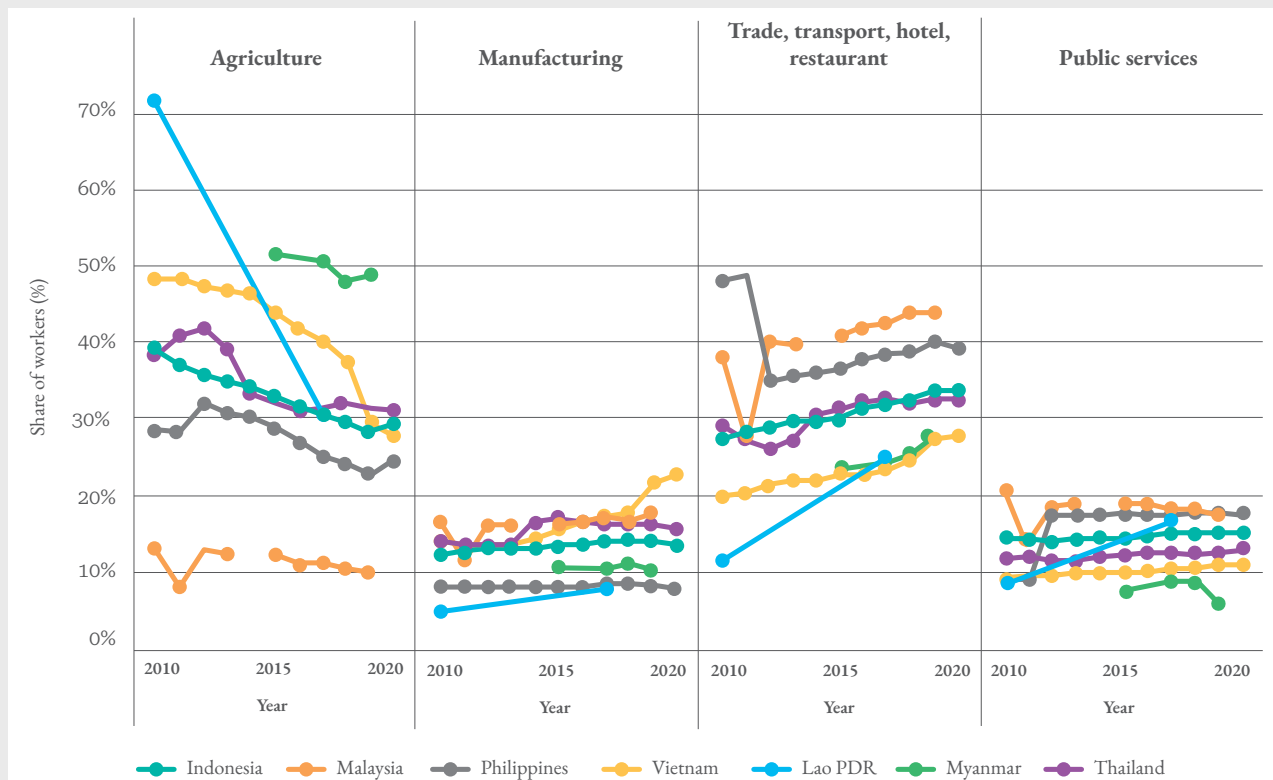
Source: ILO database.

Vietnamese wages on an international level are still low, at a few hundred US dollars per month. Low-cost labor was one of the main reasons behind increasing FDI and primarily in manufacturing. Wages in Vietnam doubled from 2010 to 2020, from $400 per month to over $800 per month (2017PPP). Average monthly earnings are higher than in Philippines but still trails the Upper-Middle Income regional neighbors of Thailand and Malaysia. Wages are still low at an international level and remain uncompetitive for economic activity relying on higher skills of higher value-added. Across sub-sectors, the wage premium for high-skill jobs is much larger than for manufacturing jobs. While Malaysia and Thailand have the highest wages across most categories, the premium for professional jobs is much greater than for lower-skill jobs. Vietnam will face challenges retaining high-skill labor force without increasing salaries.

| BOX | 2.3. | Labor and wages, Vietnam vs. other EAP economies (Continued) |

Figure B.2.3.2. Wages by economy and selected sectors
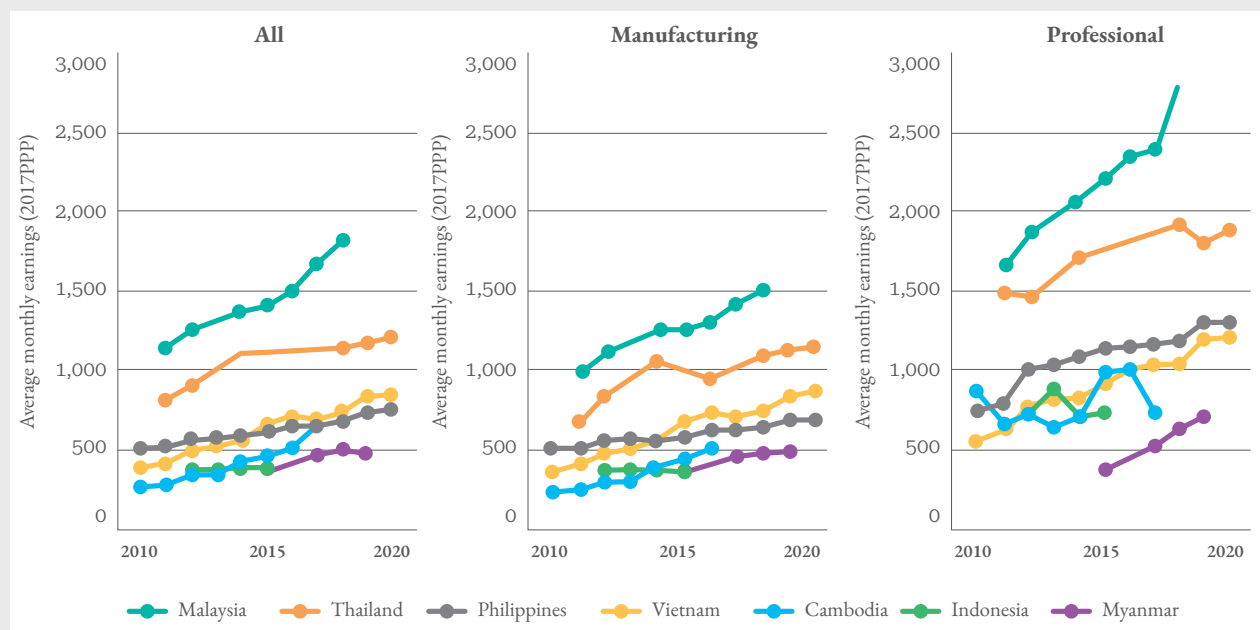
Source: ILO Database.

Figure 2.15. Evolution of household income from wages, 2020 vs. 2010

A. Share of households with wage income, by type of wage job

B. Average household wage income, by type of wage job
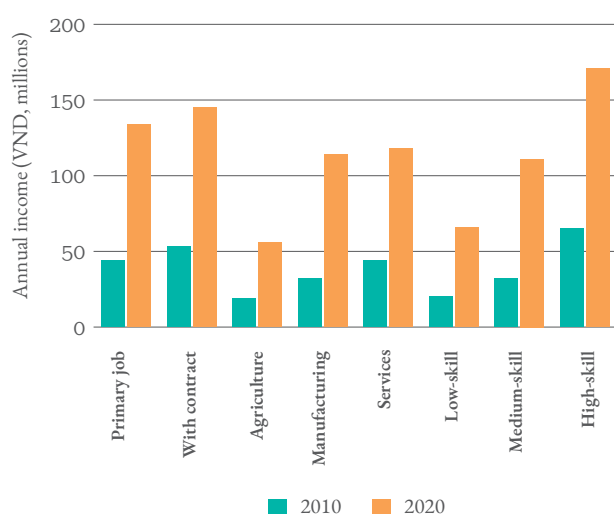
Note: Annual nominal household wage income.
Source: World Bank staff calculations using VHLSS 2010 and 2020.

Figure 2.16. Wage trends in 2020, by household quintile
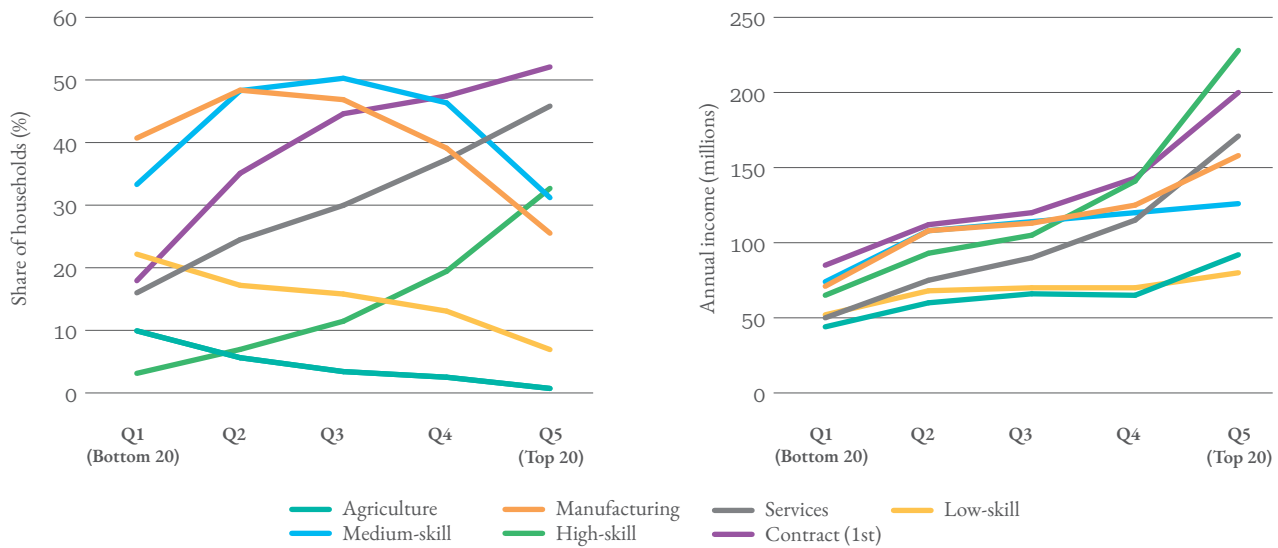
Note: Annual nominal household wage income.

Source: World Bank staff calculations using VHLSS 2020.

Non-farm family business income is less common, but large businesses can yield high earnings

Nationwide, non-farm family business income was the second-most important contributor to upward economic mobility after wage growth. Household business income overall is less common than wage employment. Only about 30 percent of households receive income from this source. The prevalence of household businesses declined slightly over the last decade. The share of households with nonfarm business income dropped slightly to 31 percent in 2020 compared to 34 percent in 2010, but the average income from household businesses rose substantially across all forms of businesses. The richest households did not reduce their participation in family businesses; thus, changes in family business income had a more modest effect on poverty rates, as most households that received income from businesses were already above the poverty line.

Registered businesses are extremely uncommon but are highly profitable. Only 1.2 percent of households reported income from formally registered businesses. Small household businesses and unregistered businesses are more common, but they earn only about half as much as large-

registered businesses (Figure 2.17). There are clear differences in business income between types of family businesses, in particular if they are registered and by size. Overall, nearly a third of household businesses tend to be retail, but registered businesses are more likely to be in wholesale.

Direct public cash transfers are a small contribution to average household income even for poor households

Direct cash transfers from social assistance programs make up a small share of household incomes. The poorest households are more likely to receive direct social assistance income, but annual amounts are still small relative to other income sources (Figure 2.18). The poverty reduction interventions in Vietnam can be divided into direct cash, indirect monetary support, and broader geographically targeted public investments. Administratively, about 7 million people are receiving direct cash support by being identified as a poor or near-poor household (Table 2.2). Benefit levels are low, and coverage is limited. Benefit levels are also declining in value over time because they are not indexed to inflation. About 15 percent of households reported receiving a social benefit of some kind in the 2020 VHLSS (social assistance, merit, or disaster relief).

Figure 2.17. Family business income trends in 2020, by household quintile

Note: Household-level income.

Source: World Bank staff calculations using VHLSS 2020.

Figure 2.18. Household-level cash transfers by household quintile
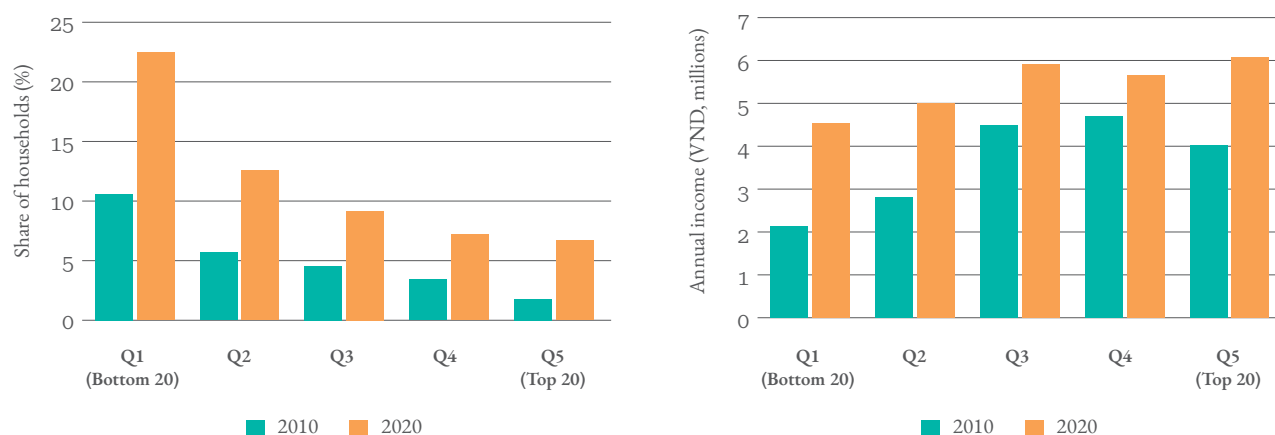
Note: Annual household nominal income among recipients.

Source: World Bank staff calculations using VHLSS 2010 and 2020.

Table 2.2. Social assistance beneficiaries

CATEGORIES OF EXISTING VULNERABLE GROUPS	ESTIMATED NUMBER OF BENEFICIARIES	AVERAGE BENEFIT AMOUNT (MONTHLY)
Whole country		
People in poor and near-poor households	7 million people	VND 750,000 per person
Social assistance beneficiaries	2.84 million people	VND 1.5 million per person
Merit people (National Devotees)	1 million people	VND 1.5 million per person

Note: Merit people (or National Devotees) are people who have contributed during revolution and war times. Dutta (2019) estimates for 2018 are used.

Social assistance through direct cash transfers are small, but indirect benefits can be larger. There is a much wider set of programs spanning relevant ministries that provide support to poor households in different forms. At the population level, support with health insurance premiums is the most commonly received support (24 percent), followed by subsidies for electricity (6 percent) (Figure 2.19). Benefits from these programs are not include in measures of household current income. However, remaining types of benefits are rarely cited to be received. Targeting performance of these additional programs varies. Social assistance schemes include programs not just targeted to the poor but also based on categorical targeting—that is, people with disabilities, people with HIV, the elderly, and National Devotees (war veterans). Some programs are more received by poor households than others. Food allowances and hardship allowances are almost exclusively received by households in the lowest decile of the welfare distribution. Other programs are less well targeted, such as support for payment of health insurance premiums, policy scholarships, agricultural extension, and tuition exemptions.

2.3. Forces behind poverty reduction–decompositions

The previous sections discussed household profiles and income trends over the decade and alluded to potentially important drivers. This section quantifies the channels and drivers of poverty reduction by decomposing poverty rates by broad groups and income sources, as well as across different periods over the decade.[30] Nationally, poverty reduction was higher during the first half of the decade, was concentrated in initially poorer areas, and was almost exclusively a rural phenomenon. From 2010 to 2016, LMIC $3.20/day 2011PPP poverty rates declined from 16.8 to 7.8 percent, and from 2016 to 2020, poverty further declined from 7.8 to 5 percent. Progress in the latter half of the decade was slower, but the absolute percentage point change in poverty is not just a function of progress, but also of the level of poverty in the initial year. The drivers of poverty reduction are overwhelmingly attributable to growth factors throughout most of the decade, with a smaller role played by redistribution as a channel of poverty reduction. From 2010 to 2020, over 90 percent of poverty reduction at the LMIC poverty line was

Figure 2.19. Percent of beneficiaries in the population, 2018
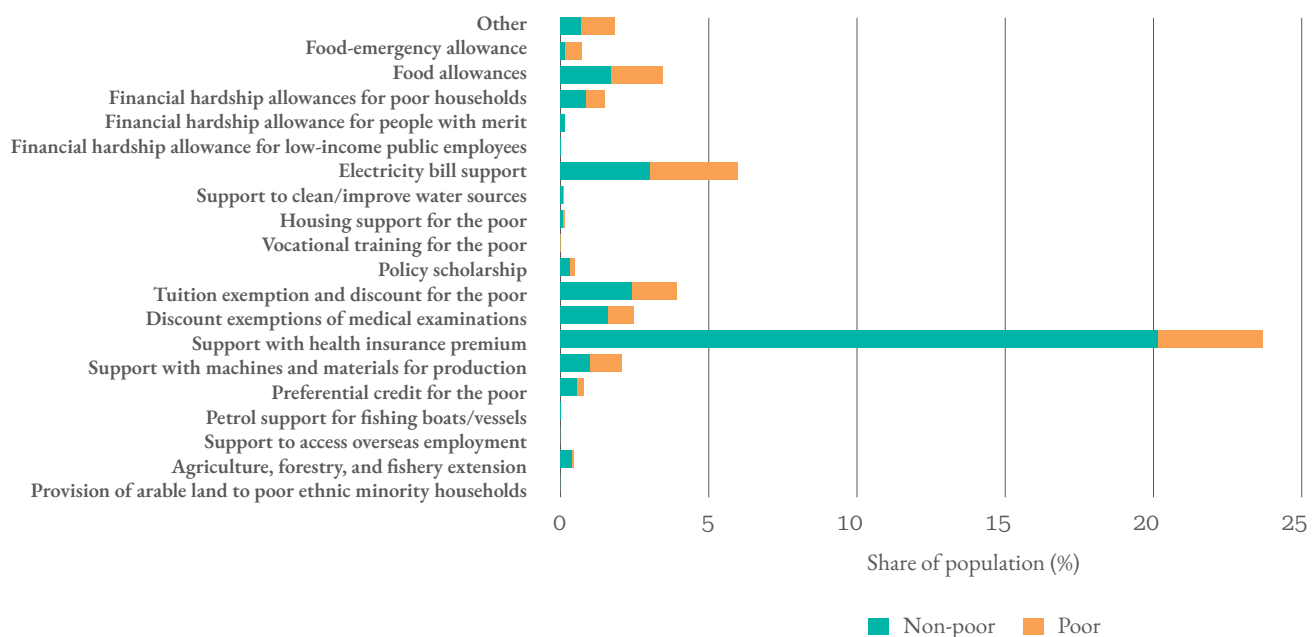
Note: Poor defined based on the $3.20/day 2011PPP poverty line.
Source: World Bank staff calculations using VHLSS 2018.

attributed to growth of the mean of household consumption (Figure 2.20). A growth-driven poverty reduction process occurred thanks to a decade of prosperity primarily due to an expansion in the non-farm labor force and rising wages. Redistribution contributed to poverty reduction in the earlier half of the decade, but still had a relatively small effect overall.

Figure 2.20. Growth-driven poverty reduction over the last decade
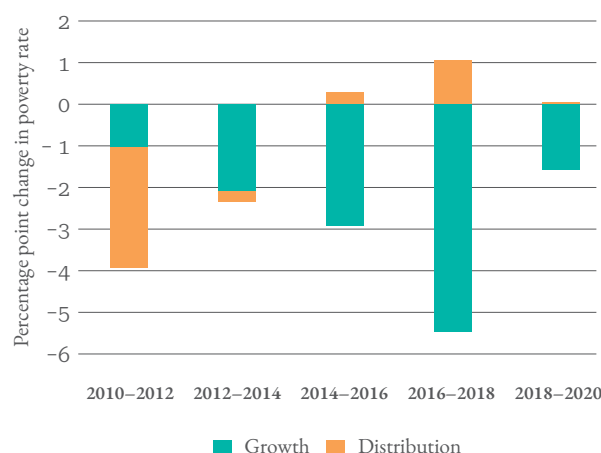
Note: World Bank LMIC Poverty Line ($3.20/day 2011PPP)
Source: World Bank staff calculations using the VHLSS.

Labor market incomes are almost exclusively explanatory of poverty reduction and are consistent with a growth-driven poverty reduction process. Among sources of household income, labor income was the primary driver of poverty reduction from 2010 to 2020, and these trends are broadly consistent across regions and also ethnicity (Figure A.2.1.1). Job creation and rising wages as a promotive strategy worked well throughout the decade, with high economic growth. However, workers are not as well protected by safety nets during downturns. The economic crisis caused by COVID-19 revealed economic vulnerabilities of informal and labor migrant workers. Low levels of private and public transfers proved to be a source of vulnerability.

By sector, poverty reduction over the last decade was attributable to growth in both manufacturing and services jobs (Figure A.2.1.2). Across the three broad primary sectors, the manufacturing sector welcomed the most households from the lower end of the welfare distribution, closely followed by the services sector. The LMIC ($3.20/

day 2011PPP) poor are positioned in distribution in the first decile. Observing changes in the bottom deciles, many poor households increased their economic participation in both the manufacturing and services sectors, but as a whole more are engaged in manufacturing. Thus, manufacturing wages played a stronger role in reducing LMIC poverty.

Drivers of income inequality

Decomposition of inequality (as measured by GE(0)) between population groups in Vietnam illustrate channels of the changes in inequality based on the method developed by Mookherjee and Shorrocks (1982). The rise in inequality is largely related to income effects and widening urban and rural disparities. Figure 2.21 illustrates that inequality was increasing between urban and rural areas, highlighting that economic vibrancy and jobs in urban areas was key for poverty reduction but the vibrancy did not always reach rural areas.

Figure 2.21. Inequality decompositions – urban/rural
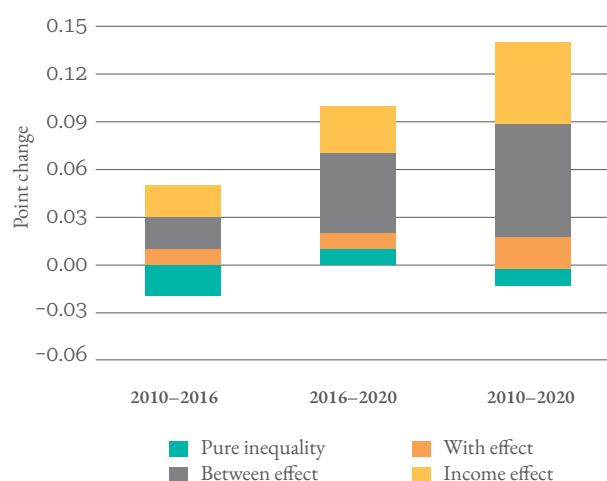
Note: Measure of change in GE(0) is based on real household consumption per capita.
Source: World Bank staff calculations using VHLSS 2010–2020.

Changes in sources of household income also affect inequality (Figure A.2.1.3). The decline in farm income is increasing income inequality in most regions. Since the poorest households are more engaged and dependent on agriculture income, a decline in this income source worsens inequality. This is compounded by strong growth trends observed for other income sources that are well received by households at the higher end of the distribution.

In the Central Highlands region, labor market conditions are worsening and inequality is increasing. Increasing inequality in the Central Highlands region is attributable to a lower share of employed adults as well as less labor income per employed adult. This is consistent with previous descriptive statistics on the declining household-level economic activity in that region in Chapter 1 and will be further discussed in Chapter 3. The Central Highlands region has experienced the slowest poverty reduction over the last decade and, unlike any other region, the share of households engaged in wage employment declined.

Decomposition of poverty rates by groups

Using classifications of urban and rural areas in each survey round, poverty reduction appears to have occurred almost exclusively in rural areas. The decline in poverty is attributed to rural areas (Figure 2.23).[31] The urban-rural poverty gap narrowed considerably over the last decade. In 2010, rural and urban poverty rates were 22 and 4.5 percent respectively, compared to 7 and 1.5 percent in 2020. Geographic variation in poverty is still much larger by regions than by the urban-rural classification. See Chapter 3 for more discussion on regional poverty reduction patterns.

While urban areas contributed little to overall LMIC poverty reduction, economic vulnerabilities exist in these areas. The small contribution to poverty reduction from urban areas is explained by the fact that most people in these areas already live above the poverty line as defined by the LMIC PL. However, the COVID-19 pandemic has raised new awareness to issues of livability and economic security in urban areas. Urban areas were by far more affected by lockdown policies and mitigation measures than rural areas. Schools in urban areas remained closed for much longer than in rural areas. Furthermore, business activity in urban areas experienced reduced hours or limited operations for a longer time. COVID-19 revealed one of the main disadvantages of urban areas: crowded, small, and low-quality housing.

Ethnic minorities have seen relatively slow poverty reduction compared to the Kinh majority, but are making progress (Figure 2.24). The Kinh majority experienced higher absolute poverty reduction even after taking into account that they started from lower initial poverty rates than ethnic minorities. In the latter half of the decade, a larger portion of overall poverty reduction is associated with improvements among ethnic minorities, since poverty rates among the Kinh majority is now very low, at about 1 percent. In the latter half of the decade, ethnic minority economic outcomes improved, as larger shares started to exit agriculture. Poverty rates among ethnic minorities remain high even though the absolute gap between the Kinh and ethnic minorities is narrowing.

Figure 2.22. Total poverty reduction
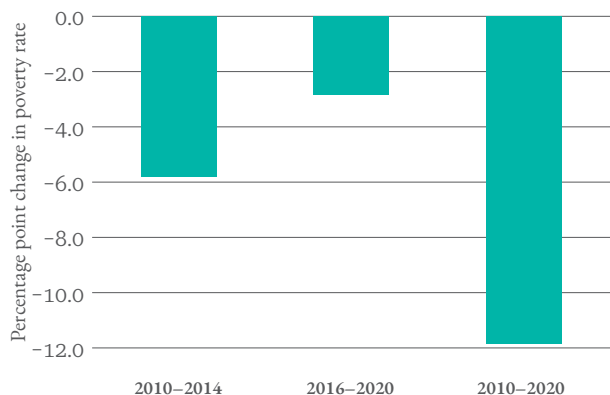
Note: World Bank LMIC Poverty rates ($3.20/day 2011PPP).
Source: World Bank staff calculations using the VHLSS 2010–2020.

Figure 2.23. Poverty reduction, by urban and rural areas
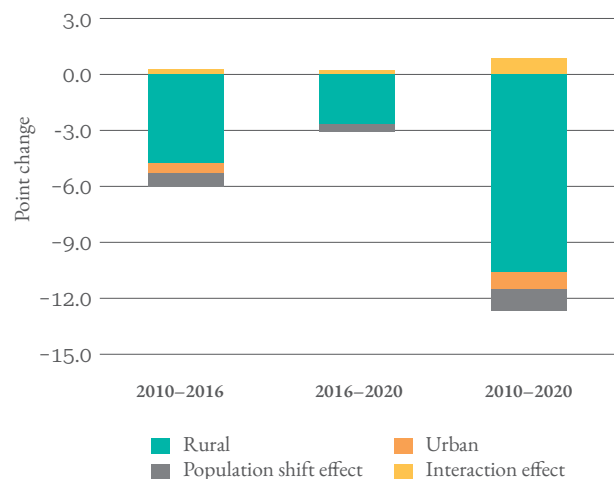
Note: World Bank LMIC Poverty rates ($3.20/day 2011PPP).
Source: World Bank staff calculations using the VHLSS 2010–2020.

Figure 2.24. Poverty reduction, by ethnicity
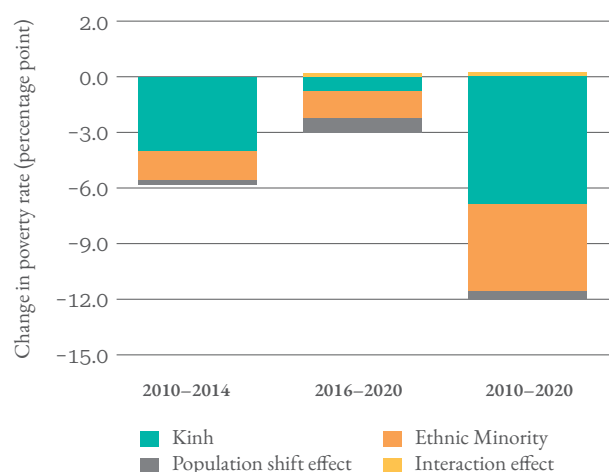
Note: World Bank LMIC Poverty rates ($3.20/day 2011PPP).
Source: World Bank staff calculations using VHLSS 2010–2020.

By education levels, households with fewer members having attended secondary education experienced the largest absolute decline in poverty rates, which is consistent with labor expansion based on low-skill manual labor. Due to dynamic household profile changes, population shift effects are the largest for decompositions by education and sector groups. A large (and negative) population shift effect is consistent with descriptive statistics of large shifts in the composition of household education levels and sectors of activities toward groups that had initially lower poverty rates. This is consistent with households having improved profiles of education and shifting out of agriculture.

Effects from ageing are starting to show

Poverty reduction decompositions with age-specific factors are showing some early impacts of ageing. Household employment shares and labor income can be decomposed to be sourced by either young or old household members, where younger cohorts are those under 35 years of age. There are some small indications suggesting lower labor force participation among the youth cohort as well as lower earnings. These factors can be driven by multiple factors, such as youth cohorts staying in school for longer, but it is not clear if a smaller poverty reduction impact from youth income is associated with lower productivity or lower-quality work. The profile of the youth cohort in the labor market is discussed further in Chapter 5.

2.4. Summary

The role of economic growth in supporting poverty reduction continued in importance throughout the last decade. The role of certain income sources and sectors for poverty reduction was clearly illustrated, both in terms of those that matter most (e.g., wage growth), and those that played a lesser role (e.g., social assistance). However, challenges are looming on the horizon related to the factors that have sustained growth and poverty reduction in the past. These include high informality, low skills, low wages, and low growth in high-skill jobs (Chapter 5). Furthermore, to better guard against risks and provide broader safety nets, the role of social assistance and protection must increase (Chapter 6).

BOX	2.4.	Group and income decompositions

Huppi-Ravallion decomposition of poverty rates by population groups

Profiling of the population is already suggestive of the drivers and determinants of poverty reduction since some characteristics were more dynamic than others. To understand the scale of poverty reduction, the contribution changes in poverty rates can be decomposed and attributed to progress across different groups based on household-level characteristics. Given that the national poverty rate is an average of poverty rates of specific population groups, weighted by the population share of each group, changes in poverty rates can also be thought of as the result of changes in poverty incidence in some groups, the relative size of groups, or a mixture of both. A decomposition (Ravallion and Huppi, 1991) that separates the total poverty change into these components can be formalized as follows. Given poverty rates for final and initial year (P_f and P_i, respectively):

$$P_f - P_i = \sum_k (P_{k,f} - P_{k,i})N_{k,i} + \sum_k (N_{k,f} - N_{k,i})P_{k,i} + \sum_k (N_{k,f} - N_{k,i})(P_{k,f} - P_{k,i})$$

where $P_{k,f}\_(P_{k,i})$ stands for the poverty incidence and $N_{k,f}\_(N_{k,i})$ represents the population share in group k for initial (final) period.

1. The first right-hand term represents the *intra-sectoral effect,* that is, the change in poverty that can be attributed to changes in the incidence of poverty in each k group of the population, assuming the relative size of the population groups remains as in the initial year of the comparison.
2. The second term stands for the *population shift effects,* namely, the change in poverty that is due to changes in population shares, assuming poverty incidence in each group stays at the level of the initial period.
3. The third term is an *interaction effect,* which indicates if there is correlation between changes in poverty incidence and population movements. A positive sign of the interaction effect would indicate—on average—a growing population share among groups where poverty is growing, which in turn would imply a smaller decline (or a larger increase) in the poverty rate. A negative sign, on the other hand, would imply that groups with declining (increasing) poverty also have a growing (declining) population share, which accelerates poverty reduction.

Shapley income decomposition

Early strategies to decompose poverty primarily decomposed changes targeting summary statistics. Changes in poverty were decomposed into effects from growth and redistribution (Datt and Ravallion, 1992), growth, redistribution, and prices (Kolenikov and Shorrocks, 2005), or changes in groups (Ravallion and Huppi, 1991). These decompositions targeted summary statistics, or the mean of the distribution. Yet, measuring changes in the aggregate may be misleading since economic growth may disproportionally impact growth across the distribution. It is most informative to analyze how the distribution changes over time from various factors.

More recent decompositions utilizing the full distribution of consumption enable the measurement of the contributions to poverty reduction from various components. Changes in the distribution of household consumption per capita across two periods can be decomposed into contributions by calculating a Shapley-Shorrocks estimate for each component based on a modified methodology from Barros et al. (2006). The adaptations to the methodology contribute to the

BOX 2.4. Group and income decompositions (Continued)

literature in several ways (Inchauste et al., 2014; Azevedo et al., 2013). First, the updated methodology focuses on consumption rather than income. Second, the decomposition computes a cumulative counterfactual distribution by adding one variable at a time. Third, cumulative decompositions are calculated along every possible path and averaged to address path dependence.

There are two caveats with respect to the described method. First, it is not possible to infer whether the changes are in returns or in endowments. For example, did wages increase because the working population became more educated, or did the minimum wage increase? Second, the method is not a general equilibrium method, meaning that the counterfactual distributions are not the result of an economic equilibrium (Azevedo et al., 2013). This implies that the contributions to poverty changes do not have a causal effect, but rather are an exercise used to detect distributional changes. It is assumed that by keeping all other components constant, each income component is allowed to change, and the effect on the change in the distributional statistics of the welfare aggregate is detected.

The richness of household surveys allows changes in poverty across two cross-sections to be decomposed into multiple explanatory factors. Poverty is a function of household consumption, and changes in poverty can be decomposed into the factors, as illustrated in Figure B.2.4.1. The decomposition is an identity that can be expanded or reduced based on data availability. For example, labor and non-labor income can be further decomposed if desired.

Figure B.2.4.1 Household consumption per capita—a decomposed identity
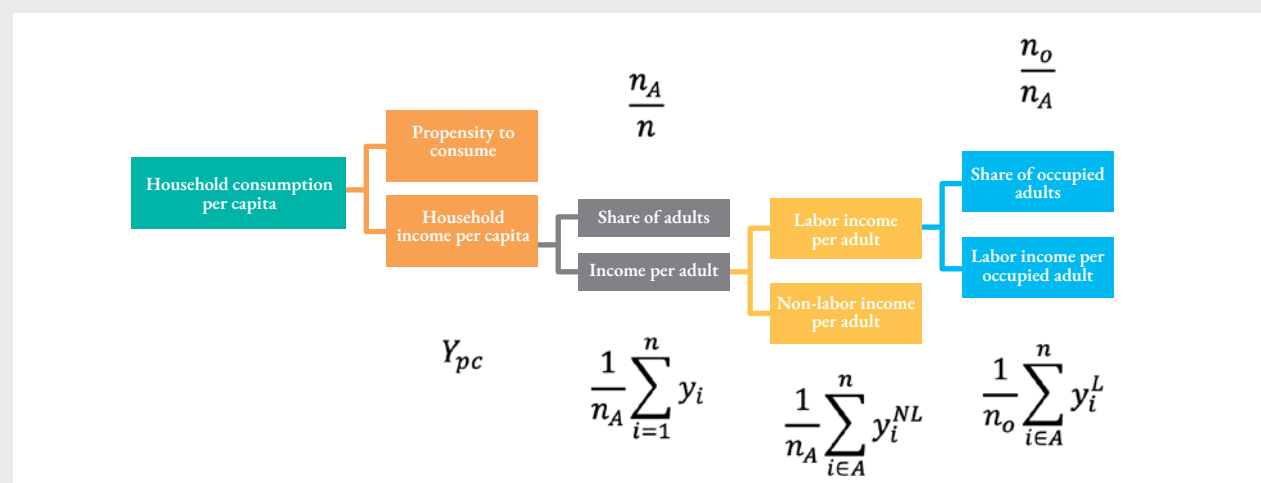
Note: An illustration of Equation 5.

Household per capita income (Y_{pc}) is total household income from all members (Y_h) divided by household size (n).

$$Y_{pc} = \frac{Y_h}{n} = \frac{1}{n}\sum_{i=1}^{n} y_i \tag{1}$$

Assuming that only adults aged 15+ contribute to household income, the identity can be rewritten as below. Working-age adults can receive wage income, while adults past retirement can receive pension income.

Continued >

| BOX | 2.4. | Group and income decompositions (Continued) |

$$Y_{pc} = \frac{n_A}{n}\left(\frac{1}{n_A}\sum_{i=1}^{n} y_i\right) \tag{2}$$

Income per adult can be separated into labor and non-labor sources. In the case of Vietnam, labor income includes wage, net business, and net farm components that are described in Annex 2.2. Non-labor income includes public transfers, remittances, and other sources.

$$Y_{pc} = \frac{n_A}{n}\left(\frac{1}{n_A}\sum_{i\in A}^{n} y_i^L + \frac{1}{n_A}\sum_{i\in A}^{n} y_i^{NL}\right) \tag{3}$$

Finally, in the case of labor income, we need to only account for employed or occupied adults.

$$Y_{pc} = \frac{n_A}{n}\left[\frac{n_o}{n_A}\left(\frac{1}{n_o}\sum_{i\in A}^{n} y_i^L\right) + \frac{1}{n_A}\sum_{i\in A}^{n} y_i^{NL}\right] \tag{4}$$

To create a mapping between household consumption and income, a variable, propensity to consume, is introduced. Household consumption per capita is expressed as below and is also identical to the illustration shown in Figure B.2.4.1.

$$Y_{pc} = \frac{n_A}{n}\left[\frac{n_o}{n_A}\left(\frac{1}{n_o}\sum_{i\in A}^{n} y_i^L\right) + \frac{1}{n_A}\sum_{i\in A}^{n} y_i^{NL}\right] \tag{5}$$

To measure the contribution of the change in poverty from different components, the identity in Equation (5) is used. The contribution of each component to the total change in poverty is the average Shapley-Shorrocks estimate across all possible paths.

Table B.2.4.1. Variables and definitions

VARIABLE	DEFINITION
C_{pc}	Household consumption per capita
θ_h	Propensity to consume
Y_{pc}	Household income per capita
Y_h	Total household income (household h)
y_i	Total income from household member i
y_i^L	Total labor income from household member i. Assuming labor income only from occupied or employed adults.
y_i^{NL}	Total non-labor income from household member i.
n	Number of household members
n_A	Number of adult household members aged 15+
n_o	Number of adult household members aged 15+ and are also employed or occupied

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2.6. Notes

[24] This chapter limits analysis to the past decade. Poverty trends in the past decade are difficult to compare to the previous decade due to changes in data in 2010. Historical discussions of poverty trends in Vietnam can be found in these reports: Glewwe, Gragnolati, and Zaman (2002) and World Bank (2012).

[25] Studies on intra-household poverty exist, but most of them cannot disaggregate consumption by household members, and the only individual-level disaggregation outcome is education, which is more easily measured (World Bank, 2018a).

[26] This categorization is based on the primary activity of each working household member.

[27] Vietnam's General Statistics Office (GSO) reported a 2 percent decline in household income in nominal terms (https://e.vnexpress.net/news/business/data-speaks/binh-duong-overtakes-major-cities-tops-per-capita-income-4282618.html).

[28] Consumption based poverty rates are measured bi-annually between 2018 and 2020.

[29] For the sake of diversification, income sources are first categorized only by size groupings in Box 2.2. Any agriculture income is considered to be the same category, whether it is from crops or fishing. For example, if a household grows multiple types of crops, it is still considered to have one type of income source rather than separate income streams for the purposes of this analysis. Wage income is also considered to be from one group initially, and not disaggregated by sectors or occupations.

[30] See Box 2.4 for technical details on decomposition methods.

[31] All areas from 2010 to 2018 maintained the same urban and rural classifications as they were sampled from the 2009 Census. The urban and rural area classifications were changed only for the VHLSS 2020 data set, since it was the first to be sampled from the 2019 Census.

ANNEX 2.1.

Chapter 2 Figures and Tables

Figure A.2.1.1. Poverty reduction from 2010 to 2020, decomposition results

LMIC ($3.20/day 2011PPP)
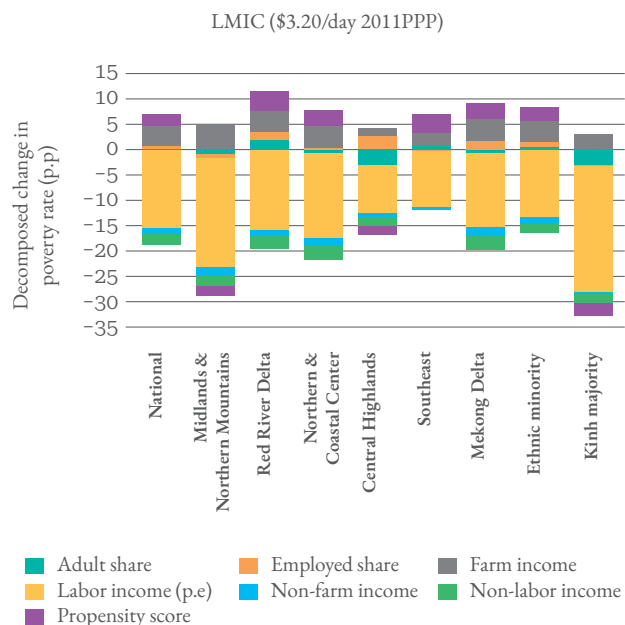
Note: Consumption-based poverty.
Source: World Bank staff calculations.

Figure A.2.1.2. Poverty reduction from 2010 to 2020, decomposition results including wages by sector

National

LMIC ($3.20/day 2011PPP)
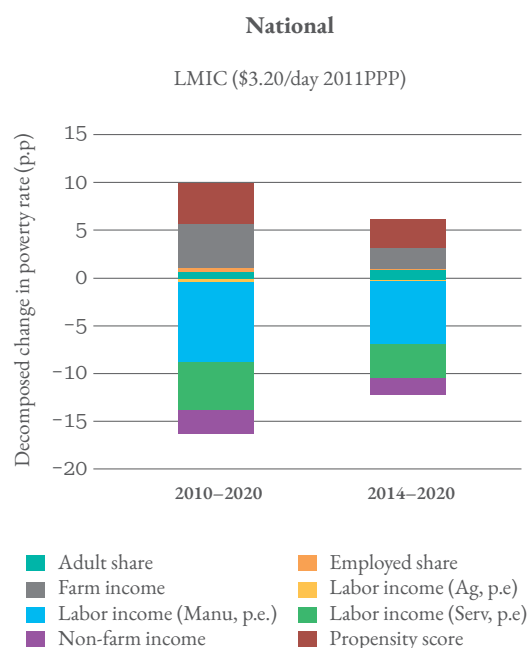
Note: Consumption-based poverty.
Source: World Bank staff calculations.

Figure A.2.1.3. Household income decomposition, 2010-2020
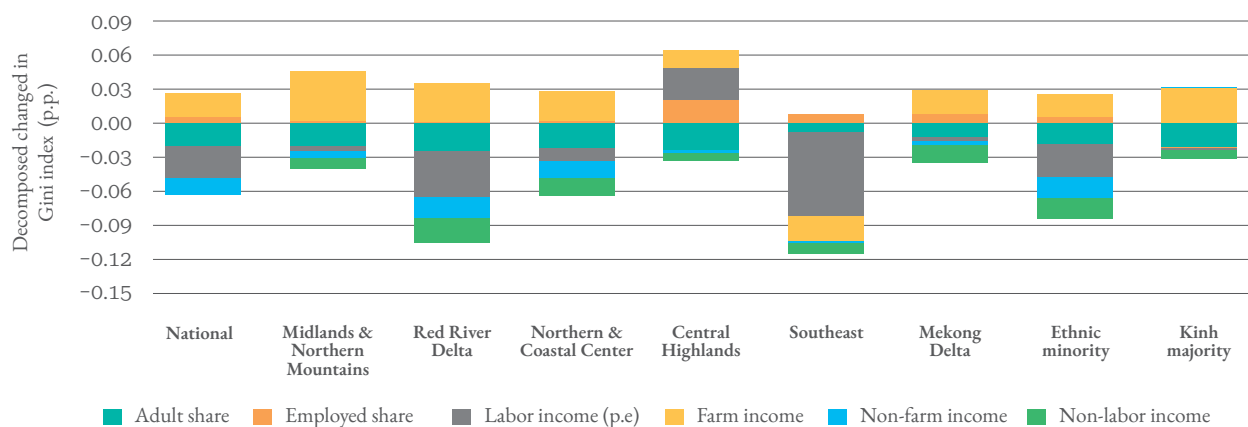
Note: Household income Gini.
Source: World Bank staff calculations.

Chapter 3.
Challenges to reducing poverty among the remaining poor

Key Messages

- Chronic poverty continues to be concentrated in households primarily engaged in agriculture, ethnic minorities, and those living in rural areas.

- Despite chronic challenges for these groups, some trends are shifting:

  – Ethnic minorities are now experiencing a similar pace of poverty reduction as the Kinh, though absolute gaps remain due to delayed progress.

  – Regionally, the Central Highlands is now the poorest region. Poverty also increased in the Mekong Delta in 2020.

Poverty rates are still much higher among rural and ethnic minority families and households primarily engaged in agriculture. These groups face persistent challenges of lower human capital, lower-quality local public services, greater distance to economic opportunities, and less access to financing or training. This chapter describes the patterns of poverty among these groups in further detail and reviews prominent constraints and challenges.

3.1. Introduction – household characteristics chronically related to higher poverty rates

Poverty rates are known to be chronically higher by some household characteristics

There is an interplay between ethnicity, agriculture, geography, and poverty in Vietnam. Remote mountainous areas where the poor are concentrated are heavily populated by ethnic minorities. Ethnic minorities are also disproportionately more engaged in agriculture than the Kinh majority. These remote areas are located far from economic centers and - partly due to unfavorable topology, agriculture is also less productive there. Group-wise poverty rates illustrate the sometimes-large differences in poverty rates by household characteristics (Figure 3.1). When households are divided by education levels,[32] geographic region, primary economic sector, or ethnicity, large variations in within-group poverty rates emerge, and the differences between the groups are more apparent.

Characterizations of groups with the highest poverty rates have remained largely the same over the last decade (World Bank, 2012). Households that were already nearest to markets and better educated in 2010 were most able to take advantage of the rapidly changing economy and structural transformations. However, the least dynamic economic sectors remained weak, and regions without strong economic growth poles experienced the lowest population growth while cities and industrial zones expanded quickly. Livelihoods have broadly improved in absolute terms but at different

rates depending on household location and circumstances. Over the last decade, nearly 10 million people escaped LMIC poverty ($3.20/day 2011PPP), but gaps across sub-groups did not always narrow. For example, when examining households by their economic engagement in agriculture, the absolute difference in poverty rates remain similar in 2010 and 2020.

Economic centers with the highest economic growth also saw the highest household consumption growth among the poor

The Southeastern region had the highest average growth in household expenditure per capita. This region grew the fastest and by almost one percentage point higher than the Northern and Coastal Center or Red River Delta regions (Figure 3.2). High-growth regions have high-performing urban areas (HCMC, Da Nang, and Hanoi). The Mekong Delta is the slowest growing region on average. Only in two instances over the last decade did a region experience average negative growth. The first case was from 2012 to 2014 in the Central Highlands region, and the second case was from 2018 to 2020 in the Mekong Delta. The contraction in the Mekong Delta from 2018 to 2020 was more severe, with household consumption growth being negative across all deciles of the distribution. Over the entire decade, the poorest households experienced the highest growth rates in the regions with the largest cities, the Red River Delta and Southeast regions. (Chapter 1 discusses regional and small area poverty trends).

The poorest regions are the smallest in population and experiencing the slowest population growth. Population size across the six regions ranges from about 5 million to over 20 million people (Figure 3.3). About 20 percent of all households live in the poorer Central Highlands and Midlands and Northern Mountains regions (Figure 3.4). Over the shorter-term horizon between 2018 and 2020, the populations are estimated to have declined in the two poorest and least populated regions: the Central Highlands and the Midlands and Northern Mountains regions. It is likely that the slowdown in population growth is also partly due to outmigration since these two regions are the most heavily populated with ethnic minority households, which tend to have more children than the Kinh majority group.

Figure 3.1. Poverty rates by dimensions revealing chronic poverty
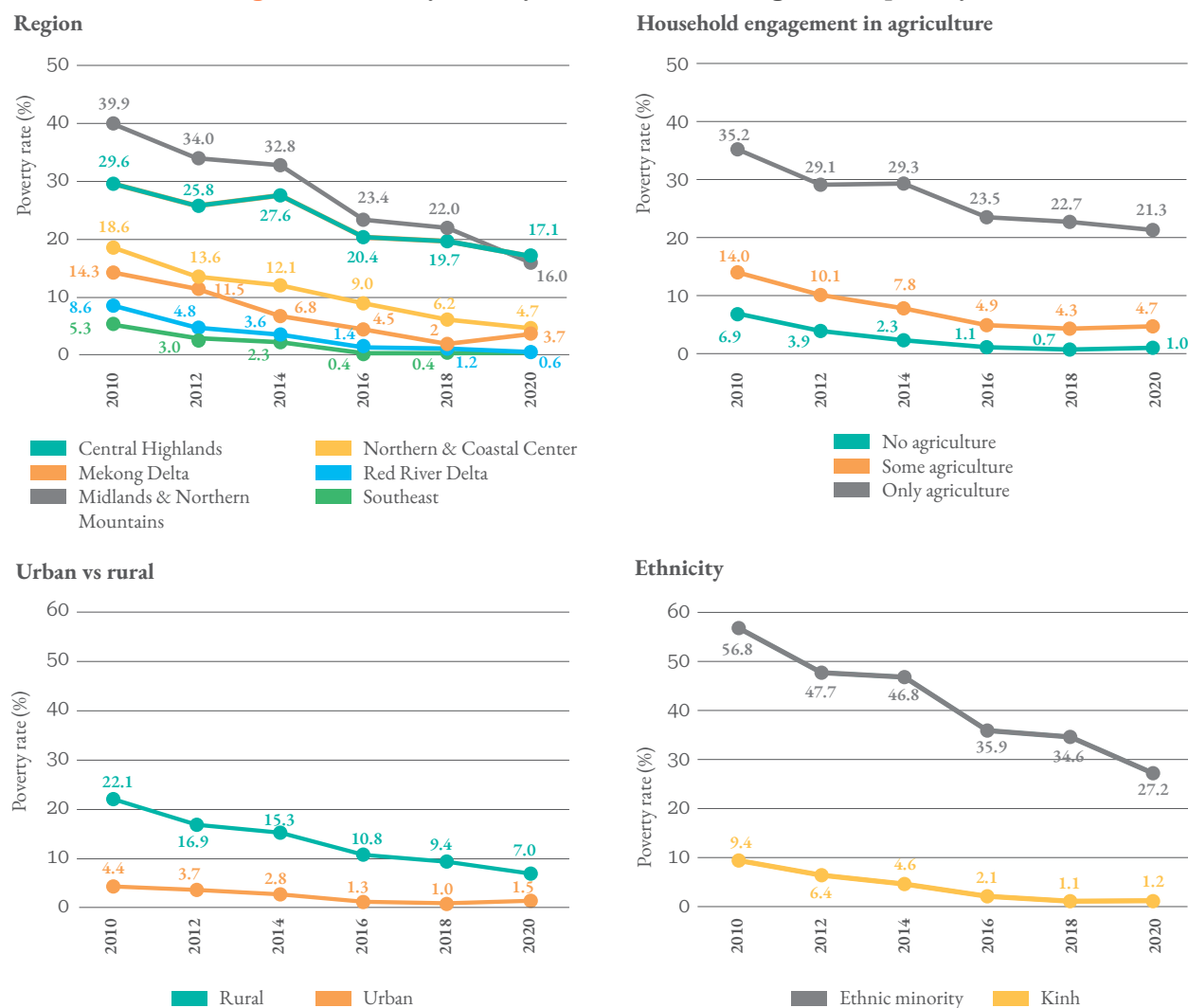
Note: Poverty rate according to the $3.20/day 2011PPP poverty line.
Source: World Bank staff calculations using VHLSS 2010–2020.

Figure 3.2. Average annualized household consumption growth, by region
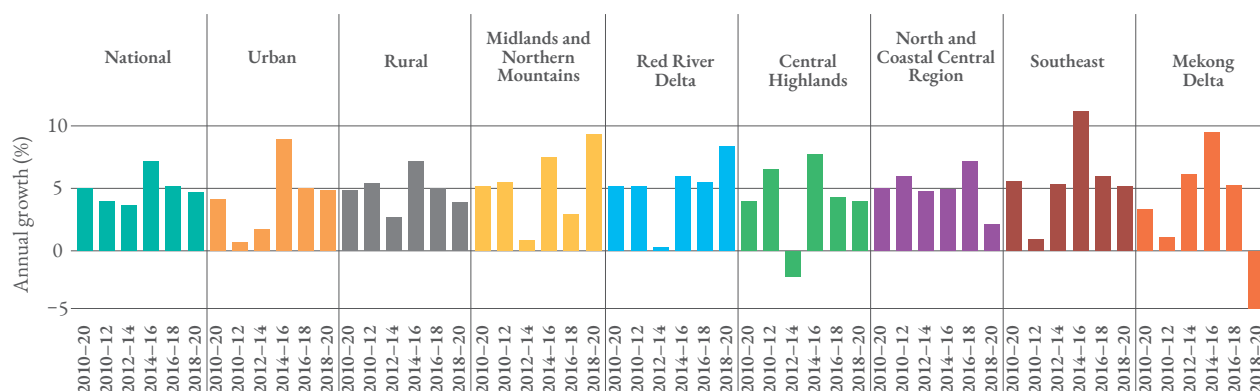
Notes: Real household consumption per capita per day (2011PPP).
Source: World Bank staff calculations using VHLSS.

Figure 3.3. Populations by region, 2010-2020

Figure 3.4. Population distribution by region, 2020

Number of households (in millions)

Source: World Bank staff calculations using the VHLSS, 2020.

The richer regions are growing faster. The Red River Delta remains the most populous region, but the Southeast region is growing faster. The primary cities in Vietnam have different degrees of influence on the regional statistics. The population of HCMC is more than half the population of the entire Southeast region, and thus is a primary driver of statistics in the region. Hanoi has less than one-fifth the population of the Red River Delta. These are the two largest cities and economic poles in Vietnam; the Southeast and Red River Delta are home to 40.5 percent of all households and are where industrial zones are most concentrated.

Poverty rates among ethnic minorities have halved over the decade

In 2020, ethnic minorities comprise about 78 percent of the LMIC ($3.20/day 2011PPP) poor, despite being only 15 percent of the total population. A bit less than one-third of ethnic minorities are poor based on this standard compared to just 1.3 percent of Kinh. This is not to say poverty reduction did not occur among ethnic minorities. In fact, the number of ethnic minorities who are poor has halved, from about 7.8 million in 2010 to 3.9 million in 2020, even with high fertility rates and population growth. However, the progress of exiting poverty among ethnic minorities is much slower than among the Kinh, who managed to reduce their poor population from 7.1 million in 2010 to about 1.1 million in 2020.

In 2020, ethnic minorities constituted about 4 out of the remaining 5 million poor. In contrast, only 29 percent of the poor were ethnic minorities in 1998, highlighting the slower pace of poverty reduction realized by this group. Over the entire decade, the annualized growth rate of household consumption per capita from 2010 to 2020 was about 10 percent per year for both the Kinh and ethnic minorities. From 1998 to 2010, per capita consumption grew at an annual rate of 7.4 for ethnic minorities and 9.4 for Kinh (World Bank, 2012). Despite improving growth rates, since ethnic minorities started at a lower consumption level, absolute gaps in household consumption are still high.

Ethnic minorities are most populous in the Midlands and Northern Mountains regions (Figure 3.5). While poverty rates among ethnic minorities are highest in both the Midlands and Northern Mountains and Central Highlands regions, a large share of ethnic minorities in the North are economically secure and even middle class. Poverty rates among ethnic minorities are also declining much faster in the Midlands and Northern Mountains, and in 2020, are at similar rates to the ethnic minority poverty in the Northern and Coastal Central region (Figure 3.6). Thus, across 53 ethnic minority groups, there is still high variation in living conditions. While the Kinh majority is the largest and most geographically spread out ethnic group across the country, the remaining 53 ethnic minority groups are scattered and tend to be concentrated in their local areas. In 2016, the poorest EM groups were the La Hu, Mang, and Mong groups

(Chi et al., 2018). The Muong, San Diu and Khmer were identified among the group of ethnic minorities with higher levels of socio-economic development (World Bank, 2019). Meanwhile, Kho Mu, Mong and Xo Dang were among lower performing groups. Significant variations exist in per capita income, poverty headcount, and non-monetary aspects such as housing conditions, access to water and adequate hygiene,

household assets among different ethnic minority groups. Even among the same ethnic minority group, gender-related factors such as the sex of household head are associated with further variation in socioeconomic outcomes (UNWOMEN, 2021). Due to limited scope, an in-depth analysis on heterogeneity in socioeconomic development between and within ethnic groups are deferred for future research.

Figure 3.5. **Economic class distribution, by region and ethnicity, 2020**
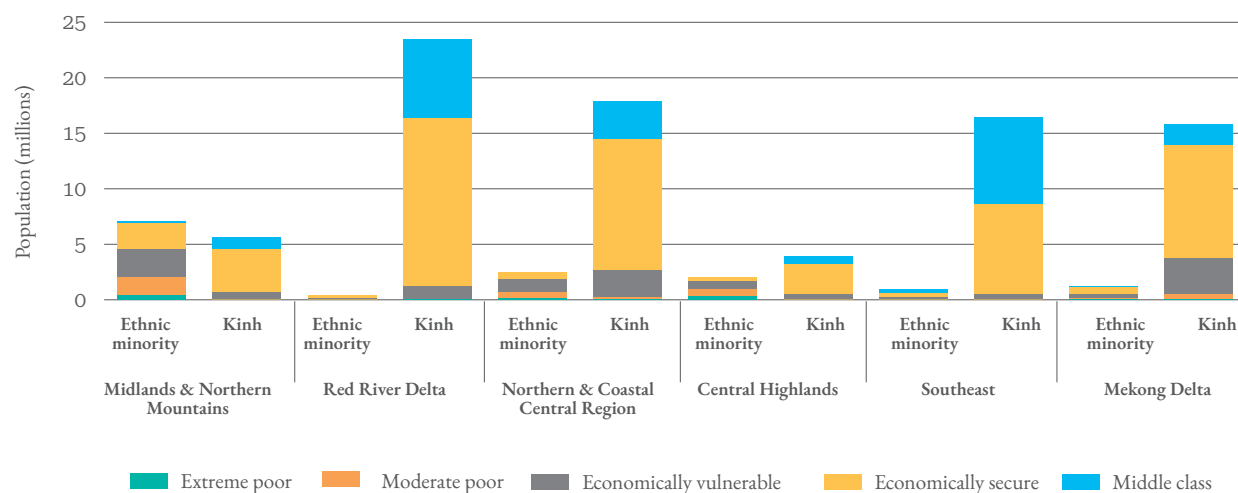
Note: Based on ethnicity of the household head.
Source: World Bank staff calculations using VHLSS 2020.

Figure 3.6. **Poverty rates among ethnic minority households**
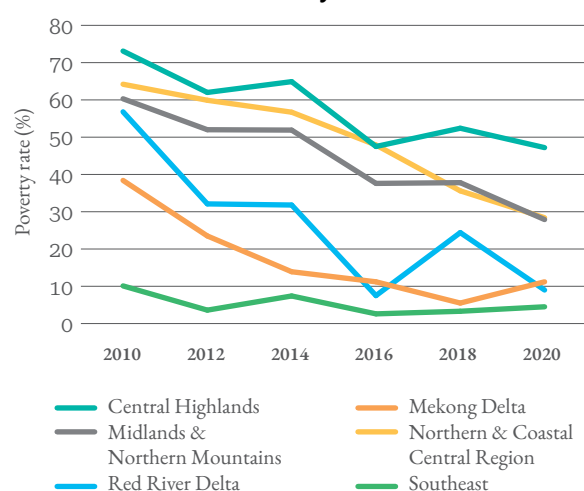
Note: Poverty rate according to the $3.20/day 2011PPP poverty line. Poverty rates among the EM sample in Red River Delta is more variable due to small sample size.
Source: World Bank staff calculations using VHLSS 2010-2020.

Figure 3.7. **Poverty rates among Kinh households**
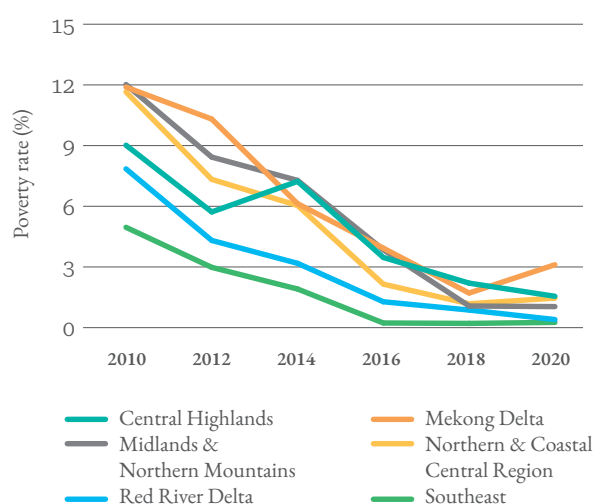
Note: Poverty rate according to the $3.20/day 2011PPP poverty line.
Source: World Bank staff calculations using VHLSS 2010-2020.

Households relying on agriculture remain the poorest

The poorest households remain the most engaged in agriculture. Households who receive their income from only family farming activities comprise 16 percent of the population, while they represent 66 percent of the LMIC poor. About 38 percent of households in the lowest consumption decile rely on agriculture as their primary source of income. Hence, agriculture is particularly important for the livelihoods of the poor, and these households also engage in subsistence agriculture. Outside of family farming, about 10 percent of wage workers are engaged in either the agricultural sector or in food and beverage processing in the manufacturing sector. For the sake of analysis on family farming, these wage workers are not considered.

Poverty among agricultural households dropped in the first half of the decade, but then stagnated in the second half of the decade. Among households engaged only in agriculture, LMIC-PL ($3.20/day 2011PPP) poverty rates declined from 35 to 23.4 percent during the first half of the decade, from 2010 to 2016. However, from 2016 to 2020, poverty among households only engaged in agriculture reduced only from 23.4 to 21 percent. The size of the agricultural labor force remained steady in the first half of the decade, and then declined significantly over the second half. Households with partial or full engagement in manufacturing or services tend to have lower poverty rates than households who are solely reliant in agriculture. For example, poverty rates for households in 2020 solely engaged in agriculture was about 21 percent, compared to 1 percent for households not engaged in agriculture at all. The significant of sectors of economic engagement in poverty reduction is discussed in Chapter 2.

The profile of agricultural households in Vietnam is largely unsurprising. In line with common perception, households with smaller land sizes, that have older household members, are ethnic minorities, less educated and headed by women, and living in larger homes with dependent children are more likely to be poor. Remoteness and the extent of reliance on agricultural income increase the risk of poverty. The relationship between the age of the household head and poverty likelihood is convex (U-shaped), implying that as people grow older, the risk of poverty increases. The risk of poverty is higher for those mainly dependent on farm activities other than non-farm activities.

The profile of the poor vs. the population as a whole

Comparing the composition of the poor to the composition of the population is also informative. These comparisons tell a similar story about which groups may be overrepresented in poor populations. For example, agricultural, ethnic minorities and households in the mountainous regions are overrepresented in poor populations. Seventy-seven percent of the $3.20/day poor in 2020 are households with agriculture as a main activity.

Generally, groups with higher poverty rates also account for most of the poor population, but it is not always the case. In 2020, ethnic minorities were 15 percent of the population, but 79 percent of the LMIC poor. Also, 42 percent of the poor live in the Midlands and Northern Mountains, even though they are 13 percent of the national population (Figure 3.8). However, not all groups are the same size, and the share of the poor population can be high in groups with lower poverty rates. For example, 20 percent of the LMIC poor population reside in the Northern and Central Coast region, even though the poverty rate in the region is only 4.7 percent. Thus, regional averages in poverty may be too ambiguous, and more granular statistics are needed at least at the provincial level.

Chronic dimensions of poverty are well known and well reflected in policy priorities. In the 2021–2025 Socioeconomic Development planning phase, three National Targeting Programs (NTPs) are aimed at assisting individuals, households, and areas based on the dimensions of high poverty (rural, mountainous, engaged in agriculture, and ethnic minorities) that are discussed in this chapter. NTPs are a broad-based policy instrument focused on alleviating poverty for the extreme poor in Vietnam. The mechanisms of NTPs are broad, ranging from large-scale public investment, loans, and credits to extension services.

The following sections describe these groups individually, but as stated at the outset, there is an interplay between these chronic characteristics. Section 3.2 discusses constraints to poverty reduction in remote areas, Section 3.3 discusses challenges faced by ethnic minorities which are more numerous, and Section 3.4 describes agricultural incomes and challenges to low levels of income generation in this sector.

Figure 3.8. Population profiles by groups

Source: World Bank staff calculations using VHLSS 2010, 2020.

3.2. Poverty across regions

Economic development and poverty reduction in remote and rural areas are by nature more challenging. The remaining poor in these areas are constrained by a lack of human, physical, and financial capital. Households in poor areas are disadvantaged by their distance to economic centers, unfavorable topography, or limited access to land. Given these well-known determinants and regional poverty trends already described in Chapter 1, this section provides more information on the important relationship between regional income dynamics and poverty reduction.

Regions with less vibrant economic centers were less successful at reducing poverty

Much of the variation in geographic poverty trends is reasonably correlated with Vietnam's terrain and location of economic growth poles. Regional differences in poverty trends are strongly associated with the presence of economic centers and cities. Regions with the lowest poverty rates contain the three largest and most prosperous cities. The Red River Delta is home to Hanoi city, HCMC is located in the Southeast, and Da Nang is located in the Northern and Coastal Central region. Industrial zones are primarily dotted around the large cities of HCMC and Hanoi, providing an abundance of factory jobs. The poorest two regions are the Central Highlands and Midlands and Northern Mountains, which also have higher shares of regional GDP associated with agriculture. One exception is the Mekong Delta region, where the agricultural share of GDP is also high, but poverty is lower. One explanation is that households in the Mekong Delta are more engaged in the country's higher-valued aquaculture, and cultivation of its flat land rice is also more productive than elsewhere in the country. The Central Highlands and the Mekong Delta region have the lowest composition of GDP derived from industry.

Regions with high concentrations of industrials parks also have high shares of households relying on wage income from the manufacturing sector. Unsurprisingly, at the higher end, the Southeast region leads with the largest proportion of households with income from wage jobs characterized by having formal contracts or that are in the manufacturing or services sectors. At the national level, growth in manufacturing wages was particularly high and an important driver of poverty reduction. In 2020, about 20 percent of households in the poorer Central Highlands region

Figure 3.9. Small area poverty estimates (2019), regional zoom-ins

Midlands & Northern Mountains

Central Highlands

Poverty rate   0.0   100.0
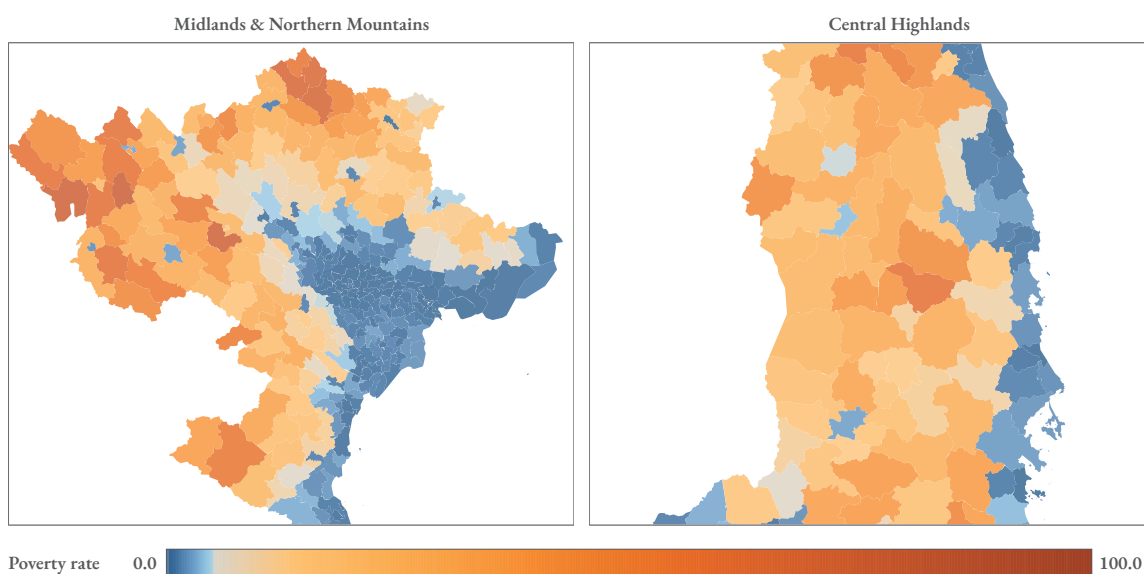
Note: The color gradient that transitions between blue and orange depicts the national average poverty rate from the 2019 small area poverty map. Poverty rates are higher in orange districts than the national average, and lower in blue districts.
Source: World Bank staff calculations.

received wages from manufacturing, while in other regions, the percentage of households receiving manufacturing wages ranged from 35 to 47 percent. The importance of manufacturing labor is that it provides an easy entry for medium-skilled jobs and pays much higher salaries that can be earned in agriculture alone.

While large cities provide strong economic spillovers to neighboring areas, rural economies do not have the same degree of positive spillover effects. Poverty rates are higher in smaller *urban* areas. There are many locations outside of principal cities that are administratively classified as urban but remain at lower levels of development. In 2010, 27 percent of the urban population was in extra-small cities, and these areas accounted for 55 percent of the urban poor (Lanjouw and Marra, 2018). Similarly, there are gaps in services between small urban versus large urban areas. Small area poverty maps that illustrate poverty rates at the district levels also reveal the lack of positive economic spillover from smaller rural urban areas (Figure 3.9). Rural economies still have small widespread regional spillovers, which is illustrated by very low poverty rates in the immediate municipal districts (blue) but higher poverty in neighboring districts (orange). For example, the immediate areas of Dalat in the Central Highlands are less poor than surrounding areas despite the region's proximity to HCMC, Nha Trang, and the coast. In the case of Sapa in the Northern Mountains, it is not its own district, but the district encompassing Sapa in Lao Cai is still poorer than the national average.

The limitations of spillover effects can be partly attributed to market connectivity. There is significant geographical variation in road density. Access to marketplaces, unsurprisingly, follows a similar spatial pattern to road density, with a higher concentration—and therefore, greater accessibility. The Southern half of Vietnam has the greatest density of roads, with the Northern Red River Delta region and Da Nang also reporting high levels of road density (all key urban centers). The rest of the country has a comparatively low concentration of roads. The Northwestern and Central Highlands (mountainous) regions of the country report much less accessibility, but points of good connection have lower poverty rates.

Households in less economically vibrant regions earn lower incomes and experience lower income growth

Across the six broad geographic regions, dynamics of household incomes and poverty are related. For example, the two poorest regions have the highest level of household participation in family farming (Central Highlands and Midlands and Northern Mountains, at 70 and 80 percent respectively) (Figure 3.10). However, the share of households that receive wage income increased by over 10 percentage points in the Midlands and Northern Mountains region but declined in the Central Highlands over the course of the decade. This contrast mirrors the faster poverty reduction success in the Midlands and Northern Mountains. The Central Highlands is the only region where economic participation in all forms of labor market activities (wages, family businesses, and agriculture) decreased at a household level from 2010 to 2020. Consistent with having the slowest progress in poverty reduction in terms of changes to the number of poor over the last decade, the Central Highlands region exhibits the lowest average wage income across most types of wage jobs (services, manufacturing, and different skill levels). Another striking difference between the composition of income in the Central Highlands and other regions is the slower progress of increasing jobs with a formal contract. The Central Highlands also exhibits the lowest share of households (22.2 percent) with someone who receives wages with a contract, a sign of lower economic stability and security. On the other hand, the share of households with income from jobs with contracts in the Midlands and Northern Mountains is now 32 percent.

The levels of both wage and family business income grew by the largest amount in the wealthier regions: the Red River Delta and Southeast regions (Figure 3.11). Average agricultural incomes in these two regions are higher partly because households are engaged in multiple activities, but income for some sub-sectors are higher in the wealthier regions. The Southeast also has the largest share of households exclusively receiving wage income as a source of labor market income. The two wealthiest regions lead in having the highest rates of wage growth among all job categories. In terms of participation in high-skill wage jobs, the Southeast ties with the Red River Delta; about 20 percent of households in each region receive income from a high-skill wage job.

Figure 3.10. Share of households receiving labor market income (2010 and 2020), by source and region
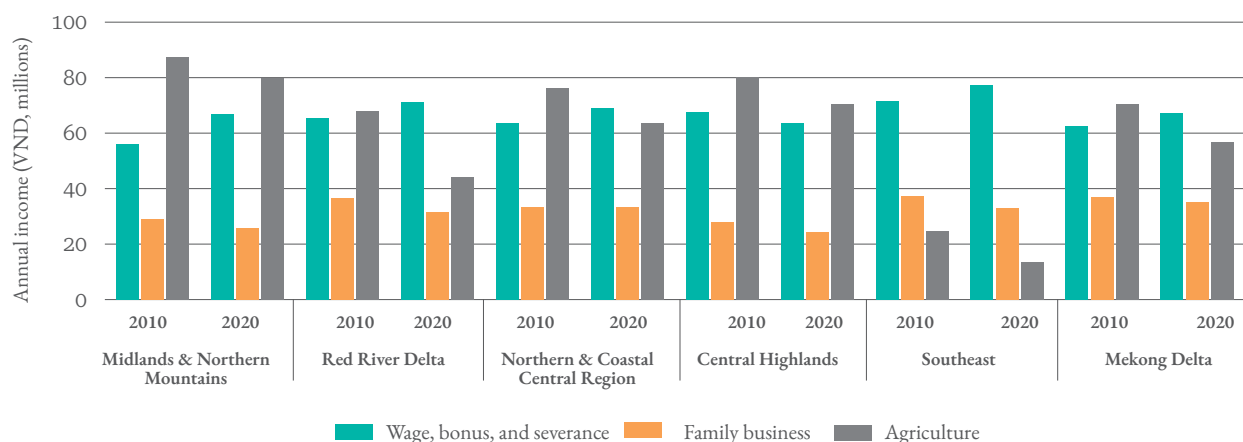
Note: Household-level income.

Source: World Bank staff calculations using VHLSS 2010, 2020.

Figure 3.11. Average household labor market income (2010 and 2020), by sources and region
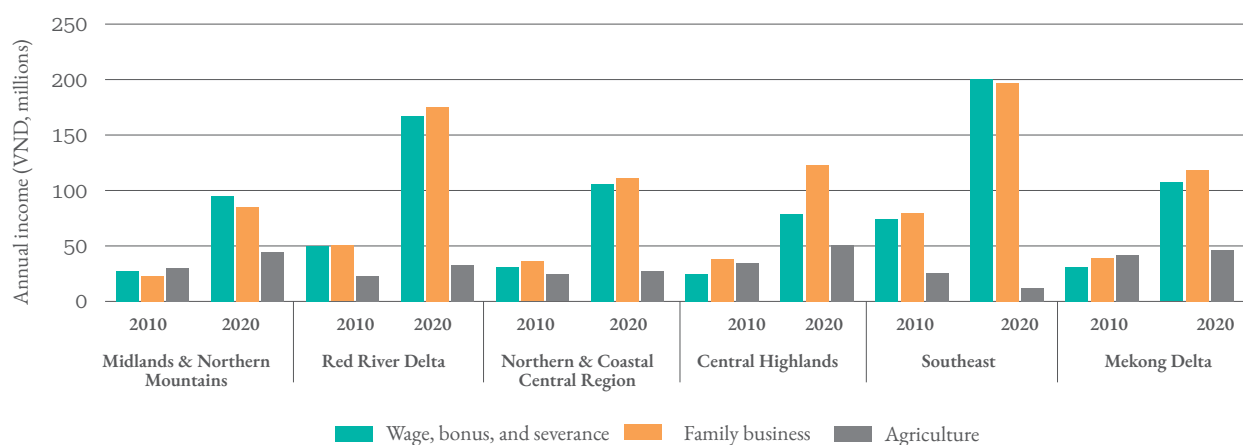
Note: Annual nominal household level income.

Source: World Bank staff calculations using VHLSS 2010, 2020.

Geography will remain a chronic challenge to poverty reduction

By geography, households in communes located in high mountainous areas are dramatically poorer (Pimhidzai et al, 2019). While there has been a longstanding association between geography and poverty, it may still be surprising just how significantly higher poverty is in high mountains compared to other geographic areas. The poverty rate in high mountains is almost 36 percent, compared to 7.6 percent in the low mountains. Natural geography largely determines the location of ports, plains suitable for agriculture, areas appropriate for industrial zones, and the feasible placement of roads and connectivity. The natural geography is also very costly to tame or alter. Areas around Hanoi and HCMC and the central coast have low poverty rates, illustrating the large spillover effects from these economic powerhouses. The limits of the economic spillover from large cities also follow geographic characteristics; poverty rates generally begin to rise as the plains begin to merge into mountains. Participation in non-farm economic activity is also directly related to access, as youths living in high mountain areas are least likely to participate in off-farm wage employment (Figure 3.12).

Figure 3.12. Poverty rates by geography
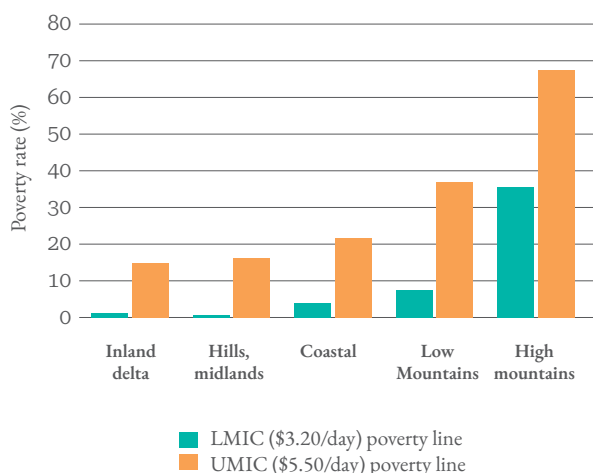
Source: World Bank staff calculations using VHLSS 2018.

Increasing poverty can be related to rising risks

Geography does not fully determine poverty. The poor tend to reside in hilly and mountainous areas, where land is less productive and more difficult to cultivate. However, there are also poor households located in relatively fertile coastal and inland delta areas. In both the inland delta and the coastal areas, the median amount of land cultivated by the poor is less than 20 percent of the median amount cultivated by the nonpoor. Poor households are also less likely to have a formal land title to use as financial collateral. With increasing climatic changes, households in extremely low-lying flat lands are also economically vulnerable. Other types of geographies are prone to natural shocks, and these regions may experience temporary increases in poverty during natural disasters but are also under threat of more permanent reversals in growth if natural environmental conditions continue to worsen. In 2020, severe droughts coincided with an increase in regional poverty rates in the Mekong Delta, which rose back to near 2016 levels. The Mekong Delta and other low-lying areas, while not constrained by geography today, will need to take decisive action now to prevent worsening environmental trends from deteriorating living conditions (see Chapter 6).

Area-based targeting programs have played an important role in regional development, but support needs to be better channeled to the poorest communes[33]

Over the last decade, National Targeting Programs (NTPs) provided high levels of investments to communes. The government invested nearly VND 560 trillion (approximately US$25 billion) in commune-level programs under NTPs from 2010 to 2019. Expenditures per commune averaged to about 85 billion VND per commune (US$3.5 million) over the whole period, or about US$350,000 per commune per year. NTP financing was a mix of central government, provincial, and commune-level funds, including credit and community-level contributions. On aggregate, the combination of state budget and local government financing made up close to 60 percent of commune-level investment financing.

Most poor households, identified using the World Bank's monetary poverty lines, live in communes that are also designated as poor under the P135 program. In 2018, about 65 percent of $3.20/day 2011PPP poor lived in P135 communes, which are targeted communes under the Sustainable Poverty Reduction National Targeting Program. Most communes in the high mountains also benefited from more government programs, with over 90 percent of communes receiving some form of government support from 2015 to 2018. Mountainous communes were also more likely to report programs being related to hunger and poverty reduction, investment in economic development, and infrastructures.

However, due to financing options, the poorest communes ultimately received less overall investment. Communes classified by the government as extremely poor in 2010 are more reliant on state contribution, which made up close to half of the investment spending, with local revenues contributing another 29 percent. Extremely poor communes received 14 percent more in state budget investment than nonpoor communes, but nonpoor communes spent 80 percent more than extremely poor communes from their own-generated revenues and four times as much from private sector and community participation. Thus, the poorest communes invested less because they mostly relied on central government financing without incremental resources. Overall, extremely poor communes drew fewer resources from private sector participation and community contributions than other types of communes.

Lower investments can be linked to less success in achieving NTP-NRD status, a recognition given to communes that reached targets in 19 monitoring indicators during NTP-NRD (2011–2015). This is apparent from a comparison of the level and sources of financing of communes that achieved Natural Rural Development (NRD) status and those that did not. Communes that had achieved NRD status by 2016 had an average investment of more than VND 60 billion during the first phase of the NTPs. This was more than twice the average amount spent by communes that had not achieved NRD status. At the end of 2019, communes achieving NRD status had on average spent VND 120 billion since 2010, compared to VND 62 billion average spending in communes not achieving NRD status. Failure to achieve NRD status is thus mostly a financing gap issue.

NTP investments improved connectivity across all communes, but gaps remain in poor communes. Resource limitations imposed sharper trade-offs in multi-deprived poor areas. Faced with a trade-off between many needs, the poorest communes favored roads and water above human development investments. As infrastructure needs are being met, investments now need to shift to improving quality in upper-secondary school and health facilities. Due to broad implementation of NTPs, the welfare impacts are hard to quantify. Widespread investment, development, and resources were broadly available to most communes. But the poorest communes in some instances received less overall support. The analysis using commune-household linked VHLSS is consistent with findings from a detailed study of NTP effectiveness (Pimhidzai and Niu, 2021).

3.3. Ethnic minority poverty reduction

Factors determining high poverty levels among ethnic minorities are manifold and complex. A high level of heterogeneity exists between different ethnic minority groups, and as such the extent to which these factors contributed to poverty among specific groups also varies. Nonetheless, an examination of the drivers of socioeconomic development facing all ethnic minorities as a group in Vietnam is important in understanding the chronic challenges for the remaining poor. The following section summarizes the key drivers

that have been identified, including physical and economic connectivity, basic household livelihood assets, market linkages, labor market mobility, access to education, and access to external support initiatives (World Bank, 2019).

Geographic remoteness and poor linkages are associated with higher poverty

Poor linkages to markets hinder ethnic minorities in improving incomes and livelihoods. Physical connectivity, production of high-value crops, prejudice from the Kinh majority, and the degree of market power exercised by local traders, retailers, and shop owners are factors that affect market linkages for ethnic minorities. Physical connectivity determines ethnic minorities' access to markets and other economic opportunities available in the wider economy. Deprived ethnic minority communities are more likely to live in areas with poor physical connectivity, which in turn keeps them trapped in poverty. Poor physical connectivity negatively impacts ethnic minorities' ability to participate in market value chains, engage in waged employment and access to other services (World Bank, 2019). The level of connectivity is not only determined by distance or level of remoteness alone, but also factors such as weather and current conditions of infrastructure. Some groups are heavily subjected to problems related to seasonality, such as landslides and monsoons, which worsen connectivity during certain times of the year.

Migration provides a pathway for further employment opportunities for some ethnic minorities

In recent years, the data suggest that there has been some migration by ethnic minorities to economic zones, but the majority continues to live in provinces with many ethnic minorities. Between 2009 and 2019, the share of ethnic minorities in the population increased in 14 out of 19 provinces identified as being part the Northern, Central, or Southern economic zones. Notably, Bac Ninh province, a major industrial center, experienced the highest growth in ethnic minorities as a share of the population, from 0.3 percent in 2009 to over 5.5 percent in 2019. Similarly, the share of ethnic minority population also increased in a number of Northern key economic zone provinces such as Hai Duong, Hung Yen and Hai Phong (Figure 3.13). Research by CARE International also found an increase in the number of migrant workers among different ethnic groups in

Figure 3.13. Share of provincial population that is ethnic minority
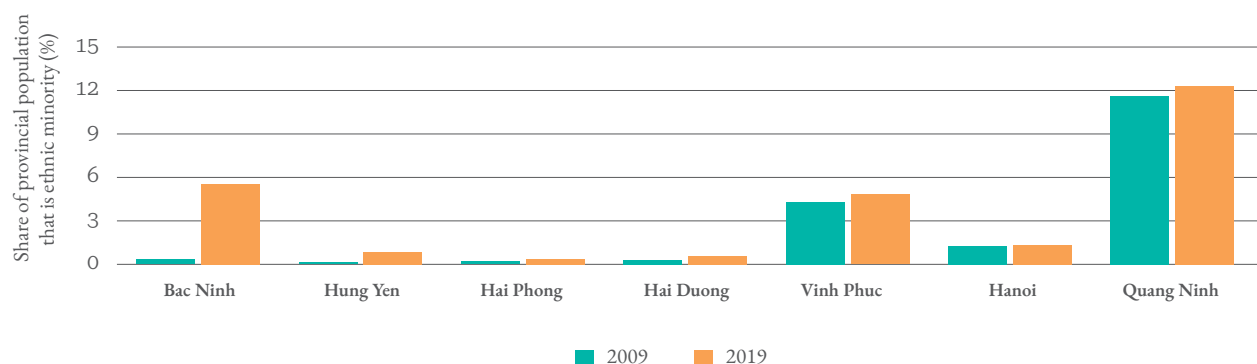
Source: 2009 and 2019 Census.

five provinces selected for the study, in 2019 compared to the previous year (CARE, 2020).[34] Overall, while there may be a degree of migration to economic zones, the largest share of ethnic minorities still resides in the same provinces in 2019 as in 2009, such as Son La, Ha Giang, Gia Lai, Dak Lak. Policies to support ethnic minorities should maintain focus on provinces with a large population of ethnic minorities. At the same time, as migration continues to play an increasingly important role in raising household income and reducing poverty, as well as providing a pathway to employment for ethnic minority youth and women, policies to support ethnic minority migrant workers are also needed.

In 2020, the share of ethnic minorities working in manufacturing was similar to the rate of the Kinh majority working in manufacturing at the start of the decade

Economic connectivity such as proximity to economic clusters or industrial parks is an important determinant of poverty amongst ethnic minorities. As public investment has improved road connectivity for ethnic minorities over the years, economic connectivity has become increasingly important for poverty reduction. Proximity to industrial areas enables more ethnic minority women and youth to participate in the labor market. For some ethnic minority groups, distance to location of work can affect perception on whether women should take on paid work outside of the home (World Bank, 2019). Closer distances also enable women to commute to work given their limited use of transportation.

Participation in the labor market outside of agriculture is key to poverty reduction for ethnic minorities. Poorer ethnic minorities are heavily dependent on agriculture, while better-off ethnic minorities earn the largest share of their income outside of agriculture. Language barriers and low educational attainment among some ethnic minority groups limit their access to only unskilled, lower-paying jobs. Closer proximity to wage employment opportunities is associated with better economic outcomes, and it enables more ethnic minority women to participate in the labor force. Some progress has been seen. In 2020, a strong shift was observed in the share of ethnic minorities working in the manufacturing sector, and impressively across all regions (Figure 3.14).

Income differentials between Kinh and ethnic minorities remain

Across the broad categories of household income, Kinh households receive more income across all sources except for agriculture (Figure 3.15). The Kinh even receive higher average social protection incomes, which includes benefits based on categorical and non-poverty-related characteristics. Among the same classification of wage jobs, wages and wage growth are higher among the Kinh than ethnic minorities (Figure A.3.1.1 in Annex). Even among high-skilled and contract jobs, household incomes are lower on average for ethnic minority families than Kinh families. Of course, there are other factors at play, such as location. Demombynes and Testaverde (2018) find that ethnic minorities working in wage jobs still earn about 6 percent less than the Kinh in comparable jobs (between 2011 and 2014).

Figure 3.14. Share of workers employed by ethnicity and in the manufacturing sector, 2010 to 2020
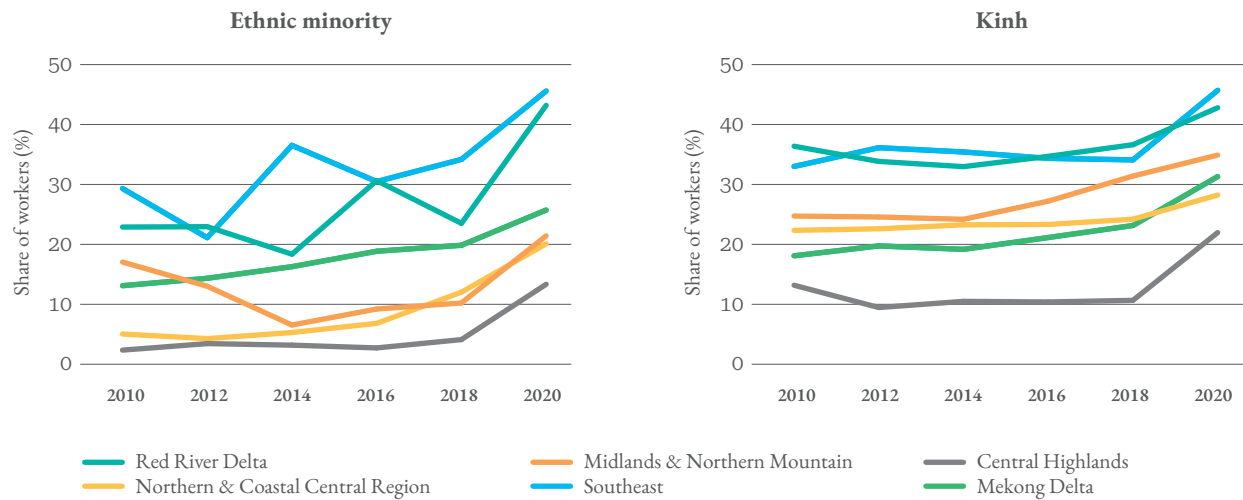
Source: World Bank staff calculations using VHLSS 2010–2020.

Figure 3.15. Kinh-ethnic minority absolute income gaps across broad categories
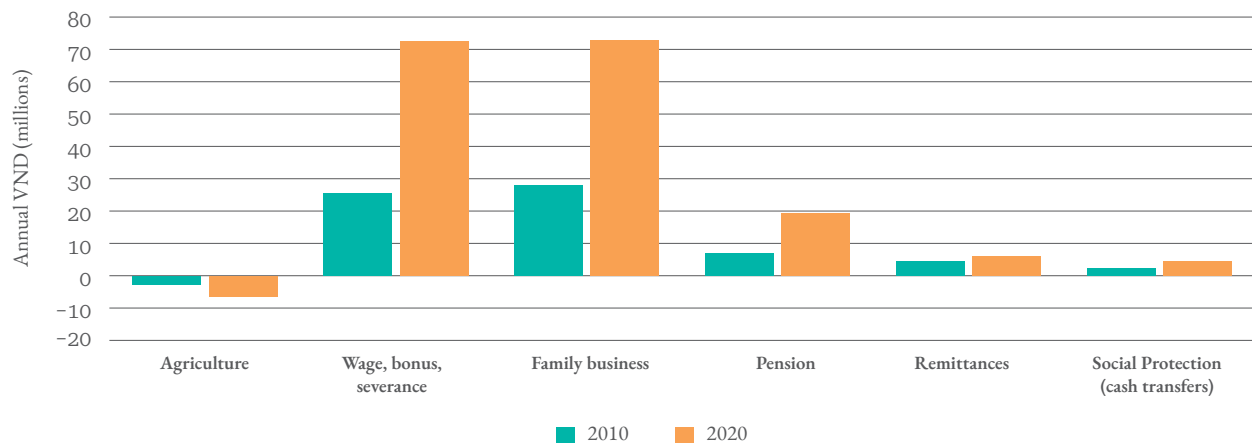
Source: World Bank staff calculations using VHLSS 2010 and 2020.

Social assistance for ethnic minorities has improved over time, but under-coverage continues to be a challenge

Coverage of ethnic minorities in Vietnam's social assistance system has improved over the years, but challenges remain. Social assistance spending in Vietnam has been increasing annually, both in terms of nominal spending and as a share of GDP (Dutta, 2019). The current social assistance system consists of regular and irregular/emergency transfers in cash and kind, as well as other social care services. Examples of large regular social assistance programs include social transfers to vulnerable groups, subsidies in the form of cash transfers for electricity, and education-related cash transfers. Ethnic minorities also benefit from specific poverty reduction programs such as the National Target Program for Sustainable Poverty Reduction. In 2016, 52 percent of ethnic minority households were covered by at least one social assistance program.

While ethnic minorities are increasingly covered by social assistance programs, challenges remain with the complexity, fragmentation, and funding of these programs as well as coverage. Multiple programs exist without a comprehensive overview of how they can contribute to improving the well-being of ethnic minorities. Furthermore, considerations of the different challenges faced by different ethnic minority groups have not been incorporated in the design of these programs, making them less effective in addressing the most pressing issues. Coverage issues remain due to the arbitrary exclusion of some poor ethnic minority households from the official poor list, due to changes in local-level poverty reduction targets. In the categorically targeted social transfer, groups such as single parents with small children, people with disabilities, and children without support are excluded.

Finally, a wide range of other cultural and social factors impact the pace of poverty reduction

Ethnic minorities are not represented in key leadership positions. While ethnic minorities are well represented in the commune administration system, leadership positions in these organizations are often held by Kinh cadres. There are limited opportunities for ethnic minorities to break into these positions, given government policies of moving Kinh cadres to remote areas, as well low educational attainment and language barriers. Lack of representation, even in non-key positions for smaller ethnic minority groups, reduces access to resources and opportunities for ethnic minorities.

External and self-perception of ethnic minorities can hinder their economic development. Prejudice exists between the ethnic majority Kinh and minority populations, which reduces ethnic minorities' access to opportunities and public services. This prejudice also exists based on socio-economic status (e.g., between better off and more deprived groups). Many ethnic minority groups internalize stereotypes about their inferiority and timidity. These prejudices and negative self-perceptions can widen the social distance between groups and make integration more difficult.

Ethnic minority women are disadvantaged because they face greater social and economic inequalities. Across educational indicators, ethnic minority women are lagging behind ethnic minority men and women nationwide. The rate of graduation for ethnic minority women was 10.2 percent compared to 16.3 percent for women nationwide (World Bank, 2021c). Similarly, nearly a quarter of ethnic minority women are illiterate, compared with just 13.3 percent of ethnic minority men (CARE, 2020). Women with lower educational attainment and poor command of the national language do not participate in community activities and consequently are not part of household decision making. The burden of unpaid care work also falls heavily on women (see Box 3.1). Child marriage, early childbirth and high fertility rates are also contributing factors to high poverty among ethnic minority groups. Having a higher number of children below working age within the household is correlated with economic hardship among some ethnic groups where birth control is not used or where a son preference exists (World Bank, 2019).

Unfair competition from local traders and retailers can also adversely impact market linkages for poor ethnic minorities. Ethnic minorities face prejudice from the Kinh majority, who control lowland markets (World Bank, 2019). In addition, where local traders and retailers also act as money lenders, they are able to set output prices for agricultural output by ethnic minorities. Indebtedness of ethnic minorities to these lenders in turn reduces their income through lower, pre-determined output prices, perpetuating further indebtedness. This can result in land and asset transfer from ethnic minorities to repay high-interest loans. Furthermore, high costs and seasonal availability of transportation increase reliance on traders for the poorest.

3.4. Agriculture incomes and livelihoods

The analysis focuses on household-level agricultural activities among smallholder farmers. Agricultural households are engaged in five activities, including the cultivation of crops, livestock rearing, forestry, fisheries, and agricultural services (see Box 3.2 for a description of these activities). In the analysis that follows, a household's main activity or main crop is defined as having the largest income source from a particular agricultural activity. The section is divided into three parts. The first part focusses on profiling poverty, poverty reduction progress, and agricultural outcomes among farm households, respectively. The final part takes a closer look to unpack some sources of disparities in farm outcomes including productivity.

| BOX | 3.1. | Gender, ethnicity and the job market in Vietnam |

Ethnic minority women are disadvantaged because they face greater social and economic inequalities. Across educational indicators, ethnic minority women are lagging behind ethnic minority men and women nationwide. The rate of graduation for ethnic minority women was 10.2 percent compared to 16.3 percent for women nationwide (World Bank, 2021c). Similarly, nearly a quarter of ethnic minority women are illiterate, compared with just 13.3 percent of ethnic minority men (CARE, 2020). Women with lower educational attainment and poor command of the national language do not participate in community activities and consequently are not part of household decision making. Women are expected to carry out traditional housewife duties in addition to agricultural labor, leaving them unable to form expansive social networks. These factors limit ethnic minority women's access to resources and livelihood opportunities. Child marriage, early childbirth, and high fertility rates are also contributing factors to high poverty amongst ethnic minority groups. Young girls and women once married are often asked to stay home to take care of children, causing many to drop out of school early. World Bank analysis found that early marriage and pregnancy are also associated with stunting and intimate partner violence (World Bank, 2018).

Women from ethnic minority groups are disadvantaged in the job market, as they face both gender and ethnicity-related barriers. Ethnic minorities are less likely to have a wage-paying job than Kinh or Hoa people. Only 17 percent of non-Kinh or Hoa working women have a wage-paying job, compared to 22 percent of Kinh or Hoa women and 32 percent of men who belong to an ethnic minority group. In addition, women from ethnic minority groups that receive a wage make 17 percent less than ethnic minority males, 35 percent less than Kinh or Hoa women, and 50 percent less than non-ethnic minority men (World Bank, 2019).

What is more, female ethnic minorities are disproportionately concentrated in low-wage, unstable agricultural self-employment jobs. In agriculture, for example, 59 percent of women from ethnic minority ethnic minority groups are self-employed, compared to 40 percent of women from ethnic majority groups (World Bank, 2019).

The probability of being poor partly depends on the type of agricultural activity a household is engaged in

Poverty rates are high among households who receive the majority of their agriculture income from forestry. Households most engaged in forestry experienced a dramatic decline in poverty rates in 2016, but then saw little change afterwards. Households engaged in forestry have more land but less income. Although forestry households are the largest landholders, production is often small-scale, and the type of trees planted may not be the popularly exported ones (such as wood and timber). Forestry output takes time to yield returns, and access to markets and services is often poor. Moreover, these households may not own appropriate forestry equipment for processing large-scale harvests to cover domestic and foreign demand. They are for the most part ethnic minorities, with no formal education and living in the Midlands.

Households most engaged in crop cultivation and that rely on staples have the highest rates of poverty. Poverty rates are generally inversely related to the value of outputs. For example, fruit products and industrial crops are more expensive, and households that primarily depend on sales of these crops are less likely to be poor. Those cultivating staples are the poorest partly because they are engaged in subsistence farming. More households in the poorest decile consume home-produced foods compared to those in the highest decile (91% vs. 47%). Families producing food crops are also more likely to consume a large portion of their crops at home compared to people who cultivate fruit crops (i.e., the latter group would more likely sell their output to domestic and/or foreign consumers). Hence, if crop cultivators can efficiently produce more and sell their output at more competitive prices, the detrimental effects of outright subsistence farming can partially be overcome.

| BOX | 3.2. | Categories of household agricultural activities in the VHLSS |

One important aspect to better understanding high poverty and low income is to describe the agriculture sector as households experience it. Analysis uses data from the Vietnam Household Living Standards Survey (VHLSS) to analyze households that depend on agriculture for their livelihood. The VHLSS captures agricultural activities primarily through household-level agricultural income modules. A small share of household members are engaged in the agriculture sector in the form of wage employment. A small share of family businesses are engaged in food processing, but that is considered to be manufacturing.

Table B.3.2.1. Description of agricultural activities

ACTIVITY	DESCRIPTION	IS THERE PER M²?	IS THERE UNIT VALUES (Y/N)
Income sources (net)			
Agricultural land	Rental income		
Livestock, hunting, trapping	Animals, birds, apiculture and associated products e.g., milk, eggs, honey, etc.	No	Yes, some in kgs some in heads
Agricultural services	Ploughing, irrigation, etc.	No	No
Forestry	Palm, bamboo, timber, cinnamon, firewood, tending, forest renovation and improvement, etc.	Has land size	No
Fisheries	Aquaculture and capture	Has pond size	Yes
Crops	Rice, staples, industrial, fruits, and by-products	Has land size	Yes
Rice	Ordinary, sticky, specialty	Has land size	Yes
Staples (food crops)	Corn, potato, beans, vegetables, etc.	Has land size	Yes
Industrial crops	Annual and perennials e.g., soybean, cotton, coconut, rubber, coffee, etc.	Has land size	Yes
Fruits	Fruit trees e.g., orange, pineapple, jackfruit etc.	Has land size	Yes
Agricultural by-products	Leaves, stems, jute, stalks, straw, grass, etc.	No	No

Among agricultural households, poverty rates are lowest among those who receive the majority of their incomes from land leasing, fruit, or aquaculture. Land leasing is a passive activity, and while it yields low incomes, it is most likely supplemental income for households engaged also in services or manufacturing. Prices of fruit and aquaculture products are higher, which keeps poverty low. The improvement in the livelihoods of aquaculture households over the decade has been the most impressive. The relative decline of poverty for aquaculture households from 2010 to 2020 was the fastest, and comparable to the pace among non-agriculture households. For households in aquaculture, poverty rates declined from 24 to 4.4 percent over the decade, or an average of 15.6 percent per year. However, a slight increase in poverty among aquaculture households in 2020 is related to the

rising poverty also seen in the Mekong Delta in the same year, since that is the region with the highest level of engagement in aquaculture. While not shown because of small sample sizes, households engaged in agricultural services also have the lowest poverty rates and correspondingly high incomes.

For 84 percent of poor households in agriculture, the main agricultural income sources are rice, staples, livestock, and forestry (Figure 3.16). For the most part, households who engage in these tend to be the poorest. An exception is that poverty rates for households principally engaged in industrial crops are slightly higher than for rice-producing households in recent years, but the number of poor is lower because fewer households cultivate industrial crops.

Figure 3.16. The number of poor (in millions), by main household agricultural activity, 2020
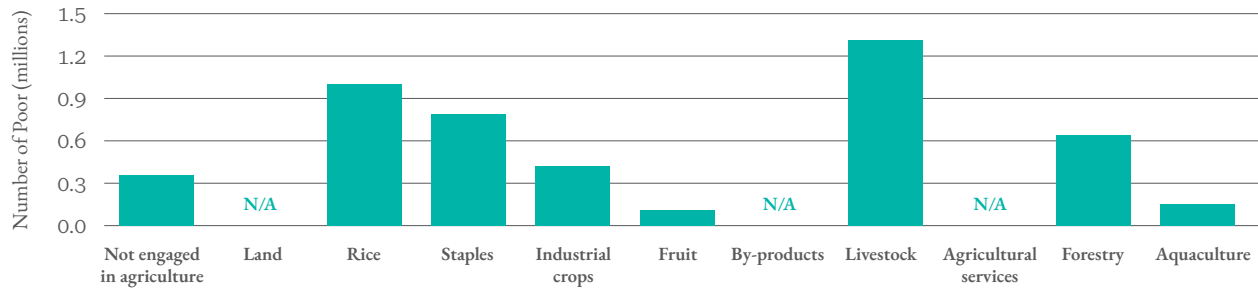
Note: World Bank LMIC ($3.20/day 2011PPP) poverty line. Main agricultural activity is the one that yields the highest income. Poverty rates for households with the largest income source from by-products or agricultural services is not shown because of small sample. Households may also earn incomes outside of agriculture.
Source: World Bank staff calculations using VHLSS 2020.

Characteristics of households in the forestry sector stand out as more unique (Table A.3.1.1. in Annex). Compared to households mainly engaged in other activities, there is a high concentration of ethnic minorities in forestry (73 percent), who have the highest share of uneducated (18 percent) and the youngest (47 years) household heads, and who manage the largest land areas, averaging 4.3 hectares. These households mainly reside in hilly and remote regions of Vietnam, with over three-quarters having at least one dependent child compared to others. Moreover, the highly educated, male-headed, Kinh group is the most likely to be engaged in profitable agricultural services, hence, to fetch the highest average household income among this group of households.

Employment in agriculture is in decline. In 2020, half of all Kinh farmers were aged 50 and over, illustrating the main source of ageing, while ethnic minority farmers tend to be much younger (Figure 3.17). Persistence in agriculture among ethnic minorities also foreshadows longer-term challenges to poverty reduction. Across all regions and all sub-sectors, fewer households were engaged in agriculture in 2020 than in 2010 (Figure 3.18). The exit from agriculture is a combination of factors including ageing, growing economic opportunities elsewhere, and changing employment choices among younger generations. Across sub-sectors, the largest decline in participation was among some of the agricultural activities that generate the lowest income: by-products and rice production. The share of all households earning income from agricultural

Figure 3.17. Farmers are aging, particularly among Kinh
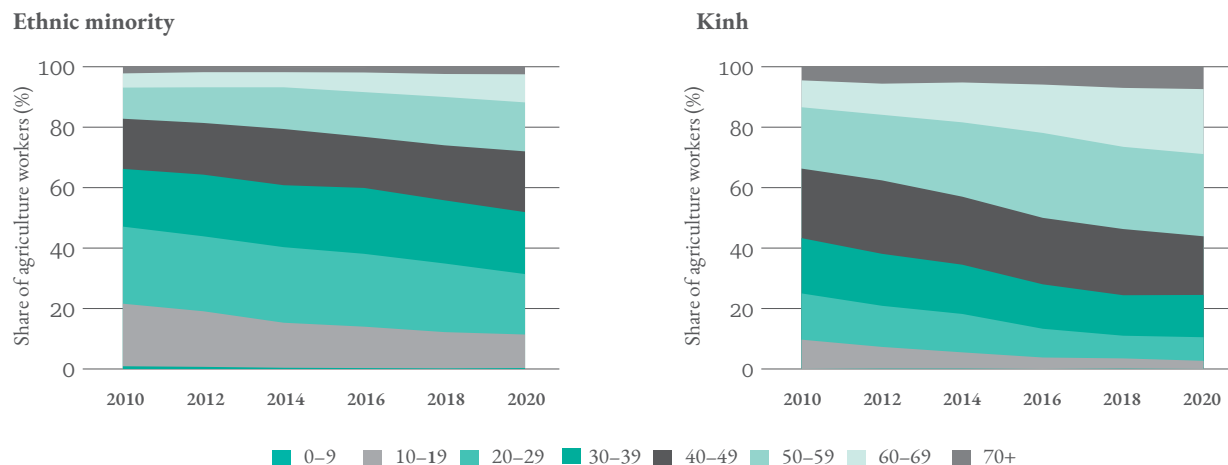
Source: World Bank staff calculations using VHLSS 2010–2020.

by-products was 41 percent in 2010, dropping to 21 percent in 2020. Participation in rice farming dropped from 44 to 28 percent over the same period. However, households are diversified and often earn income from family farming in addition to other labor activities. Households can also earn income from more than one type of agricultural activity.

Across regions, households are engaged in a variety of types of agricultural activities. In 6 out of 10 sub-sectors, the Midlands and Northern Mountains region has the highest participation: by-products, forestry, fruit, livestock, rice, and staples (Figure 3.19). Mekong Delta households are the most likely to be seafood producers (39 percent), while a large share of households in the Central Highlands cultivate industrial

crops (perennials). People living in the Southeast region, with its small land size, and half of its population from Ho Chi Minh City, are the least likely to be engaged in agricultural activities. Hence, the extent to which regions are engaged in less profitable agricultural activities is likely to explain the variations in regional poverty rates among these households.

Agricultural incomes across sub-sectors remain modest compared to other sources of non-agricultural income

Incomes from some agricultural activities are increasing, but even these higher incomes are low compared to income from wages or family businesses. Figure 3.20 disaggregates

Figure 3.18. Participation in agricultural activities over time (2010–2020), national level

Share of households with income source (%)
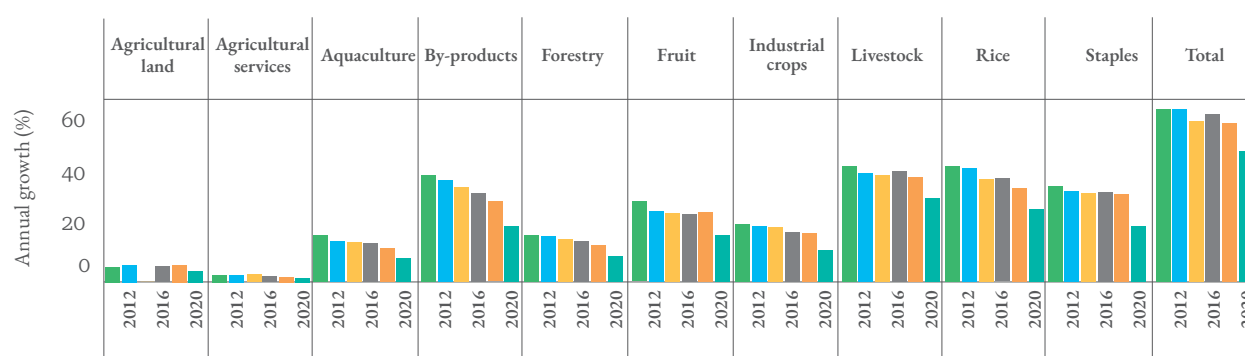
Note: Agricultural land data missing in 2014.
Source: World Bank staff calculations using VHLSS 2010–2020.

Figure 3.19. Participation in agricultural activities over time (2010–2020), by region
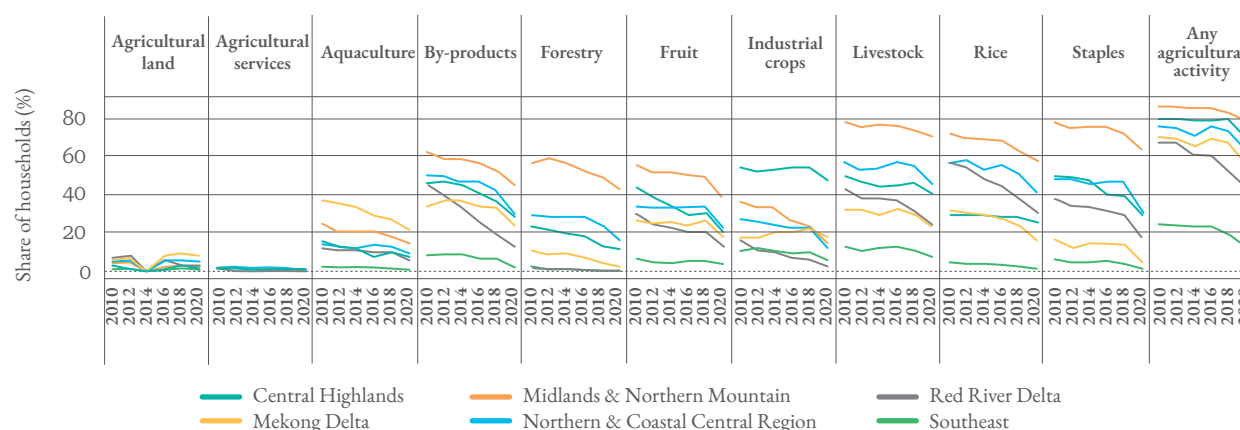
Source: World Bank staff calculations using VHLSS 2010–2020.

farm income trends by activities and crops and shows that while crop income increased to a lesser extent, income from agricultural services, aquaculture, and livestock substantially increased throughout the decade. Higher livestock income also reflects increasing diversity in diets and higher consumption of milk products by the domestic population. However, even for households engaged in sub-sectors that are enjoying increasing incomes, total incomes from even the most lucrative activities are still well below wage incomes. Average annual household income from wages totaled about 138 million VND in 2020 compared to the highest-paying agriculture sub-sector: 51.5 million VND in agricultural services.

Changes in agricultural incomes also vary by region. For example, despite lower participation rates in some household activities such as aquaculture, forestry, and livestock, the Red River Delta and the Southeast regions still enjoy higher growth in average incomes from these sub-sectors, perhaps benefitting from higher local prices (Figure 3.21). Other regional advantages include higher incomes from rice in the Mekong Delta and higher incomes from perennials in the Central Highlands and Southeast regions.

Figure 3.20. **Household farm income by activity (2010–2020), national level**

Annual VND (thousands)
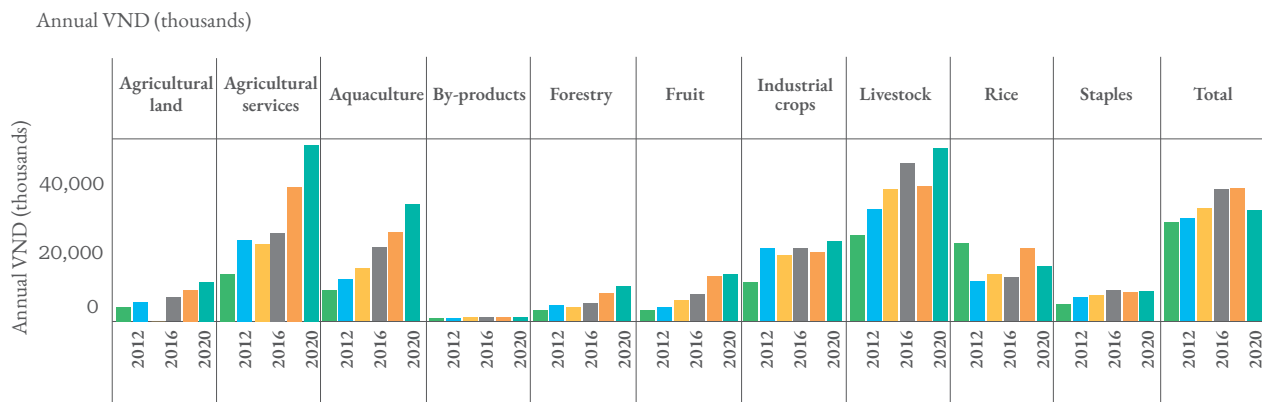
Note: Nominal average annual net income among engaged households.
Source: World Bank staff calculations using VHLSS 2010–2020.

Figure 3.21. **Household farm income by activity (2010–2020), by region**
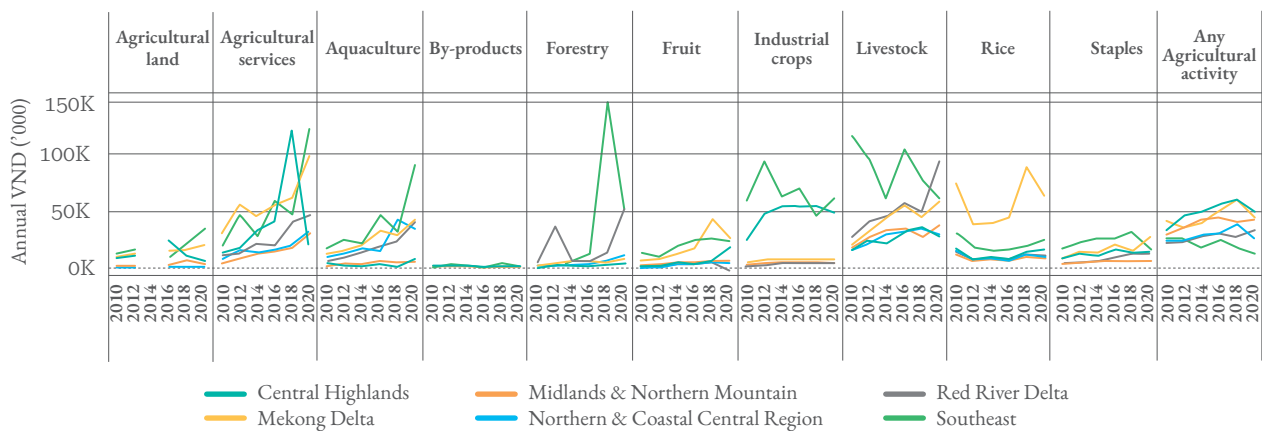
Source: World Bank staff calculations using VHLSS 2010–2020.

Sources of disparities between Kinh and ethnic minorities

Despite remarkable headway in overall poverty reduction, including a steady fall in ethnic minority poverty, there remains a considerable gap in agricultural outcomes between the Kinh majority and ethnic minorities. Overall, ethnic minorities are more likely to engage in agriculture compared to the majority Kinh (88% vs. 56%), as well as across all sub-sectors (Figure 3.22). Table 3.1 panel A shows that the most noticeable difference between the Kinh and ethnic minorities is in engagement in livestock (82% vs. 64%) and forestry (69% vs. 11%). Ethnic minorities are marginally more likely to be engaged in crops and fishing by a 7 percentage point difference each. In panel B of Table 3.1, the absolute difference in engaging across crops between the two groups is largest in rice and staples compared to industrial crops and fruit trees. This implies that despite the vast presence of ethnic minorities in agriculture, they are more likely to engage in subsistence agriculture and in profoundly less productive activities compared to the Kinh majority.

Assessing crop yield and total factor productivity (TFP) shows that poor and ethnic minority households are less productive (Table 3.2). In panel A, the difference in farm-level yield and TFP between poor and nonpoor households is statistically significant. Although there is no systematic difference in crop yields between ethnic minorities and the Kinh, the significantly lower TFP among ethnic minorities in panel B is potentially concerning.

Table 3.1. Agricultural activities - Kinh vs. ethnic minorities

	KINH	EM	DIFF.
Panel A: Activity			
Crops	0.90	0.97	-0.07***
Livestock	0.64	0.82	-0.19***
Ag. services	0.02	0.01	0.01***
Forestry	0.11	0.69	-0.60***
Fisheries	0.21	0.28	-0.05***
Observations	4488	1482	
Panel B: Crop			
Rice	0.62	0.80	-0.21***
Staples	0.56	0.82	-0.30***
Industrial crops	0.34	0.37	-0.01
Fruits	0.48	0.58	-0.09***
By-products	0.53	0.68	-0.17***
Observations	4003	1430	

Note: 'Diff.' is the difference in means between the two groups with significance * p < 0.10, ** p < 0.05, *** p < 0.01 based on t-tests.
Source: World Bank staff calculations using VHLSS 2018.

Figure 3.22. A comparison of household agricultural participation - Kinh vs. ethnic minorities
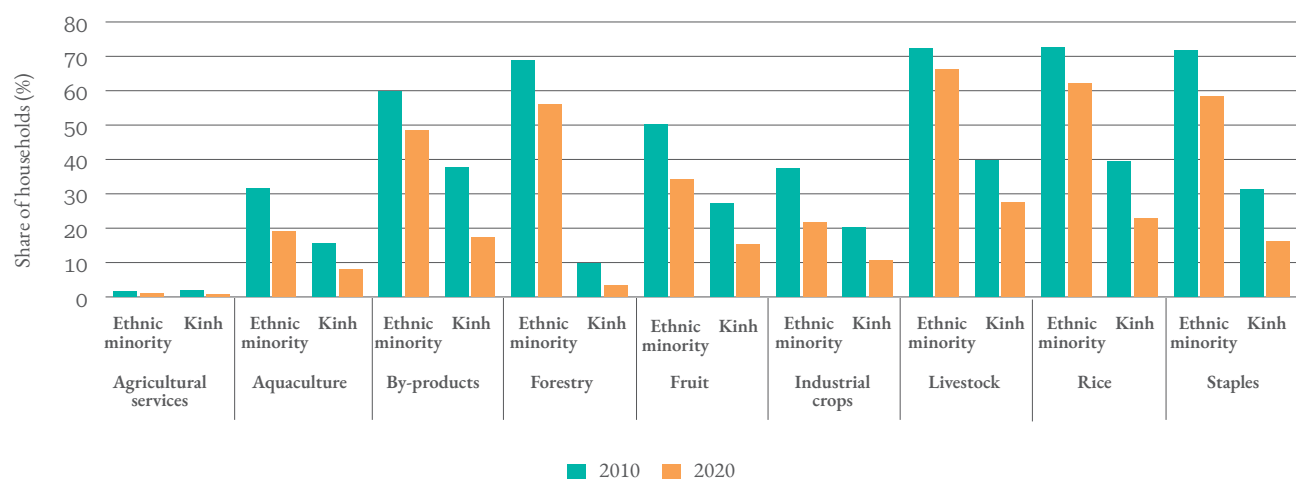
Source: World Bank staff calculations using VHLSS 2010–2020.

Table 3.2. Crop yield and total factor productivity

	(1) YIELD (LOG)	(2) TFP
Panel A: Poverty		
Poor (=1)	-0.349***	-0.195***
	(0.050)	(0.028)
R-sq	0.357	0.391
Observations	5602	5314
Panel B: Ethnicity		
EM (=1)	0.037	-0.121***
	(0.071)	(0.042)
R-sq	0.350	0.358
Observations	5602	5314

Note: TFP is expressed in hours of labor and is estimated based on yield, input expenditures, land size, and capital. District FE included. SE clustered at the enumeration area level. *** p<0.01 ** p<0.05 * p<0.10.
Source: World Bank staff calculations using VHLSS 2014.

Considering productivity and unit values across crops further explains welfare dynamics between Kinh and ethnic minorities (Figure 3.23). Overall, average price per unit is lowest in rice (₫7,000) and highest in cash crops (₫22,000) – panel A. However, the major source of variation between the two groups is in the value per kilogram for staples and fruits. For example, Kinh staples are worth more than double those of ethnic minorities (₫24,000 vs ₫10,000). Therefore, the Kinh charge significantly higher prices than

the average compared to their ethnic minority counterparts. This points toward information asymmetries in prices or access to markets. Panel B shows that although productivity is generally low in rice and staples regardless of ethnicity (rice is as equally low as ₫2,000 per kg for both groups), productivity in fruits and cash crops per square meter is profoundly higher for the ethnic majority.

While ethnic minorities are more engaged than Kinh in every agricultural activity, they earn less in every activity and have experienced less agricultural income growth. Figure 3.24 shows that Kinh majority generally earn higher than the overall average, and farm income gaps between the Kinh and ethnic minorities are significantly wide. In line with these findings, the most profitable activities are agricultural services and fisheries, while forestry is the least profitable. Although it appears that households engaged in cultivating crops have a sizeable income, this is largely driven by fruit trees and industrial crops. Therefore, being productive is harder in rice and staples regardless of ethnic affiliation.

Disparities persist between the Kinh majority and ethnic minorities, and chronic challenges largely remain among ethnic minorities. Ethnic minorities are more likely to be engaged in less profitable activities and to use less fertilizer; they are less likely to monocrop, they have lower TFP, and they earn less farm and total household income. Income-maximizing households might concentrate in the production of the most profitable crops. While some potential sources of disparities

Figure 3.23. Crop productivity - Kinh vs. ethnic minorities
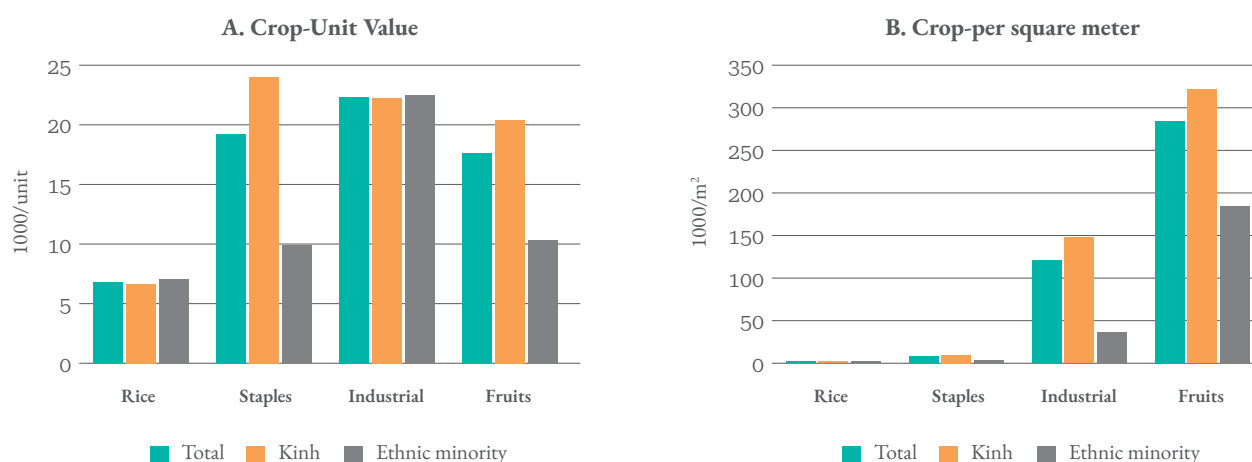
Source: World Bank staff calculations using VHLSS 2018.

between Kinh and ethnic minorities have been highlighted, additional explanations driving these outcomes may be linked to differences in knowledge/skills, quality of crops, land productivity (upland vs. lowland), and risk strategy. Availability of geo-coded data and qualitative work could further explain these mechanisms. A suggestive implication for family farms in Vietnam is to enlighten and encourage households, especially those that are multicropping, to specialize in the production of fewer crops to yield improved outcomes, boost household welfare, and ensure sustainable livelihoods. This underscores the importance of skill development in farming techniques and production decision making.

The ability to engage in the agriculture value chain or diversify into cash crops is limited for ethnic minority groups. The poorest ethnic minority groups have very little capacity to diversify into cash crops without the availability of indigenous crops (World Bank, 2019). This could be attributable to environmental, location-specific factors, the lack of productive landholdings and capital, poor labor capacity, or potential risk aversion. Similarly, participation in agriculture value chains is very low for most ethnic minorities, despite the proximity of some of them to value chains for products such as coffee, rubber, aquaculture, and others.

Putting agricultural land to better use to increase the incomes of those left behind in agriculture is imperative. Across lowland and highland areas, poor and nonpoor households cultivate similar amounts of land. However, poor households are less likely to grow industrial crops; they devote more of their land to cultivating less profitable traditional cereal crops. Not only do poor households plant suboptimal crops; their yields are lower than those of nonpoor households, which cultivate the same crop type on the same type of land (Pimhidzai et al., 2019). This could be a result of lower educational attainment, which results in lower professional and management skills. This is one of the underlying reasons for their poverty. Furthermore, poor households have limited access to credit to invest in perennial crops, as these crops often need expensive intermediate inputs and take longer to yield returns. The lack of access to credit generally stems from the lack of collateralized fixed assets and land user certificates. Hence, the remaining challenges regarding the lack of education and lack of financial capital should be addressed to further exploit the agricultural potential from non-crop cultivation in reducing rural poverty.

Figure 3.24. A comparison of household agricultural income - Kinh vs. ethnic minorities
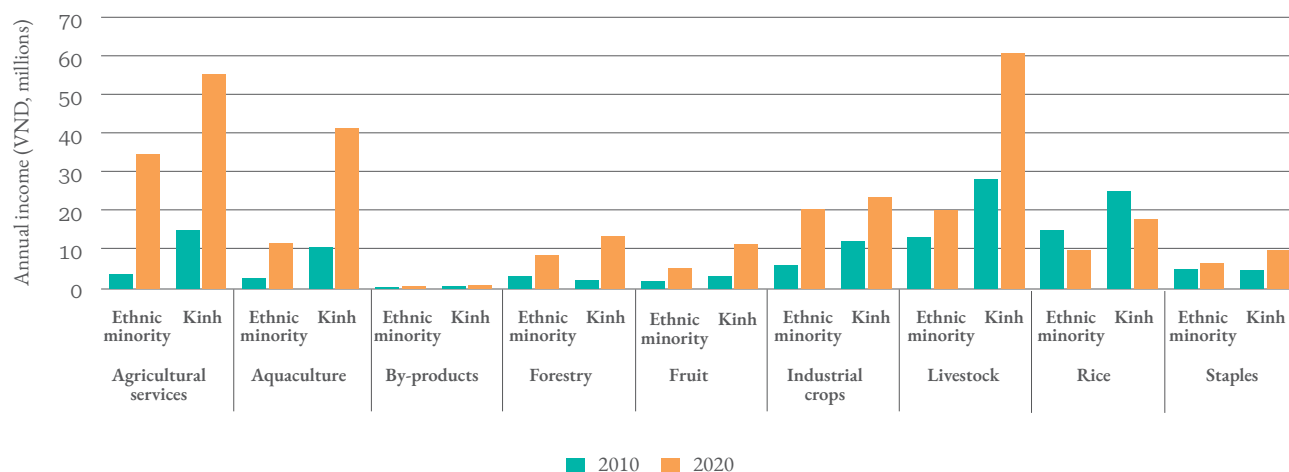
Source: World Bank staff calculations using VHLSS.

3.5. Chronic Poverty: yesterday and tomorrow

Chapter 3 examined the characteristics of regions and ethnicities to distill the main observable differences that are associated with higher rates of poverty. Regional and ethnic differences in the progress of poverty reduction have persisted. Some changes were seen in 2020. For example, the Mekong Delta experienced a severe drought as well as supply disruptions from COVID-19, which upset its decade-long trend of poverty reduction. The Midlands and Northern Mountains region has proven more successful than the Central Highlands in reducing poverty from a high starting point at the beginning of the decade. This may be linked to a dynamic labor market process, where the region has experienced a high increase in manufacturing wage employment, while the Central Highlands has a more static labor market. For the poorest households, agriculture is frequently the largest source of household income. To conclude, the chapter reviewed the types of agricultural activities households are engaged in and their association with poverty reduction. An important contribution of this chapter is to describe and better understand trends in household farm income and productivity. Income from agricultural activity is the weakest source of labor market income, with much lower growth rates over the last decade compared to wage and household business incomes.

Yet, the population of the economically vulnerable is more than double the size of the population of poor. Moreover, this group has a different profile, which necessitates different policies to sustain their well-being at higher levels. Due to the distribution of the population, the economically vulnerable are more prevalent in regions outside of the traditionally poor mountainous areas, with the difference in the share of the economically vulnerable compared to the poor greatest in the Mekong Delta. The share of the economically vulnerable with higher levels of education is also higher than it is for the poor. Addressing the needs of this group, those out of poverty but still vulnerable, and creating pathways where there is a fair chance for all Vietnmaese to improve their livelihoods is the Next Mile challege described in Part 2 of this report.

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3.7. Notes

[32] How education levels are tied to poverty will be discussed more in Chapter 4.

[33] This section summarizes findings from the Shared Gains report (Pimhidzai and Niu, 2021). See Annex 3.2 for a summary of objectives and targets for the various NTPs and over different periods.

[34] Research was conducted in five provinces where many ethnic minorities reside. These include Dien Bien, Bac Kan, Quang Tri, Kon Tum and Tra Vinh. From these 10 communes with high rate of migrant workers were selected. The 10 communes include Muong Phang and Ngoi Cay (Dien Bien province), Thuan Mang and Na Phac (Bac Kan province), Dak Xu and Bo Y (Kon Tum province), Dak Rong and Ba Nang (Quang Tri province), and Thanh Son and Tra Cu (Tra Vinh province).

ANNEX **3.1.**

Chapter 3 figures and tables

Figure A.3.1.1. Wage trends by job type, Kinh vs. ethnic minorities
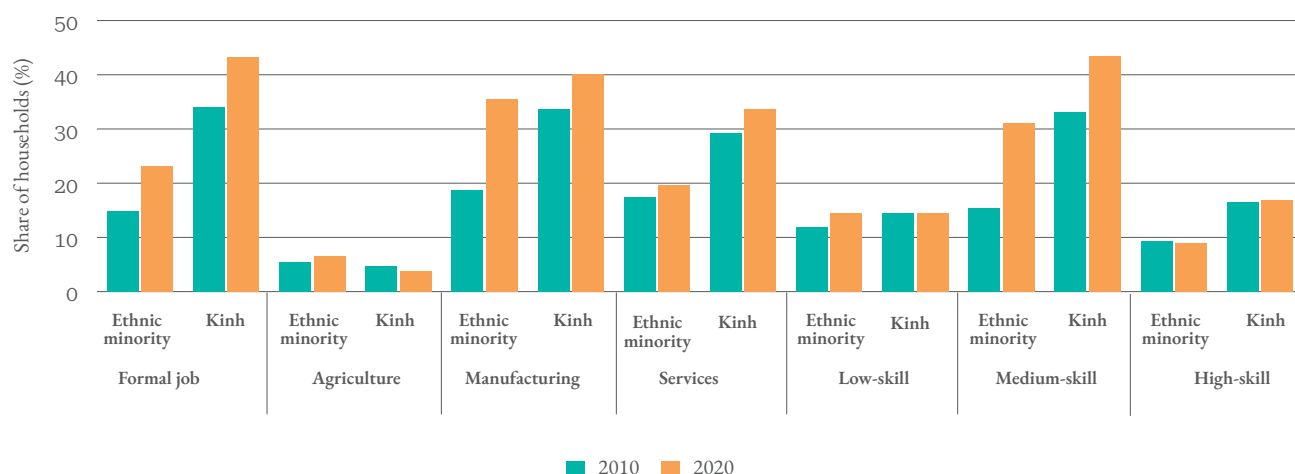
Source: World Bank staff calculations using VHLSS 2010 and 2020.

Table A.3.1.1. Key household characteristics across main activity

2018	CROPS	LIVESTOCK	AG. SERVICES	FORESTRY	FISHERY
Ethnic minority (=1)	0.35	0.25	0.14	0.73	0.07
Female headship (=1)	0.16	0.17	0.00	0.10	0.17
No education (=1)	0.09	0.11	0.00	0.18	0.07
Age in years	51.04	52.79	49.03	46.49	52.24
Household size (#)	3.90	3.48	4.08	4.47	3.97
Household w/ child (=1)	0.63	0.55	0.67	0.75	0.67
Net household income (log)	11.27	11.30	12.12	11.09	11.88
Land size (ha)	1.82	1.11	1.07	4.30	2.47
Observations	1155	250	22	118	225

Source: World Bank staff calculations using VHLSS 2018.

ANNEX 3.2.

NTP Summary

Table A.3.1.2. A Summary of National Targeting Programs

SOCIOECONOMIC DEVELOPMENT PLAN (SEDP) PHASES	NATIONAL TARGETING PROGRAMS (NTPS)	TARGETS AND COVERAGE
2011–2015	16 NTPs focused on sectors such as health, education, water, transport, agriculture, and rural development. The NTP for New Rural Development (NTP-NRD) was the largest, investing over US$9 billion through the state budget, increasing to US$37 billion when other financing sources such as bank credits, private sector investments and commune contributions are included. Meanwhile, Program 135 (P135) continued to finance investments in extremely poor communes where ethnic minorities are concentrated.	The objective of NTP-NRD was to develop rural communes in all 63 provinces, involving 11 activity groups that were linked to 19 social and economic monitoring indicators. Achievement of all 19 NTP criteria qualified communes, districts, and provinces for recognition as having attained "National Rural Development status," a largely symbolic recognition. However, this approach that has led to some biases in funding to prioritize those districts and communes with the best chance of achieving "NRD status."
2016-2020	The government consolidated the 16 NTPs into two NTPs for the 2016–2020 implementation period to increase efficiency and reduce overlapping activities. The two programs are the New Rural Development (NTP-NRD) and the Sustainable Poverty Reduction Program (NTP-SPR) with the P135 falling under the NTP-SPR.	
	NTP-NRD is designed to upgrade services and infrastructure for rural communities across all 63 Provinces of Vietnam. It encompasses 11 activity groups linked with 19 economic and social criteria relating to poverty, education, health, transportation, water supply, irrigation, livelihoods, agricultural production, markets, culture, energy, environmental issues, communication, and security.	**NTP-NRD** has four ambitious objectives: (a) 50 percent of communes to meet NRD standards (achieve 15 of the 19 preset criteria), and each province, and each city under Central Authority should have at least one district that meets NRD standards (i.e., meeting all 19 criteria); (b) Communes, on average, to meet 15 out of 19 NRD criteria, and no commune to achieve less than 5 criteria; (c) Basic production and quality of life requirements to be achieved for rural citizens in areas such as transportation, power supply and domestic water, schools, and health stations; and (d) income levels to increase by at least 1.8 times compared with 2015.
	NTP-SPR supports infrastructure, livelihoods, basic services, and capacity building for the country's 94 poorest districts and 310 communes in coastal areas through sub-programs: (i) Program 30A; (ii) P135; (iii) Production support, livelihood diversification and scaling up of poverty reduction models in non-P30A and non-P135 communes; (iv) Communications and information poverty reduction. NTP-SPR falls under the overall purview of MOLISA, with CEMA playing a strong role as it has relatively independent management of Program 135 (SPR-P135).	**NTP-SPR** has four ambitious targets: (a) lowering the poverty rate by an average of 1.5 percent per year; (b) improving the livelihoods and quality of life for the poor by increasing per capita income of poor households by 1.5 times from 2015 to 2020; (c) implementing poverty reduction mechanisms and policies in a consistent and effective manner to improve living conditions and enhance access to basic social services for the poor; and (d) investing in the infrastructure of poor districts, communes, and villages with special difficulties following NTP- NRD criteria. Program-135 (SPR-P135) is one of its five sub-programs, referred to as projects, which supports 2,240 poor communes and 33,723 poor villages in ethnic minority and mountainous areas.

SOCIOECONOMIC DEVELOPMENT PLAN (SEDP) PHASES	NATIONAL TARGETING PROGRAMS (NTPS)	TARGETS AND COVERAGE
2021-2025	NTP-NRD supports continued development of the agriculture sector, promoting sustainable rural development and urbanization. The program also aims to improve living standards of rural communities and promote gender equality. NTP-SRD is designed to improve infrastructure in rural communities, modernizing it and ensuring its climate resilience.	NTP-NRD has four key targets. These include: (a) 80% of communes reach NRD standards, increase average income per capita of rural inhabitants by 1.5 times compared to 2020; (b) 50% of provinces, communes and cities to reach NRD standards; (c) At least 15 provinces and cities meeting NRD standards; (d) 60% of villages in special areas including border area, mountainous, coastal, and island areas reach NRD standards. Total budget is 196,332 billion VND (39,632 billion VND from national budget and 156,700 billion from local budget)
	NTP-SPR implements reduction in multidimensional poverty, and supports poor households in improving livelihoods, access to services, and living standards. This program supports poverty alleviation in the poorest districts and coastal and island communes.	Main targets of NTP-SPR are as follows: (a) Reduce the share of multidimensional poor by 1-1.5% each year; (b) Reduce the share of poor ethnic minority households by 3% each year; (c) Alleviate poverty for 30% of poor districts and 30% of poor coastal and island communes. Total budget is 75,000 billion VND (48,000 billion VND from national budget, 12,690 billion from local budget, 14,310 from other sources of funding)
	NTP-Socioeconomic development of ethnic mountainous areas (SEDEMA) will classify disadvantaged ethnic minority communes as those with high rates of poverty, high ratios of untrained workers, poor roads, high child mortality rates, and high illiteracy rates. The broad objective of NTP-SEDEMA is to utilize the potential and comparative advantage of ethnic mountainous areas, promoting innovation, driving economic growth, and ensuring social security; reducing poverty and the gap between living standards and income and the national average; develop infrastructure, improving connectivity; develop education and training, health, and culture; improving living standards; improving the quality and quantity of ethnic minority cadres and workers; promoting ethnic minority cultures while reducing backwardness; improving gender equality, addressing issues with women and children; build resilient local political system, ensuring security, and improving unity and trust in government.	Key targets of NTP-SEDEMA: – Double average income per capita of ethnic minorities compared to 2020 – Reduce share of ethnic minority households in poverty by 3% each year, reducing the share of poor communes and villages by half. – 100% of communes with tarmac or cement roads for cars to the center, 70% of villages with solid roads for cars. 100% of schools and health centers have structure reinforced. 99% households have access to national electricity grids or other sources. 90% of ethnic minority people have access to water. 100% have access to television and media. Improving infrastructure in poor areas and villages. – Complete resettlement of 90% of households. Resettle/develop 60% of households living in remote or at-risk areas. – Increase share of 5 year-olds attending kindergarten to 98%, share of children attending primary school to 97%, share of children attending secondary school to 95%, 60% for high school. Reach 90% for share of people over 15 who can read and write in Vietnamese. – Improve access to health care, eradicating certain illnesses. Increase health insurance coverage to 98%. Access to maternal care to 80%, reducing malnutrition to lower than 15%. – Enabling 50% share of working age population to receive appropriate vocational training – Preserve cultural traditions – Develop capacity of ethnic minority cadres Total budget for the 2021-2025 period is 137,664 billion VND (104,954 billion VND from national budget, 10,016 billion VND from local budget, 19,727 billion VND from loans, 2,976 billion VND from other sources of funding)

Source: World Bank, 2017; Office of the Government of Vietnam, 2021

Part 2.
The *Next Mile* is the Road Ahead
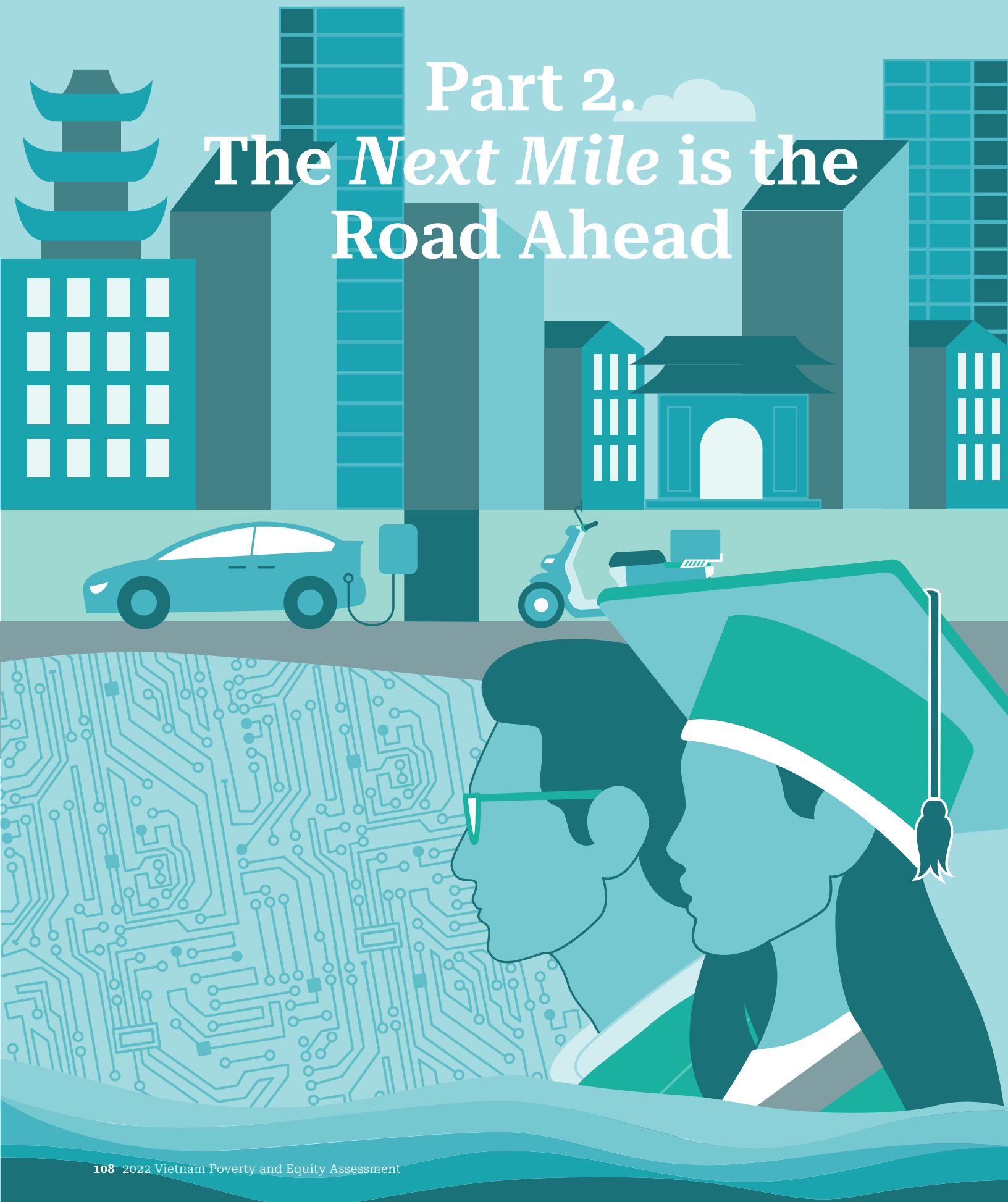
The Next Mile is the road to upper-middle and high-income country living standards. Human capital—a combination of the education, skills, and health factors that largely determine labor productivity—has been a key driver of sustained economic growth and is also a key ingredient to break intergenerational poverty traps. An important aspect to ensure equitable economic pathways includes finishing the job of narrowing education gaps (Chapter 4). Economic growth has transformed the country, but preserving these gains and creating new, sustainable economic pathways towards higher levels of income is the challenge ahead (Chapter 5). Yet, Vietnam faces challenges in creating pathways based on a transition to high-skilled labor. Its labor market is still characterized by low wages, high informality, medium-skills, and a slow expansion of high-skilled occupations. In a world with unpredictable risks and challenges, promotive policies to sustain economic mobility must be complemented by protection strategies to preserve gains and guard against poverty traps. Households face individual and communal risks such as accident and illness, unemployment, and environmental—which will be exacerbated by climate change—as well as future pandemics and economic shocks. Yet the current social protection system does not adequately protect all households against all risks and needs to be modernized (Chapter 6). Addressing these challenges will require significant public investment. However, a rapidly aging population and rising middle-class demands will bring additional spending pressures. How can fiscal policy finance these investment needs while also helping reduce poverty and inequality? (Chapter 7).

CHAPTER 4.	Early human capital formation and poverty reduction
CHAPTER 5.	Sustaining upward economic mobility
CHAPTER 6.	Building resilience and safety nets to guard against shocks
CHAPTER 7.	Fiscal policy, financing future investment and buidling the middle class

Chapter 4.
Early human captial formation and poverty reduction

Key Messages

- High-quality education can break inter-generational cycles of poverty, promote human capital formation, and support poverty reduction, with positive implications for labor productivity, economic growth, and average life expectancy.

- However, family backgrounds still explain variations in on-time education completion, and private expenditures in education vary substantially across household wealth quintiles and ethnicity, even for public education at compulsory levels.

- The government and private sector have a role in promoting equitable access and consistent quality.

4.1. Human Capital– a key driver of sustained growth

Human capital is a combination of the education, skills, and health factors that largely determine labor productivity. These factors have been a key driver of the sustained economic growth and poverty reduction observed across East Asia over the past several decades (Gill, Revenga, and Zeballos, 2016; Permani, 2009; World Bank, 2018). Widespread basic literacy and numeracy gained through education supported employment in manufacturing and product-assembly sectors in the early stages of economic development in the region. Following rapid economic growth, some countries saw educational attainment accelerate across generations, facilitating the development of knowledge- and skill-intensive activities. With the region's strong focus on education, educational attainment levels have converged with global averages. The level of schooling increased even while the population of the region doubled. The rapid rise in educational attainment has continued to this day, with higher numbers of students completing secondary school and progressing to tertiary education (World Bank, 2018).

The development of human capital plays a vital role in boosting growth and reducing poverty and inequality. For children, the education they receive and how healthy they grow up affects their future wages, life expectancy, and human capital as adults (World Bank, 2019a). Falling short on human capital formation can limit their economic mobility in adulthood (Narayan et al., 2018). In high-income countries, levels of educational attainment are closely linked to economic performance. Similarly, strong health indicators are essential to support economic growth and productivity. High-quality education can break intergenerational cycles of poverty, promote human capital formation, and support poverty reduction, with positive implications for labor productivity, economic growth, and average life expectancy. Educated populations also tend to have higher levels of social tolerance, intercommunity trust, and demand for public services.

Education is a strong determinant of poverty. The difference in poverty rates between households with the least and the most education can be as large as the variation in regional poverty rates discussed in Chapter 3. In 2020, poverty rates among households with primary education or less was about 15 percent at the LMIC (US$3.20/day 2011PPP) poverty line, while virtually no households with tertiary education were in poverty (Figure 4.1). The population living in households with primary education or less comprise about 20 percent of the total population, but they also constitute about half of the LMIC poor population. The gaps in poverty rates are even larger at the UMIC (US$5.50/day 2011PPP) poverty line. A cohort effect is partly at play since education completion rates have improved considerably across generations and youths are less engaged in agriculture. However, differences in poverty by education level persist even accounting for these effects.

Figure 4.1. Poverty rates by household education group

Maximum education in the HH
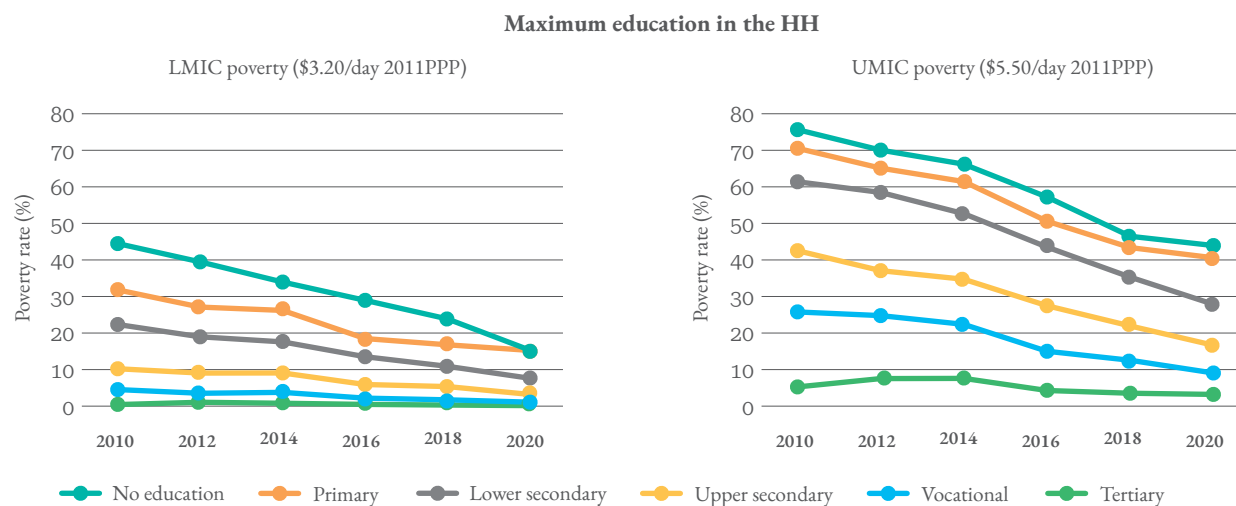
Note: Household education category determined by the maximum level of education of any household member.
Source: World Bank staff calculations using VHLSS.

4.2. Vietnam's performance in human capital vs regional and global peers

Vietnam's youth possess high human capital potential. The World Bank's Human Capital Index (HCI) measures actual and potential productivity levels for the next generation of workers (World Bank, 2019). Despite being a lower-middle-income country, Vietnam is among the top (quartile) performers worldwide in terms of the HCI, not only outperforming other countries in the East Asia and Pacific region, but also significantly surpassing other lower-middle-income countries (LMICs). According to the 2020 series of HCI data, a child born in Vietnam today will be 69 percent as productive when she grows up as she could be if she enjoyed complete education and full health, compared to 59 percent for the average child in the EAP region, and 48 among LMIC children (Table 4.1).

However, there is scope to further improve human capital formation across some dimensions. Among ASEAN nations, Vietnam's performance on the overall HCI ranks only second to Singapore, but the picture is more nuanced when examining sub-indicators. Across the five indicators used to compute the World Bank's HCI, Vietnam scores significantly above average compared to peer groups in education but scores closer to the average in health indicators. While Vietnam performs better than the EAP and LMIC averages on stunting, it scores below average in stunting globally and child survival rates, having higher stunting and lower survival rates than half of all countries in the world.

Vietnam performs well in compulsory education completion.

Across the different dimensions of the HCI, Vietnam ranks relatively high in terms of education quality. Vietnam's strong performance on the HCI is partly attributable to its very high Harmonized Test Scores. Scoring 519 out of 625, Vietnam's result ranks 16th in the world, surpassing that of many high-income countries, and second only to Singapore in ASEAN. However, international assessments in Vietnam are not without some sensitivity. The OECD did not rank Vietnam in the 2018 PISA round, stating that the international comparability of the results could not be ensured. The PISA score used in the World Bank's 2020 calculations were from the 2015 assessment round. International comparisons are not without challenges, and this chapter will compare differences in test scores between students in Vietnam.

On the expected number of school years, a measure of the quantity of education, Vietnam performs relatively well in the region. In Vietnam, a child who starts school at age 4 can expect to complete 12.9 years of schooling by her 18th birthday. Adjusting for the quality of schooling, as proxied by harmonized test scores, the World Bank estimates that children in Vietnam are expected to complete 10.7 years

Table 4.1. Human Capital Index - Vietnam vs. peers (2010 vs. 2020)

MALE + FEMALE	INDICATOR	VIETNAM		EAST ASIA AND PACIFIC		LOWER MIDDLE INCOME	
		2010	2020	2010	2020	2010	2020
HCI Component 1: Survival	Probability of Survival to Age 5	0.977	0.979	0.972	0.978	0.944	0.959
HCI Component 2: Schooling	Expected Years of School	11.8	12.9	12.0	11.9	9.6	10.4
	Harmonized Test Scores	533	519	500	432	407	392
HCI Component 3: Health	Survival Rate from Age 15-60	0.864	0.867	0.847	0.864	0.760	0.804
	Fraction of Children Under 5 Not Stunted	0.773	0.762	0.691	0.759	0.690	0.750
Human Capital Index (HCI)	HCI	0.66	0.69	0.68	0.59	0.45	0.48

Source: World Bank HCI (2020).

of schooling (Figure 4.2). This measure of 'learning-adjusted years of schooling' is designed to incorporate differences in the quality of education provided as proxied by tests scores–a given number of years in school does not imply the same level of learning across different countries. While Vietnam's learning-adjusted years of schooling are very high (high-income country average is 10.3 years), it is subject to similar sensitivity issues since it is adjusted by harmonized test scores.

Figure 4.2. Learning-adjusted years of schooling by GDP per capita, Vietnam, and comparators, 2020
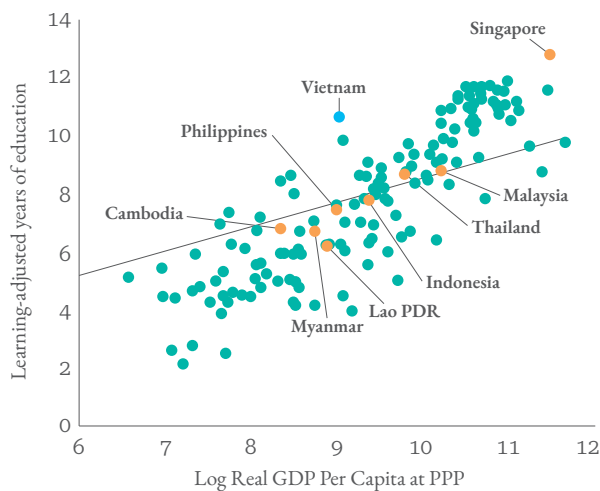
Source: World Bank staff calculations using HCI data sheet, WDI.

Vietnam's strong performance on the education component of the HCI reflects the government's focus and commitment to education, in particular, general education. A World Bank report has identified a number of success factors in Vietnam's education system including the government's commitment to educational development, investment in general education, basic inputs and equity, high household expenditure on education, and development of the teaching workforce (World Bank, 2020).

Health indicators have scope for improvement.

Across health indicators, there is still progress to be made in ensuring that the youth population achieves good health that will enable them to productively contribute to the economy. Over the last decade, progress in improving health outcomes in Vietnam has been slow. From 2010 to 2020, the average child survival rate has increased from 97.7 to 97.9 percent, which translates to around 2 fewer deaths per 1,000 live births. In 2020, nearly 21 in 1,000 children will not survive until age 5 in Vietnam. While adult survival rates in Vietnam are higher than LMIC, UMIC, and EAP averages, there are further gains to be made to reach the levels seen in high-income countries.

Malnutrition among children is one of the dimensions where the challenges are greatest in Vietnam. In 2020, almost a quarter of children under 5 years old are stunted. The stunting rates in Vietnam are ranked third highest in the ASEAN region and are higher than the LMIC average. Stunting, defined as a low height-to-age ratio, is indicative of impaired growth and development in children resulting from chronic malnutrition, repeated infection, or inadequate psychosocial stimulation. Early childhood stunting has long-lasting impacts on cognitive development, leading to poorer educational performance, lower adult wages and productivity, and other health conditions in later life. Nutrition is especially concerning among ethnic minority children. A 2019 study finds that one in three ethnic minority children are stunted and one in five are underweight (Mbuya et al., 2019).

Improving access to maternal health care, early childhood health care, and nutrition is needed to further reduce under-5 mortality rates. In 2020, the under-5 mortality rate stood at 21 deaths per 1,000 live births, higher than that of all ASEAN countries except Philippines and Cambodia (Figure 4.3). This is reflective of the prenatal, infant, and early childhood environments in Vietnam. Infectious diseases, birth complications, and congenital birth defects are leading causes of death for children globally. Chronic malnutrition also makes children more susceptible to dying from common childhood illnesses. To further improve child survival rates and reach UMIC and HIC levels, Vietnam needs to ensure equitable access to quality maternal and postnatal care and early childhood health services, as well as address the existing challenge of poor childhood malnutrition.

Adult survival rates in Vietnam are comparable to those of other ASEAN nations. The probability that a 15-year-old person will reach their 60th birthday is 87 percent (Figure 4.4). There are several primary observable factors that can be said to have an impact on adult mortality, including noncommunicable diseases, access to healthcare, income levels, labor laws, and lifestyle factors. As of 2017,

public health expenditure was equivalent to 2.8 percent of GDP in Vietnam. The share of 30 to 70 year-olds dying from noncommunicable diseases such as cardiovascular disease, cancer, diabetes, or chronic respiratory diseases was 17 percent in 2016. While Vietnam's adult survival rates are comparable to those of other countries in the region, to achieve HIC levels by 2045 will require continued investment in improving the health of its economically productive population.

Figure 4.3. Fraction of children not stunted by GDP per capita, Vietnam, and comparators, 2020
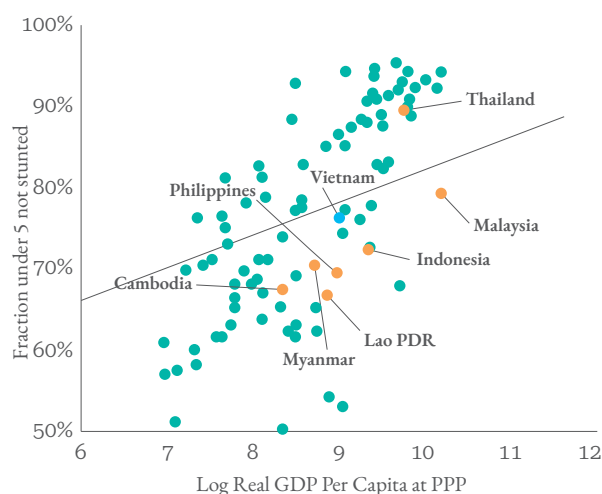
Source: World Bank staff calculations using HCI datasheet, WDI.

Figure 4.4. Survival rates by GDP per capita, Vietnam, and comparators, 2020
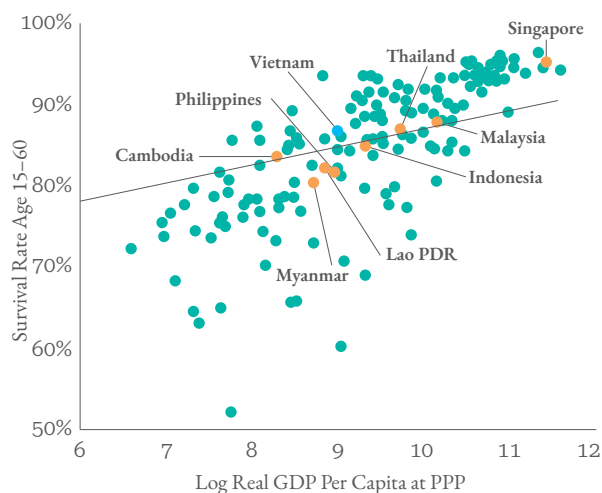
Source: World Bank staff calculations using HCI datasheet, WDI.

4.3. Variations in human capital formation exist within Vietnam

While at the national level, indicators of human capital formation appear mostly in line with regional peers, there are gaps *within* Vietnam across different groups. This section illustrates the differences in human capital formation outcomes across gender, household socioeconomic groups, regions, and ethnicities. When structural gaps exist that limit the opportunities of entire groups, the full potential of human capital development will not be reached. Disparities in access to nutritional, medical, educational, and social resources can impact children's future economic productivity or contribute to the misallocation of human capital, inhibiting future economic growth.

Gaps in human capital outcomes in Vietnam between children from bottom and the top 20 percent of households are larger than the average

Socioeconomic status-disaggregated HCI (SES-HCI[35]) scores can be calculated to illustrate variation in human capital formation across different household wealth quintiles. Family characteristics and resources are strongly linked to the outcomes of children. The HCI is 17 points lower than the average for children in the poorest 20 percent of households, compared to 16 percent above the average observed in children in the richest 20 percent. Unsurprisingly, children in the top 20 percent have higher nutrition, health, and education outcomes (Figure 4.5).

Performance gaps in Vietnam between the bottom and the top 20 percent of households are larger than the average. Gaps in the Vietnam SES-disaggregated HCI, harmonized test scores, and stunting rates are all larger than the typical gap in a comparative study across 50 developing countries (D'Souza, Gatti, and Kraay, 2019). The gap in the SES-disaggregated HCI between the top 20 and bottom 20 is 0.27 points, higher than the average gap in 50 countries (0.15 points). The percentage of children that are not stunted in the richest 20 percent of families is 94 percent, compared to only 59 percent in the poorest 20 percent of households. This translates to a 35-percentage point gap in stunting rates between the top and bottom compared to a 19-percentage point gap on average.

Figure 4.5. Gap in socioeconomic-disaggregated HCI, 2013
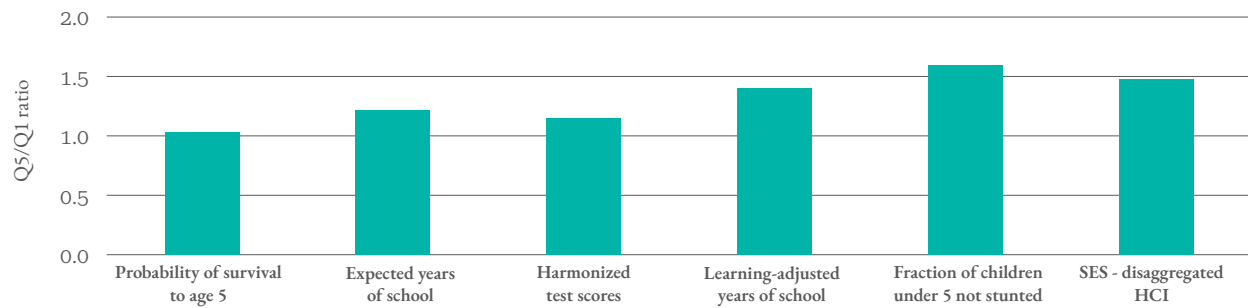
Note: Ratio of average outcomes between children in the richest quintile (Q1) and the poorest quintile (Q5), according to the 2013 Human Capital Index (HCI) disaggregated by socioeconomic status (SES).
Source: World Bank 2019b.

BOX	4.1.	World Bank's human capital index

The World Bank created the Human Capital Index (HCI) to assess the conditions that will shape the productivity of the next generation (Kraay, 2018). The HCI is part of a broader World Bank Group initiative that emphasizes and prioritizes investment in people. By anchoring the index in economic theory, it raises awareness of the opportunity cost of inaction and bolsters demand for effective interventions. To accelerate evidence-based investments in people for greater equity and growth, the HCI benchmarks the accumulation of human capital across the world. The index provides an indicator for how the current level of health and education will impact productivity in the next generation of workers.

The HCI encompasses key health measures, including survival, education, and health. These three broad categories are measured through the under-5 mortality rate, the under-5 stunting rate, and the survival rate for adults aged 15–60. It also estimates the quantity and quality of education by measuring learning-adjusted years of schooling—the expected number of years of schooling received by age 18, adjusted to reflect educational quality as proxied by standardized test scores. The HCI benchmarks different aspects of human capital including education (expected years of schooling and harmonized test scores) and health (child survival, child stunting, and adult survival rates). These composite indicators are combined to estimate the expected productivity of a child born today as a future worker relative to a benchmark of complete education and full health.

Figure B.4.1.1. Framework for calculating the Human Capital Index
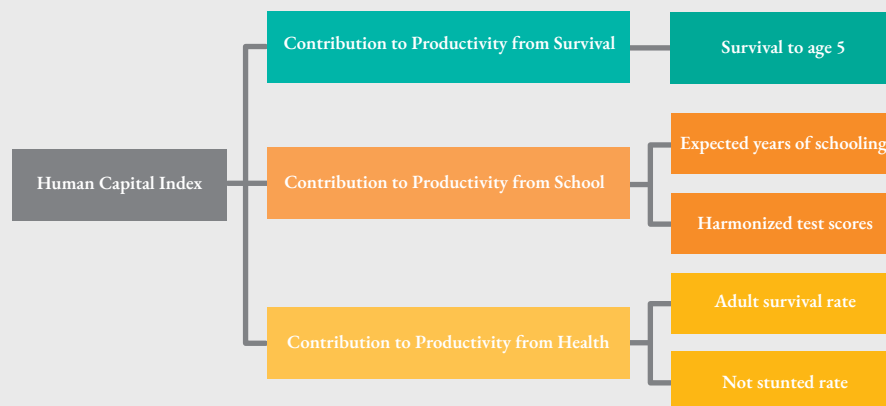
School enrollment rates among children from households in the bottom income quintile lag behind the rates for children from households in the richest quintile at higher grade levels. Starting with universal enrollment in younger years, differences in enrollment widen toward the end of lower secondary school in the late teen years, at which point over a third of children from households in the bottom quintile have dropped out (Figure 4.6). By age 19, less than one-fifth of 19-year-old children from households in the bottom quintile remain in school. By contrast, 80 percent of students from households in the top quintile continue with their education up to college or university.

Disparities exist among socioeconomic groups in their access to improved drinking water sources. Measured as access to drinking-water sources that are protected from outside contamination, including fecal matter and harmful chemicals, nearly a hundred percent of the top two quintiles have access to improved drinking water sources. While this remains fairly high, only two thirds of households in the poorest quintile have access to safely managed drinking water sources (Figure 4.7).

The benefits of improved sanitation are well documented, yet just over a third of the poorest group in Vietnam can access this. This is in stark contrast to the accessibility of safely managed sanitation for the top 3 income quintiles, which ranges from 95 to 100 percent. Improved sanitation facilities hygienically keep human waste away from

human contact. This not only prevents the spread of diseases, reduces instances of malnutrition, it also improves the plight of women and girls by increasing school attendance with separate sanitary facilities (WHO, 2022a).

Gender gaps in human capital formation

In early years, girls outperform boys in human capital formation. Girls scored 0.73 on the HCI while boys scored 0.65 overall (Table 4.2). Across HCI components, girls outperformed across all indicators, scoring higher on standardized tests (10 points), attending schools for longer (0.7 years), having higher probability of survival until age 5 (0.7 percentage points), having a lower share of stunting (2 percentage points), having higher adult survival rates (12 percentage points).

While in the early stages of life girls in Vietnam do well, there are still strides to be made for both genders to reach their full potential. Figure 4.8 shows that while schooling up to the lower secondary level could be said to be universal, the proportion of children who are in school declines rapidly beyond 14 years of age, with small differences in this pattern across genders. For individuals aged 20-24, a slightly smaller proportion of women are attending school than that of men, reflecting a lower proportion of individuals actively pursuing advanced degrees among women than men. Differences in human capital accumulation between genders

Figure 4.6. **Enrolment rates by household wealth quintile and age, 2020**
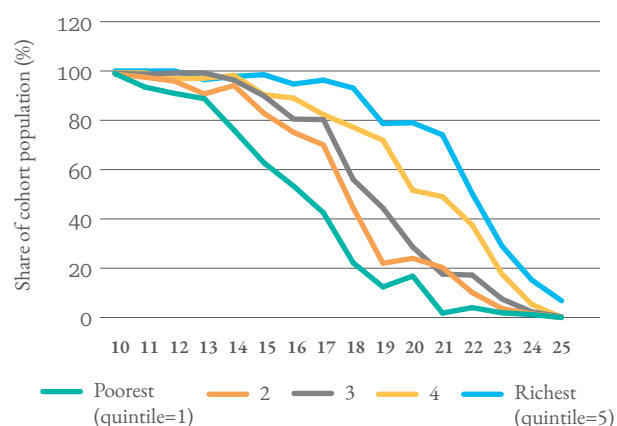
Source: World Bank staff calculation using VHLSS2020.

Figure 4.7. **Access to improved drinking-water sources and sanitation facilities, by income quintiles, 2014**
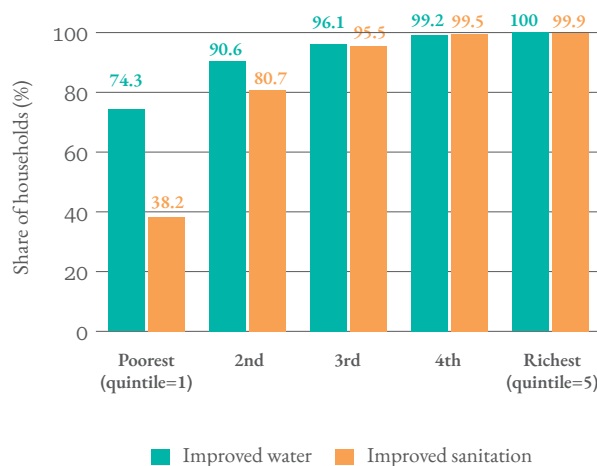
Source: MICS survey (UNICEF, 2014).

Table 4.2. Human Capital Index disaggregated by gender

		MALE		FEMALE	
		2010	**2020**	**2010**	**2020**
HCI Component 1: Survival	Probability of survival to age 5	0.973	0.976	0.981	0.983
HCI Component 2: School	Expected years of schooling	11.7	12.5	11.9	13.2
	Harmonized test scores	530	514	536	524
HCI Component 3: Health	Survival rate from age 15-60	0.808	0.813	0.92	0.924
	Fraction of children under 5 not stunted	0.763	0.752	0.784	0.773
	Human Capital Index	**0.63**	**0.65**	**0.68**	**0.73**

Note: Maximum harmonized test score is 625.

Source: World Bank HCI.

reflect the different challenges that boys and girls face at different stages in the life cycle. Limitations of the HCI mean that it captures human capital development during stages in which girls slightly outperform boys, and as such does not necessarily translate to improved life outcomes.

Figure 4.8. School Attendance by age and gender, 2020
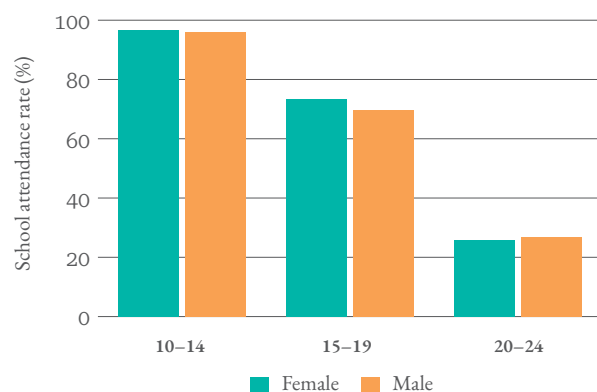
Source: World Bank staff calculations using VHLSS 2020.

Outcomes vary by geography, related to the provision of public services

Human capital formation is associated not with family resources, but also with public resources in terms of the quality, access, and availability of schools and health care services. Thus, a child's location also has consequences for their opportunities, outcomes, and human capital formation potential. Primary school enrollment is nearly universal at 98.5 percent, with only small urban-rural differences.

Geographically, the Central Highlands and Mekong River Delta regions have slightly lower primary enrollment rates than the rest of the country. However, there is a substantial disparity between secondary school enrollment rates in rural and urban areas, with urban enrollment rates being nearly 15 percentage points higher than in rural areas (90 vs. 76 percent, respectively). Geographically, the Red River Delta and the North Central and Central Coast regions have comparatively higher secondary enrollment rates than the rest of Vietnam. In terms of access to health services, the average access time to a health facility is 48 minutes in urban areas and 75 minutes in rural areas. Even more striking is the *maximum* time taken to access a health facility: 3,000 minutes (50 hours) in urban areas and 7,200 minutes (120 hours) in rural areas.

The majority of children aged 6 to 14 in Vietnam live in rural areas, with only 31 percent residing in urban areas. Vietnam's industrialized and urbanized fertility rates declined, from around 6 births per woman in 1975 to around 2 births per woman in 2018. This decline was more pronounced in urban areas than rural ones, and is reflected by the mean number of children under 14 in each household. All regions have a lower mean number of children per household in urban areas, with the notable exception of the Northern and Central Coastal area. The majority of urban children come from the Southeast and Red River Delta regions, accounting for just over half of all urban children. The Southeast region is also the only region in Vietnam with a larger population of children in urban areas, all the other regions being majority rural. Ethnic disparities exist in the urban-rural divide. While 36 percent of children belonging to the Kinh majority reside in urban areas, only 9 percent of children not of Kinh ethnicity reside in urban areas.

Ethnic minority children underperform in education and health

Ethnic minority children fall out of schooling earlier than other children (Figure 4.9). Poorer ethnic communities in geographically remote areas experience higher dropout rates. Remoteness also reduces exposure to the national language for ethnic minority children, which is a factor in the educational gap between Kinh and ethnic minority children. One of the reasons for the underlying variation in enrollment rates is the opportunity cost of sending children to school. For many poor families, the labor contribution of a child is too valuable to justify keeping him or her in school. The long-term gains from education are simply not commensurate with the short-term sacrifice in income or expenditure. Several nonfinancial factors are also constraints to educational attainment among poor and ethnic minority households, including poor infrastructure and accessibility, limited quality of teachers, and the perceived irrelevance of the school curriculum. (Pimhidzai, 2018). The lack of education in turn reduces access to better employment or productive opportunities among the poor, resulting in low earnings, and perpetuates intergenerational trends.

Nutritional challenges remain, especially for ethnic minorities. Stunting rates among children age 5 in certain underdeveloped regions have stagnated over the last decade, particularly in remote mountainous regions with large ethnic minority populations. The key determinants of undernutrition among ethnic minority populations are multisectoral. Ethnic minority children are fed less nutritious food, get sick more frequently, and have less access to health services as well as water and sanitation resources compared to children from the Kinh majority (Mbuya et al., 2019). On average, women living in mountainous and remote areas get married younger, have lower educational attainment, and receive less reproductive care compared to their peers in lowland and urban areas. Poverty, an important basic determinant of undernutrition, is also concentrated among ethnic minorities. Stunting rates matter for poverty reduction because they are a key predictor of lower educational attainment, adult health, and future earnings.

Access to safely managed water and sanitation are major determinants of good health. The vital importance of this has been reflected in the United Nation's Sustainable Development Goals number 6, which aims to ensure the availability and sustainable management of water and sanitation for all. Unsafe and contaminated water leads to illnesses such as cholera and typhoid. Similarly, poorly managed sanitation spreads diarrheal diseases which in turn leads to stunting in children. The arrival of COVID-19 has further highlighted the significant role of safe water, sanitation and hygiene for human health and development. This section analyses data from the Multiple Indicator Cluster Surveys conducted by UNICEF for Vietnam for 2013-2014. More up to date survey results are yet to be published.

Figure 4.9. Enrolment rates by ethnicity and age, 2020
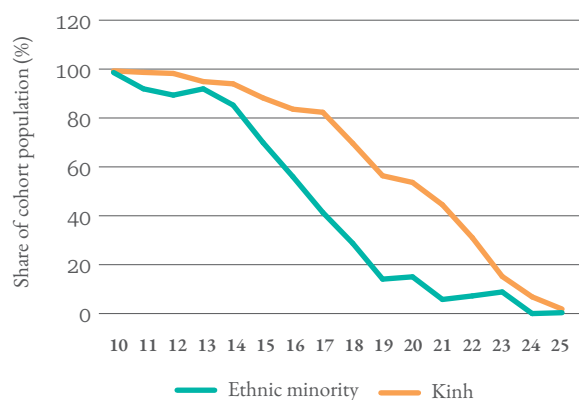
Source: World Bank staff calculation using VHLSS2020..

Figure 4.10. Access to improved drinking-water sources and sanitation facilities, by ethnicity, 2014
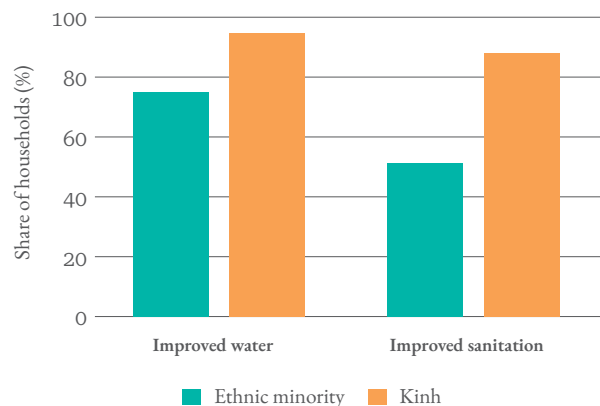
Sources: MICS Survey (UNICEF, 2014).

Access to improved sanitation and water-drinking sources are higher for Kinh ethnic majority, compared to ethic minorities in Vietnam (Figure 4.10). While only 5 percent of Kinh households are still using unimproved drinking water sources, this figure stood at 25 percent of ethnic minority households. These households are consuming water from unsafe sources such as unprotected wells, springs, surface water (WHO, 2022b). This is likely to result in poorer health, higher expenditure on medical costs and lower school attendance for children. On sanitation, Kinh majority are 1.7 times more likely to be able to access improved sanitation facilities such as flush or pour-flush to piped sewer system, or septic tank pit latrines among other safely managed options. With only half of ethnic minorities being able to use improved sanitation facilities, this will have serious consequences for the socioeconomic development of this group.

4.4. Quantifying the sources of variation in child outcomes within Vietnam

The previous section illustrated broad human capital trends in Vietnam and how these outcomes varied across ethnic, geographic, and socioeconomic groups. This section quantifies these differences in outcomes using decompositions by specific characteristics and family backgrounds.

The dissimilarity index – a measure of dispersion of outcomes across groups

The dissimilarity index is informative of how variation in outcomes across groups (see Annex 4.2 for measurement details). It quantifies variations across groups by comparing overall and group-specific outcomes. The dissimilarity index can be interpreted as the degree of reallocation between groups to achieve equality of access or a constant coverage rate across all groups of children aged 6–14. For example, in the case of on-time lower-secondary completion, 89 percent of children in the relevant age group have achieved on-time completion. Depending on the group of interest, children have different rates of on-time education completion. However, the difference between groups is small. To achieve the same completion rate across all demographic and socio-economic groups, the difference is completion among only 5.6 percent (dissimilarity index) of children (Figure 4.11).

Among indicators of on-time education completion, the dissimilarity index increases with grade level. Among compulsory levels of education, there is higher dissimilarity in on-time completion at the lower-secondary level than at the primary. The dissimilarity in on-time completion of upper-secondary education (which is non-compulsory) is significantly higher at 16 percent. The rate of on-time upper-secondary completion in general is lower, averaging 68 percent. Studies on the determinants of school dropouts in Vietnam provide evidence on the correlation between the probability of dropping out and such factors as age, working time, primary education, number of siblings, parental

Figure 4.11. Dissimilarity index in education and health
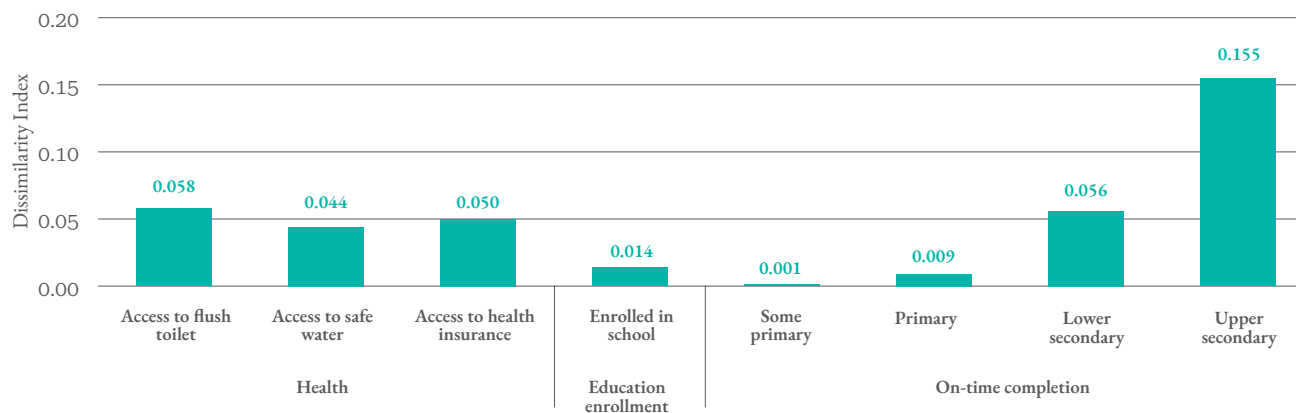
Source: World Bank staff calculations using VHLSS 2020.

education, household's per capita expenditure, the cost of schooling (Vo and Trinh, 2005), and gender (Bui, 2011). Baulch et al. (2012) consider two groups of dropouts: (1) children who have completed lower secondary grades (and are already enrolled in upper-secondary school), and (2) children who have not completed lower secondary school. They find that the strongest predictors were parental education for the first sub-sample and the amount of paid or unpaid work undertaken by the child in the previous survey round. For the second sub-sample, however, only the mother's education and ethnicity are essential factors behind the likelihood of dropout before lower secondary completion. This is followed by poor socioeconomic status—poverty and parental education less than lower secondary education.

Household wealth, location, and ethnicity are large predictors of child education outcomes.

The dissimilarity index can be decomposed along different sets of circumstances that may affect a child's outcome. For comparison, four sets of circumstances are used, consisting of (1) geographical factors and gender, (2) household characteristics, (3) household characteristics and expenditure quintile, and (4) a combination of all circumstances from sets 1-3 (Figure 4.12). Examining the decomposition results among these four sets enables discerning the relative importance of each of the circumstances in driving the dissimilarity of outcomes.

Ethnicity plays a larger role in the variations in certain outcomes among children. When examining only Set 2 indicators, a parent's ethnicity is more often the largest explanatory factor of dissimilarity, more so than parental education. When controlling for the full set of circumstances (Set 4), ethnicity has a larger explanatory role than urban/rural or household education circumstances for some indicators. Indicators where ethnicity is still a strong factor are access to flush toilet and health insurance. Moreover, while household wealth absorbs many of the dissimilarity effects, by all accounts variation in education enrollment and outcomes still vary considerably by ethnic group. On health indicators, ethnic minorities and those living in remote provinces have lower access to health services and experience poorer health outcomes. The child mortality rate in rural areas in 2016 was 26 per 1,000 live births compared with 12.7 per 1,000 live births in urban areas (World Bank, 2021b). Only 68 percent

of births by ethnic minority women were assisted by trained staff. In contrast, 74 percent of births for the poorest quintile nationwide and 95 percent for remaining quintiles were assisted by trained staff.

Ethnic minority students, particularly those in mountainous areas, tend to experience "double segregation" by ethnicity and concentrated poverty. The network of boarding and semi-boarding secondary schools which cater to above 85 percent of ethnic minority students (i) have caps limiting non-Kinh students to 5-10 percent of total school enrollment and (ii) can only serve students coming from the most disadvantaged communes and villages in ethnic minority and mountainous areas. Substantial heterogeneity is masked under the distinction between Kinh vs. "ethnic minorities" category. Most of the main data sources on learning outcomes in Vietnam, such as PISA and NLSA, are collected at the level of "ethnic minority" classification, which merges together ethnic groups with vastly different learning experiences and outcomes.

Considering all the circumstances together (Set 4), household geographic and wealth factors are the most explanatory of a child's education outcome. Household wealth (as measured by household consumption per capita quintiles) consistently makes up the largest proportion of the dissimilarity of on-time education completion. The association between student learning and household characteristics is a well-established empirical finding both in developed and developing countries, and gaps in education outcomes between children from high and low socioeconomic backgrounds are widely documented. For instance, Filmer and Pritchett (1999) use data from 35 developing countries to show that most shortfalls in basic education indicators (e.g., enrollment and dropout) are due to children in the bottom 40 percent of the wealth distribution. Likewise, Schuetz, Ursprung, and Woessmann (2008), using TIMSS data of 54 countries, found that student and household characteristics have significant effects on achievement. A recent meta-analysis of 49 empirical studies on socioeconomic status and academic outcomes in 38 developing countries similarly finds that parents' socioeconomic status has a strong impact on students' academic attainment and achievement, with effect sizes stronger in more economically developed countries and moderated by grade level, gender, and racial and ethnic background (Kim et al., 2019).

Figure 4.12. Shapley decomposition of the dissimilarity index in education and health outcomes
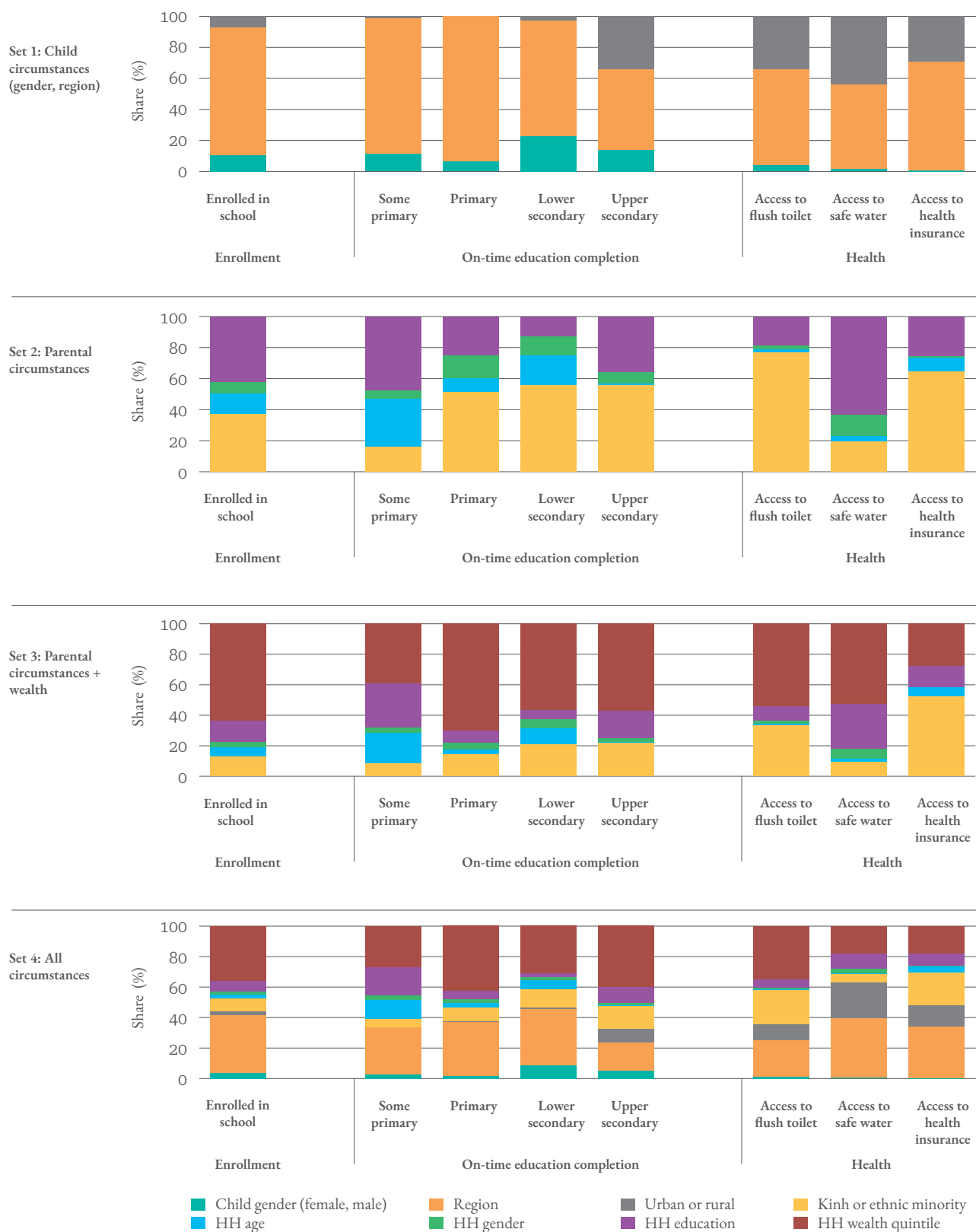
Note: See Table A.4.1.1. for values. HH = household head.

Source: World Bank staff calculations using VHLSS 2020

Learning outcomes in Vietnam suffer from acute geographical inequality, with the Mekong Delta and Central Highlands regions persistently falling behind other regions in the past 10 years. Although the regional gaps have gradually narrowed, these lagging regions continue to suffer from low net enrollment, high dropout rates at the upper-secondary level, and low progression (survival) between education levels, between 2010–2020. Students from the Mekong Delta region rank at the bottom on most assessed subjects at all levels from primary to upper-secondary education. Moreover, there has been no national narrative encouraging educational advancement for this group in the way there has been for ethnic minorities, nor has there been one regionally. The regional development master plan for Mekong Delta currently has little to say about education.

Complementarity of opportunities - Children need joint access to multiple opportunities to be able to succeed in society.

Access to education and opportunities are not substitutes for one another but rather are complements. Children require access to multiple opportunities to achieve their full potential. It is also useful to see how different factors influence the dissimilarities in access to opportunities across the board. We construct an outcome that is a minimum bundle across a range of 11 complementary indicators, including education, health, housing quality, access to services, and assets (see Annex 4.2). The importance of complementary opportunities was made especially salient since the onset of COVID-19 during school closures and prolonged lockdowns. Access to distance learning and the quality of continuity varied considerably across regions, and access to the internet and home computers became essential for education continuity.

Children can be said to be vulnerable if they have access to fewer than a minimum number of opportunities in a bundle (8, 9, or 10 out of 11). We determine a threshold under which a child is said to be vulnerable by looking at the proportion of individuals deemed vulnerable under each threshold. While upwards of 80 percent have access to at least 8 opportunities, only around 60 percent have access to at least 9 opportunities, and around 30 percent have access to all 10 opportunities. As expected, dissimilarity is increasing when non-vulnerability is defined as having a larger number of opportunities (Figure 4.13). Some components in the bundle are common or nearly universal, such as access to electricity,

but others, such as access to the internet, are much less common. Thus, having access to a lower number of indicators is more easily attainable.

Figure 4.13. Dissimilarity index in bundled opportunities
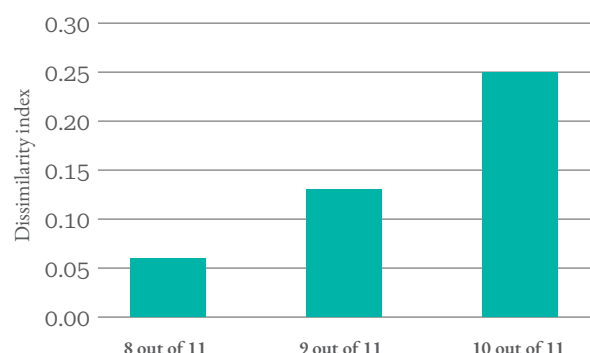
Note: Total of 11 indicators in a bundle, see Annex 4.2. In the bundle, on-time education completion is considered one indicator.
Source: World Bank staff calculations using VHLSS 2020.

The main determinant of dissimilarity for bundled opportunities is household wealth (Table A.4.1.1). When accounting for all factors (Set 4), household consumption expenditures explain nearly half of the dissimilarity. While ethnicity and region are the second and third strongest determinant for vulnerability defined by having eight or more opportunities, their contributions decrease as the size of the bundles increases further; the explanatory contributions from urban status and the education of the household head increases and eventually overtakes ethnicity and region. Gender is not a major contributor of dissimilarity in bundled opportunities when decomposed using this set of circumstances. A similar pattern with ethnicity emerges in that it matters less as the definition of bundled opportunities become increasingly stringent.

Over time, variation has narrowed

Over a decade, dissimilarity of opportunities and access has declined across a range of indicators, highlighting broad improvements (Figure 4.14). One of the most significant gains is access to the internet and health insurance. Improvements in access and opportunities are largely driven by the scale effect, meaning a proportional increase in coverage across all groups. For example, being fully insured sees the largest gain of 47 percentage points, 30 percentage points

of which are contributed by the scale effect. While equity in educational outcomes is improving, there is larger variation in complementary indicators such as access to improved housing, internet, health insurance, safe water, and sanitation. Dissimilarity still remains high in the most advanced indicators such as access to computers, internet, and on-time education completion of upper-secondary education, illustrating that there is room for improvement to reach upper-middle and high-income country levels.

Inequality in education continuity persisted during COVID-19[36]

Complementary access and opportunities were especially important during COVID-19, which revealed discontinuities in education and learning losses. During the first outbreak in early 2020, Vietnam's education sector responded early and decisively to COVID-19 risks and closed all schools for almost three months—among the longest closures in the world. Although containment measures became more localized and targeted over time, school closures were still widespread. Between September 2020 and March 2021, 72 percent of households with a child between 6 and 18 years of age experienced school closures. Households with children from urban areas, the Red River Delta, and Southeast

regions were most affected. As many as 50 out of 63 provinces closed schools early in January and February 2021 ahead of Tet holidays because of the third outbreak.

Adverse learning effects from school closures remain challenging because of limited access to distance learning and remedial learning. Among households with children having school disruptions, only 61 percent had access to online classes and almost 20 percent did not have access to any distance learning opportunities between September 2020 and March 2021. In locations where online classes were not available or accessible, the Ministry of Education and Training and the provincial Departments of Education and Training arranged to broadcast lessons on television and/or radio. However, these mediums account for only a negligible portion of distance learning. Short Message Service and paper-based self-study are the second most popular methods, but they are generally considered ineffective by teachers and students.

School closures hit poor, ethnic minorities, and low-achieving students particularly hard (Figure 4.15). Over 60 percent of households in the lowest welfare quintile and ethnic minorities, and close to 59 percent of those living in the Midlands and Northern Mountainous Areas, Central Highlands, and the Mekong Delta regions did not have online

Figure 4.14. Equity in access is improving (dissimilarity in 2010 and 2020)
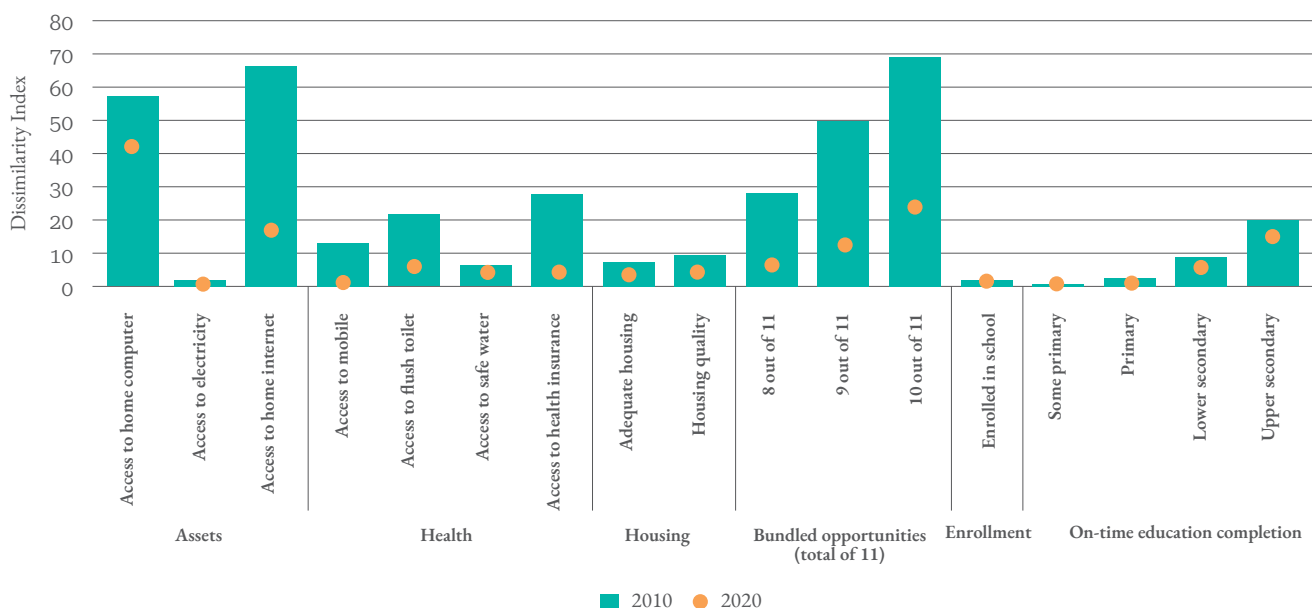
Note: See Annex 4.2 for definition of wider set of indicators.
Source: World Bank staff calculation using VHLSS 2010 and 2020

learning offered during school closures. By contrast, only 4 percent of households in the Red River Delta region (Hanoi area) did not receive distance learning. The Red River Delta region and the Southeastern region where Hanoi and Ho Chi Minh City are located, respectively, had high rates of online live classes (86 and 71 percent, respectively).

These regional differences reflect not only inequality across households but also inequality in public services across regions. Access rates and performance of the Midlands and Northern Mountainous Area, Central Highlands, and the Mekong Delta regions have persistently lagged other regions at all levels of education. These regions also suffer from a technological infrastructure deficit, inhibiting their ability to implement distance learning. Poor information and communication technology capacity is reflective not just of insufficient infrastructure but also of weaker governance, in addition to poor and unsustainable financing, given that governance and financing for general education are highly decentralized to the provinces.

The situation remains fluid, and provinces continue reopening and reclosing schools in a relatively disruptive manner in response to new outbreaks. The arrival of more transmissible COVID-19 variants in mid 2021 resulted in widespread school closures in 49 out of 63 provinces, mostly

in the form of early summer breaks or complete closure without remedies or access to distance learning. The latest wave of closures also coincides with a key assessment and testing period. It is still uncertain how these high-stakes assessments, including secondary graduation exams, will be implemented. Given that high-stakes exams are used as a key qualification to enter upper-secondary schools and higher education, school interruption and exam cancellation can have potential long-term consequences for education completion. Because more poorly resourced provinces are less able to provide education continuity, disparities in education completion may also widen across socioeconomic groups.

Education expenditures vary substantially across household backgrounds.

Investment in supplementary education services and resources is tied to family resources. Richer households devote substantial private expenditures to secure better outcomes for their children than poorer households do. At every level of education, wealthier families spend more than poorer ones. Starting at compulsory levels of education (primary and secondary), households in the top quintile spend 5.6 times more on extra courses than households in the lowest quintile (Figure 4.16). Kinh households spend over seven times more than ethnic minority households on

Figure 4.15. Continuity of education across regions and socioeconomic groups
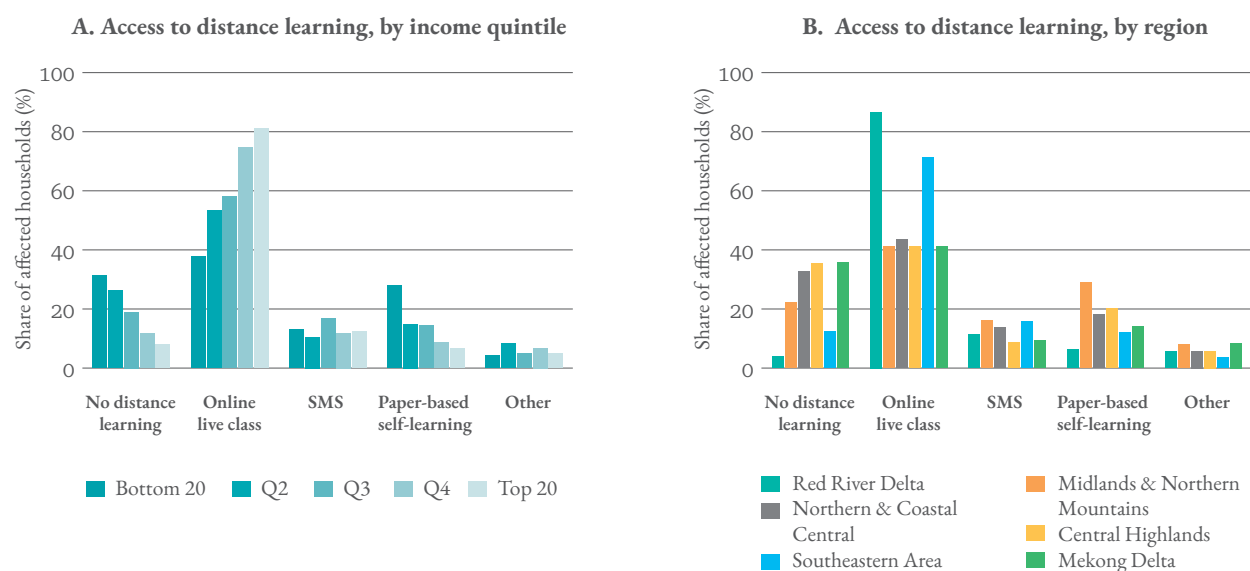
Note: Household welfare quintiles (Q) are based on household consumption per capita in 2018. SMS = Short Message Service.
Source: World Bank Vietnam COVID-19 household monitoring surveys (round 5, March 2021).

extra classes during compulsory education. These differences translate into disparities in educational attainment, slowing intergenerational mobility and exacerbating inequality. For children around age 8, the participation rate in extra classes is almost twice as high among top quintile households compared to bottom quintile households (Figure 4.17). Among children aged 12, the participation rates in top quintile households are almost three times higher. Moreover, among wealthy households, participation in extra classes is increasing with age, while in the poorest households, participation is declining with age. These differences in education investment create uneven opportunities and realities for future education attainment, skill development, and access to jobs. At the upper-secondary levels, the disparity is even greater where the top quintile is spending nearly 10 times more on extra classes than households in the lowest quintile.

Poorer households have more children and even less to spend on education per child. 92 percent of households in the bottom quintile have a child under 16 compared to 72.5 percent of households in the top quintile. Households at the bottom of the distribution also have more children on average (2.3 in the bottom quintile, compared to 1.3 in the top quintile). Richer households not only have more resources, but have fewer children to invest in education, which can lead to even larger gaps to poorer households with more children.

When child outcomes are related to their parents, intergenerational outcomes persist.

The association between a child's outcome and their parents is referred to as intergenerational persistence or relative mobility. The dissimilarity index decomposition for Vietnam shows that household education is a strong determinant of child education when controlling only for parental backgrounds (Set 2 variables in Figure 4.12), but its role diminishes when controlling for wealth (Set 3 variables). Across countries in the region, a mixed story of progress in relative *educational* mobility is evident. In three of the six large countries with estimates for multiple cohorts—Lao PDR, Timor-Leste, and Indonesia—children's educational achievements are becoming less associated with their parents' education between the 1950s and the 1980s cohorts. In other words, persistence across generations is declining in these countries, and relative mobility is increasing (Figure 4.18). Yet on average, persistence at the bottom is also becoming more pronounced, as mobility of those in the bottom half into the top quartile is declining in five out of the six countries. The share does not exceed 20 percent in any country in EAP for the 1980s generation.

Figure 4.16. Expenditure of wealthier families on compulsory education (primary and lower secondary)
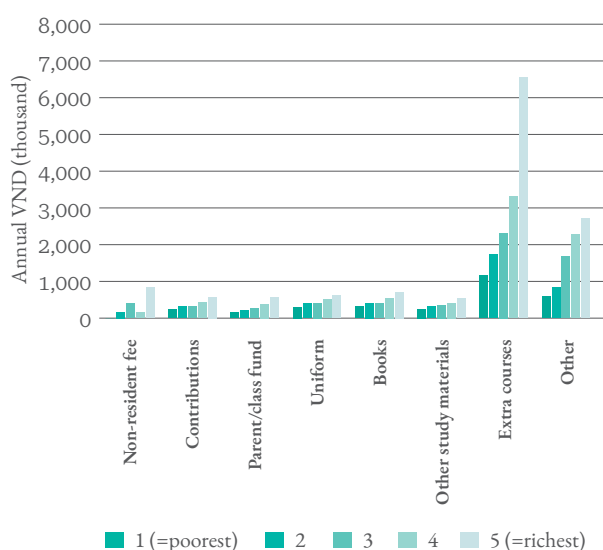
Note: Other study materials include paper, pens, bags, and notebooks.
Source: World Bank staff calculation using VHLSS2020.

Figure 4.17. Participation rates in extra classes by household wealth and age
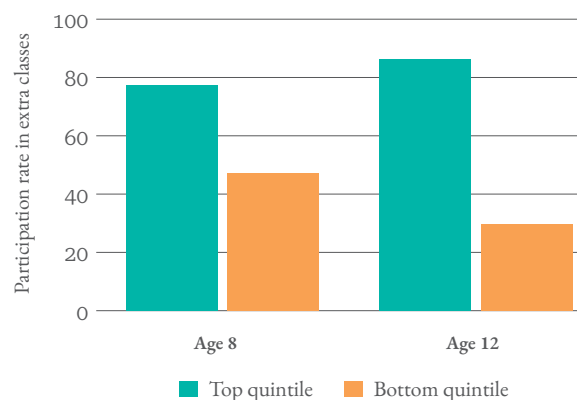
Source: Le and Nguyen (2016). Young Lives Surveys.

Figure 4.18. Persistence and relative mobility by cohort
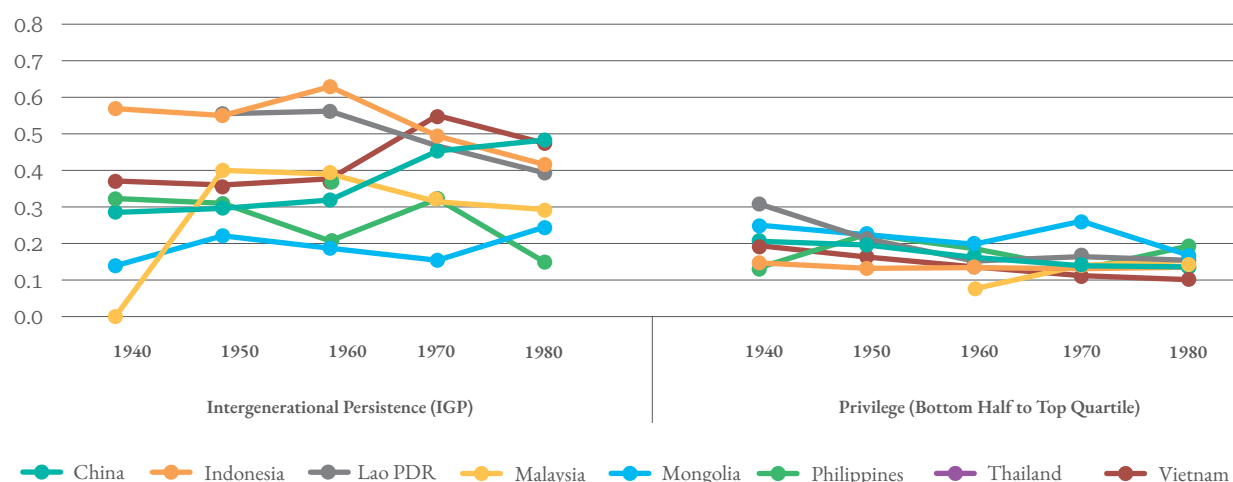
Note: See Annex 4.2 for definition of wider set of indicators.

Source: World Bank staff calculation using VHLSS 2010 and 2020

Economic growth is a key driver of income and educational mobility but is not sufficient on its own. Examples from individual countries illustrate how relative mobility in education is not an inevitable consequence of economic growth (Narayan et al, 2018). In three of these countries, relative mobility increased with national income; but not in China, Mongolia, or Vietnam. Upward mobility from the bottom to the top has increased unambiguously with economic growth only in Malaysia. That China and Vietnam showed increasing persistence despite rapid economic progress may be in part related to the significant changes experienced by these countries in the last half century, which led to the early and later cohorts growing up under very different circumstances, including the wars that affected those born from the 1950s to the 1970s. Promoting mobility in education is also likely to raise income mobility across generations in the region. The evidence that exists for a few countries does not indicate a significant disconnect between educational and income mobility in the EAP region. Income mobility in the five EAP countries for which estimates are available appears to line up well with educational mobility in a cross-country comparison (Narayan and Yang, 2019).

4.5. Summary

The education system in Vietnam is on the right path: a new modern curriculum is being adopted, teachers are being retrained, large and targeted investments are being made to the poorest areas in the country, and new policies are under way to make lower-secondary education tuition-free. While general education is continuously improving, household wealth remains a large determinant of a child's education outcomes and private expenditures in education varies substantially between poor and rich families.

Prior to the pandemic, a range of educational and socioeconomic inequalities have become more salient, especially between the top and the bottom of wealth quintiles as well as between ethnic minorities and Kinh groups. The gaps in education access and learning outcomes begin very early in life and accentuate as children move up the education ladder. Educational performance varies significantly based on socioeconomic backgrounds, and pathways into quality employment are much less clear for those not going on to tertiary education. This issue is perpetuated by the schooling system which benefits high-performing students while leaving behind those with learning difficulties, at least at the general education level.

Students from disadvantaged backgrounds are more likely to suffer from school failures and dropouts. The cause of—and responsibility for—students' low learning outcomes is due to (i) school failures: a deficient and/or inadequate provision of quality education by schools and the educational system, appropriately catering to the needs of students, especially those from the disadvantaged background, and being placed in low performing schools; and (ii) correlated factors that schools or the education systems can have little or no influence, such as place of residence, child poverty, and family environment.

The COVID-19 pandemic has radically changed the lives and education of children in Vietnam, highlighting inequalities in education and skills formation. Although in relative terms Vietnam was not hit as hard by COVID-19 as other countries by the pandemic thus far, in education, Vietnam has had one of the longest school closures in the world. The lack of face-to-face teaching overall and inequality in access to distance learning across socioeconomic backgrounds have massively disrupted the education of all children, but especially those from disadvantaged families (poor, migrants, those with disabilities, lagging ethnic groups). These worse impacts will likely also have longer-term effects on their educational progression and labor market performance, further exacerbating existing inequalities, and limit intergenerational mobility.

| BOX | 4.2. | The Association between socioeconomic characteristics and school quality |

While not explicitly discussed in this chapter, outside of family and child characteristics, the quality of schools are also important determinants to child outcomes.

A large literature addresses why children from higher socioeconomic backgrounds have better educational outcomes, focusing predominantly on differences at home and in school. Home factors that seem to influence educational outcomes the most include income, parental education, and early childhood nutrition (Glewwe and Miguel, 2007). Children from lower-income backgrounds, who tend to attend lower quality schools, are less likely to participate in higher education (Yang and Qiu, 2016). Furthermore, high levels of income inequality and poverty can lead to great variability in the allocation of educational resources across households, which may deter children exposed to other inequalities (e.g., health, nutrition) from accessing schooling opportunities (Wongmonta and Glewwe, 2017). In addition to inequalities in household inputs, family socioeconomic status influences the kind of school and classroom environment to which the student has access. A large body of evidence from both high-income and developing countries indicates that access to quality schooling varies by children's socioeconomic background. A review of the data in and studies on countries in the South Asia region show the same—in some cases achievement for a student in the top income quintile is three to four times that of a student in the bottom quintile (World Bank, 2014).

BOX	4.3.	Decomposing variation in education quality

Similar to education completion, education quality can vary by family conditions or circumstances. Nguyen (2006) studied test scores and school quality, and observed that children from poor households in better-off villages (without government financial support as they are in disadvantaged areas) faced higher risk of school dropout. Following the Shapley decomposition techniques described in Chapter 4, the sources of variation in test scores can also be studied. Since only binary indicators can be decomposed, a threshold of high or low scores must be determined. As a starting point, children that score above the 75th percentile are considered to be high math test score achievers. The sources of variation in test scores across different levels of education illustrate how differences in educational resources can compound across the educational cycle for children. The decomposition of the dissimilarity index of test scores shows similar results to other decompositions on the variation of education completion, namely there are large influences from household wealth, ethnicity, parental education, and region, but lesser influence due to a child's gender.

Table B.4.3.1. Decompositions of math test scores

	PRIMARY (R4, 2019)	LOWER SECONDARY (R2, 2018)	LOWER SECONDARY (R5, 2020)
Dissimilarity index	0.284	0.270	0.257
Shapley decomposition of the D-index			
HH wealth	23.95	16.744	29.00
Parents' Education (max)		19.610	18.78
Ethnicity	32.14	26.700	26.31
Gender	4.80	0.278	0.38
Province	38.80	36.660	25.50

Source: World Bank staff calculations using the RISE data.

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4.7. Notes

[35] SES-disaggregated outcomes are computed using middle-income countries to allow for disaggregation. Computations are made using same general methodology as the global HCI but are not directly comparable due to differences in data sources.

[36] See A Year Deferred – Early Lessons and Experiences from COVID-19 in Vietnam (World Bank, 2021a).

ANNEX **4.1.**

Chapter 4 figures

Figure A.4.1.1. HCI benchmarking, Vietnam vs. peers

Survey

Probability of survival to age 5

Country	
Singapore	
Malaysia	
Thailand	
Brunei Darussalam	
Upper Middle Income	
ASEAN average	
Vietnam	
Cambodia	
Philippines	
Lower Middle Income	

School

Expected years of schooling

Harmonized test scores

Health

Adult survival rate

Children not stunted under 5
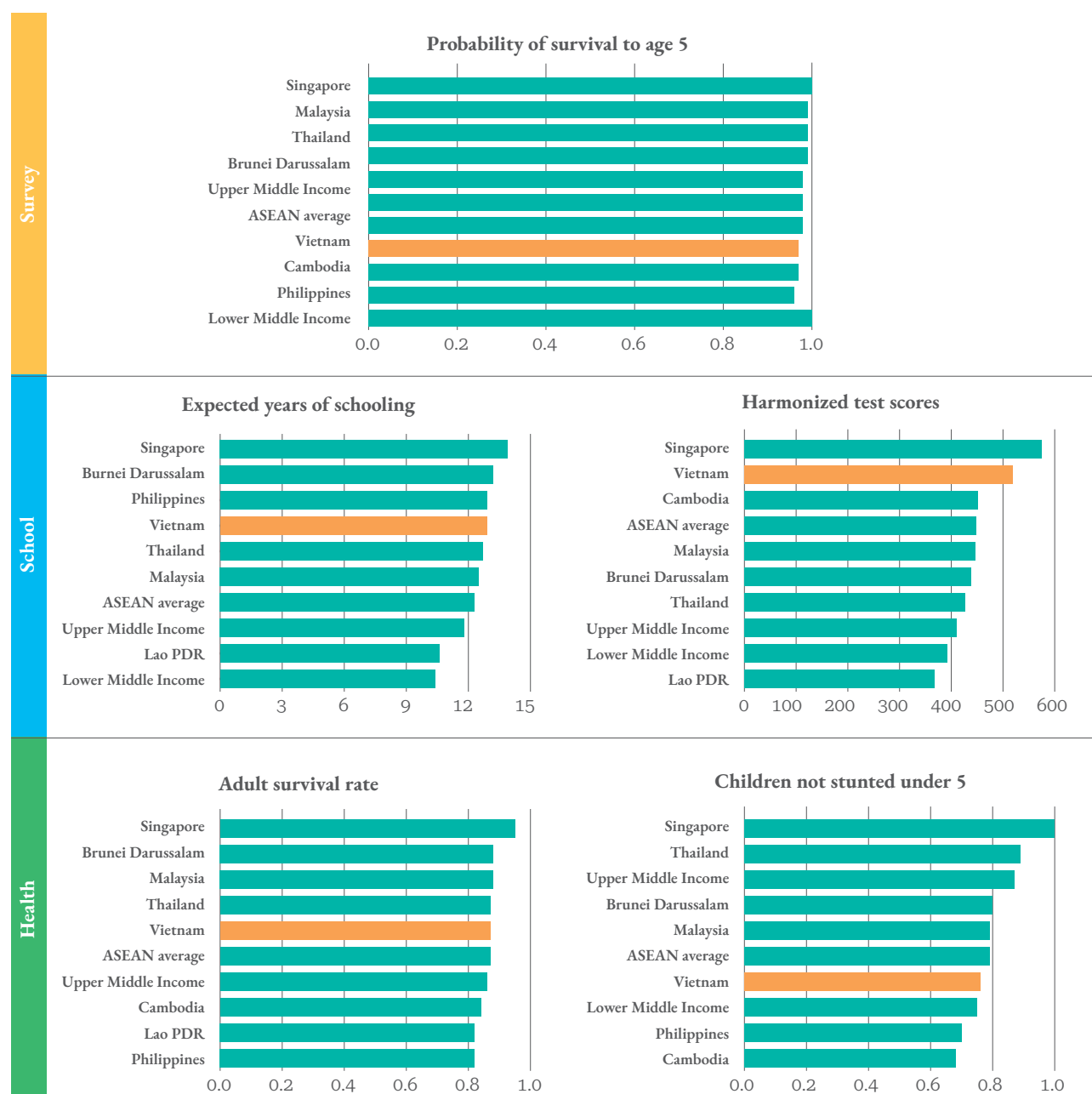
Source: World Bank, 2020, HCI vintage 2020

Table A.4.1.1. Shapley decomposition of dissimilarity index

		BUNDLED OPPORTUNITIES (TOTAL OF 11)			ENROLLMENT	ON-TIME EDUCATION COMPLETION				HEALTH		
		8 OUT OF 11	9 OUT OF 11	10 OUT OF 11	ENROLLED IN SCHOOL	SOME PRIMARY	PRIMARY	LOWER SECONDARY	UPPER SECONDARY	ACCESS TO FLUSH TOILET	ACCESS TO SAFE WATER	ACCESS TO HEALTH INSURANCE
Set 1: Child circumstances (gender, region)	Child gender (female, male)	2.4	2.5	4.0	10.5	11.2	6.3	22.7	13.8	3.9	1.4	0.9
	Region	62.9	60.2	42.3	82.0	87.4	93.7	74.5	52.0	61.9	54.6	69.9
	Urban or rural	34.7	37.3	53.7	7.5	1.4	0.0	2.8	34.2	34.2	44.0	29.2
Set 2: Parental circumstances	Kinh or ethnic minority	71.5	51.5	34.1	36.9	15.7	51.3	55.5	55.5	76.6	19.2	64.7
	HH education	19.6	34.1	59.0	42.1	47.7	24.9	13.1	36.2	18.5	63.3	25.9
	HH gender	4.0	9.2	5.1	7.6	5.6	15.1	11.8	6.9	2.9	13.6	1.0
	HH age	5.0	5.2	1.8	13.4	31.0	8.7	19.6	1.4	2.0	3.9	8.5
Set 3: Parental circumstances + wealth	Kinh or ethnic minority	23.8	19.0	13.7	12.8	8.1	14.1	20.6	21.7	33.2	9.2	52.1
	HH education	8.1	13.2	23.2	13.9	28.7	7.9	6.1	17.5	9.8	29.0	13.8
	HH gender	1.8	3.8	2.4	3.2	3.7	4.5	5.9	2.7	1.7	6.7	0.4
	HH age	2.2	2.0	1.1	6.4	20.2	3.4	10.9	0.7	1.2	2.1	6.0
	HH wealth quintile	64.1	62.1	59.6	63.8	39.4	70.1	56.4	57.4	54.1	53.1	27.8
Set 4: All circumstances	Kinh or ethnic minority	17.2	13.5	9.9	8.2	5.3	9.0	12.2	15.3	22.5	5.5	21.8
	Child gender (female, male)	0.6	0.6	0.9	3.7	2.7	1.5	8.7	5.0	1.2	0.5	0.3
	HH education	4.9	8.1	15.6	6.9	18.8	5.0	2.8	10.0	5.7	9.8	7.9
	HH gender	1.1	2.2	1.5	1.7	2.6	2.8	2.2	1.7	1.0	2.8	0.4
	HH age	1.7	1.4	1.0	2.9	12.6	2.8	5.5	0.3	0.7	0.9	3.9
	HH wealth quintile	43.5	42.9	46.7	36.2	27.0	43.0	31.0	40.5	34.9	18.2	18.2
	Region	21.6	21.9	12.2	37.7	30.6	35.4	36.5	18.3	23.5	38.9	33.7
	Urban or rural	9.5	9.6	12.2	2.7	0.4	0.6	1.2	9.0	10.5	23.4	13.9

Source: World Bank staff calculations using VHLSS2020.

Computing Dissimilarity index – Circumstances and opportunities

Circumstances – factors that can influence a child's opportunities

A set of circumstance variables are selected and defined as the factors that contribute to the disparity of access to opportunities. Variation in children's outcomes are attributable to their circumstances. In this analysis, three broad groupings of circumstances are considered: the characteristics of the children themselves, the characteristic of their households, and their geographic location (Table A.4.2.1).

A child's opportunities

A child's opportunities are defined as access to basic needs and infrastructure deemed necessary during formative years to the fulfillment of a child's potential. This generally covers three main realms: health, education,

and infrastructure. The list of opportunities we look at are provided in Table A.4.2.3. While the definitions for access to education, assets, and electricity are generally well defined, we refer to standards defined by the United Nations and the World Health Organization for access to improved drinking water and sanitation.

Opportunities should be exogenous, not determined by the individual or their prior actions. For that reason, we restrict the main analysis to children aged 6–14. This is equivalent to the age range from the start of primary education to the completion of lower-secondary education. While it is difficult to ascertain why an individual is in a certain circumstance, the assumption that children are where they are largely due to the birth lottery is still plausible.

Access to an opportunity is equated with the opportunity itself for the purposes of this analysis. While it can be debated whether opportunity should be defined as the access to or utilization of the opportunity, due to the data we base this analysis upon the assumption of access-as-opportunity is made. We thus define the use of clean, piped water as the opportunity for clean water, while the availability of clean, piped water elsewhere in the village is not considered as opportunity as long as the household still uses collected rainwater.

Table A.4.2.1. List of circumstances (potential sources of inequality)

CATEGORY	CIRCUMSTANCE	DESCRIPTION
Geographic	Region	There are six geographic regions defined in the VHLSS:
		Red River Delta
		Midlands and Northern Mountains
		Northern and Coastal Central
		Central Highlands
		Southeast
		Mekong Delta
	Urban/Rural	Binary indicator for being located in an urban or rural area
Child Characteristics	Gender	Binary indicator for gender
	Ethnicity	Binary indicator for being of the Kinh ethnic majority
Household Characteristics	Gender of Head	Binary indicator for gender of household head, defined as being male
	Education of Head	Binary indicator for education of household head, defined for having completed lower secondary
	Age of Head	Binary indicator for household head age, defined as being below median
	Household consumption quintile	Quintiles based on the household consumption aggregate in nominal LCU terms.

The definition of opportunity considers only the utilization of an opportunity and does not take into account the quality of the opportunity being utilized. This is due to data constraints, as the data we rely on cannot measure or distinguish high quality opportunities from low quality ones.

For the purposes of this analysis, some assumptions need to be made in order to harmonize the general and vocational educational streams. In the education module of the VHLSS, there are two primary questions on level of education: highest qualification earned (question 2), and current grade attending (question 6). Question 2 is divided into two parts: 2a asking for the highest general education certificate earned, and 2b asking for the highest vocational education certificate earned. As such, one can roughly discern from question 2 the trajectory of an individual's education, provided that there was only one shift between general education and vocational educational streams. However, when thinking about the level of education that has been achieved in itself, or that being attended by an individual, one must categorize the different vocational certificates into the buckets of lower-secondary/upper-secondary/post-secondary. This gets tricky because there is no specification on what type of certificate that the individual is in the process of earning or has earned, adding to the complexity that is the incongruence of the general and vocational education streams. As such, for the purposes of the analysis, we group vocational education into one with upper-secondary education. As such, for the analysis of access to educational opportunities, we restrict the sample to between 6 and 21 years of age instead of 6 and 14 as in the other parts of the analysis.

The education system in Vietnam consists of compulsory five years of primary and four years of lower-secondary education followed by further levels of education, upper-secondary and beyond. Starting from lower-secondary, students have a choice of general or vocational education streams and are free to switch between general and vocational streams, as illustrated in Table A.4.2.2.

Table A.4.2.2. Vietnam's General Education System

LEVEL	GRADES	INTENDED AGE RANGE
Primary	Grades 1–5	6–11
Secondary	Grades 6–9 (Lower Secondary)	11–15
	Grades 10–12 (Upper Secondary)	15–18

A minimum bundle of goods

It is possible to define an opportunity as a minimum bundle of goods and services. From Table A.4.2.3, ten opportunities were chosen to construct the bundle. These include school enrollment, on-time education completion, access to safe drinking water, improved sanitation, electricity, mobile, internet, health insurance, and a permanent housing structure and a non-overcrowded dwelling. Choosing overlapping deprivations may involve some subjective choice of what is included in the bundle. The indicators should be as different from each other as possible to create a combination as opposed to interrelated goods and services. This bundle represents the minimum complementary opportunities that children need with consideration to data availability, but also aligns with dimensions of the Multidimensional Poverty Index for Vietnam and OPHI's MPI. The weighting of different indicators is also another consideration that can be somewhat arbitrary. All indicators are set to have equal weights to one another. Taking this approach avoids imposing a hierarchy of importance, which seems to be the most intuitive.

Additionally, certain opportunities cannot be measured from the data, such as access to healthcare facilities. While access to healthcare facilities is covered in the survey data used, it is only asked when individuals fall ill. As such, it would be impossible to disentangle the fact that individuals got sick (possibly indicating not having the opportunity of a healthy constitution) and the opportunity of having the access to a hospital if the individual fell ill.

Table A.4.2.3. List of opportunities

CATEGORY	OPPORTUNITY		DESCRIPTION
VHLSS data			
Education	Attending School		Children in age window 6-14
	Completing education on time	Some Primary	Age window: 6-11
		Primary	Age window: 12-15
		Lower-Secondary	Age window: 16-18
		Upper-Secondary	Age window: 19–21
Access to Infrastructure	Housing	Adequate living Space	Square-meters of living space per capita is more than 8m2
		Housing quality	Floor AND wall are permanent/durable materials
	Improved Drinking Water		Sources of water that are protected from outside contamination, in particular from fecal matter.
	Improved Sanitation		Sanitation facilities that are covered
	Electricity		Household has access to electricity
	Internet		Household has access to internet (at home or internet café)
	Healthcare	Health Insurance	All members of the household have health insurance
Access to Assets	Phone		Household owns mobile or land line phone
	Computer		Household owns computer
Bundled Opportunities	Not Vulnerable (8, 9, 10 out of 11)		Opportunities can also be bundled. A child is not vulnerable if he or she has joint access to a minimum number opportunities: school attending, on-time education completion, improved drinking water, improved sanitation, electricity, internet, mobile, health, housing. See the section *Complementarity of opportunities* for analysis of bundled opportunities.
RISE Data			
Education quality	Math and reading test scores		High above 75th percentile.

Note: HOI analysis is calculated for children 6-14 years of age. Exceptions are the individual opportunities of on-time completion of lower-secondary education.

Chapter 5.
Sustaining upward economic mobility

Key Messages

- Economic growth has transformed the country but preserving these gains and creating new sustainable economic pathways to build a secure middle class is the challenge ahead.

- Higher labor productivity and high skilled led growth is necessary for HIC transition as well as generating upwards economic mobility

- The labor market will have to recognize and address challenges of high informality, slow growth of high-skill and digital drops, and slow transition into higher skill occupations among the youth.

5.1. What will it take to build a middle-class?

Vietnam needs a productivity-led growth path to reach higher levels of prosperity. The growth strategies that underpinned Vietnam's poverty reduction success in the previous decade are no longer ones that can sustain the country's growth path to higher income levels and the build-up of a large and secure middle class. Even before the onset of COVID-19, the efficacy of the developing East Asia and Pacific region's growth model based on low-skilled outward-oriented growth was expected to diminish as the world rapidly changes (Mason and Shetty, 2019). Given these emerging challenges, Vietnam may not be as well positioned as it was a decade ago when it reaped advantages from a demographic dividend, low labor costs, and a structural transition of the labor force based on low-skill occupations and out of agriculture.

Productivity growth had been a major driver of GDP growth in the early years of Vietnam's economic transition following market liberalization. Labor productivity growth between 1990 and 2000 was driven by *intra*-industry improvements as production processes began to modernize, new technologies were adopted, and less productive firms were forced out due to competitive market forces. Post-2000, productivity growth emerged from *inter*-industry improvements, with workers moving from low-productivity agriculture to more productive manufacturing and services sectors (Cunningham et al., 2018). In the early half of the decade, labor productivity growth was below

4 percent but increased in the latter half of the decade (Figure 5.1). In the latter half of the decade, mirroring stronger labor market transitions out of agriculture and into wage jobs as discussed in Chapter 2, labor productivity growth increased to nearly 6 percent. However, the sector with the highest productivity growth was agriculture, which is now facing an aging workforce and will need to modernize to sustain productivity growth rates. Despite increasing labor productivity, the services sector remains highly informal and is susceptible to economic shocks, as witnessed by adverse employment shocks from COVID-19. The labor productivity patterns of the manufacturing sector has varied inconsistently.

To increase labor productivity, productivity in the services and industry sectors must increase. In 2002, industry was Vietnam's smallest but most productive sector, making up just over 10 percent of employment but with productivity nearly three times the national total. It was followed by services with 20 percent employment share and around 1.75 times total productivity; agriculture formed two-thirds of employment but was less than half total productivity (Figure 5.2). By 2030, 70 percent of employment will be in the two more productive sectors but their advantage over total productivity no more than 1.4 times. Thus, total productivity over the last two decades has grown because low productivity agriculture has shrunk. However, this means that, for total productivity to increase in the future, it is not enough for services and industry sectors to increase employment share; they must also increase sectoral productivity.

Figure 5.1. Average labor productivity growth (GDP per worker), by sector
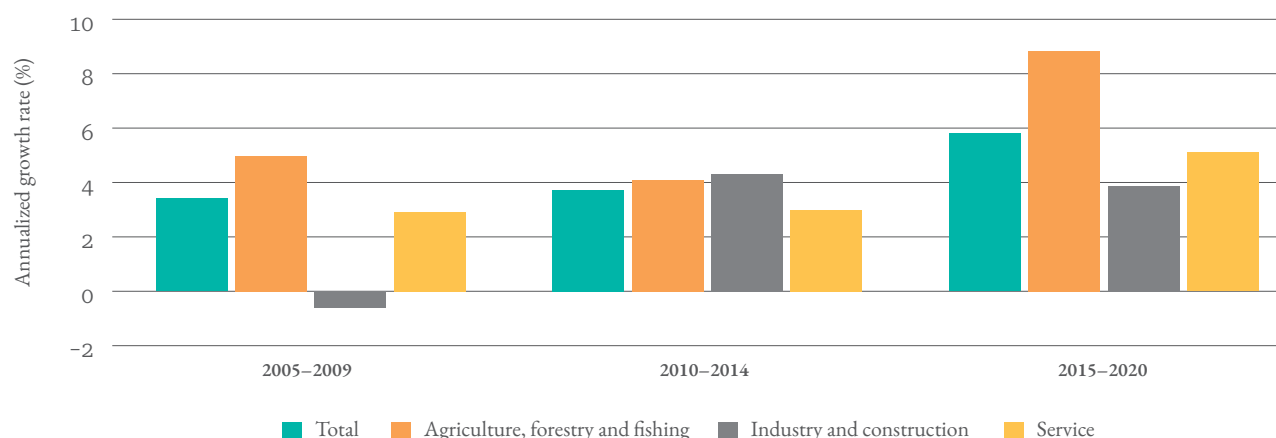
Source: World Bank staff calculations using GSO and WDI data.

Figure 5.2. Employment shares and labor productivity by sector, 2002-2030
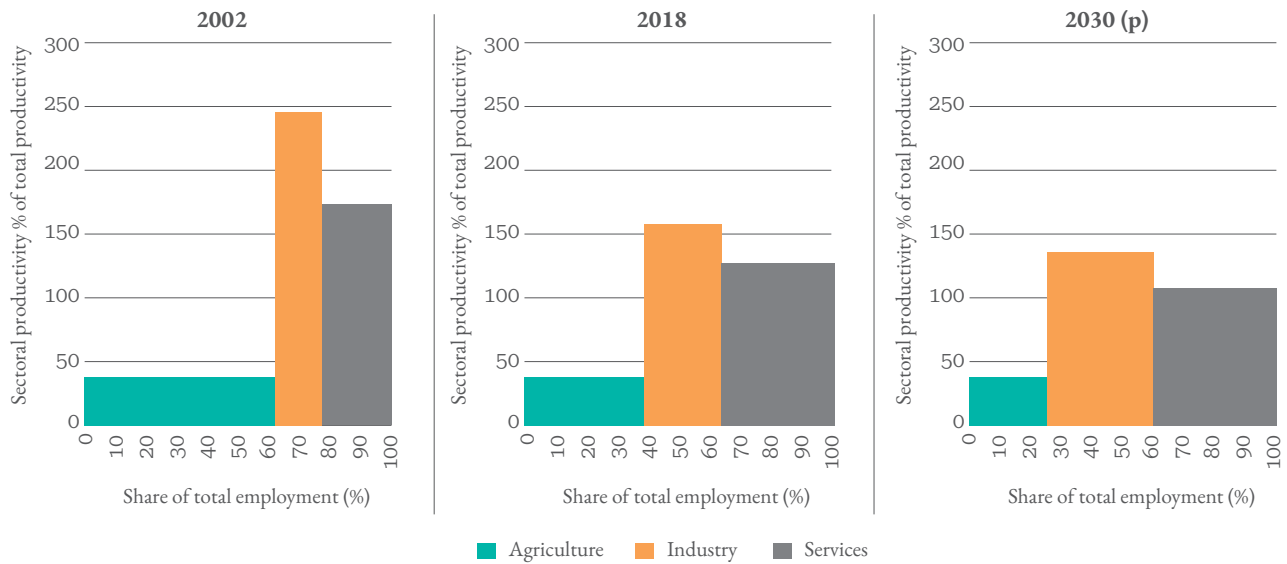
Note: (p) = predicted.
Source: World Bank, 2009.

Figure 5.3. Projected growth (baseline and target scenario), 1991–2045
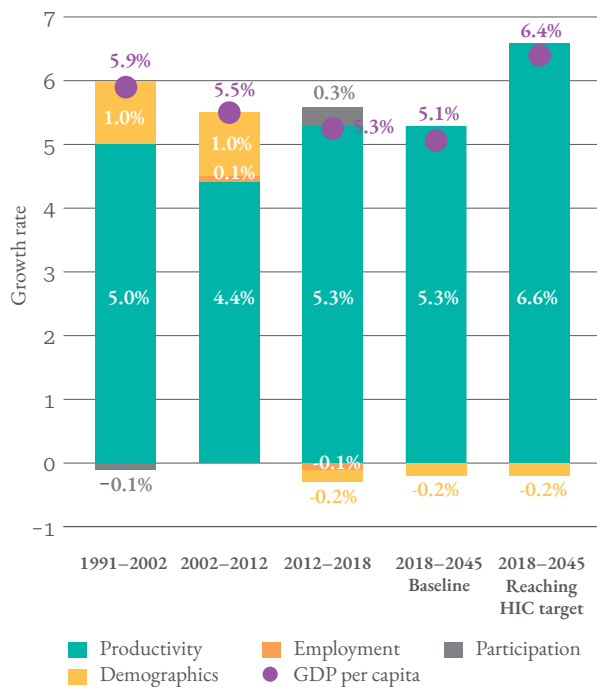
Figure 5.4. Projected income, 2018–2045
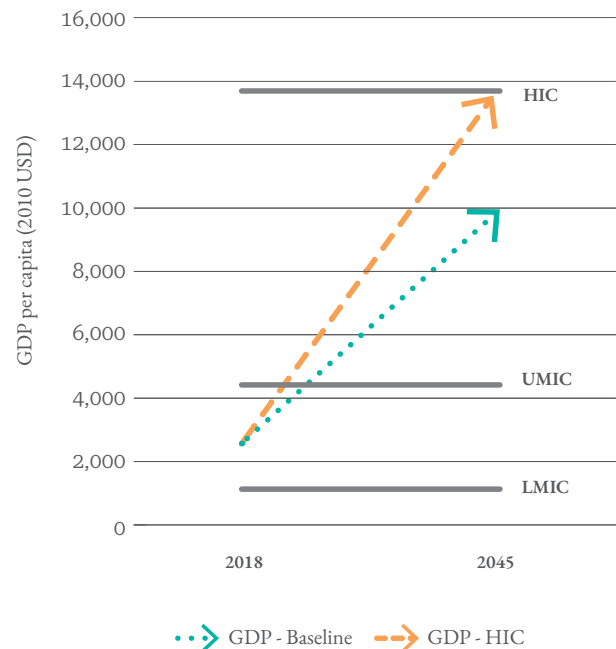
Note: Both projected periods use UN projected total population and working-age population and hold employment and labor force participation constant. Baseline uses 2012–2018 average worker productivity growth; HIC uses the growth required to achieve high-income status by 2045. See Annex 5.2 for methodology. Income levels are converted from GNI per capita to GDP per capita based on the 2018 ratio of the two in Vietnam.
Source: World Bank staff calculations.

For Vietnam to achieve high-income status by 2045, annual productivity growth of nearly 7 percent would be required. If participation and employment rates stay the same as from 2012 to 2018 and the population continues to age as projected, then the number of workers will fall and the productivity of those who do work will need to increase to sustain or even increase growth. Average real per capita growth from 1991 to 2018 was 5.6 percent per annum. A 6.7 percent rate would be required until 2045 to reach high-income status. To achieve this, growth in productivity per worker would need to increase from the 2012–2018 annual rate of 5.3 percent—already the highest of the last three decades—to 6.6 percent per annum, an acceleration of around 20 percent each year (Figure 5.3). At the 2012–2018 rate, Vietnam would be comfortably upper-middle income but US$4,000 per capita short of high-income status (Figure 5.4).

A high-skill labor transition will help boost upwards economic mobility. Better jobs will not only boost economic growth, it will further improve household living standards and conditions. Household consumption varies by the occupation skill level of the household head (Figure 5.5). Households where the head is in a high-skilled and non-manual occupation is nearly three times larger than households where the head has an unskilled occupation.

Figure 5.5. **Household consumption per capita by household head occupation skill level**
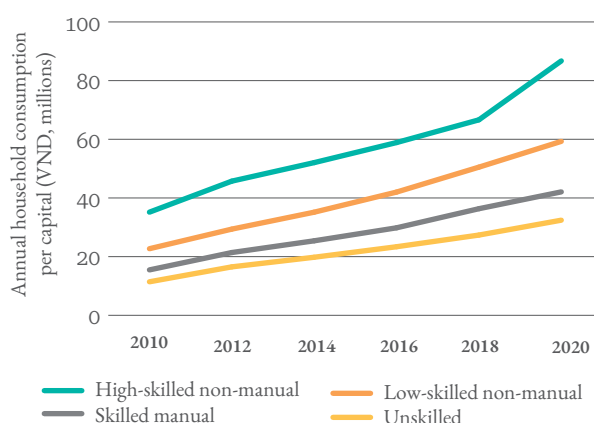
Note: Household consumption in annual per capita nominal VND.
Source: World Bank staff calculations using VHLSS 2010-2020.

5.2. Economic mobility for tomorrow – potential challenges ahead

Since the postwar era, Vietnam has successfully used promotive strategies through job creation to improve living standards and reduce poverty. While medium-skilled manufacturing jobs created economic pathways off the farm and out of poverty for many, incomes from these jobs are still too low to support the build up of a middle class. Future labor market challenges have also been looming on the horizon in regard to the viability of a continuously transforming the labor market towards more skilled and sophisticated activities (Cunningham et al., 2018, Pimhidzai and Niu, 2020). Moreover, reports with a global perspective have described the need for developing economies to update their growth strategies involving the manufacturing sector as well as address informality (World Bank, 2017; Ohnsorge and Yu, 2021; Mason and Shetty, 2019). This section reviews challenges for the Vietnam context including low education at higher grade levels, high labor informality, low labor productivity, low skills, and an aging workforce, which this section summarizes and reviews.

An aging population means a smaller labor force in the future.

The demographic dividend is nearly spent. The working age share of the population is projected to have begun declining in 2018, just as the share of the elderly population is beginning to increase. While 6.7 percent of the population was aged 65 years or above in 2017, this is expected to reach 21 percent by 2050, transforming Vietnam from a young to an aged society. Moreover, Vietnam is projected to become old before it becomes rich, by aging at levels that are much higher than other lower-middle-income developing countries (Eckardt et al, 2016). While Thailand and China are older in the region, these two countries are also much richer and may be better able to afford care for an aging society (Figure 5.6). Moreover, social assistance programs are also larger in these two countries. An aging society increases the dependency ratio, reduces the eligible working-age population, and increases the demands on social services.

Figure 5.6. At its level of development, Vietnam is older than its peers
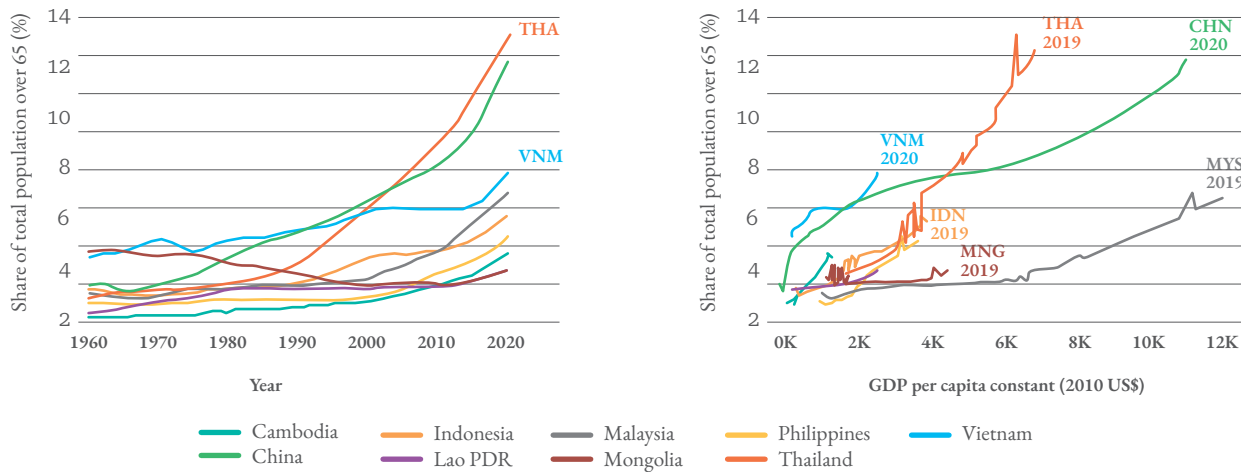
Source: WDI.

The combination of an increasing share of elderly and a declining share of working-age people—which is projected to accelerate (Figure 5.7)—has several implications for jobs and growth. The decline in the working-age population means that a key driver of Vietnam's rapid growth will diminish, making other sources even more vital; growth would have been 1.2 points higher from 2012 to 2018 if the demographic dividend had not been lost (Figure 5.8 and Annex 6.2).[37] This means that Vietnam will need to move its relatively declining workforce into more knowledge-intensive activities that allow for high labor productivity to sustain robust growth and upward economic mobility (Cunningham et al., 2018; World Bank & MPI, 2016).

Figure 5.7. Potential workers, 1991–2050
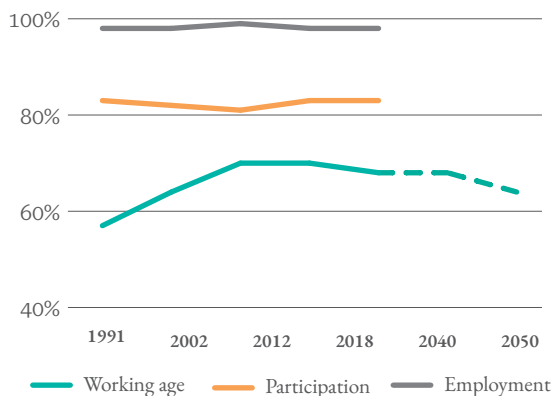
Source: WDI (working age 1991–2018, participation, employment); UN Projections (working age 2018 until 2050).

Figure 5.8. Growth decomposition (varying demographic scenarios), 1991–2018
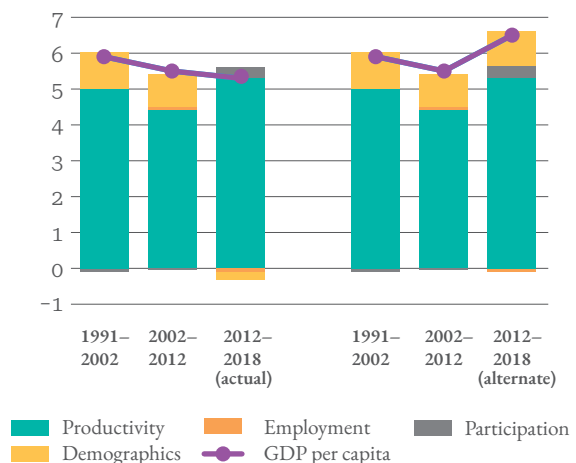
Note: 2012–2018 Alt. assumes all growth components the same as actuals for 2012–2018 except for Demographics (working age population) which are equal to the 2002–2012 value. See Annex 5.2 for methodology.
Source: WDI and World Bank calculations.

Most of Vietnam's growth components are exogenous or maximized. An aging population is given while unemployment is near-zero and participation rates among the working age population are some of the highest in the world. Even in a country with strong family care responsibilities, female labor force participation is 73 percent in Vietnam compared to the 59.4 percent average in the East Asia and Pacific region. Among females aged 20–39, only 6 percent are out of the labor force due to family care responsibilities (Figure 5.9). With an aging population, fewer new workers are coming into the labor force while existing workers are leaving at a greater rate. Among working adults, labor participation cannot be significantly increased; of those participating, almost all have already found employment. Thus, the only potential source of growth that can increase is worker productivity and to have jobs in the labor market that allows every worker to work to their full potential and not be underutilized.

Figure 5.9. Reasons for remaining out of the labor force, by gender and cohort
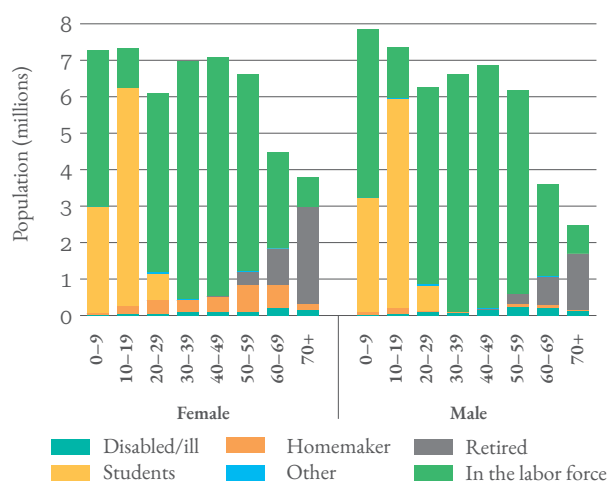
Note: This variable is not available in the VHLSS 2020.
Source: World Bank staff calculations using 2018 VHLSS.

Job informality is still high with implications towards income instability and access to social insurance.

Informality remains widespread; in 2020, only 23.5 percent of households have an employed household member with a formal wage contract. Outside of the public sector, the manufacturing sector provides the most contract jobs due to the prevalence of foreign-owned firms, which are more

likely to offer formal work (Figure 5.10). Wage employment in the services sector is more likely to be informal and is comprised of more low-skilled activities than manufacturing. A significant share of workers working in family farms or household enterprises, meaning they do not have access to social or health insurance through their employment, as small enterprises are not required by law to provide social benefits.

Older, rural, and ethnic minority demographics are often excluded from formal wage jobs due to educational requirements. Older workers and those from rural areas have lower educational attainment, work primarily in household-based production, and are trapped in low-quality jobs. Over half of all workers aged 50 and over and three-quarters of ethnic minorities are engaged in farming. The ILO categorizes 52 percent of Vietnamese workers in 2019 as being engaged in "vulnerable employment," that is, family or own-account workers.

COVID-19 highlighted the large vulnerabilities of the informal and labor migrant workforce (World Bank, 2021a). Informal workers are more concentrated in lower-skilled services sectors, which were also more affected by social distancing restrictions. Informal workers had few coping mechanisms, safety nets, or formal assistance with job search. Most informal workers (64 percent) who experienced declines in employment or income could only respond to labor shocks by waiting until social distancing ended (GIZ, 2021).

Most jobs today are either low-skilled or manual.

Manual but skilled jobs are concentrated in manufacturing, and these are also the types of jobs that have increased the most over the last decade (Figure 5.11). From 2010 to 2020, the composition of jobs has shifted away from agriculture to occupations in manufacturing, non-trade services, or the trade and construction sectors. Ten million new jobs were created in the manufacturing and services sectors combined between 2010 and 2020, yet growth in the manufacturing and services sectors has yet to be accompanied by complementary growth in high-skilled non-manual occupations. High-skilled non-manual jobs are most numerous in public-service sectors such as education and public administration. The financial sector is more private sector and high-skill oriented but employs a smaller share of workers. The current analysis uses occupation as a proxy for skill; there is likely unobserved within-sector heterogeneity which further skills surveys could better capture and differentiate.

Figure 5.10. Sectors having jobs with contracts remain
concentrated in the public sector and manufacturing (2010–2020)

■ Has contract ■ No contract
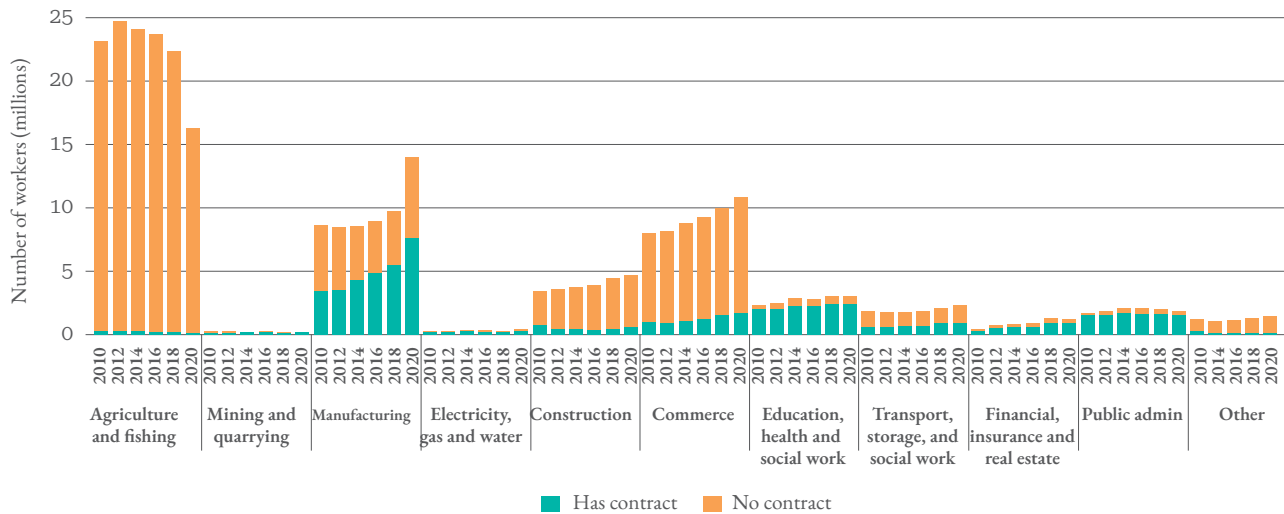
Source: World Bank staff calculations using VHLSS.

Figure 5.11. Skill level of jobs, 2010 and 2020

Number of workers by skill level of jobs in 2010

Number of workers by skill level of jobs in 2020

■ High-skilled non-manual ■ Low-skilled non manual ■ Skilled manual ■ Unskilled manual
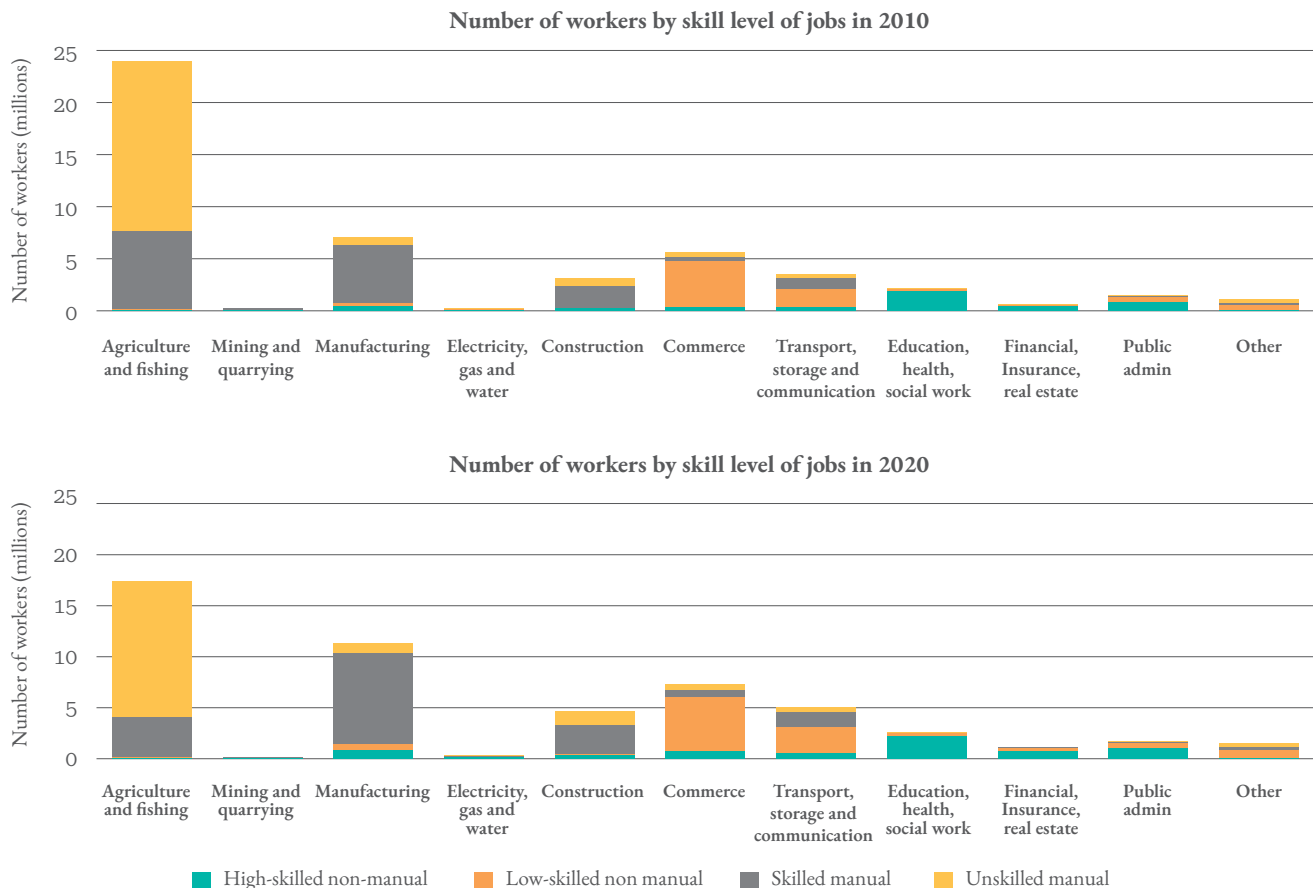
Note: See Table A.5.1.1 for skill categorization.
Source: World Bank calculations using LFS 2010 and 2020.

Building broad economic security and a consumer class is no longer just about moving people to wage jobs, but increasingly more about improving the quality of those jobs to sustain wage income growth. Gains in skilled or non-manual employment are mostly seen among households in the top quintile. While the absolute number of skilled manual jobs nearly doubled in the lowest quintile, the size of the unskilled labor force did not significantly decrease. Modern jobs will need to shift toward higher-value added activities to improve job quality, drawing from the global shift toward knowledge-intensive production processes and complex value chains. This is needed if Vietnam wants to move toward the service segments, and more sophisticated, higher value chains.

Vietnam has a high share of low digital occupations compared to nearby economies. Figure 5.12 illustrates the distribution of jobs as classified by the intensity of digital skills across a set of Southeast Asia economies. About 74 percent of occupations in Vietnam are classified as having low digital skill needs, more jobs than in neighboring countries where comparable data was available.

The growth of high-skilled jobs has been gradual despite a more educated workforce.

Based on official surveys, the size of the labor force in high-skill occupations has been marginally increasing, but not as quickly as the size of the medium-skilled workforce (Figure 5.13). 9.1 percent of occupations were high-skill in 2009 compared to 11.9 percent in 2020. With higher education, workers are for the most part shifting into medium-skilled manufacturing occupations rather than low-skill occupations like earlier generations. While the growth of the high-skill occupations may be expected to be slower, one aspect that points to future challenges is that younger workers are entering manufacturing and medium-skill occupations at higher rates than in neighboring economies. It is too early to see if structural upgrading into higher-skilled service jobs will occur at the same pace.

Despite higher average education in the population, those with tertiary education are more likely to be engaged in medium-skilled jobs in 2020 than in 2010 (Figure 5.14). 86 percent of workers with tertiary workers in 2010 worked in high-skill occupations compared to 74 percent in 2020. The slow growth of high-skilled jobs is due to several factors. Vietnam's ability to move into higher value-added jobs is hindered by existing education and skills systems which does not address priority skills, along with a shortage among higher-skill occupations. Young workers are better educated but, due to a mix of supply- and demand-side factors, are not finding or being hired for better jobs. Youths with the right skill sets may be discouraged by low domestic wages. Existing older workers have less education and larger skill gaps. While Vietnam's current education system has improved significantly, most workers do not benefit from these improvements, having long since left the education system. At the same time, enrollment in tertiary education is stagnating (World Bank, 2020b).

Figure 5.12. Employment across digital occupation level, by country

	Cambodia	Thailand	Malaysia	Vietnam
Highly digital occupations	0.3%	3%	1.4%	1.4%
Medium digital occupations	28.6%	33.4%	26.1%	24.7%
Low digital occupations	71.1%	63.6%	72.5%	73.9%
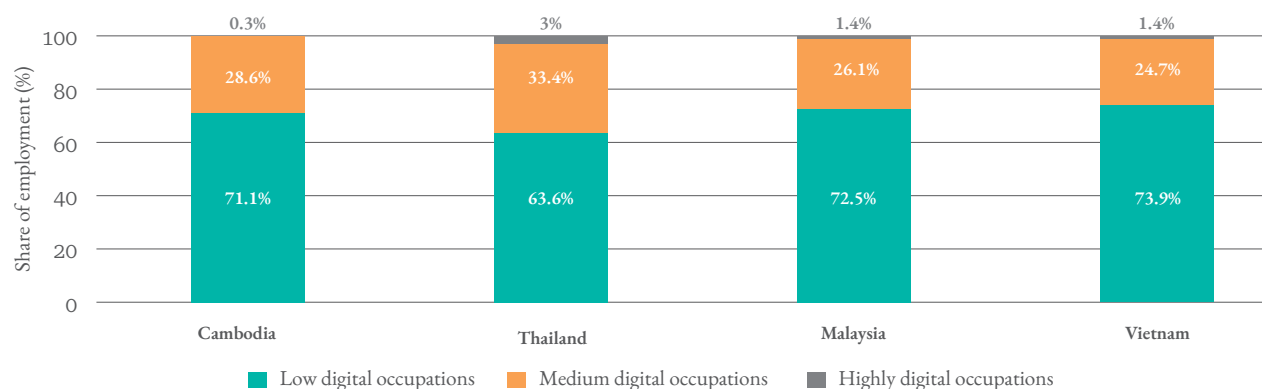
Source: World Bank 2021b using SEAD data.

Figure 5.13. Employment by occupation skill category (share)
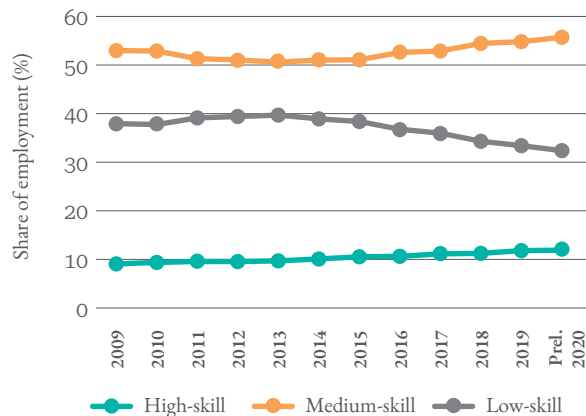
Note: Occupations are grouped into broad skill categories defined by the ILO.
Source: GSO and World Bank calculations.

Employers identify a lack of adequately skilled workers as a constraint

Employers and employees in East Asia particularly emphasize job-specific technical skills and critical thinking and behavioral skills (World Bank, 2019). In general, creativity and IT skills tend to have a higher relative importance within UMICs, whereas practical knowledge is particularly crucial in LMICs (based on firm surveys in Indonesia, the Philippines, and Vietnam). Despite these overarching trends, the relative importance of generic skills varies by sector, trade orientation, and foreign ownership. For

instance, behavioral skills appear to be more important in the services sector rather than the manufacturing sector, which values problem-solving skills more.

Employers in Vietnam report difficulty in finding skilled labor, sometimes at rates higher than in the region. Based on the World Bank's Enterprise Survey on Innovation and Skills in Vietnam conducted in 2019, 22 percent of managers reported that the biggest obstacle faced by the firm was an adequately educated workforce (World Bank, 2021b). This rate is nearly double the rate from a similar survey conducted in 2015[38]. Nearly half of employers surveyed in the Skills Toward Employment and Productivity (STEP) surveys in Vietnam indicated that graduates did not have the skills needed in their workplace (Bodewig et al., 2014). Labor force surveys suggest that firms often prefer workers with technical and vocational education and training skills, which may undermine student interest in university education. Occupational mismatch can stem from both supply and demand factors. About 11 percent of young workers in 2016 were overqualified, but an even larger share, 33 percent, was under qualified (Nguyen and Kenichi, 2018). While a wage premium for tertiary-educated workers may reflect their higher productivity, because employers are most concerned about skills gaps in those occupations that university workers hold (technical, professional, and managerial professions), higher returns most likely reflect a shortage of those with (even limited) university education (Cunningham and Pimhidzai, 2018). Recent analysis also shows returns to non-routine analytical tasks are increasing over time in Mongolia, the Philippines, and Vietnam (Macdonald, 2018).

Figure 5.14. Share of workers by skill category and education in 2010-2020
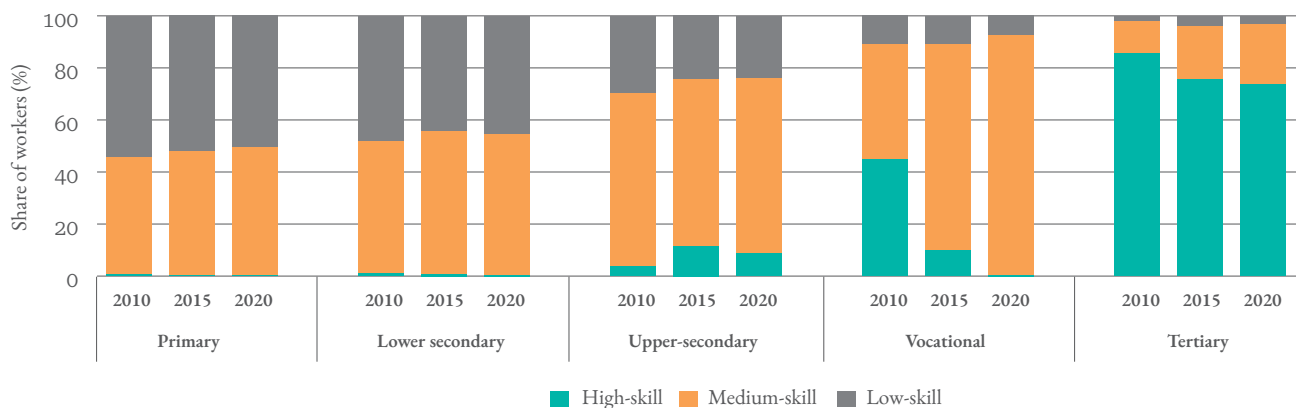
Source: World Bank calculations using LFS.

Increasing the demand for high-skilled jobs will require a more competitive and innovative private sector

Many firms in Vietnam today are small and uncompetitive. Compared to other countries in the region, firms in Vietnam are slower to shift to complex production, are less innovative, and have a lower number of patents (World Bank, 2021b). Private domestic firms are less productive than foreign-owned firms. The labor productivity of foreign-owned enterprises is almost five times higher than that of private domestic firms (World Bank, 2020a). Foreign-owned firms dominate the export sector, with private domestic firms unable to compete. Only 17 percent of domestic firms are in the export sector (Eckhardt et al., 2016). This presents a lost opportunity for domestic firms to gain from technology transfer and better linkages through exposure to foreign buyers.

Domestic private firms are mostly small and less productive as they lack the scale to access technology and invest in fixed capital. The non-farm business sector mostly consists of households and small enterprises (World Bank, 2020a). In 2017, there were over 5.7 million non-farm businesses in the country. Nearly 98 percent of these firms operate in the informal sector (World Bank, 2017). The median firm, including household businesses, has three workers and most likely operates in traditional sectors such as construction, repairs, and food preparation. Small firms in Vietnam underinvest in physical capital and are slow to adopt technology. The quality of investment is also low, reflecting inefficiencies in capital allocation. As a result, the median domestic firm is lagging in productivity compared to countries with similar income per capita. These firms face difficulties in expanding due to lack of scale, access to technology, and competitive pressure to boost productivity (Eckhardt et al., 2016). Barriers to increasing productivity for small firms also include low innovation capacity. Investment in research and development (R&D) in Vietnam amounts to 0.4 percent of GDP, compared with 2.1 percent in China and 1.3 percent in Malaysia.

5.3. Is the youth labor force transforming?

Rapid technological change has tightened the link between human capital and economic output. Previous sections illustrated the need for higher labor productivity, but also some challenges to increasing productivity to reach upper-middle and high-income targets and preserve patterns of upward economic mobility. Today's youth in Vietnam are better educated, but will they lead a high-skill and high-productivity labor transition? To further examine the potential direction of labor market transitions in the near future, the next section describes the characteristics, outcomes, and circumstances of the youth today. A few stylized statistics raise doubts that a high-skill transition will occur without policy interventions related to improving education and skills

Younger cohorts are primarily engaged in medium-skill occupations.

Is the more educated youth cohort working in better jobs? Vietnam's population is getting more educated. As discussed in Chapter 1, the transformation of households with increasing education levels was one of the most dramatic changes in profiles over the last decade. The largest improvements in education are among the younger cohorts. In 2010, 8.4 percent of 30–39 year-olds had completed tertiary education, compared to 17.5 percent in 2020. Among 20–29 year-olds in 2010 and 2020, a large improvement in tertiary education completion was also observed. However, a comparison across cohorts shows that higher educated individuals in their 20s in 2010 were more concentrated in professional jobs than 20 year-olds in 2020 (Figure 5.15). Participation in high-skilled occupations among tertiary-educated workers is not increasing as rapidly among the younger cohort. Among the population that has completed tertiary education, the share engaged in low-skilled and non-manual work is increasing. This is mainly driven by younger cohorts working in more medium-skill occupations despite achieving higher education completion. The comparison illustrates that recent cohorts appear more engaged in medium-skill occupations and less so in high-skill occupations, despite being more educated.

Figure 5.15. Distribution of occupations among tertiary education workers, by skill and age groups
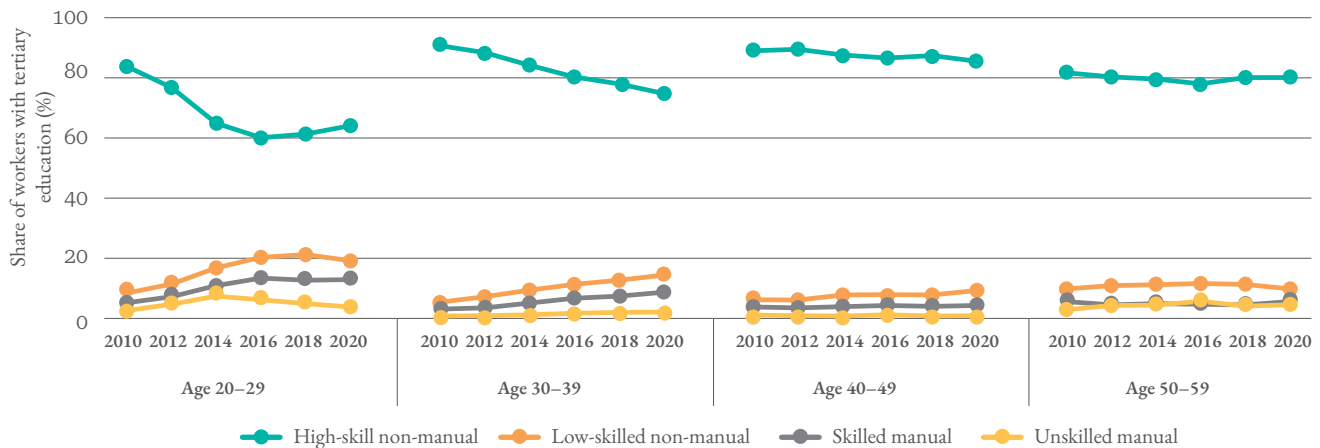
Note: See Table A.6.1.1. in Annex for occupation skill categorization. Share of active workforce with completed tertiary education.
Source: World Bank calcualtions using LFS.

Occupation choice has shifted across cohorts. For example, older cohorts are still primarily engaged in elementary occupations in agriculture reflective of much lower education levels (Figure 5.16). The cohort born in the 1980s and 1990s are most likely to be working as plant and machine operators and assemblers, consistent with anecdotal evidence of a preference for younger factory workers. The 1990s cohort was still in school at the start of the decade in 2010, and as they entered the workforce, they entered jobs in the largest numbers in manual and routine jobs. Due to a lack of detail in household and labor force surveys, there is ambiguity in the types of activities being conducted across occupations and the level of within-occupation heterogeneity. These details are important for better understanding the future of skills in Vietnam.

Figure 5.16. Number of workers, by occupation and birth cohort
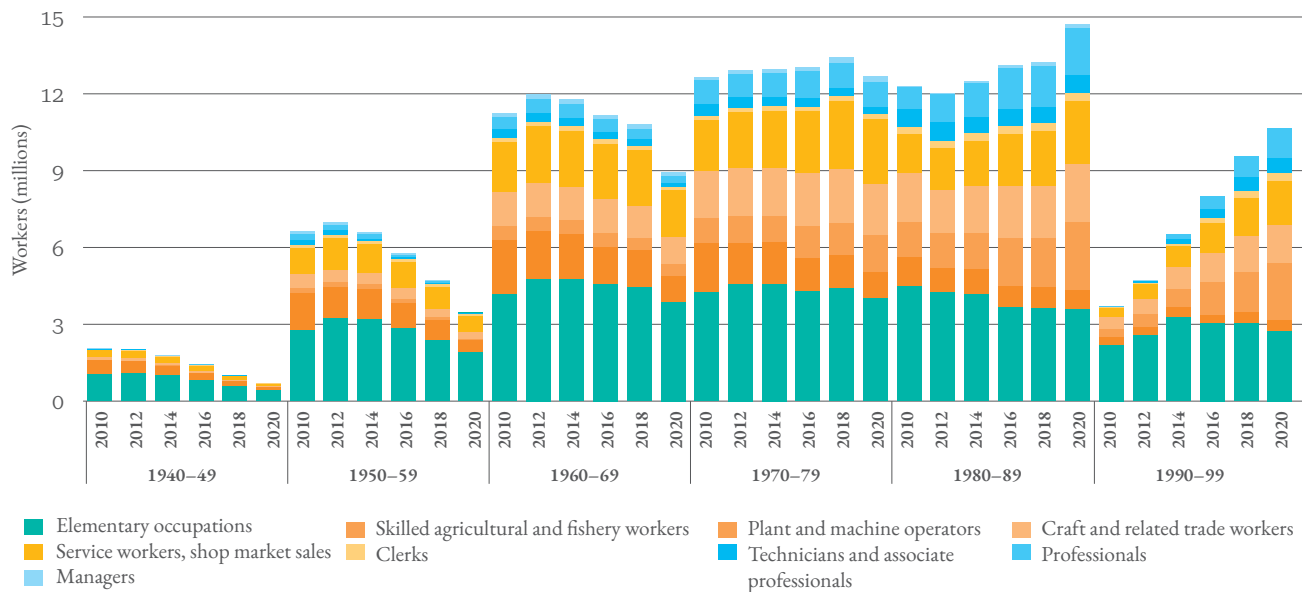
Source: World Bank staff calculations using LFS.

Compared to youths in other countries, Vietnamese youth are more engaged in routine and manual jobs.

Occupation skill intensity illustrates higher manual and routine work among Vietnamese youth compared to other youths in the region. O-Net skills scores can be used to measure the skill intensity of occupations, by whether jobs employ manual, analytical, cognitive, or interpersonal skills, and whether tasks are routine or non-routine (Autor and Handel, 2013). Based on these categorizations, a profile of job sophistication can be illustrated. In Vietnam, younger cohorts (born after 1977) work in jobs with higher skill intensities in routine manual, and non-routine manual physical tasks than youths in other countries (Figure 5.17).

These skill intensity trends are consistent with the higher concentration of younger cohorts in the manufacturing sectors and slower movement into high-skilled services. According to the sector of occupation, younger cohorts in Vietnam aged 15–24 are more engaged in manufacturing than younger cohorts elsewhere (Figure 5.18). Vietnamese youth are more engaged in services than youths in Cambodia or Myanmar, but less so than younger cohorts in Indonesia, Philippines, or Thailand. While Vietnamese youth are moving up the skill ladder in the sense of engaging less in manual and routine jobs, their engagement in jobs requiring

analytical and interpersonal skills is lower than in neighboring countries. The current profile of occupations may become barriers to development of a high-skill services sector.

Underutilized human capital?

The Utilization-adjusted Human Capital Index (U-HCI) also notes a disconnect between human capital potential and its utilization in the labor market. Vietnam's Human Capital Index (HCI) as described in Chapter 4 indicates a high level of human capital potential in Vietnam compared to its LMIC peers or the East Asia and Pacific regional average (Figure 5.19). The index is a measure of potential, but utilization of that potential in the labor market is not guaranteed. The interpretation of Vietnam's HCI is that a child born today will be 69 percent as productive when she grows up as she would be if attaining complete education and health. The utilization-adjusted HCI considers the share of employment in the population and the quality of jobs available to highlight the degree of labor-market underutilization of human capital in each country, and suggests that realized productivity in the labor market is much lower (Pennings, 2020).

Considering the utilization of human capital in higher-quality jobs, the U-HCI reflects the limits of Vietnamese youth in utilizing their human capital potential in the workforce. Vietnam's full U-HCI stands at 0.37, a reduction

Figure 5.17. Occupation skill intensities, by age cohort
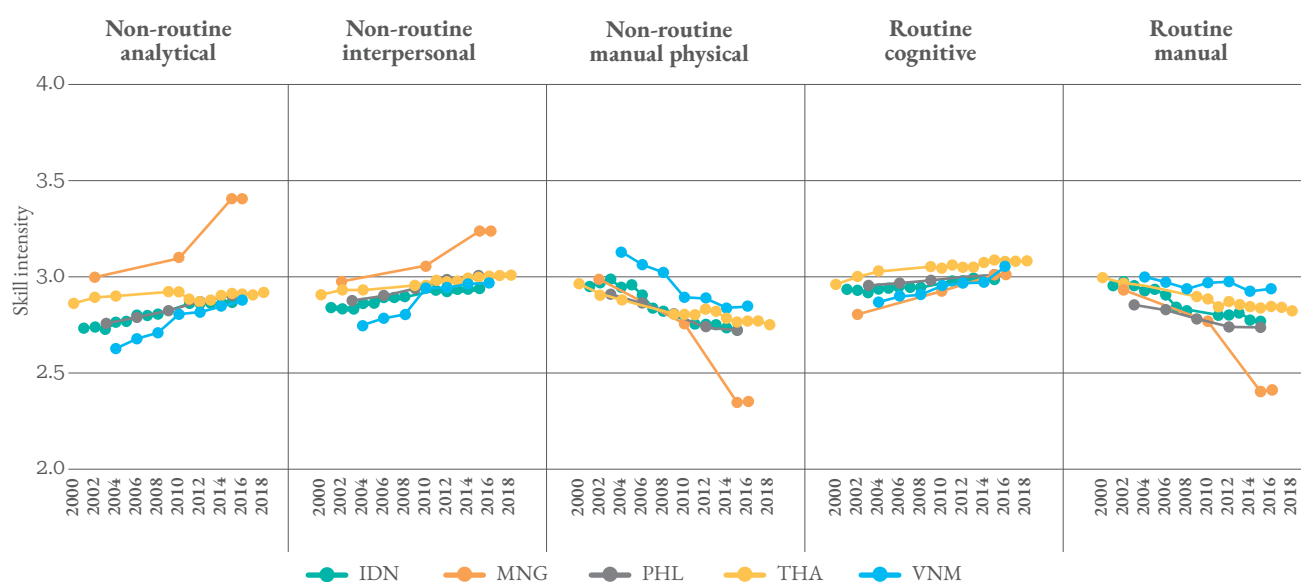
Notes: Based on O-NET occupation skill scores. Cohort born after 1977.
Source: World Bank calculations.

Figure 5.18. Concentration of manufacturing jobs compared to other countries in the region (15–24-year-old cohort)
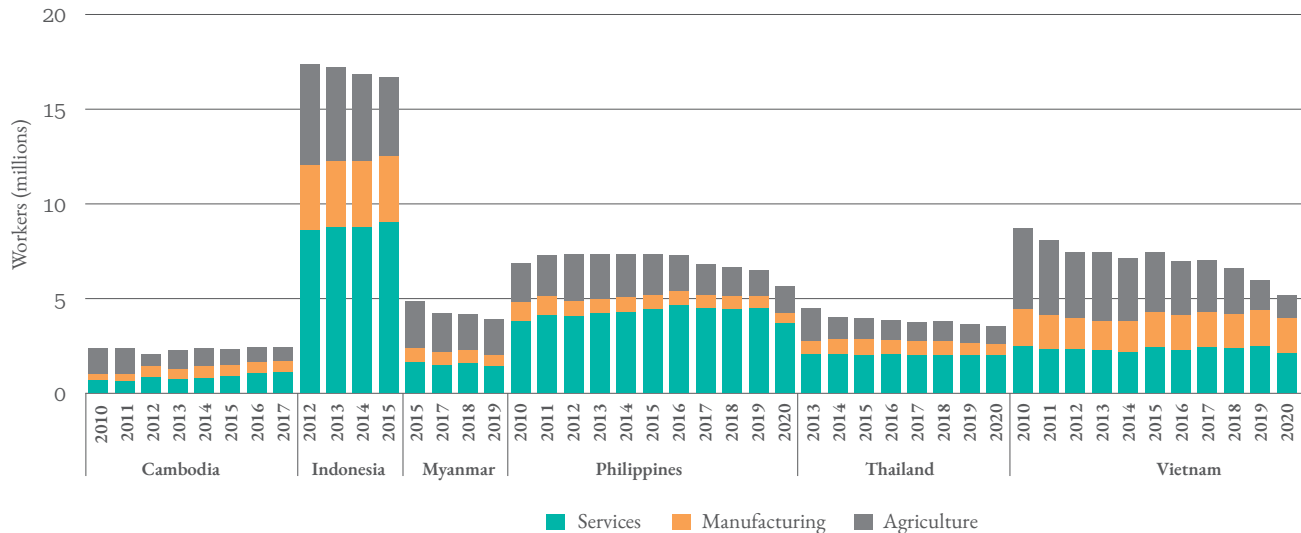
Source: ILO.

of nearly 50 percent from the unadjusted HCI. In its income group, Vietnam has the largest absolute decline due to the full utilization adjustment and is about average in its income group when the decline is measured in percent terms (Figure 5.20). After this correction, Vietnam's full U-HCI is slightly lower than the EAP regional average, although still higher than the LMIC average.

Underutilization of human capital reflects a situation whereby a person's skills and knowledge are not used to the fullest to increase productivity. While the HCI captures the future supply of a factor of production, the U-HCI reflects both the factor supply (capturing investments in capital), and a productivity index of how efficiently human capital is used in production (Pennings, 2020). The absence of jobs from the demand side that match the supply of skills can drive labor underutilization and reduce realized growth and upward economic mobility. Two U-HCI measures are estimated. The first incorporates the basic utilization rate, which is the employment-to-working-age population ratio. The second measure, the full U-HCI, recognizes that not all jobs are equal in terms of their ability to utilize human capital. Employment in developing countries may be high, but it can often be in low productivity agriculture, informal or low-skilled manufacturing. As such, the full U-HCI incorporates a measure of better employment, in this context non-agricultural employees and employers.

Figure 5.19. Comparison of HCI and full utilization-adjusted HCI, 2020
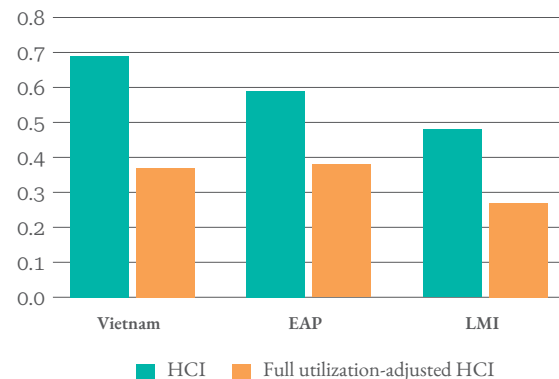
Source: World Bank HCI and Pennings, 2020.

Papers examining the returns in education up to the first half the decade noted a decline in returns to education in midway through the recent decade. Expand (Demombynes et al, 2018; Doan et al 2018; McGuinness et al 2021). Findings on reasons for the decline were associated with an increase in the supply of higher educated students, lower demand for educated workers, slower rates of improvements in the quality of tertiary education relative to expansion of enrollment, and an increase in job mismatch. Using data up to 2020, returns are seen to decline further and most notable for tertiary and high-skilled non-manual jobs (Figure 5.21).

Figure 5.20. Decline in HCI due to full utilization adjustment
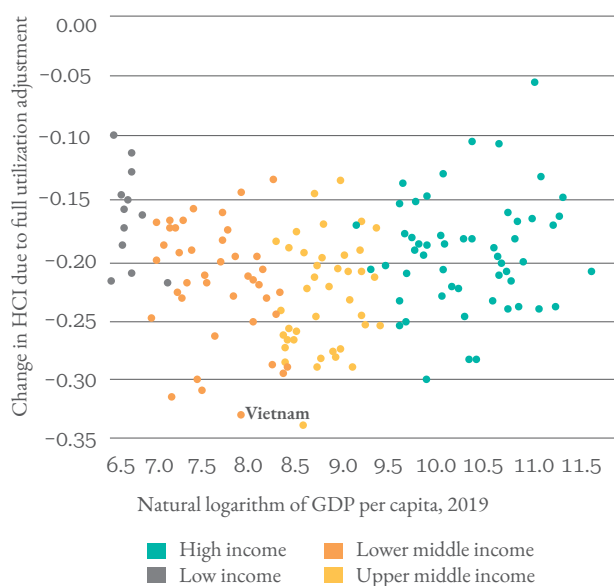
Source: World Bank staff illustration based on Pennings 2020.

5.4. Conclusion

Strategies that achieved upward economic mobility over the past decade may not be effective to continue upward economic mobility into the future. The reduction of poverty over the last decade was due in large part to structural shifts out of agriculture and into low- and medium-skilled manufacturing and services occupations. These off-farm opportunities raised household incomes higher than what could be obtained through faming alone and provided a generation of new workers with better jobs than their parents. Even in the absence of the goal to reach high-income targets by 2045, labor productivity must increase and be driven by increases in within-sector productivity to sustain current economic growth levels. However, gains from further exits from agriculture are limited given how much the sector has already shrunk as well as population aging. Growth of high-skill jobs has been slower the growth in medium-skill jobs, and the current youth labor force in their 20s is also more engaged in manual and routine jobs than youths in other neighboring countries. Thus, there is still work to be done to upskill, retrain, and educate new and old workers to realize a high-productivity and high-skill labor transition.

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Figure 5.21. Returns to education and skills over time
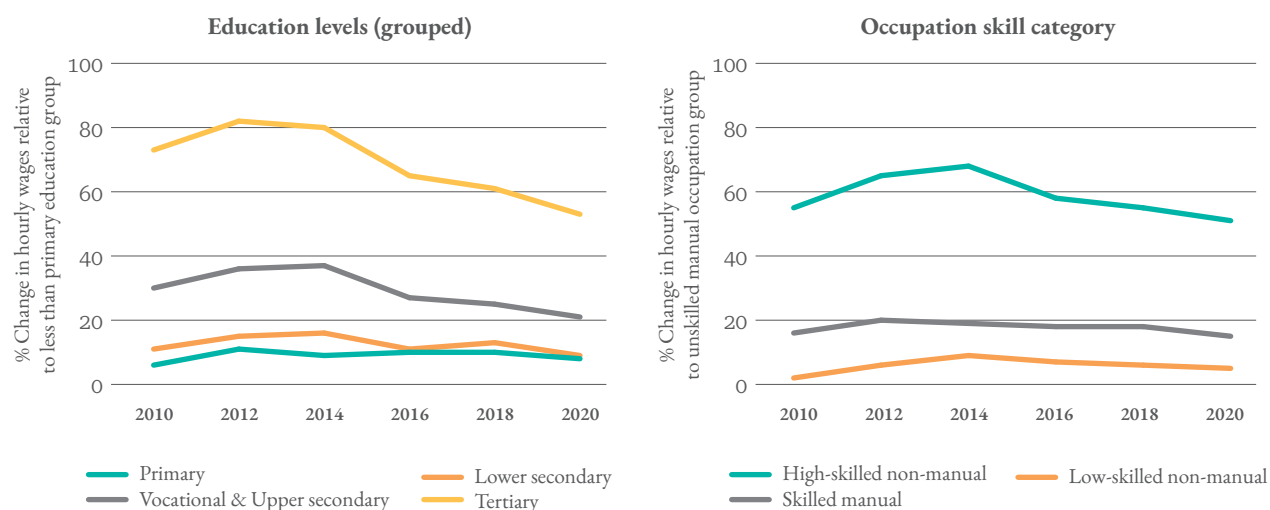
Note: The reported coefficients are calculated from (hourly) log wage regressions restricted to all wage workers controlling for age, sector, urban/rual, region, and gender. Ethnicity is not available in more recent LFS data sets and thus are not included.
Source: World Bank calculation using LFS.

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5.6. Notes

[37] Assumes all growth components the same as actuals for 2012-2018 except for demographics (working age population) which are equal to the 2002-2012 value.

[38] Based on the East Asia and Pacific regional roll-out of the World Bank's Enterprise Surveys in 2015, 10.7 percent of formal firms in Vietnam said that an inadequately educated workforce was their biggest obstacle, higher than the 6.9 percent average in the East Asia Pacific region.

ANNEX 5.1.

Chapter 5 tables

Table A.5.1.1. Skill categorization of occupations and expected education level of workers

OCCUPATION GROUP	SKILL CATEGORIZATION	EXPECTED EDUCATION COMPLETION
1: Legislators, senior officials, managers	High-skilled non-manual	Tertiary (ISCED 5–6)
2: Professionals		
3: Technicians and associate professionals		
4: Clerical support workers, low-skilled non-manual	Low-skilled non-manual	
5: Service and sales workers		
6: Skilled agricultural and fishery workers, secondary (ISCED 3–4)	Skilled manual	Secondary (ISCED 3–4)
7: Craft and related trades workers, skilled manual		
8: Plant and machine operators and assemblers		
9: Elementary occupations, unskilled Primary (ISCED 1–2)	Unskilled	Primary (ISCED 1–2)

ANNEX   **5.2.**

Growth decomposition methodology

This methodology is a summary from the World Bank's Job Structure Tool. See Muller (2008), Gutierrez, et al. (2007), and World Bank (2009) for more detail.

Economic growth per capita—or change in value added per capita—can be decomposed into four components: (i) productivity growth, (ii) employment growth, (iii) labor force participation growth, and (iv) changes in working age population. Growth in aggregate per capita value added can be described by growth in its components using the following identity:

$$\frac{Y}{N} = \frac{Y}{E} \times \frac{E}{L} \times \frac{L}{A} \times \frac{A}{N}$$

where: Y = Total value added
        N = Population
        E = Employment
        L = Labor force
        A = Working age population (15-64 years old)

or:

$$y = w \times e \times p \times a$$

where: y = Value added per capita
        w = Value added per worker
        e = Employment rate
        p = Participation rate
        a = Working age population / total population

Growth in value added per capita can be decomposed into the contribution of changes in each of its components:

$$\Delta y = \Delta y^w + \Delta y^e + \Delta y^p + \Delta y^a$$

where $\Delta y^w, \Delta y^e, \Delta y^p, \Delta y^a$ each represent a marginal contribution of w, e, p, and a, respectively, to Δy while holding other variables constant.

Using the Shapley method, the marginal contribution of productivity per worker (w) to the change in per capita value added (y) from t_0 to t_1, denoted as $\Delta y^w \, t_0, t_1$, is calculated as:

$$
\begin{aligned}
\Delta y^w_{t0,t1} = \alpha^w(s,m) & \\
+ [(w_{t1}e_{t0}p_{t0}a_{t0}) \quad & - (w_{t0}e_{t0}p_{t0}a_{t0}) \quad - (w_{t1}e_{t1}p_{t1}a_{t1}) \quad - (w_{t0}e_{t1}p_{t1}a_{t1}) \\
+ (w_{t1}e_{t1}p_{t0}a_{t0}) \quad & - (w_{t0}e_{t1}p_{t0}a_{t0}) \quad - (w_{t1}e_{t0}p_{t1}a_{t0}) \quad - (w_{t0}e_{t0}p_{t1}a_{t0}) \\
+ (w_{t1}e_{t0}p_{t1}a_{t0}) \quad & - (w_{t0}e_{t0}p_{t0}a_{t1}) \quad - (w_{t1}e_{t1}p_{t1}a_{t0}) \quad - (w_{t0}e_{t1}p_{t1}a_{t0}) \\
+ (w_{t1}e_{t1}p_{t0}a_{t1}) \quad & - (w_{t0}e_{t1}p_{t0}a_{t1}) \quad - (w_{t1}e_{t1}p_{t1}a_{t1}) \quad - (w_{t0}e_{t0}p_{t1}a_{t1})]
\end{aligned}
$$

which simplifies to:

$$\Delta y_{t0,t1}^{w} = \alpha^{w}(s,m)$$
$$+ [\Delta w(e_{t0}p_{t0}a_{t0}) \quad\quad + \Delta w(e_{t1}p_{t1}a_{t1}) \quad + \Delta w(e_{t1}p_{t0}a_{t0}) \quad + \Delta w(e_{t0}p_{t1}a_{t0})$$
$$+ \Delta w(e_{t0}p_{t0}a_{t1}) \quad\quad + \Delta w(e_{t1}p_{t1}a_{t0}) \quad + \Delta w(e_{t1}p_{t0}a_{t1}) \quad + \Delta w(e_{t0}p_{t1}a_{t1})]$$

The first term on the right-hand side, $\Delta w(s,m)$, is a parameter vector which determines the weights of each term in the square brackets. Under the Shapley approach, the parameter values are given by the formula:

$$\alpha^{w}(s,m) = \frac{s!\,(m-s-1)!}{m!}$$

where: s = number of variables other than w taken at t = t1
         m = Total number of variables.

In this case, m=4 (w, e, p, and a), and for the first two terms in the bracket when s is equal to 0 or 3, the coefficient value is 1/4. Equivalently, when s is 1 or 2, the coefficient value is 1/12.

$$\alpha^{w}(s,m) = \frac{s!\,(m-s-1)!}{m!}$$

or:

$$\frac{0!\,(4-0-1)!}{4!} = \frac{6}{24} = \frac{1}{4}$$

Thus, the Shapley value of the contribution of w to the change in y is given by:

$$\Delta y_{t0,t1}^{w} =$$
$$+ \tfrac{1}{4}[\Delta w(e_{t0}p_{t0}a_{t0}) + \Delta w(e_{t1}p_{t1}a_{t1})]$$
$$+ \tfrac{1}{2}[\Delta w(e_{t1}p_{t0}a_{t0}) + \Delta w(e_{t0}p_{t1}a_{t0}) + \Delta w(e_{t0}p_{t0}a_{t1}) + \Delta w(e_{t1}p_{t1}a_{t0}) + \Delta w(e_{t1}p_{t0}a_{t1}) + \Delta w(e_{t0}p_{t1}a_{t1})]$$

And analogously, the Shapley values of the contributions of e, p, and a to changes in y is given by:

$$\Delta y_{t0,t1}^{e} =$$
$$+ \tfrac{1}{4}[\Delta e(w_{t0}p_{t0}a_{t0}) + \Delta e(w_{t1}p_{t1}a_{t1})]$$
$$+ \tfrac{1}{2}[\Delta e(w_{t1}p_{t0}a_{t0}) + \Delta e(w_{t0}p_{t1}a_{t0}) + \Delta e(w_{t0}p_{t0}a_{t1}) + \Delta e(w_{t1}p_{t1}a_{t0}) + \Delta e(w_{t1}p_{t0}a_{t1}) + \Delta e(w_{t0}p_{t1}a_{t1})]$$
$$\Delta y_{t0,t1}^{p} =$$
$$+ \tfrac{1}{4}[\Delta p(w_{t0}e_{t0}a_{t0}) + \Delta p(w_{t1}e_{t1}a_{t1})]$$
$$+ \tfrac{1}{2}[\Delta p(w_{t1}e_{t0}a_{t0}) + \Delta p(w_{t0}e_{t1}a_{t0}) + \Delta p(w_{t0}e_{t0}a_{t1}) + \Delta p(w_{t1}e_{t1}a_{t0}) + \Delta p(w_{t1}e_{t0}a_{t1}) + \Delta p(w_{t0}e_{t1}a_{t1})]$$
$$\Delta y_{t0,t1}^{a} =$$
$$+ \tfrac{1}{4}[\Delta a(w_{t0}e_{t0}p_{t0}) + \Delta a(w_{t1}e_{t1}p_{t1})]$$
$$+ \tfrac{1}{2}[\Delta a(w_{t1}e_{t0}p_{t0}) + \Delta a(w_{t0}e_{t1}p_{t0}) + \Delta a(w_{t0}e_{t0}p_{t1}) + \Delta a(w_{t1}e_{t1}p_{t0}) + \Delta a(w_{t1}e_{t0}p_{t1}) + \Delta a(w_{t0}e_{t1}p_{t1})]$$

Chapter 6.
Building resilience and safety nets to guard against shocks

Key Messages

- Households are exposed to a range of shocks that can be costly, for the poor can become poverty traps.

- Households experience idiosyncratic and covariate shocks that require different systems and policies.

- Protection policies are needed to complementation promotive growth strategies to preserve economic and poverty reduction successes.

6.1. Introduction - Shocks, Coping, and the Need to Build Resilience

Guarding against risks is essential to preserve gains and prevent households from falling back into poverty in the event of shocks or disasters that can lead to poverty traps. COVID-19 has revealed a wider population of economically insecure groups that risk falling into poverty traps in the absence of adequate safety nets. These 'moving targets' can sometimes face greater risks because they are out of the line of sight of government by not being registered in the social protection system and the lack of integrated national databases. The current social protection system covers the chronic poor and other selected groups in Vietnam, but gaps remain. An integrated, adaptive, and modern social protection system is needed to better guard households against shocks. This chapter discusses the link between risks and falling into poverty, the types of shocks that households experience as well as their coping mechanisms, and finally how the social protection system can be improved to provide broader safety nets.

Shocks and risks are related to falling into poverty

Poorer households are more likely to report that their living conditions are the same or worse than five years ago. Related to the concepts of churning and economic mobility described in Chapter 1, about 6 percent of households in 2010 and 2020 reported that their living conditions were worse than five years ago (Figure 6.1). Incidents of sliding backward are thus not entirely rare, which emphasizes the importance of building resilience and providing safety nets to support longer-term upward economic mobility. This may also explain why despite great economic progress, poverty and hunger remain a top citizen concern for the last five years in UNDP PAPI surveys. Among respondents (25 percent in 2018) who picked poverty to be the top concern, about half stated that the reason was because they were personally concerned about themselves or members of their family falling into poverty.

Households reporting stagnant or worsening living conditions cite reasons related to chronic challenges as well as shocks. Among households who reported having the same or worse conditions (15 percent), nearly half provided reasons related to shocks due to droughts, animal disease, pests, illness in the household, or accidents (but not including job loss) (Figure 6.2). These reasons hold broadly consistent patterns over the decade. Root causes of other reasons, such as low income, for example, could also be related to illness in the household or shocks to crops. Moreover, for households whose conditions worsened rather than stayed the same, they were significantly more likely to report illness or death in the household as a cause. Thus, providing adequate safety nets and disaster response can play a large role in preventing households from falling backwards.

Figure 6.1. Percent of households reporting worsening living conditions compared to five years ago
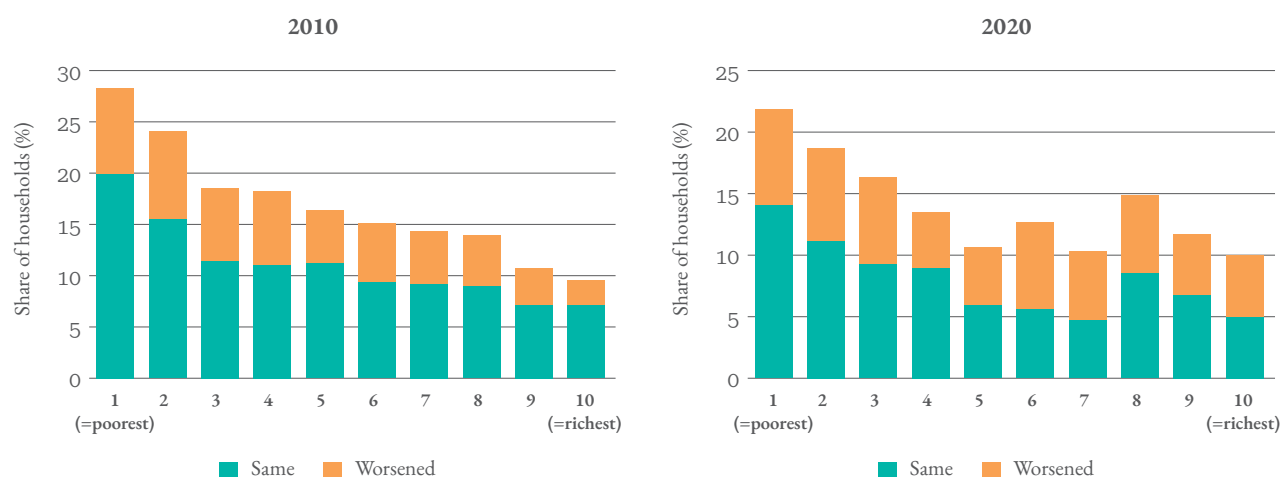
Source: World Bank staff calculations using VHLSS.

Figure 6.2. Top three reasons why conditions are same or worse than five years ago
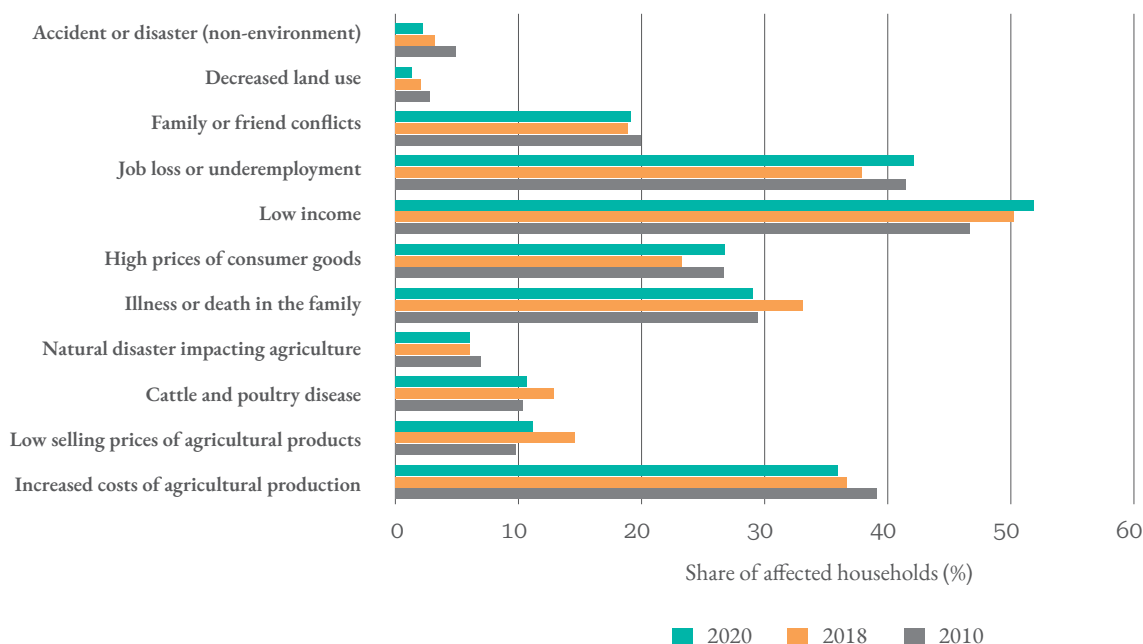
Note: Not all households selected 3 reasons. Agriculture includes forestry and aquaculture.
Source: World Bank staff calculations using VHLSS.

There are some differences between poor and rich households with respect to the reasons provided that their livelihoods did not improve. Poor households are more likely to cite reasons related to agricultural production, while richer households are more likely to cite reasons related to rising prices. The regional variation also reflects similar differences in responses. For example, households in the richer regions of the Southeast and Red River Delta are more likely to cite increasing prices, while households in the Central Highland more likely cite low agricultural prices and cattle disease. The range of responses lends some caution to the interpretation. Richer households may report worse conditions while still having adequate material comforts but may be unsatisfied with their speed of upward economic mobility. Also, rich and poor households report "low income" at similar rates, which adds a subjective element to the interpretation of low incomes.

6.2. Households and shocks

This section illustrates different types of shocks that can affect households along the entire welfare distribution. From the examples provided, even if the poor are not more exposed to risks, with less savings and buffers, shocks can become poverty traps and thus more consequential to household welfare and economic mobility.

Examples of two different types of shocks are given: (i) idiosyncratic shocks, or those which only affect specific individuals or households; and (ii) covariate shocks, or those which affect entire communities, regions, or countries. Idiosyncratic shocks include illness or accident, which usually affect a single individual or household. Covariate shocks, such as a natural disaster or an economic shock (as resulting from the COVID-19 lockdowns or the Global and Asian Financial Crises), affect many more people. The distinction can be important because a household's risk profile varies by the type of shock: susceptibility to illness may depend upon underlying health, access to preventative care, living and working conditions; susceptibility to natural disaster may depend on household location; susceptibility to economic shocks may depend upon the sector a worker is

in. It is not a mutually exclusive distinction; two households living in a typhoon-prone area will have a different level of risk exposure if one has a sturdy or unsound house. The same category of shock can be either idiosyncratic or covariate; unemployment may come because a single firm conducts a small number of redundancies or because an entire sector or country sees widespread job losses due to an economic shock, such as tourism during COVID. Nonetheless, the distinction is also important because it has different policy implications. Idiosyncratic shocks are generally best dealt with by having effective social insurance coverage (unemployment insurance, health insurance, old age pensions) while covariate shocks often require a more coordinated government response, such as preemptive disaster risk management and ex-post disaster response, or large social programs such as wage subsidies or direct income support as many countries deployed during COVID.

Health shocks

Households in Vietnam are exposed to idiosyncratic health shocks which can have a significant economic impact through changes to household income, medical care spending, and household consumption. Sudden health declines can lead to a persistent reduction in earnings and other labor market outcomes. The impact on household income depends on who in the household falls ill, whether the household has multiple income earners, social protection coverage, and the level of financial support available from other family and friends (Wagstaff, 2005). Large out-of-pocket health expenditures following a health shock can result in a financial catastrophe for households. The extent of medical expenditures following health shocks is partly determined by enrollment in health insurance and its coverage levels. Changes to household consumption are determined by the options available for consumption smoothing. In the absence of adequate coping mechanisms, food consumption levels may fall to below the recommended daily caloric intake for poor households.

Out-of-pocket health expenditure in Vietnam has continued to climb in the last decade and exacerbate health shocks even for those with health insurance. The share of out-of-pocket health spending is indicative of the level of financial protection against health shocks. Vietnam's

share of out-of-pocket health expenditure stood at 45 percent in 2018 (Figure 6.3). While this is slightly lower than the LMIC average (51 percent), it is considerably higher than the equivalent UMIC and EAP out-of-pocket shares, at 33 and 26 percent, respectively. The high out-of-pocket expenditure share in Vietnam amplifies the risk of impoverishment from health shocks.

Examining another indicator on the cost burden of health shocks—catastrophic health expenditure—demonstrates the significant risk that health shocks pose to households in Vietnam. Catastrophic health expenditure occurs when co-payments for healthcare result in a financial catastrophe (WHO, 2005). In 2016, 9.4 percent of the population in Vietnam incurred catastrophic health expenditure, measured as out-of-pocket spending exceeding 10 percent of household income (Figure 6.4). The reduction in catastrophic health expenditure has been slow over the decade, with signs of a potential reversal to this progress in 2016. Rural areas have a higher share of households incurring catastrophic health expenditure, but the urban-rural gap has been closing in recent years.

Around a fifth of the population in Vietnam is at risk of incurring catastrophic and impoverishing expenditure for surgical care. Surgical care is a common type of medical care required in the face of particular health shocks. Data from Harvard Medical School illustrate that the risk of incurring costs of surgical care exceeding 10 percent of income (catastrophic expenditure) has declined by nearly 50 percent in the last decade but remains relatively high. In 2020, the share of population at risk for this type of expenditure was 22 percent, compared to just 10 and 9 percent, respectively, in UMIC and EAP countries. Similarly, the share of population at risk of impoverishing expenditures, defined as out-of-pocket payments for surgical care that drive people below the extreme poverty threshold of $1.90 PPP per day, was 19 percent in 2020 in Vietnam, compared to 7 percent in UMIC and EAP countries. It is worth noting, however, that in 2015, Vietnam's share of population at risk of impoverishing expenditure for surgical care fell below the LMIC average and has remained below it ever since. Progress has been made in improving the financial protection of households from health shocks, but further gains are needed to achieve greater economic development.

Figure 6.3. Out-of-pocket health expenditure remains high
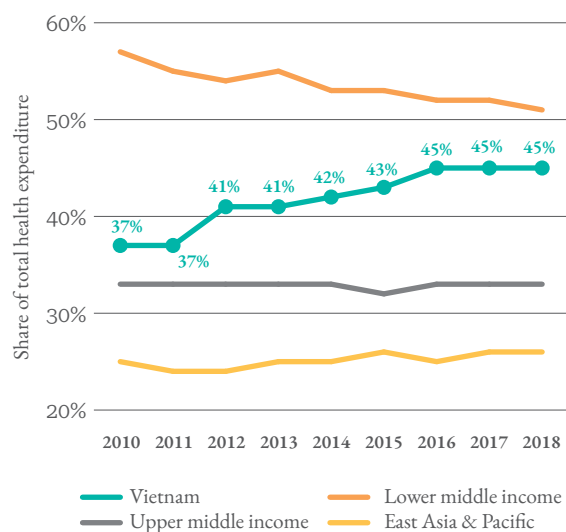
Source: World Development Indicators.

Figure 6.4. Catastrophic health expenditure has been declining slightly (% of households)
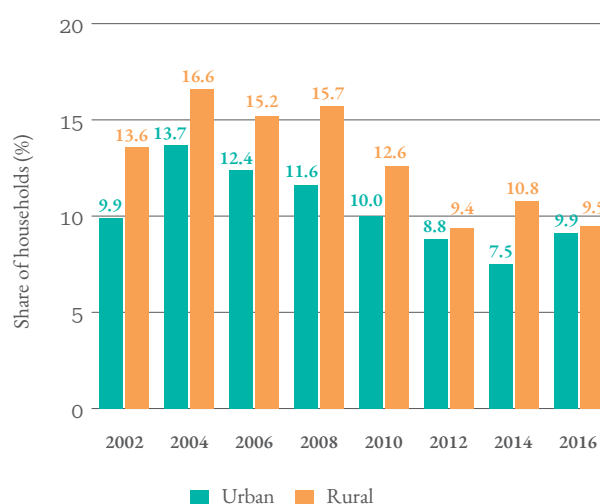
Source: World Development Indicators.

An aging population will increasingly be exposed to multiple shocks.

Aging can drive two potential shocks for individuals and households. The first is increased risk of illness. As Vietnamese live longer and grow older, they are increasingly exposed to health risks. For example, someone in Vietnam who is 60 years old can be expected to live another 23 years, but only 17 of those years will be healthy, with much of the disability due to chronic non-communicable diseases (NCDs) and disabilities associated with aging (World Bank 2021b).

The risk of greater illness is compounded by the high out-of-pocket health costs previously discussed, which increase with age and may lead to foregoing of care even when seriously ill. As aging leads to greater inpatient and outpatient needs, so too do the out-of-pocket costs increase. Out-of-pocket health spending for both types of care rise significantly with age, reaching around VND 2.0-2.5 million per year on average for those aged 60–79, which is around 15–20 percent of the $3.20 poverty line (World Bank, 2021b). Moreover, while they fall for those aged 80 and above, this is likely because this age group has by far the highest rate of foregone care even in the face of serious illness.

The other potential aging shock is growing old without enough income to live on—a real risk currently facing three-quarters of Vietnam's elderly. As people age and can no longer work, they nonetheless require income to live on. A quarter of the current elderly receive a contributory pension, having been either public sector workers or formal workers in the private sector, both of which have made pension contributions over their working lives and are able to retire with a reasonable degree of income support. Most of the other three-quarters of elderly have no income support beyond whatever savings they may have that they may get from family, while a small number receive a social pension from the government (World Bank, 2021a).

Moreover, even for those receiving some form of old-age income support, it is either unsustainable or insufficient (World Bank, 2021a). Contributions to Vietnam's pension scheme (VSS) have been less than required to finance payments to an increasingly aging base, and the scheme will soon run deficits to finance payments. At the same time, the benefits for those being assisted by the government with social pensions are small and provide little support; the average ratio of VSS pensions to social pensions is 18:1. Meanwhile, more than half of all elderly receive neither.

Shocks experienced by households during COVID-19

COVID-19 has likely been the most significant co-variate shock experienced by households since the end of the Vietnam war. Almost 70 percent of households reported experiencing a negative shock[39] between February and June 2020, which covers the duration of the first nationwide lockdowns in April 2020 (World Bank, 2021b). The crisis affected households across the entire welfare distribution through a variety of channels. Wealthier households more likely experienced income losses from family businesses, and poorer households experienced losses from farming activities. Adverse labor impacts occurred broadly across different socioeconomic groups and geographic areas. In March 2021, a little less than one-third of all respondents knew someone who had lost a job or switched jobs since the beginning of the pandemic in February 2020.

Other household demographics correlate to the reporting of experiencing negative shocks. For example, households with children were more likely to report experiencing shocks during periods coinciding with occurrences of school closures, with women more likely to take absences from work to care for children. Moreover, increased care responsibilities were the main driver of the gender difference in lost turnover from family businesses. Lower family business income from female respondents compared to men is driven by fewer hours worked. Agriculture households were less likely to report shocks than nonagricultural households, except during a period that covered a drought that severely affected farming in some regions.

COVID-19 also illustrates potential scarring effects and that shocks can take time to recover from completely. The World Bank's COVID-19 monitoring in the early phases of the pandemic illustrated that right before the emergence of the fourth wave in April 2021,[40] about 30 percent of households in March 2021 still reported lower incomes than the year before (World Bank, 2021b). The challenges brought on by COVID-19 revealed a wider set of vulnerable households, beyond the traditional characterization of the chronic poor as being mainly from certain regions or ethnic minority groups. Certain groups experienced slower income recovery, including households without formal sources of income, women, and households in the bottom 20th percentile who are closer to the poverty line and vulnerable to falling into poverty given weak safety nets. The impact of COVID-19 on households and firms illustrated the existing gaps in access to services and social assistance, and the importance of building resilience and stronger safety nets to guard against poverty traps.

Environmental risk and exposure

Vietnam is one of the most hazard-prone and climate risk-affected countries in the world. From 1990 to 2018, over 26,000 people died directly from epidemics, floods, landslides or storms, with damages estimated at US$14.4 billion. Droughts have caused an additional 7 billion in damages over this period (World Bank and ADB, 2020). Nearly a million people have been affected by natural hazards almost every single year since 1985[41]. In addition, urbanization, industrial production, and a growing consumer class has led to challenges in waste management, water pollution, congestion, air pollution, and marine plastics. This compounds existing climate change and environment issues. These risks directly affect household economic security and livelihoods.

About 10 percent of communes reported experiencing an emergency in 2018, including natural disaster, fires, and epidemics. About 60 percent of these communes received relief or aid, primarily in the form of direct cash relief from the government budget, although information on the severity of the disaster is not known. Based on UNDP PAPI surveys, in 2020 about 14 percent of households experienced a flood over the last five years, 17 percent experienced droughts, and 18 percent were affected by typhoons. Moreover in 2020, the share of farming households reporting disruptions to their operations was high in the Mekong Delta region (World Bank, 2021b).

Climate change is expected to exacerbate existing risks. Under a worst-case climate-change scenario, sea levels are set to rise by 30cm and 70cm by 2050 and 2100, respectively. This would result in the flooding of land currently inhabited by 20 million people, equivalent to a quarter of the population (Rentschler et al., 2020). Climate change can also increase the frequency of droughts, which compounds the severity of saline intrusion, together with rising sea levels. More extreme weather patterns such as severe typhoons and monsoon rains also pose risks of flash-flooding and landslides in highland areas.

The types of environmental risks vary across regions of the country, with most areas ranking high in at least one type of environmental risk (Figure 6.5). Starting in the north of the country, high levels of air pollution are concentrated in the Red River Delta where high urban density, coal-fueled factories, and coal mines all contribute to high levels of air pollution, which is further trapped in place by geographical features. The North Central region is more affected by heavy rains, which are associated with risks of flash floods or landslides. Finally, most of the population in the densely populated central Red River Delta, Southeast region, and the Mekong Delta are exposed to high flood risk.

Figure 6.5. **Environmental conditions and risks by district**
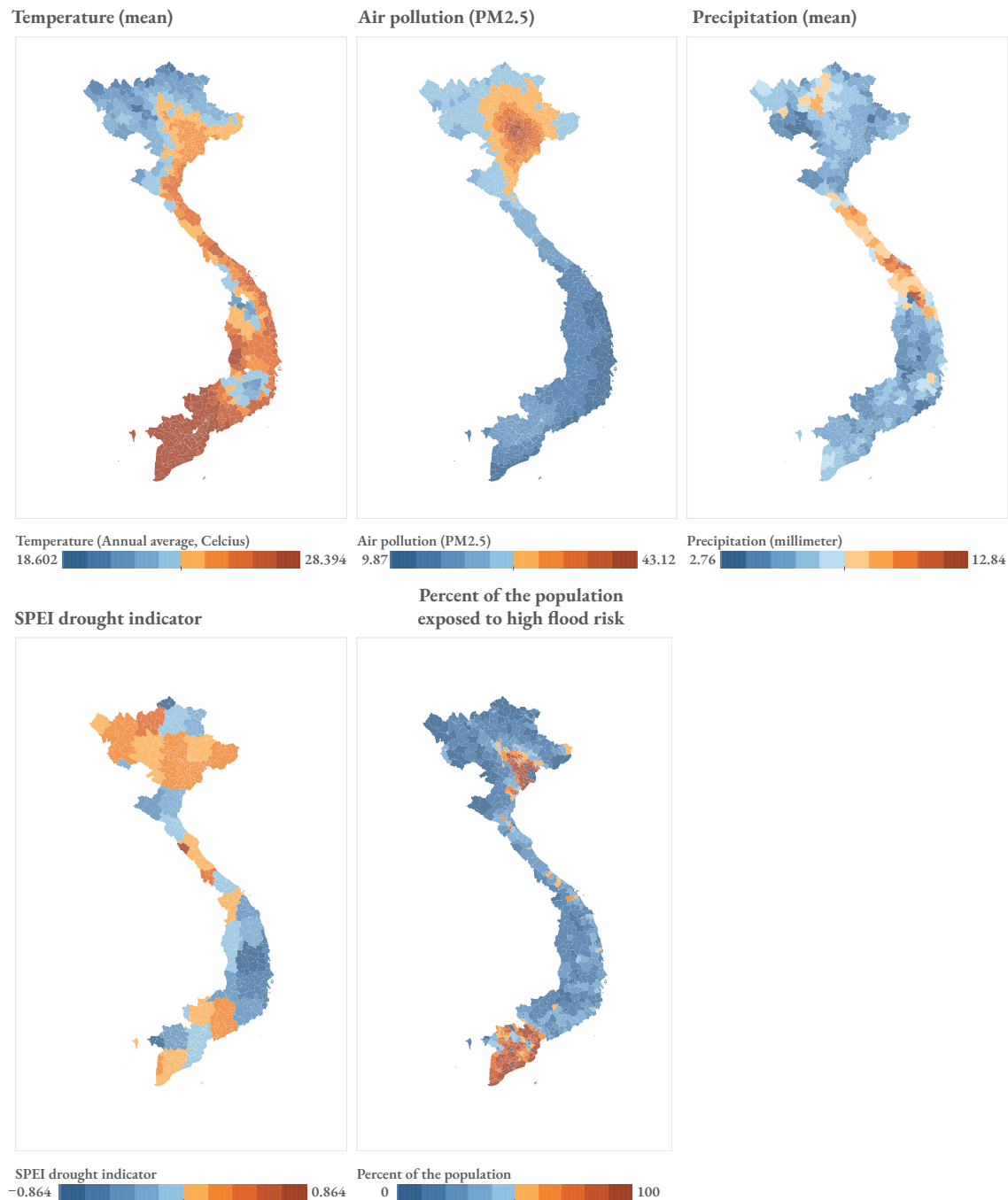
Note: District-level map. SPEI is available at the province level. See Table 6.1 for definitions.

A pressing issue faced by cities is soil subsidence caused by excessive groundwater usage to support growing populations. Parts of Ha Noi have been recorded as subsiding at a rate of 68 mm per year between 2007 and 2011 (Dang et al 2014), while some of Ho Chi Minh City has seen subsidence in excess of 70 mm per year over the same period (Minh et al., 2015).

The Mekong Delta is well known for its share of environmental hazards affecting farming livelihoods. While agricultural wages in the Mekong Delta are relatively high and support low poverty rates, wages in all other sectors are some of the lowest in the country. Climate change has severely impacted livelihoods in the Mekong Delta, leaving many inhabitants with no choice but to migrate. Between 2008 and 2018, net migration out of the Mekong Delta region was around 1 million people (Climate Home, 2018). The 2015–2016 drought led to the destruction of 160,000 hectares of crop. Many households are unable to switch livelihoods to salt water-tolerant commodities. With increasing frequency and/or intensity of climate events, more households are at risk of losing their livelihoods and homes and falling into poverty, with many forced to migrate from the region.

District-level environmental risk does not always correlate with poverty rates[42] (Figure 6.6), although poorer households are less able to cope with shocks when

Table 6.1. Environment indicator, definitions

	UNIT, DESCRIPTION	PERIOD OF DATA
Average topographical incline	Degree	2017
Air pollution	PM2.5 concentration (μg/m3)	Annual daily average over 2018
Average settlement inundation depth in 1-in-100 year flood	Meter	2020 flood model; 2015 Global Human Settlement Layers
Temperature	Celsius	Mean and variance over 2020
Wind speed	Meter per second	Mean and variance over 2020
Precipitation	Millimeter	Mean and variance over 2020
Flood risk exposure	Share of the population exposed to high risk	2020 flood model and 2020 population data
SPEI drought indicator	An SPEI of 0 indicates a value corresponding to 50% of the cumulative probability of D, according to a Log-logistic distribution." (D value is a threshold for drought, defined as precipitation minus evapo-transpiration). In sum, a higher SPEI corresponds to a higher probability of drought.	2016–2021 average

Figure 6.6. Share of districts with a high environmental risk factor, by district-level poverty rates
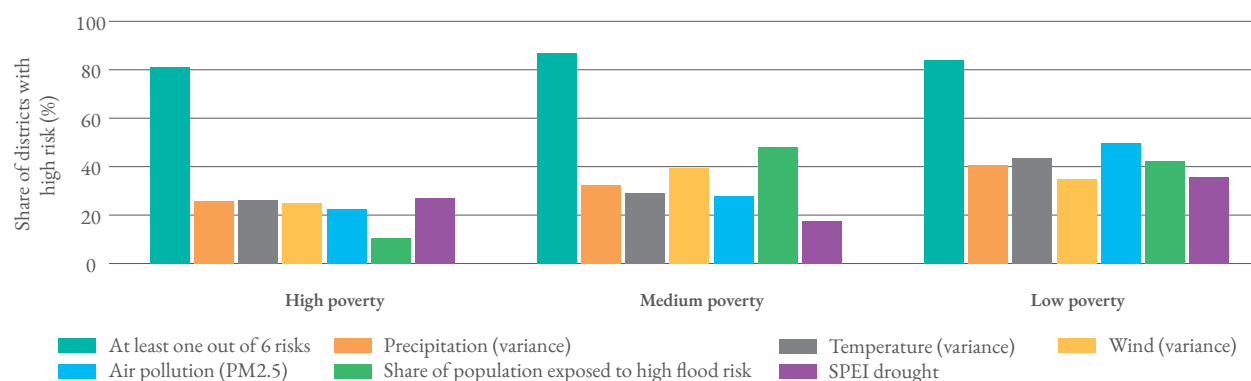
Source: World Bank staff calculations.

they do happen. Environmental risks vary by geography, which is sometimes related to poverty (Chapter 2), but not always. For example, the Northwest area has high poverty and is geographically mountainous, which is related to the risk of landslides, but it is less affected by pollution or drought. Districts can be categorized into high, medium, and low poverty and environmental risk groups (based on unweighted rankings). While not considered a primary risk due to there being fewer districts with such characteristics, topographical incline is also included, as mountainous areas tend to be less suitable for agriculture and are at risk of flash floods and landslides, which are hazards specific to traditionally poor areas. Low-poverty districts have higher risks for other factors such as air pollution, mainly in the districts around the Red River Delta. On average, poor and non-poor districts tend to have a similar probability of ranking in the top third in at least one out of six risk factors.[43] The relative similarity in the share of low- and high-poverty districts exposed to at least one risk also illustrates the complexity and ubiquity of natural and man-made risks in Vietnam. However, whether or not poor households are over-exposed, they have fewer coping strategies and safety nets to weather such shocks.

Overlaying maps of district-level environmental risk and poverty rates is a useful exercise to gain more powerful insights on the extent of vulnerability from environment and climate-related factors. Figure 6.7 illustrates districts where environmental risk or poverty rates are ranked in the top third across all districts. Complementary to Figure 6.5, these bi-variate maps also illustrate the high frequency of risks across the country. The poorest districts are not often also those with the highest environmental risk (black color). The correlation between districts with high poverty rates and higher environmental variables is significant for slope, green color, and average precipitation.

6.3. What types of shocks are households more at risk from?

This section examines the relationship between poverty, vulnerability, and risk in greater detail. Analysis presented seeks to identify which households are "chronically poor," as well as the "risk-induced vulnerable" who usually live above the poverty line but sometimes fall below it because of shocks. Risk-induced insecurity arises from two sources: idiosyncratic shocks and covariate shocks. This section divides risk-induced insecurity into these two sources. This can be useful because often vulnerability to idiosyncratic risks is greater than vulnerability to covariate risks. While community-based insurance mechanisms can be effective in mitigating idiosyncratic shocks, where covariate risks matter, insurance mechanisms cannot rely on local risk pooling. In such regions, the need for effective risk management and adaptive social protection programs is greater.

These distinctions have important policy implications. Policies required to address chronic insecurity are not exactly the same as those needed to address risk-induced insecurity. The chronic insecure usually live below the economic security line, even in good years, because they lack the human and physical assets to earn a sufficient livelihood even in good conditions. These households will most likely benefit from better livelihoods, cash transfers, and better delivery of basic services to facilitate investments in physical and human capital. Those who face risk-induced insecurity consume enough to live above the line, but that this consumption can be highly variable because of idiosyncratic or covariate shocks, meaning sometimes they fall below the line. These households do not necessarily need the same investments in assets but do need protection from shocks, which might mean insurance programs to increase resilience.

Figure 6.7. Poverty and environmental risk maps
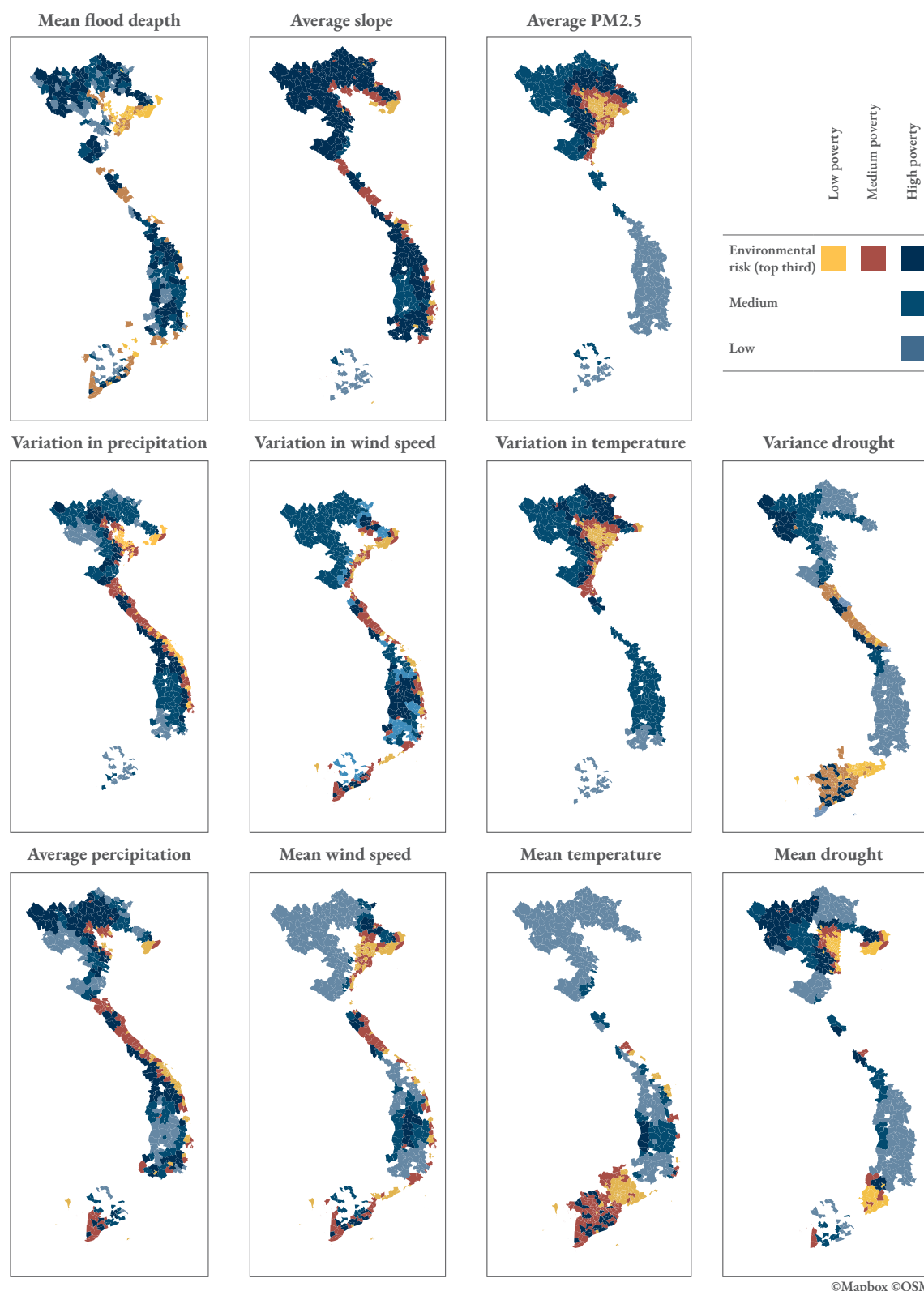
Note: Only districts ranking in the top third of the environmental variable are shown. Poverty rates are grouped into high, medium, and low categories by ranking of district level poverty rates. See Table 6.1. for definitions.

Source: World Bank staff calculations.

In most regions, chronic insecurity is higher than risk-induced insecurity

In Vietnam the rate of chronic insecurity is twice that of risk-induced insecurity, but this varies significantly by region. At the $5.50 line, the rate of chronic insecurity in the country is around 21.7 percent, 1.9 times that of risk-induced insecurity at 11.5 percent (Figure 6.8).[44] In other words, while around one in five Vietnamese usually lives below this aspirational economic security line, another one in ten are vulnerable to falling below it sometimes due to shocks. Regional outcomes vary widely. With so many chronically insecure in the Midlands (51.2 percent), there are fewer people left to experience risk-induced vulnerability (13.3 percent). Conversely, in the Red River Delta where chronic insecurity is below 5 percent, risk-induced insecurity (9 percent) is the larger concern, being twice as prevalent. Other regions where risk-induced insecurity is relatively more important than the national average are the Southeast and the Mekong Delta.

In general, idiosyncratic risk contributes to insecurity more than covariate risk, but this also varies by region. Nationally, idiosyncratic risk contributes to risk-induced insecurity 1.2 times more than covariate risk (Figure 6.9). The Red River and Mekong Deltas are regions where idiosyncratic risk matters a lot more (1.7 and 1.5 times respectively), while in the Midlands and North and Central Coast covariate risk

is nearly as important. This regional pattern is the opposite of the chronic insecurity to risk-induced insecurity pattern seen in the last paragraph, suggesting in areas with low chronic insecurity idiosyncratic risk is more important.

6.4. Household coping strategies

Coping strategies that households rely on during economic crises or shocks range from self-coping, personal networks, to formal external channels. In response to a crisis, households can rely on their own means to cope, such as using personal assets and savings. Changing behaviors such as reducing consumption or engaging in more economic activities to smooth income are other typical strategies to deal with shocks. In countries with developed social response systems, financial or government institutions can also be a common means of support. Vietnamese households are in general not indebted, which reduces the serious implications of moderate declines in income from economic shocks. High recurring monthly expenses such as housing rent, mortgages, car payments, or debt payments are uncommon in Vietnamese society. A low cost of living also ensures that essential items are still affordable, and growing food for self-consumption was also common among poorer households.

Figure 6.8. **Rates of chronic insecurity and risk-induced insecurity by region, 2018**
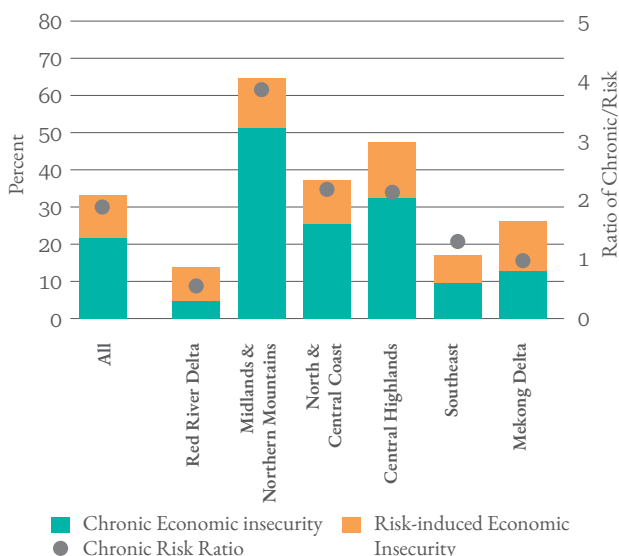
Source: VHLSS 2018 and World Bank's Vulnerability Tool.

Figure 6.9. **Relative importance of idiosyncratic and covariate risk by region, 2018**
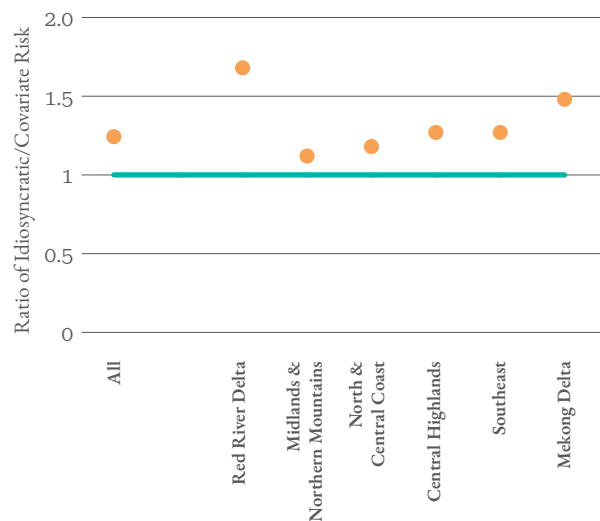
Source: VHLSS 2018 and World Bank's Vulnerability Tool.

BOX	6.1.	Modelling risk and vulnerability among households

The distinction between chronic poverty and risk-induced vulnerability depends upon expected household consumption and how much it might vary around that average. Poverty measures from Chapter 1 tell us how many people live below the poverty line at any one time, specifically at the time the household survey was conducted. But they do not indicate what a household's chances are for being in poverty in the future. This section uses a modelling approach to decompose notions of economic insecurity, drawing upon Skoufias (2019) and Skoufias and Baez (2021)[45]. For this exercise, consider anyone living below the $5.50 economic security line is considered "economically insecure." The insecure are then divided into two groups:

1. Households experiencing chronic insecurity are those whose expected or average consumption is always likely to be below the economic security line.
2. Second, the notion of risk-induced insecurity is introduced. This reflects the notion that some people consume enough to live above the line sometimes but that this consumption can be highly variable because of idiosyncratic or covariate shocks, meaning sometimes they fall below the line. This group is referred to as the "risk-induced vulnerable".

Classifying households as chronically insecure or facing risk-induced insecurity means understanding how household consumption varies and setting a risk probability threshold. The analysis in this section uses per capita household consumption as the measure of welfare and the UMIC ($5.50/day 2011PPP) line as that of economic security, reflecting Vietnam's higher aspirations for the minimum standard of living that all of its citizens should enjoy. In addition, the analysis means specifying: (i) a statistical model of how consumption varies and (ii) a threshold for the probability of falling below the line to be called insecure. The statistical model of the consumption distribution is empirically derived from the variation in the household survey data and described in more detail in Skoufias et al (2021). The probability threshold is a policy choice and depends upon policymakers' (and society's) tolerance for risk. Higher thresholds (as used here) will increase the number of households classified as insecure; a higher threshold (or tolerance) for the probability of falling under the welfare threshold will decrease the number of households classified as insecure.

These two types of insecurity depend upon how much a household's consumption varies in different states of the world, whether "normal," "good," or "bad." Households who usually live below the economic security line are chronically insecure; those who are usually above the line but sometimes fall into insecurity. Figure B.6.1.1. illustrates these two concepts with some examples. The orange box is each household's average (or expected) consumption across different states of the world. The black lines show how much each household's consumption can vary in these different states. According to Skoufias and Baez (2021), "If a household experiences a negative shock, such as a drought or is a victim of crime, then depending on the severity of the shock, the household would be expected to have consumption somewhere to the left of the average welfare (orange square). If the household experiences a positive shock, such as agricultural prices that are more favorable, then the household would be expected to be somewhere to the right of the expected welfare." In this figure, households A, D, G, and I have expected consumption below the economic security line and can be classified as chronically insecure. In a "good" year they may be above the line, but on average their consumption is below the line; household A never gets out of insecurity even in the best years. By contrast, households C, F, and J have expected consumption that is above the line, but depending on the realized shocks, in some states of the world they may be below the line. These households are classified as facing risk-induced insecurity.[46] Household B, E, and H are not expected to fall below the line under normal shocks and are thus not identified as insecure.

Continued >

BOX	6.1.	Modelling risk and vulnerability among households (Continued)

Figure B.6.1.1. Stylized examples of chronic insecurity and risk-induced insecurity
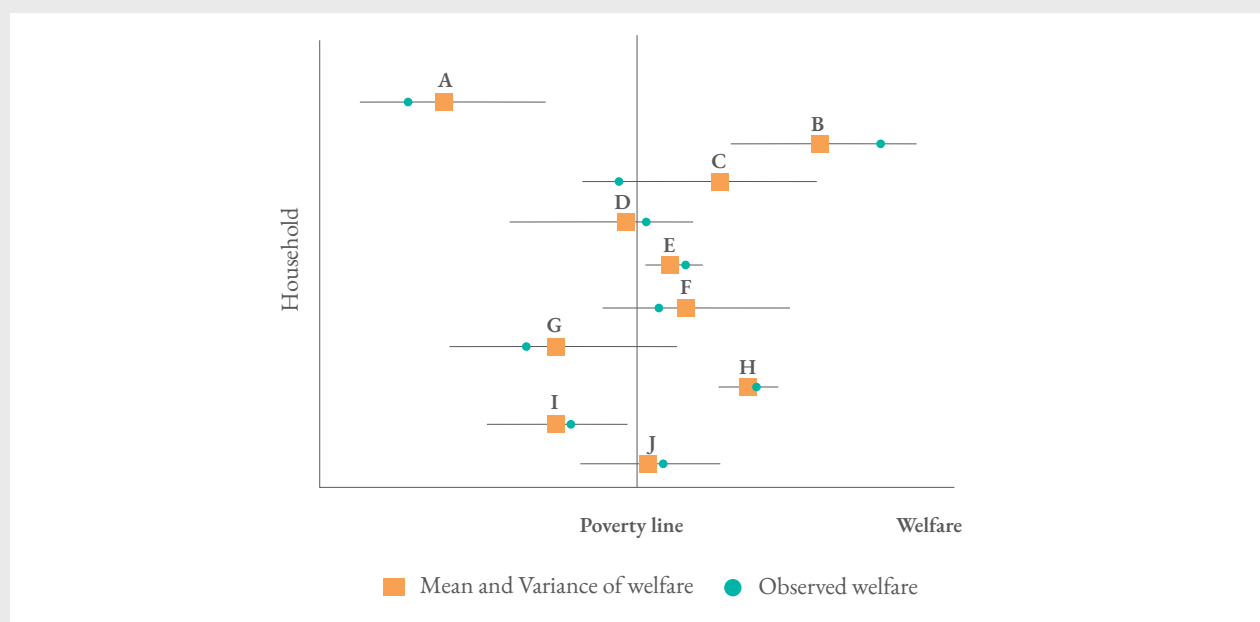
Note: Adapted from Skoufias et al (2021).

Self-coping strategies vary between poor and rich households.

Self-coping strategies used by households when facing shocks include relying on oneself or family or friends for support. This was evident during COVID-19 when households were self-insuring and remained self-sufficient, despite the lack of widespread social relief measures. Reducing consumption was the most common household coping strategy, followed by borrowing from friends. Other strategies were less commonly used: growing food, relying on savings, loans from an institution, or receiving assistance from family members. Formal channels of assistance from financial institutions or government were the least common. The low level of reliance on formal public support reflects issues in the design and implementation of the fiscal response.

Coping strategies vary between poor and rich households. While poor households rely on external sources, rich households are more able to rely on their own means, again highlighted during COVID-19. Poor households turned to family and friends for financial assistance during this time,

while richer households coped by relying on personal saving and assets and reducing consumption. In earlier studies on coping behavior during the global financial crisis, poor households having fewer assets either did not employ any coping strategies, sought external financial assistance from family and friends, or sought additional income-generating opportunities (Tran, 2015). These differences were similarly observed during COVID-19. While these coping strategies were employed during COVID-19, the impact of different shocks such as health or disaster events are likely to bring about different coping strategies.

The poor are less likely to have savings

Savings enable households to smooth consumption in response to income shocks. Vietnamese save to buffer against shocks, in particular illness, given the high cost of out-of-pocket health expenses. Three in four workers are in farm or non-farm informal employment and therefore not covered by the formal social security system. These households largely depend on their own consumption-smoothing mechanisms, such as savings, in the event of a negative income shock. Even

among households that save, savings intended for emergencies may not be sufficient to cope with such shocks when they arrive. Survey data from the Global Findex database show that 70 percent of respondents (aged 15 and older) reported being able to come up with emergency funds, but only 14 percent reported savings to be the main source (2017). The main source of emergency funds is likely to be income from work. This ability to earn an income, however, is severely impacted during shocks such as economic crises or illness.

There is evidence that level of income per capita drives household savings. Households in the bottom income quintile, particularly those in the bottom decile, persistently have negative savings rates. Notably, almost one in three households had no or negative savings in 2010. Analysis at a more disaggregated level finds that this varied greatly across income groups: it was 68.8 percent and 44 percent in the bottom and second-to-bottom quintiles, respectively, in the same year, thus significantly higher than the average. This pattern held across all the years when VHLSS was conducted in the last two decades (Nguyen, 2022). While the poor are usually beneficiaries of targeted assistance programs, households in the second-lowest income deciles are normally not. Therefore, not only the poor, but also those non-poor with negative or modest positive savings rate should be given adequate support in time of economic shocks. The same figure also shows that higher income households have higher saving rates and households in the bottom income quintile have had negative savings rates since 2010. This was largely driven by households in the bottom decile, approximately the poor according to MOLISA's poverty line. In the better years of 2016 and 2018, savings of households in the second-lowest income decile, approximately MOLISA's near poor, turned positive, albeit modestly. Coping strategies during COVID-19 also highlighted differences in the ability of poor and rich households to utilize savings to cope with shocks. During this time, rich households are much more likely to tap into savings compared to poor households (World Bank, 2021b). With a lower level of assets and savings, poor households are also less likely to use formal savings channels. The growth rate of household deposits over the medium term also slowed and may indicate changes to the saving behavior of households.

Borrowing through personal networks is more common than through financial institutions.

Financial inclusion is limited for certain vulnerable groups due to household-specific constraints. The share of adults with an account at a financial institution increased from 26 percent in 2017 to 42 percent in 2019 (Figure 6.10). This varies by socioeconomic groups along differences in wealth and education levels. While 83 percent of rich households have an account, only 17 percent of poor households do. This highlights that financial inclusion is not necessarily due to limited supply but rather to household-specific constraints to access that disproportionately affect the vulnerable.

Having large family networks is a significant determinant of financial resilience. Family members tend to be more altruistic toward each other, share common obligations, and have stronger contract enforcement (Cox and Fafchamps, 2008; Hamilton, 1964; La Ferrara, 2011). Vietnamese society places great importance on family ties, roles, and responsibilities. Families are essential and core social units. This can be seen in the large share of households (50 percent) that engage in family businesses.[47] Family units also have a significant place in administrative processes. The family registry book, passed down for generations, is an essential for life events such as marriages, opening bank accounts, and so on.

Borrowing from personal networks is more common than borrowing from financial institutions (Figure 6.11). In developing countries, borrowing from family and friends is a common strategy in the presence of unexpected shocks (Demirgüç-Kunt and Klapper, 2013; Pearlman, 2010). Relying on financial assistance from family and friends has been more commonly seen in poor households compared to rich as a coping strategy during COVID-19 (World Bank, 2021b). While used less frequently than borrowing from friends and family, poor households borrowed from financial institutions more frequently than tapping personal savings. These financial institutions include State Policy Banks and farming cooperatives and other noncommercial banks, which provide loans to agricultural and poor households. Overall, this is consistent with previous research that poor households tend to rely on external sources, whereas rich households are better able to cope within their own means.

Figure 6.10. Use of financial services has improved on some dimensions and less in others

Figure 6.11. Borrowing from family and friends is the most common source
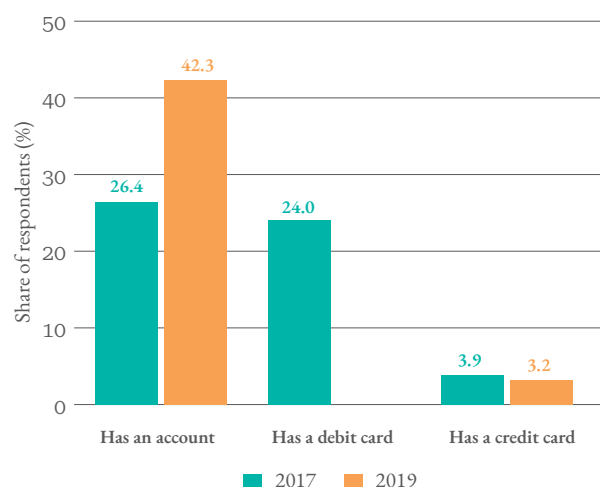
Source: Based on 2017 data from the Global Findex database and World Bank 2019.
Notes: The FINDEX target population is the population of individuals aged 15 years and older.
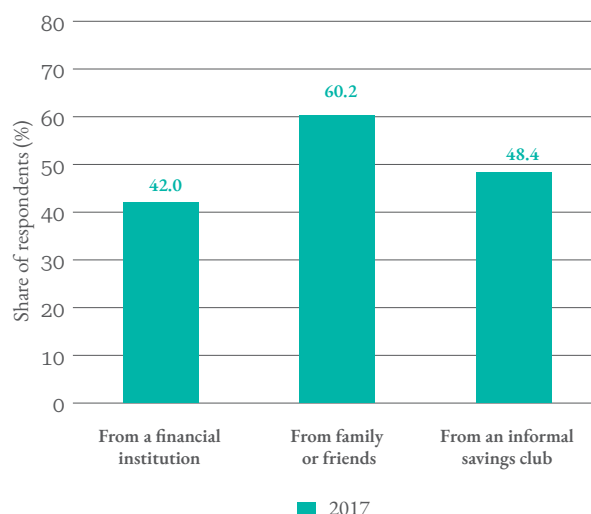
Source: Based on 2017 data from the Global Findex database.
Notes: The FINDEX target population is the population of individuals aged 15 years and older.

6.5. Social Protection programs in Vietnam today

As the previous section showed, households primarily rely on their own resources and personal networks to cope through shocks. The social protection system can play a larger role in guarding against shocks and helping households avoid poverty traps, but it currently has some key limitations.

- *Social protection is underfunded, and programs are fragmented.* Vietnam underinvests in social protection relative to peers, meaning coverage will be too low, benefits insufficient, or both. Furthermore, there are design issues. There is no flagship program around which social assistance is built but instead a number of smaller and uncoordinated programs. This means economies of scale are missed, exacerbating the lack of funding, and there is no central design to make sure that the mix of schemes matches the changing risk profile of households and shocks. At the same time, decentralization further disrupts efforts at coordinating social protection. Large budgets are channeled toward area-based targeting programs and investments, which gives local governments flexibility in how they allocate resources, but

the system is less prepared to support individuals in the face of idiosyncratic shocks. This was evident during COVID-19 (See Box 6.2).

- *Implementation issues are an important constraint.* The application process can inhibit sign-up. A lack of a national social registry means responses to large shocks can quickly scale vertically, providing additional payments to existing beneficiaries, but not horizontally, providing new payments to new beneficiaries. A largely cash-based transfer system means assistance may not get to households as quickly as they need it.

- *Some risks are addressed, but coverage is limited.* Social insurance covers unemployment and old age income, but only formal workers are covered; with most of the country's workers being informal, the gaps in coverage are significant.

- *Some risks are not adequately addressed.* For example, natural disasters—which will increase in frequency and/ or intensity with climate change—are not prepared for as well as they could be, nor responded to as quickly and as comprehensively as needed to stop households from resorting to ineffective coping mechanisms. Much of the country has health insurance, but out-of-pocket costs undermine its effectiveness.

BOX	6.2.	Vietnam's early COVID-19 response

Vietnam's initial fiscal support in 2020 for households in response to the COVID-19 crisis was smaller than its regional peers. Vietnam's income support to households included both topping up payments to existing social assistance beneficiaries and making payments to new beneficiaries not previously covered. However, the amount of spending early in the pandemic was significantly smaller than in other East Asian countries, and total COVID-19 spending in support of households lagged all major regional peers, such as China, Indonesia, Malaysia, the Philippines, and Thailand (World Bank, 2021c). Consequently in 2020, although employment and wage losses were lower in Vietnam than in other countries, the gap between those losses and the support that households did receive was proportionally larger than in all other countries except for the Philippines, where households experienced very high losses (Figure B.6.2.1).

Figure B.6.2.1. Vietnam had the second-largest relative gap between household losses and support, East Asia and Pacific
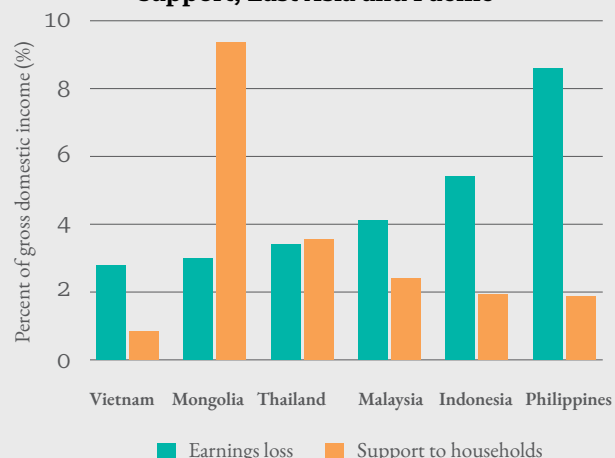
Source: World Bank 2021c

Moreover, implementation issues meant that the size and coverage of household income support was even smaller than intended and was not pro-poor. The initial COVID-19 package was to cover 5 million informal workers affected by lockdowns. Due to the lack of a social registry or other processes to identify eligible people, only 1 million new beneficiaries were enrolled (World Bank, 2021b). Moreover, households receiving new assistance were not generally poorer. Sixty-one percent of households receiving new COVID-19 assistance were from the richest 60 percent of households and 39 percent from the poorest 40 percent, indicating near equal chances of being supported for households across the distribution (World Bank, 2021b). Nor was this because poorer households did not know how to apply; the poorest 40 percent of households made up 43 percent of applicants.

Benefit levels were also relatively low, limiting effectiveness for those who did receive support. Benefits were for a maximum of three months and relatively low. National Devotees received the highest benefits, about VND 1.5 million over three months; in comparison, minimum monthly wages are about VND 4 million per month. The estimated impact of this support was minimal (World Bank, 2021b).

The second support package in response to the Delta variant sweeping Vietnam in 2021 was smaller than that of the first package. The package was designed to be implemented for a period of 8 months between May-December 2021, longer than the duration of the first package of 3 months. Individuals falling under national devotees, social assistance beneficiaries, and members of the poor and near-poor were no longer eligible for support, while contracted employees in quarantine, children infected or quarantined, and employees in certain occupations received financial support. Affected contract employees who were pregnant or had young children and employees in certain occupations received additional amounts based on the number of eligible individuals. Changes reduced aid to the pre-existing vulnerable and expand aid to formal workers (who are less likely to be poor, although may well be affected by the crisis). Thus, aid in the form of household cash transfers saw changes between the first and second rounds of national support packages, potentially disadvantaging poorer households.

The social assistance system requires modernization.

The social assistance system has evolved, but further modernization is needed. The system has been transformed from a basic income support system of last resort for those unable to work to a system capable of addressing multiple challenges of a more diverse set of beneficiaries (see Box 6.3 for a description of Vietnam's social protection system today). There has been a gradual transition to a quasi-universal social pension (albeit for the very old) and support for people with disabilities. Some efforts have been made to improve the relatively rudimentary delivery system that continues to rely on manual, paper-based administrative processes. Social assistance coverage has expanded significantly from 200,000 beneficiaries in 2000 to more than 3.1 million in 2020. Around 1.8 million of the beneficiaries are elderly, reflecting the importance of the social pension scheme, which has universal coverage above age 80 but is means-tested for those aged 60-79. Vietnam did not always perform relatively poorly in social assistance. A decade ago, Vietnam's social assistance coverage was in line or better than many East Asia and Pacific neighbors. However, since then it has started to lag. In particular Malaysia and Indonesia's social assistance coverage has increased the most. Both countries used to lag behind Vietnam but now have wider coverage. (World Bank and MPI, 2016).

The administration of social assistance programs is complex and can be difficult to navigate for potential beneficiaries. According to MOLISA, there are 8 Laws, 1 Master Plan, 14 Decrees of Government, 37 Decisions of the Prime Minister, and 13 Circulars of Ministries that regulate issues related to social assistance. Several of the newer programs were introduced in a piecemeal fashion to mitigate the impacts of certain reforms. There is no flagship program to provide a "backbone" program in contrast to those found in other middle-income countries in the region such as China,

Indonesia, and the Philippines. Different programs have their own delivery systems (registration, eligibility determination, payments) and are very decentralized, leading to significant variation across different parts of the country.

This fragmentation is exacerbated by the fact that several poverty-reduction programs work in parallel to the social assistance system. These additional programs include the National Target Poverty Reduction Program (NTPRP), Program 135, and the Sustainable Poverty Reduction Support Program (SDRSP). These programs are predominantly area-based but also include some household-based social assistance. For instance, poor, ethnic minority households facing housing challenges are provided a lump sum for housing, production land, and clean water assistance. Another subset of programs provides assistance to poor and ethnic minority households through cash or in-kind support, such as the kerosene subsidy for poor households of ethnic minorities residing in areas without grid connection. Limited active labor market programs also operate without any link to social assistance programs.[48]

Despite this complexity, Vietnam spends relatively little on its safety nets, which consequentially provides benefits that are low relative to global benchmarks. The decentralized and fragmented nature of the system makes it difficult to calculate the overall spending on social assistance.[49] This is relatively low compared to other middle-income countries and is the result to a great extent of low benefit levels. In recent years, benefits have been allowed to shrink in real terms with social assistance benefits frozen in nominal terms from 2015 to 2021[50]. This is reflected in household surveys that show that benefits are spread thinly and have a relatively small impact on poverty. Figure 6.12 shows that benefits as a share of consumption of households in the bottom quintile of the distribution are much lower in Vietnam than in other middle-income countries.

Figure 6.12. Social assistance benefit levels in Vietnam compared to other countries
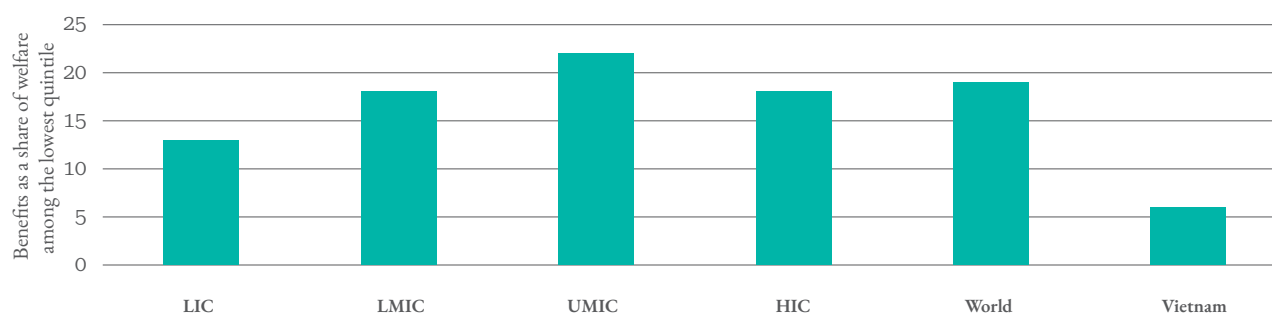
Source: WB ASPIRE 2018; Dutta and Sen (2018). Excludes health waivers.

| BOX | 6.3. | Vietnam's Social Protection System |

Figure B.6.3.1. depicts the various elements of Vietnam's social protection system today. It has evolved rapidly in the last two decades in terms of both the number and coverage of programs. The current system is based on Resolution 15, adopted by the Central Committee of the Communist Party of Vietnam in 2012. The resolution commits to developing the social protection system through expansion of social assistance, social services, social insurance, and poverty reduction programs. In 2017, the government approved the Master Plan for Social Assistance Reform and Development (MPSARD), which assessed the performance of the social assistance system and identified ways of making it more comprehensive and effective at addressing vulnerability and exclusion in the country. It also set out specific goals for expanding the coverage of existing social assistance programs, including expanding the coverage and benefits for the elderly, people with disabilities, children in need (orphans, abandoned children, severely disabled children, and especially disadvantaged children) or those facing emergencies or difficult circumstances. Finally, it proposed the phased introduction of a new policy to provide cash transfers to infants and young children under 4.

Figure B.6.3.1. Key Elements of Vietnam's Social Protection System
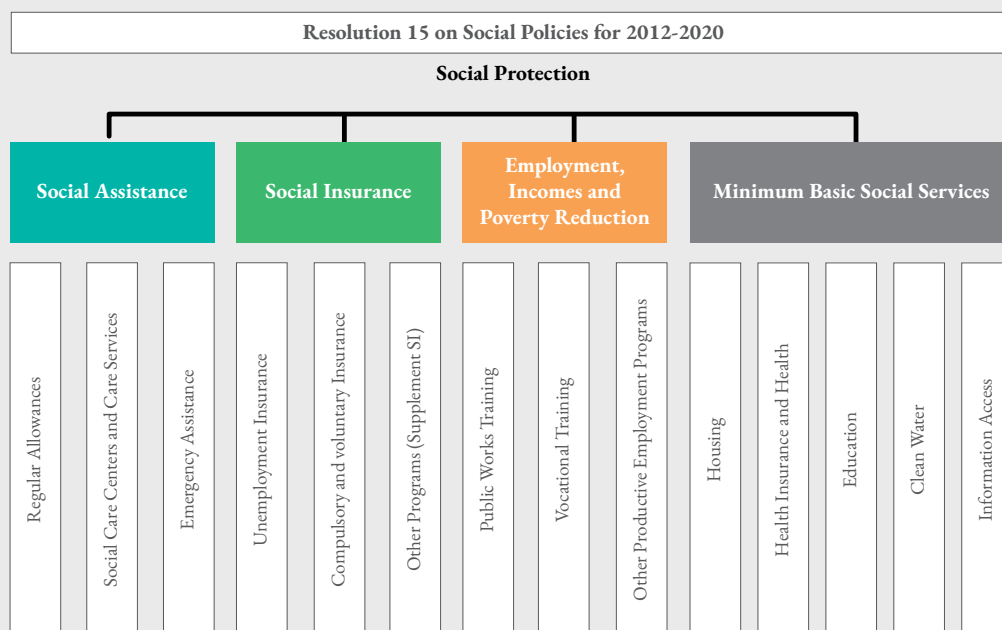
Social insurance is a key tool to support demographic change.

The main objective of the social security pillar—which in Vietnam consists primarily of its social insurance and health insurance systems—is to smooth individuals' consumption across their lifetimes as they confront different risks. The pension system will be increasingly important for Vietnam due to its rapid demographic aging and, along with social pensions, will be a key tool in managing the social consequences of this demographic change (World Bank, 2021b). The existing system pays very generous pensions to public sector workers and more modest pensions to private sector workers. The retirement age has not changed for decades, while life expectancy at retirement age has risen sharply. In a positive step, the government has recently announced that the retirement age will rise gradually from 50 to 60 for women and from 55 to 62 for men. This change should increase labor force participation and make the pension scheme more sustainable in the long run. Financial sustainability is important given that the scheme benefits workers in the upper part of the income distribution and deficits could crowd out spending on redistributive programs.

The biggest challenge, however, is coverage. The primary scheme of the pension system is a compulsory insurance scheme that is part of Vietnam Social Security (VSS). In 2020, this scheme covered about one quarter percent of the working age population (14.6 million people). Its coverage extends almost exclusively to workers in the formal sector—a serious constraint given the country's high informality rate. To address this shortcoming, a voluntary contributory scheme was established in the 2006 Social Insurance Law and SI Law amendments. However, this scheme has failed to attract a significant number of informal sectors workers and covered only about 1.2 million workers by 2020. While coverage has risen gradually over time, the pace of expansion is too slow to ensure that most of the elderly have a source of income in the next few decades. The government has set a coverage target of 60 percent of the labor force by 2030, but based on international experience and Vietnam's own experience with health insurance, this target is unlikely to be achieved without significant subsidies to make it affordable for informal sector workers.

The social insurance system also addresses short-term risks such as unemployment or disability. Again, since coverage is limited to formal sector workers, most workers have no recourse when subjected to these shocks. The COVID-19 crisis has exposed this major gap in the social protection system, as millions of non-poor and mostly urban informal sector workers in sectors such as transport and tourism suddenly lost their incomes. While most of these workers and their households were covered by health insurance, they had no insurance against the impact of the pandemic on their employment and incomes.

Lack of adaptive social protection to guard against shocks

The response to the pandemic in 2020 also highlighted the weaknesses in social protection delivery systems, specifically their inability to respond quickly to covariate shocks. Initially, the first relief package targeted 5 million informal sector workers, but reached only around 1 million. A significant part of the problem was the inability to leverage administrative data and the national ID database in the way many other countries were able to do (Johnson and Palacios, forthcoming). Instead, the relief was implemented using manual processes that were difficult for potential beneficiaries to navigate, burdened local officials, and were difficult to monitor at the national level. As a result, far less of the population received Vietnam's 2020 COVID cash response than in other countries in the region. Moreover, among respondents who received monetary assistance, the mode of payment was universally cash, with no instance of digital payments (World Bank, 2021b).

In the context of the second COVID-19 relief package that the government launched in September 2021, the Hue City government conducted a pilot. Its objective was to register new beneficiaries using a mobile application created for this purpose. The digitalization of the manual registration process would reduce queues and physical interaction with government officials who would approve or reject applications based on certain criteria. Those approved as beneficiaries would opt for a mode of payment that included digital payment. District and provincial officials would be able to monitor progress in real time. As of November 2021, around 14,000 beneficiaries had been registered.

Vietnam is an outlier in that it makes the majority of payments in cash. The government has issued a decree mandating a shift to digital payments for social assistance.[51] Figure 6.13 compares Vietnam to other countries based on the 2017 FINDEX survey. More recent government figures show that more than 90 per cent of social assistance payments are made in cash. The government has conducted several e-payment pilots and has expanded digital payments for all social assistance beneficiaries in two provinces. Moreover, the Ministry of Labor, Invalids and Social Affairs (MOLISA) has committed to scaling this up to the national level. Moving to digital payments into bank accounts could not only increase the efficiency of government-to-person (G2P) payments but has the potential to dramatically increase financial inclusion, especially for women.

The government has also recognized the importance of data governance generally and social protection in particular. The National Plan envisions linking six major databases, including the National Citizen database managed by the Ministry of Public Security and the social insurance database managed by the VSS.[52] The latter is being centralized as part of the VSS ICT strategic plan. In principle, the MPS database contains the demographic and biometric information required to issue a unique national ID number. In 2021, a

mass effort has been made with the intention of distributing 50 million IDs based on this database. The fragmented social assistance databases, however, are highly decentralized, as are the processes of registration and determination of eligibility. Advanced systems such as the ISAS in Turkey (see Chapter 8) have been able to establish data sharing protocols with digital authentication using the unique ID number to make the registration, enrollment, and grievance redressal processes more efficient for both government and beneficiaries. Most importantly, it would make it possible to respond quickly to both idiosyncratic and co-variate shocks. Combined with institutional and financial arrangements, this would help Vietnam move toward a truly adaptive social protection system.

Adequacy of minimum basic social services

Limited recent studies point to the positive impact of health insurance on catastrophic health expenditure and impoverishment in Vietnam. Studies from earlier in the decade found that health insurance had very limited impact on healthcare costs incurred by households (Nguyen et al., 2016; Ahmed et al., 2018; and Van Minh H et al., 2012). Vietnam implemented several key health insurance reforms in recent decades, notably in 2009 and 2015. The latest reforms in 2015

Figure 6.13. Vietnam lags other countries shifting to digital payments
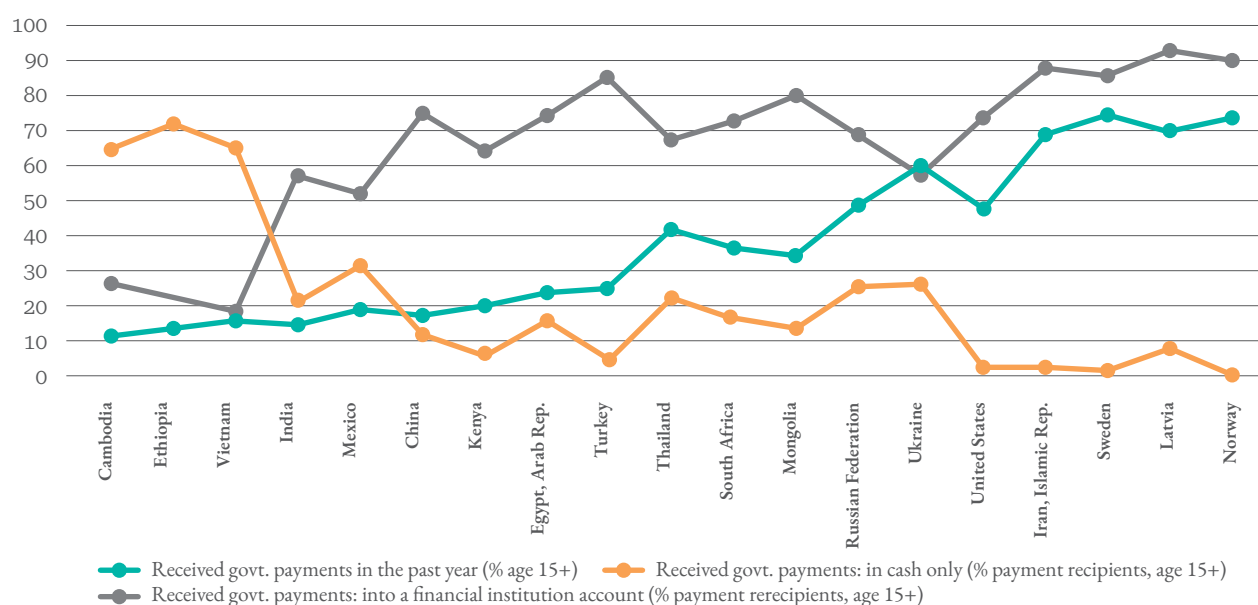
Source: FINDEX survey (2017).

were aimed at increasing participation in health insurance, encouraging participation through household subscription, and expanding entitlements for the insured (Thuong et al., 2021). A more recent study using the VHLSS found that the health insurance reforms in Vietnam has contributed to lowering the incidence of catastrophic health expenditure and medical impoverishment (Thuong, 2021). More up-to-date studies are needed to ascertain the impact of the current health insurance system, given existing high levels of out-of-pocket payments.

6.6. Conclusion

While the odds of falling into extreme poverty are low, about 2 million people still fell from a higher economic class into poverty from 2016 to 2018. In 2010 and 2020, about 6 percent of households also self-reported that their living conditions were worse than five years ago. These households report reasons for a lack of progress that can be attributed to shocks such as job loss, accidents, illness, or environmental shocks affecting agricultural output. Selected reviews of shocks illustrate that households across the entire welfare distribution can be exposed either due to economic impacts from COVID-19 or for environmental or health reasons. However, for the poor who lack sufficient savings and have fewer coping strategies, any exposure to shocks is riskier and more consequential.

Thus, safety nets and insurance can play a role in preserving economic gains and helping households avoid falling into poverty traps. However, the current social protection system is outdated and is not adaptive to offer adequate protection and safety nets especially for 'moving targets,' that is, those who are not registered as poor but can still be at risk of falling into poverty. Recent employment shocks from COVID-19 clearly illustrated the challenges to getting cash support into the hands of informal workers or labor migrants, who can be economically insecure but not registered in the social protection system.

Modernizing the social protection system is needed. A decade ago, Vietnam's social assistance coverage was in line with or higher than many of its East Asia and Pacific neighbors. However, it is now lagging behind them, as other countries have since made more progress. In particular Malaysia and Indonesia's social assistance coverage has increased, and now both countries have wider coverage than Vietnam. The following are some needed changes:

- *More effective social assistance for poorer households:*
  - Increases in coverage and benefit levels to achieve greater poverty and inequality reduction;
  - Increases in overall spending while consolidating the currently fragmented mix of programs to achieve greater efficiency.
- *Greater coverage of social insurance to protect all households from all risks:*
  - Expanding coverage to non-poor informal workers by blurring the line between social assistance and insurance; workers make the contributions they can afford while the state subsidizes the remainder.
- *A more flexible and adaptable delivery chain for both social assistance and insurance:*
  - Better data collection and use to determine who is in need and how this changes over time;
  - Adoption of digital payment systems so that payments occur quickly and safely, reaching those who need them when they need them;
  - Movement toward an adaptive social protection system which can scale up when shocks strike: top-ups for existing beneficiaries, expansion to those newly in need.

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6.8. Notes

[39] Shocks can be non-COVID-19 related, such as illness or death in the family.

[40] Before the 4th wave, Vietnam had COVID-19 under control. However in April 2021, the Delta variant entered the country that was almost completely unvaccinated. In one month, the number of cases exceeded the number of cases from the entire previous year. At the time of this report, developments are still unfolding.

[41] https://climateknowledgeportal.worldbank.org/country/vietnam/vulnerability

[42] However, some past results find that the poor are more exposed to environment risk, and that there is a positive correlation between

districts being high-risk and having higher poverty rates using data on environmental risk for 2000-2010 and a poverty map for 2010 (Narloch and Bangalore, 2016).

[43] The six environmental risks or uncertainties considered include air pollution, and variation in wind, precipitation, and temperature, the share of the population exposed to high flood risk, and the SPEI drought indicator.

[44] The analysis in this section relies upon commune-level variables to help estimate the degree of idiosyncratic and covariate risk. Data are not available for all communes, so not all of the VHLSS is used in this particular analysis.

[45] In addition, the modelling is implemented using a vulnerability tool developed by the Equity Policy Lab of the World Bank.

[46] Note, Skoufias and Baez use the term "poverty-induced vulnerability" where this report uses "chronic poverty."

[47] World Bank COVID-19 monitoring surveys.

[48] Employee Service Centers (ESC) manage the unemployment insurance program and administer vocational training and job placement programs. However, these services are minimal in most of the 98 ESCs and focused mainly on formal sector workers with low skill levels. See World Bank (2020).

[49] The most recent estimate of 0.66 percent of GDP is for 2013. See Dutta and Sen (2018).

[50] They were raised from VND270,000 to 350,000 based on Decree 20 in March 2021.

[51] Government of Vietnam, Decree 20/2021.

[52] The others are the National Land Database (managed by Ministry of Natural Resources and Environment); National Database on Business Registration; National Database on General Statistics of Population (managed by Ministry of Planning and Investment); National Database on Finance (managed by Ministry of Finance).

Chapter 7.
Fiscal policy, financing future investments and building the middle class

Key Messages

- Fiscal policy can play a critical role in both driving Vietnam toward high-income status and doing so in an inclusive manner help grow the size of the middle class.

- First, it can help finance the required investments needed for the country and its workers to become more productive and higher earners, such as modernization of agriculture, improved skills and higher-quality education, a more robust digital backbone, and accompanying services.

- Second, it can finance policies which can address Last Mile and Next Mile constraints today, such as a modern social protection system and strengthening of National Targeting Programs (NTPs).

7.1. Introduction – measuring fiscal impacts

Fiscal policy is one of the few instruments that governments can use to reduce inequality in the short term. It is not just that fiscal policy finances public investments which can promote growth as well as reduce poverty and inequality in the long term; it can also affect household income distribution today. This chapter examines the relationship in Vietnam immediately before COVID-19 between fiscal policy and poverty and inequality reduction. Different households pay various taxes and benefit from public spending in different ways. The net effect determines the extent to which fiscal policy directly reduces poverty and inequality. The choice of public spending can also affect how much poverty and inequality are reduced in the longer term.

This chapter asks how different households benefit (or do not) from fiscal policy in Vietnam. Using the Commitment to Equity (CEQ) framework (see Box 7.1) allows two key questions to be answered. First, who pays a particular tax or receives a particular benefit? For example, how much VAT is paid by poorer households and how much by richer households, both in Vietnamese dong and as a percentage of their market income? Second, what is the net impact of all taxes and transfers on different households? For example, which households pay more in taxes than they receive in benefits, and which pay less? How does this net fiscal impact on households affect poverty and inequality in Vietnam?

| BOX | 7.1 | The Commitment to Equity methodology |

To determine the impact of fiscal policy on household welfare, the Commitment to Equity (CEQ) framework of fiscal incidence analysis is used (Lustig, 2018).[53] Under this framework, household income is assessed at different stages, as outlined in the figure below.

Figure B.7.1.1. Definition of income concepts and the role of fiscal instruments
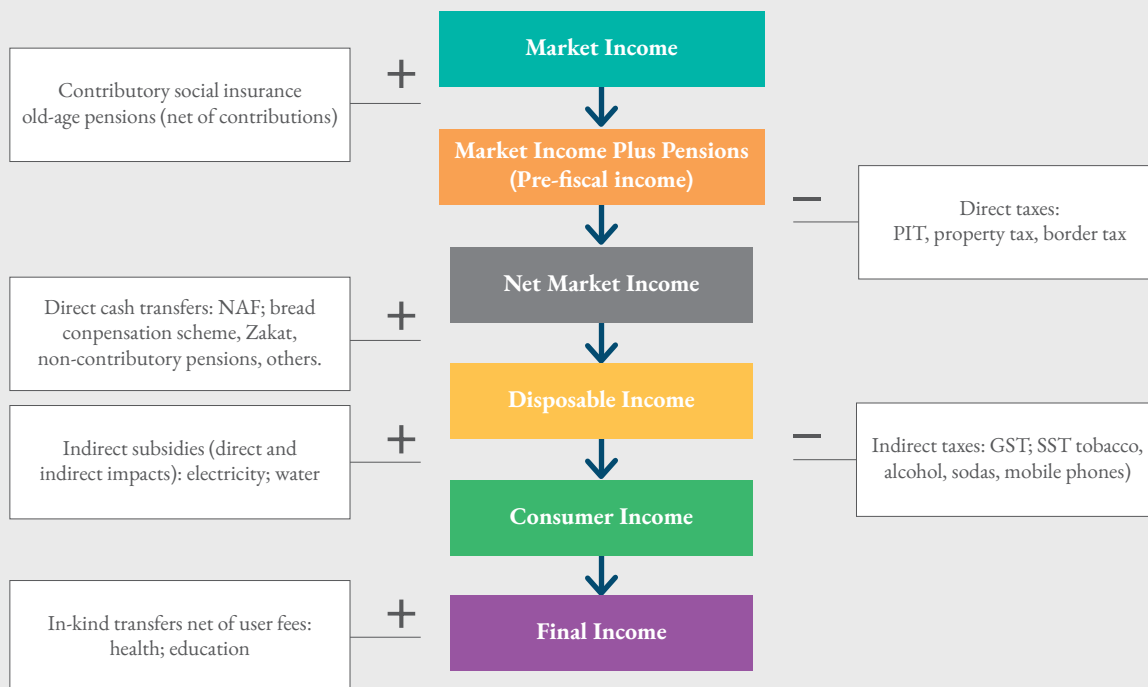
Source: Adapted from Lustig (2018).

Continued >

BOX	7.1.	The Commitment to Equity methodology (Continued)

As a starting point, a household's *market income* is the total income it received from wages and salaries, rents and dividends, private transfers and remittances, and pension income.[55] This is the income a household generates before it encounters the fiscal system and is also called its *pre-fiscal income.* Some households pay personal income taxes, property taxes, and capital gains taxes, which reduces their market income. Some households receive direct transfers from the government as part of the social safety net, which increases their market income. The net effect after direct taxes and direct transfers is a household's *disposable income*: how much money it has to spend on goods and services, or to save. Second, when a household buys goods and services, it pays indirect taxes (such as VAT or special excises on particular goods), which means its disposable income buys less, but it might also benefit from indirect subsidies (such as cheaper electricity) which means its disposable income buys more. How much of different goods and services a household can afford to buy, after considering both indirect taxes and subsidies, is called *consumable income*. When considering only cash-based fiscal instruments, this is also a household's *post-fiscal income*. Finally, a household may also use public services such as send their children to a public school or visit a health center or hospital. In this case they are benefitting from public spending not in a cash sense but in-kind. Including this non-cash spending results in a household's *final income* (the post-fiscal income if non-cash spending is included). (See Box 7.2 for a discussion of data limitations and Annex 7.1 for a summary of key modelling assumptions.)

A key objective of this chapter is to ask whether pre-COVID-19 fiscal policy in Vietnam made the household income distribution more equal as it moved from market income to consumable and final income, and which instruments contribute to any such effect. The results are put in international perspective and insights from international experience are summarized, while specific policy recommendations are discussed in the concluding chapter of the report. The data and methodology used in to produce these results are discussed further in Wai-Poi et al (2022).

7.2. Vietnam's pre-COVID-19 fiscal policies: how is money raised and how is it spent?

This section provides an overview of fiscal revenues and expenditures in Vietnam for 2018, which is calibrated to the 2018[55] VHLSS household survey data used to determine fiscal incidence. The treatment here is cursory and intended as a high-level overview of revenue and spending magnitudes and breakdowns, and does not provide a detailed description by tax instrument or social sector; see the companion fiscal incidence report for more details (Wai-Poi et al., 2022).

Revenues

Just over half of Vietnam's tax revenues are included in the analysis. Tax revenues accounted for 18.4 percent of GDP in 2018 (Table 7.1). The items in bold indicate taxes which are included in the current analysis, representing 57 percent of total tax revenues. Indirect taxes (such as VAT and excises) make up half of tax revenue, while direct taxes such as corporate and personal income tax contribute less; corporate taxes are still an important but declining revenue source.

Indirect taxes include VAT and special excises on tobacco and alcohol. Vietnam's standard VAT rate is 10 percent, but a number of goods and services are subject to a reduced 5 percent rate and others are exempt. An excise rate of 75 percent of the pretax factory price is applied to domestic tobacco products, with VAT then levied on the retail price. Tobacco manufacturers and importers pay an additional 2 percent of the pretax ex-factory price, earmarked to finance the Fund for Prevention and Control of Tobacco Harms; as of May 2019, the total tax rate for domestic cigarettes equaled 95 percent of the factory price.[56]

Personal income tax (PIT) has seven tiers and with progressive rates increasing by tier; capital income taxes vary by source of income. Vietnam's PIT framework does not have a tax-free threshold, but there are significant personal and dependent deductions and allowances, and rates are relatively low for lower tiers before increasing to a top rate of 35 percent. Taxes on capital income vary by source but in all cases not exceeding 20 percent (for capital gains and some property taxes) and in most cases significantly lower.

Table 7.1. Vietnam government revenues, 2018

	TRN DONG	% GDP
Total revenues & grants	1,364	24.6
Taxes	1,022	18.4
Oil revenues	66	1.2
CIT	49	0.9
Natural resources tax	17	0.3
Non-oil taxes	956	17.2
Taxes on goods & services	509	9.2
VAT	344	6.2
Excise	96	1.7
Natural resources tax	38	0.7
Environment protection tax	47	0.8
Direct taxes	296	5.3
CIT	202	3.6
PIT	94	1.7
Taxes on international trade	87	1.6
Other taxes	64	1.2
Registration tax	32	0.6
Agricultural land use tax	0	0.0
Land & housing tax	2	0.0
Lottery	29	0.5
Non-taxes	334	6.0
Fees & charges	38	0.7
Land rents	28	0.5
LUR assignment	148	2.7
Other non-taxes	121	2.2
Grants	8	0.1

Source: MOF, GSO, IMF and World Bank staff calculations.

Expenditures

This chapter focuses on central government spending; data limitations mean important sub-national spending on social assistance is excluded, which is material in a highly decentralized fiscal system such as Vietnam's. Revenues in Vietnam are largely centralized, allowing this chapter to capture a considerable deal of them. However, spending in Vietnam is quite decentralized, meaning that the focus on central government spending in the current analysis does miss important social spending decisions which occur at the local level, in particular social assistance. Nonetheless, both central and local health and education expenditures have been included in this chapter, and they account for the majority of social spending analyzed. Data limitations prevent a more comprehensive review. Box 7.2 discusses spending decentralization in Vietnam.

Vietnam's total central public expenditures in 2018 were around 19 percent of GDP;[57] of this, 6.8 percent of GDP was spent on social and non-social expenditures included in the analysis (Table 7.2). Education was the largest expenditure, followed by health. Direct cash transfers comprise a small part of total expenditures, 11 percent of those analyzed. Administrative data on electricity subsidies were not available but have been estimated at 26 trillion dong in the current work.

Household composition

The composition of a household has a strong influence over how much it is likely to benefit from certain types of spending. For example, households with school-aged children will benefit from education spending when kids go to school, and those with seniors are more likely to receive pensions. Households with children or elderly are also potentially eligible for social assistance targeted at these particular categories. Households with neither cannot benefit from these types of social spending. Figure 7.1 shows how household composition changes across the income distribution. Poorer households tend to be younger, with more children. As households get richer, they have fewer children, with half or more of the richest two deciles having none at all. At the same time, there are almost no elderly in the poorer half of the distribution (and relatively few in any household, although this will change as the country ages).

Table 7.2. Vietnam central government expenditures, 2018

	TRN DONG	% GDP
Total expenditures	1,435	25.9
Expenses	1,051	19.0
Total spending analyzed	376	6.8
Direct Transfers	40	0.7
Education	220	4.0
Pre-school	34	0.6
Primary	63	1.1
Lower secondary	49	0.9
Upper secondary	22	0.4
TVET	31	0.6
Tertiary	21	0.4
Health	89	1.6
In-patient	43	0.8
Out-patient	46	0.8
Subsidies	26	0.5
Electricity	26	0.5

Notes: Education total expenditures are based on the 2018 administrative data. Breakdowns by education level are based on 2013 UNESCO data, pro-rated to the 2018 total expenditures. Modelled estimates come close to the total level (modelled is 229 trillion compared to 220 trillion admin) and pro-rated levels except for TVET (overestimated) and tertiary (underestimated). Health total expenditures are based on the 2018 administrative data; WHO 2018 data is 154 trillion. The table uses modelled levels for in-patient and out-patient and pro-rates to the admin total for this table. The analysis uses the modelled absolute levels. Total modelled expenditure accounts for 92 percent of administrative expenditure analyzed.

Source: Ministry of Finance, Ministry of Education, WHO Global Health Expenditure Database, GSO, IMF, and World Bank staff calculations.

Education

Differences in demographics and enrollment rates across the income distribution drive the incidence of public education spending. Poorer households generally have more children to benefit from public education, but richer households' children are more likely to stay enrolled at higher (and more expensive) education levels. For example, nearly two million pre-school and primary students come from the poorest income decile of households, compared to less than half a million from the richest decile, and lower secondary students from poorer households significantly outnumber richer ones. However, upper secondary students are roughly evenly split between the bottom and top half of the income distribution while the upper half dominates tertiary enrollment (Wai-Poi et al., 2022).

There are also significant private expenditures on education even at compulsory levels and in public schools, which offsets the benefit of public spending. The richest quintile far outspends the poorest households in education, primarily in the categories of extra courses and tuition, spending almost four times as much than the lowest quintile (Wai-Poi et al., 2022). For the purposes of this chapter, out-of-pocket expenses which are received by the school are treated as co-payments—effectively a tax—as they reduce the value of the education benefit, and the payments that go into the fiscal system. Expenses which go to the private sector, such as for uniforms or books, are excluded from the fiscal incidence analysis; they are legitimate expenses but because they are not paid to a public entity, they are not part of the fiscal system.

Figure 7.1. Demographic composition of households by per capita consumption decile
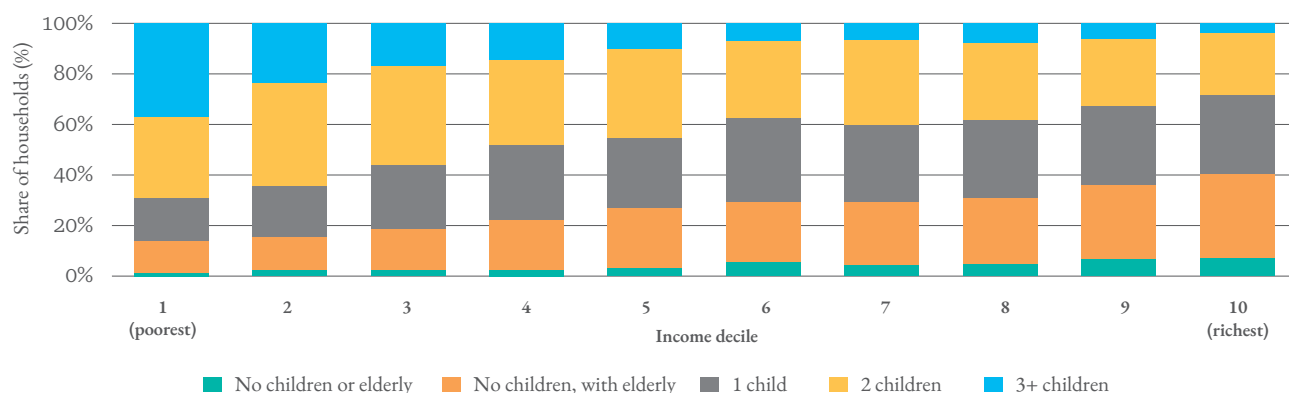
Source: 2018 VHLSS and World Bank calculations.

Health

In 2020, health insurance covered 91 percent of population (MOH, 2021). Vietnam introduced new reforms to the Health Insurance Law in 2015 to improve universal health coverage. Support was shifted from supply-side to demand-side subsidies on health insurance premiums for various groups such as poor and near poor, among others. These reforms were aimed at expanding participation in health insurance, promoting enrollment in health insurance through household subscription, and increasing entitlements to the insured (Thu et al., 2020). As a consequence of the reforms, most households are covered and coverage does not vary significantly across the income distribution, although the nature of coverage does (Wai-Poi et al., 2022).

Out-of-pocket health expenditures are high in Vietnam, reducing the net value of public health services. Despite the high level of health insurance coverage, out-of-pocket costs remained high at 45 percent of current health expenditure in 2018 (see Chapter 6). In 2016, 9 percent of the population incurred catastrophic health expenditure measured as out-of-pocket spending exceeding 10 percent of household consumption or income. As with education expenses, those which are paid to a public entity are treated as co-payments or a tax. Private expenses such as medicines from a pharmacy would not be included.

BOX	7.2.	Limitations to CEQ methodology in Vietnam

Decentralization is an important feature of fiscal spending and decision making in Vietnam. Vietnam has 63 provinces that differ significantly in size, economic structure, and level of development. Their average size is relatively small compared to that in many other countries, with an average of 1.5 million inhabitants per province and 8,500 per municipality. These ratios are much smaller than the OECD average (3 million inhabitants per region and 37,800 inhabitants per municipality) and in other more populous developing countries, such as China and India, but also Malaysia and Mexico (OECD, 2020). In turn, this means that smaller provinces are not able to take advantage of economies of scale and efficiently solve problems because of externalities (Xu, 2011).

Along with an increasing number of provinces, Vietnam has embarked on extensive spending decentralization since the mid-1990s; current levels are significantly higher than those of its peers. Within the set of rules and norms applied across the country, subnational governments have at their discretion an increasing share in total expenditures, from 26 percent in 1992 to close to 60 in 2020. They are also responsible for over three-quarters of the country's public investment. The subnational share of spending is higher in key sectors such as education (90 percent), health (80 percent), and transport (65 percent), some of which are key for fiscal incidence analysis. Subnational spending as a share of total government spending is now significantly higher than the international average (24 percent) and the lower middle-income average (20 percent). Subnational investment spending is almost double the averages in the unitary countries (34 precent) and overall (39 percent); see figure below.

There has not been a corresponding increase in subnational revenues; "balancing" transfers from central government make up the growing financing gap. The proportion of decentralized revenue to total local revenue has declined over time as there is very little revenue autonomy at the subnational level. Balancing transfers in turn have constituted a growing share of local financing; 47 out of 63 provinces are dependent on balancing transfers from the central government. The current balancing transfers system is equity-based (using "registered population" as the key criterion for allocation). As resources are increasingly transferred to the subnational levels, the central government lacks necessary resources for nationally important infrastructure investments. At the same time, the leading urban areas also lack the resources required to meet the infrastructure needs to accommodate economic growth.

Fiscal decentralization creates challenges to obtaining provincially disaggregated expenditure and revenue data. A subnational fiscal data based was created in 2014 and informed the World Bank's previous household fiscal incidence analysis study (World Bank, 2017). However, this database has not been updated, which affects the analysis in this chapter.

7.3. Vietnam's pre-COVID-19 fiscal incidence: who pays and who benefits?

Net impact of fiscal policy on households by income decile

Most households pay more by way of taxes and co-payments than they receive in cash benefits. This section presents the key results showing which households pay which taxes and receive which benefits. Figure 7.2 considers the aggregate impact of fiscal policy, excluding non-cash in-kind health and education spending. The first feature of note is that all but the poorest decile of households are net contributors in cash terms into the fiscal system (and even the first decile sees net benefits of less than 5 percent of their already low incomes). This contribution represents 10 percent or less of household market income for deciles 2-4 and then rises above 10 percent for all other deciles, reaching 23 percent and 20 percent for the richest and next richest 10 percent of people, respectively. Indirect taxation—largely VAT – is modestly regressive in relative terms, ranging from

5.2 percent of the poorest decile's average income to 4.5 percent for the richest. The progressive nature of the aggregate fiscal cash impact is driven by direct taxation, part of which is personal income tax but most of which are contributions to social insurance, particularly social security contributions. Also of note is that direct transfers are relatively small albeit concentrated in the poorest decile and representing just over 10 percent of their income on average.

When in-kind health and education spending is included, the poorest four deciles are net beneficiaries of taxes and public spending, with the poorest decile receiving net benefits of 36 percent of market income (Figure 7.3). The majority of the in-kind benefits comes from education, which is worth around 13–22 percent of market income for the poorest two deciles. However, even when health and education spending is included, the net payment into the fiscal system for richer households remains relatively similar. In education, this reflects the number of richer households who do not have children (or who might be enrolled in private schooling). In health, it reflects high out-of-pocket costs to access public health; these reduce the benefit of health services to all households but actually outweigh the value of benefits for the richest decile.

Figure 7.2. Impact of fiscal policies by per capita consumption decile (excluding in-kind spending
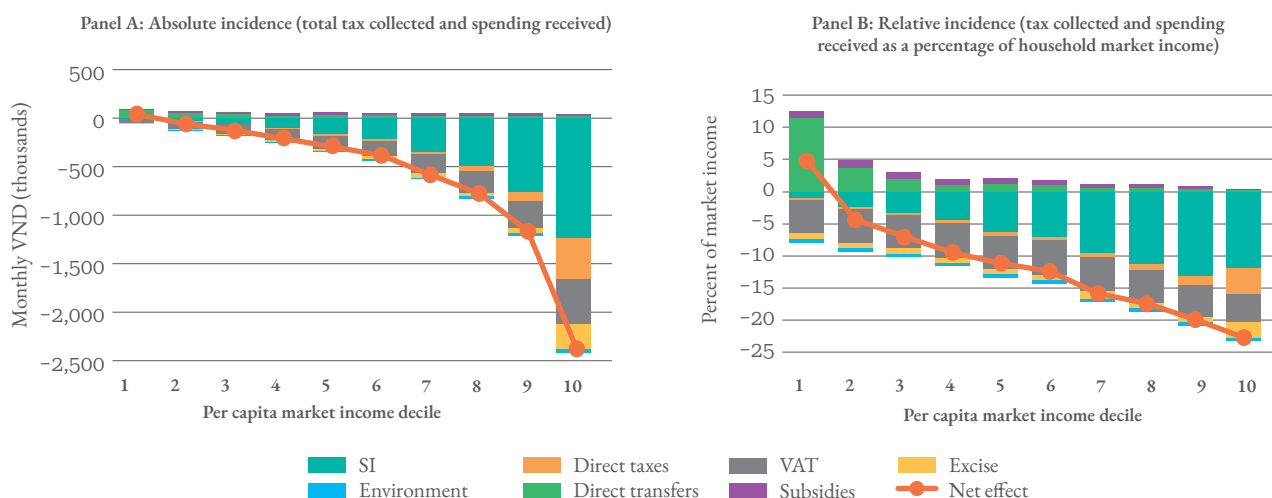
Panel A: Absolute incidence (total tax collected and spending received)

Panel B: Relative incidence (tax collected and spending received as a percentage of household market income)

Note: See Annex 7.1 for key assumptions.
Source: 2018 VHLSS and World Bank calculations.

Figure 7.3. Impact of fiscal policies by per capita consumption decile (including in-kind spending)

Panel A: Absolute incidence (total tax collected and spending received)

Panel B: Relative incidence (tax collected and spending received as a percentage of household market income)
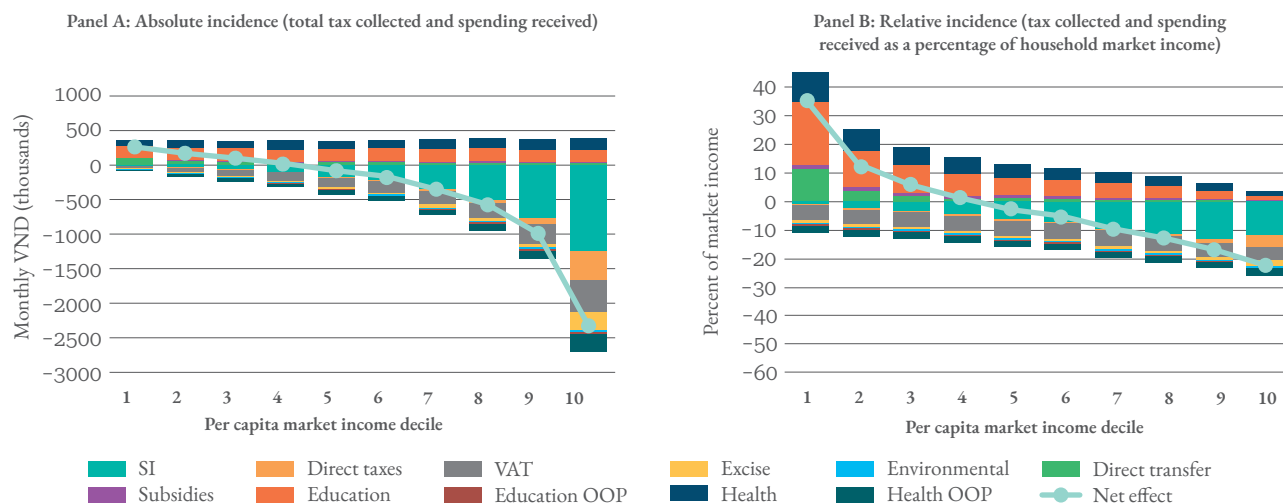
Note: See Annex 7.1 for key assumptions.
Source: 2018 VHLSS and World Bank calculations.

Given the pattern of benefit and burden across the household income distribution, what is the impact of fiscal policy on poverty and inequality?

The short-term value of transfers received by the poor are less than the taxes they pay – largely indirect taxes on consumption. However, the longer-term benefits they get from public spending on health and education are likely to be greater than the taxes paid now. At market incomes, the LMIC ($3.20/day 2011PPP) poverty rate in Vietnam in 2018 was 7.5 percent. Figure 7.4 shows how each fiscal instrument contributes to poverty reduction or increases poverty. Direct cash transfers contribute 1.1 points of poverty reduction (that is, it reduces poverty by 1.1 points). Direct taxes—mostly social security and health insurance contributions—reduce this contribution by 0.4 points, meaning that poverty measured at disposable income is 0.6 points lower than at market income. However, while electricity subsidies make a minor contribution to poverty reduction, excises, environmental taxes, and particularly VAT more than offset

Figure 7.4. The impact of fiscal policy on poverty by fiscal instrument
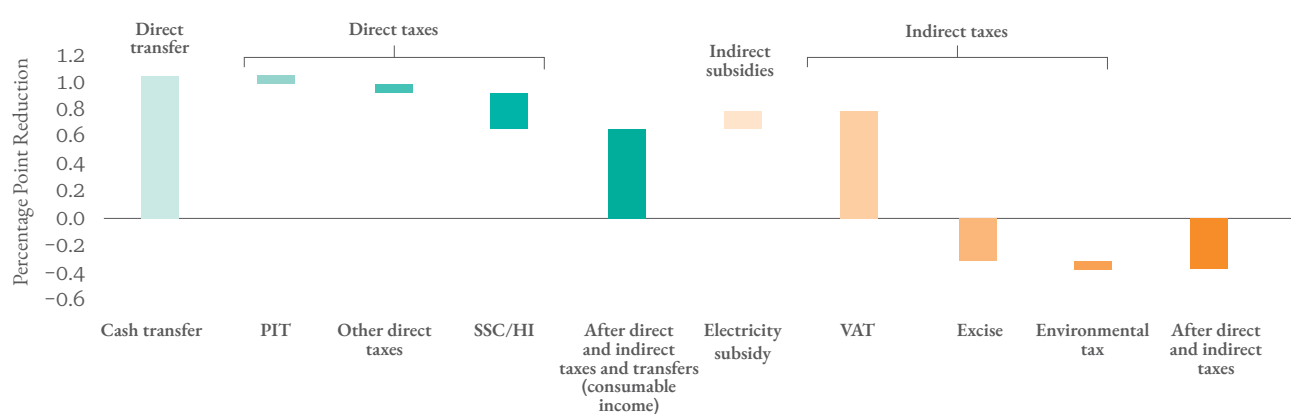
Note: Marginal effects on poverty reduction are presented. A positive bar represents contribution to poverty reduction. A negative bar represents an increase in poverty. Individual subcomponents are scaled to the marginal effect of each fiscal category. For example, the marginal effects of VAT, excises, and environmental taxes are scaled to sum to the marginal effect of indirect taxes as a category.
Source: 2018 VHLSS and World Bank calculations.

the impact of direct transfers and result in overall poverty being higher after all fiscal policies are considered. That is, poverty when measured with market incomes is 7.5 percent; after cash transfers and direct taxes it falls to 6.9 percent; after electricity subsidies and indirect taxes it increases to 8.0 percent, or 0.5 points higher than before fiscal interventions. However, spending on health and particularly education not only benefits poorer households more today, as discussed next, it also benefitting them in the long-term. The returns to education in terms of better adult health outcomes and higher earnings are well-documented and poorer children disproportionately benefit (for example, see Holla et al 2021 and World Bank (forthcoming)).

The progressive nature of in-kind spending, particularly on education, means that the fiscal system reduces household inequality. While the fiscal system results in a small increase in poverty, it does help redistribution, and the Gini Index measure of inequality is reduced by nearly 3 points after accounting for all cash-based policies and by 5 points after including non-cash health and education spending (Figure 7.5). The key progressive instruments are direct taxes and transfers, which reduce inequality by nearly 3 points, driven mostly by social security and health insurance contributions, and education spending, which contributed nearly another 2 points of inequality reduction. Indirect transfers (electricity subsidies) and indirect taxes were largely neutral and had little effect on inequality.

Impact and cost-effectiveness of fiscal policy instruments on inequality

Vietnam raises more revenue from the least progressive taxes and spends the most on the least progressive expenditures, indicating the potential for fiscally neutral reforms which would reduce inequality further. The previous section examined how much each fiscal instrument increased or reduced inequality. The following chart considers the progressive instruments and asks which is the most cost-effective in reducing inequality. That is, given the money spent on each instrument (or the revenue raised), how much is inequality reduced? Non-progressive instruments such as indirect taxes are excluded. In Figure 7.5, personal income taxes decreased inequality by about 0.5 points and other direct taxes by 0.2 points while the impact of social insurance contributions (e.g., social security, health and unemployment insurance) was much larger (1.6 points). Figure 7.6 presents the results in a different light. First, a cost-effectiveness index is constructed (on the left-hand axis), which is the decrease in inequality per dong raised (taxes) or spent (spending).58 Second, this is compared to the size of spending (or revenue in the case of a tax) on that instrument (right-hand axis). Personal income taxes reduce inequality the most per dong of revenue raised. Other direct taxes are half as effective at reducing inequality, and social insurance contributions are only one-third as cost-effective. However, social insurance contributions are responsible for five times more revenue contributions as both personal income and other direct

Figure 7.5. The impact of fiscal policy on inequality by fiscal instrument

Note: Marginal effects on poverty reduction are presented. A positive bar represents contribution to poverty reduction. A negative bar represents an increase in poverty. Individual subcomponents are scaled to the marginal effect of each fiscal category. For example, the marginal effects of VAT, excises and environmental taxes are scaled to sum to the marginal effect of indirect taxes as a category.
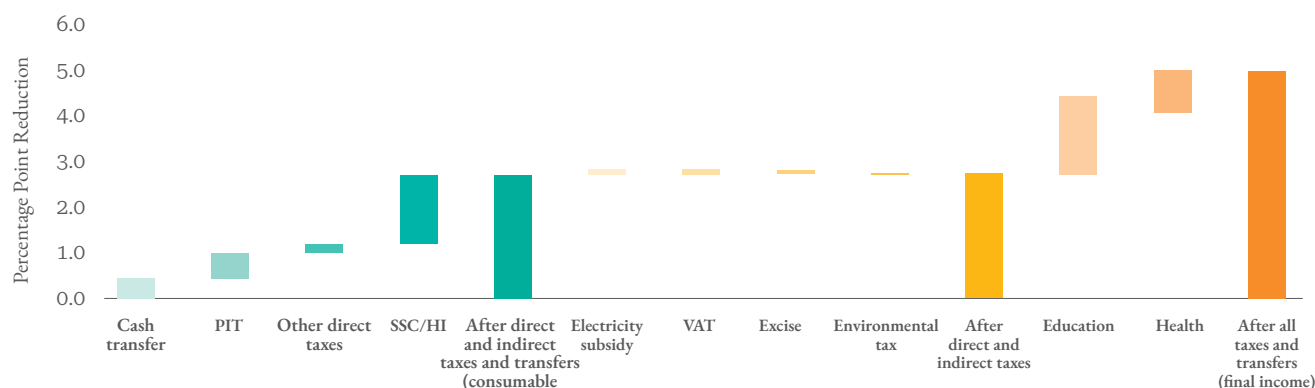*Source*: 2018 VHLSS and World Bank calculations.

taxes combined, and so have the largest absolute impact on inequality (Figure 7.6). If the revenue mix were rebalanced to bring more in from direct taxes and less in from social security contributions, inequality would be further reduced at no fiscal cost. Alternatively, if Vietnam were looking to increase tax revenues, broadening the income tax base would both bring in more money and reduce inequality at the same time. Similar results can be seen on the expenditure side. Direct cash transfers are nearly three times more effective at reducing inequality than less well-targeted electricity subsidies, yet almost as much is spent on the subsidies as the transfers.

Value of in-kind health and education spending can also take into account quality

Poorer children do not benefit from education and health spending to the same extent as richer children. Just over two-fifths of the total reduction in inequality through Vietnam's fiscal system comes from health and education spending (Figure 7.5). These benefits are in-kind services received, and the benefit level has been set at the cost to the government of delivering these services. However, the *value* to households may not be the same as the cost of providing them. Quality may vary from province to province or between urban and rural locations, for example. Some classrooms may have better equipment than others, smaller teacher-pupil ratios or more textbooks. To test how sensitive this key contributor to fiscal inequality reduction is to the assumption that the benefit to a household is the cost of service provision, an alternative benefit level can be constructed. For this purpose, the Human

Capital Index (World Bank, 2020) can be disaggregated across household welfare quintiles (D'Souza, Gatti, and Kraay, 2019). Figure 7.7 shows how well each quintile scores on the different HCI components and overall relative to the richest quintile.[59] For example, the poorest quintile stays in school for only 80 percent of the time that the richest quintile does. Moreover, the average test scores for the poorest quintile are only 87 percent those of the richest quintile, so even when they do stay in school, they do not learn as much. As a consequence, when their years of schooling are adjusted for how much they learn, the poorest quintile has only 71 percent of the educational attainment as the richest quintile. Stunting outcomes are even more unequal.

Adjusting the value to a household in a particular quintile of health and education spending by their human capital outcomes means inequality is reduced by 15 percent less. The value of health and education spending to each household can then be adjusted according to that household's S-HCI quintile result relative to that of the richest quintile, reflecting the lower human capital outcomes that household achieves. After making this adjustment, the contribution of health and education benefits to inequality reduction falls by around one-third, from 2.3 points to 1.6 points, and the overall redistributive effect of Vietnam's fiscal system declines by 15 percent, to around 4.4 points in total (Figure 7.8).

Figure 7.6. Magnitude of different fiscal instruments and their cost-effectiveness at reducing inequality
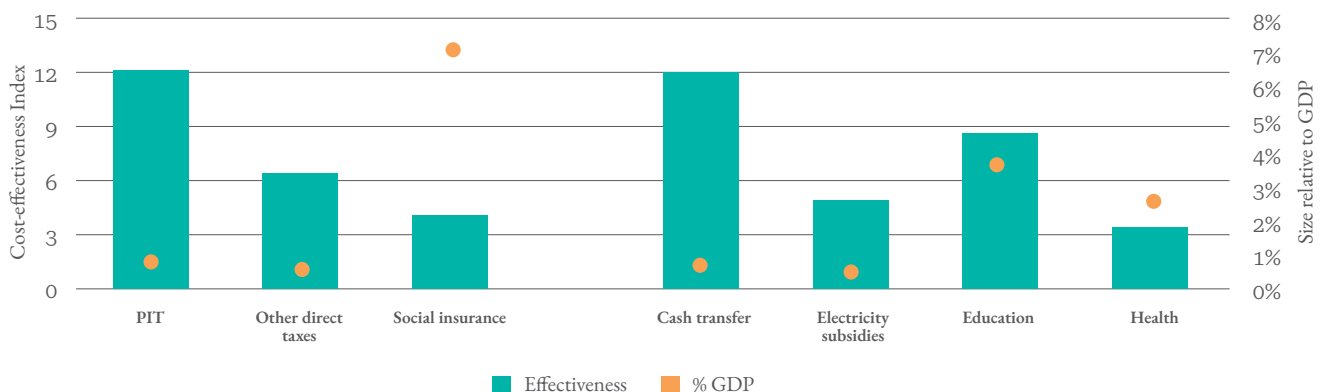
Note: Cost-effectiveness index is the marginal contribution to inequality reduction (points of Gini changed) divided by total spending.
Source: 2018 VHLSS and World Bank calculations.

Figure 7.7. Socioeconomic-disaggregated Human Capital Index (S-HCI) by component
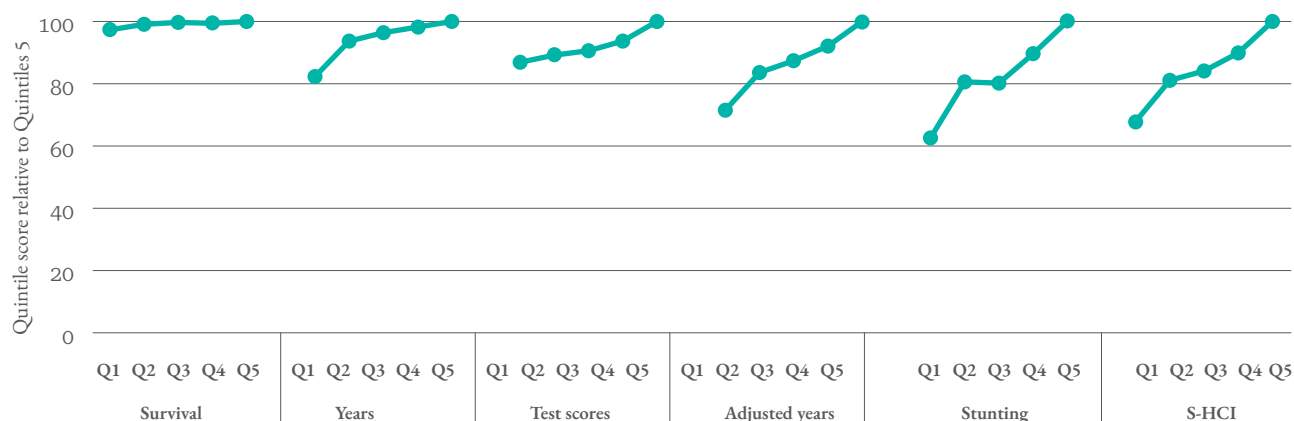
Note: For each component (and the aggregate index), the Q5 score is normalized at 100 and the other quintile scores normalized relative to this. That is the normalized score for Quintile X is Qx / Q5.
Source: D'Souza, Gatti and Kraay (2019) and World Bank calculations.

Figure 7.8. The impact of fiscal policy on inequality after adjusting value of in-kind benefits for S-HCI differences
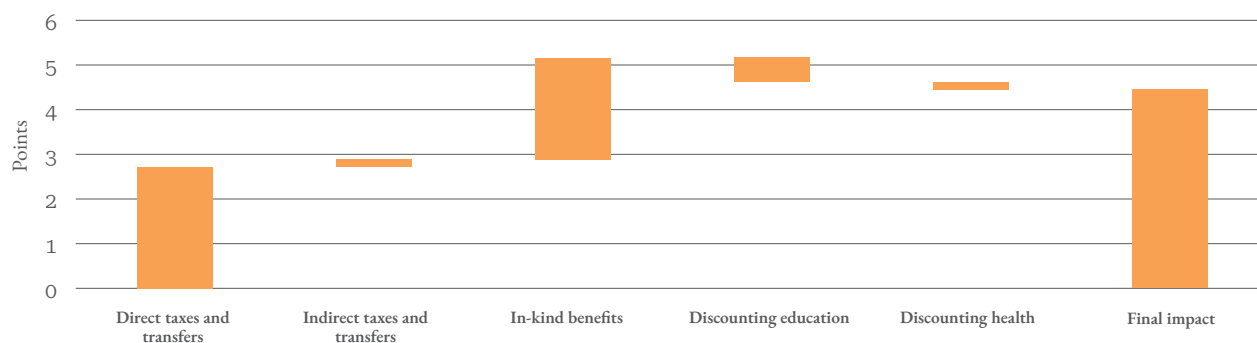
Note: Marginal effects on inequality reduction are presented. A positive bar represents contribution to inequality reduction. A negative bar represents an increase in inequality. Health and education discounting are as per the note to Table 7.2.
Source: 2018 VHLSS, D'Souza, Gatti and Kraay (2019) and World Bank calculations.

A longstanding and persistent issue with general education is financing inequity for public schools, especially those in the most lagging ethnic minority and mountainous areas. Schools in remote and poor areas are on average underfunded. Ethnic minorities and low-income students are more likely to attend low-quality school facilities that lack qualified teachers, instructional materials, technology, critical facilities, and physical maintenance. The absence of these facilities negatively impacts learning ability and exacerbates existing inequities in student access and learning outcomes.

Equalizing opportunities requires public policies and investments that compensate for the gap in private investments between children of privileged and underprivileged parents (Narayan et al., 2018). Government has a role to play in leveling the playing field so that Vietnamese children regardless of circumstances can grow up with equal access to educational opportunities. If the circumstances of a child's upbringing are linked to their opportunities in life, then certain groups of children will not be able to realize their full potential. Globally, as well as for East Asia and Pacific countries, public spending on education

increases with income levels, and relative economic mobility tends to be higher as well in countries with higher spending as a share of GDP. The evidence thus suggests that richer countries tend to have higher relative mobility in education, on the average, because they tend to invest more (relative to the size of their economy) in human capital development to equalize opportunities (Narayan et al., 2018).

7.4. Conclusion - Insights from international experience

Vietnam can learn from countries that achieve greater redistribution through fiscal policy. In international comparison, particularly compared to other lower middle-income countries, Vietnam is one of the better performers with respect to poverty and around average with respect to inequality. This section concludes by benchmarking Vietnam's performance with other countries in the CEQ database, and then discussing how some countries are able to achieve more pro-poor outcomes with different combinations of fiscal instruments. Fiscal policy can be used to both reduce inequality in Vietnam today and finance sustainable

pro-growth and pro-poor investments for the future. Chapter 8 further discusses key fiscal policy priorities.

High-income countries tend to have the most progressive mix of fiscal policy for the poor

Using the CEQ methodology across a selection of low to high-income countries, richer countries tend to have the most progressive mix of fiscal policies that help further reduce poverty (Figure 7.9). The previous section showed that Vietnam's fiscal policy in 2018 increased short-term poverty slightly by 0.6 points once all direct and indirect taxes and transfers are taken into account, exluding the many beneficial long-term poverty reduction effects of public investments in health and education. At the same time, inequality is reduced by 2.9 points when only cash instruments are considered and by 5.2 points when in-kind spending on health and education are also included. How do these results compare to other lower-middle-income countries? The small increase in poverty from fiscal policy is a relatively good outcome for a lower-middle-income country based on the methodology, which average a 1.5 point increase and some of which see 5 or 7 point increases.

Figure 7.9. Impact of fiscal policy on poverty by country income level
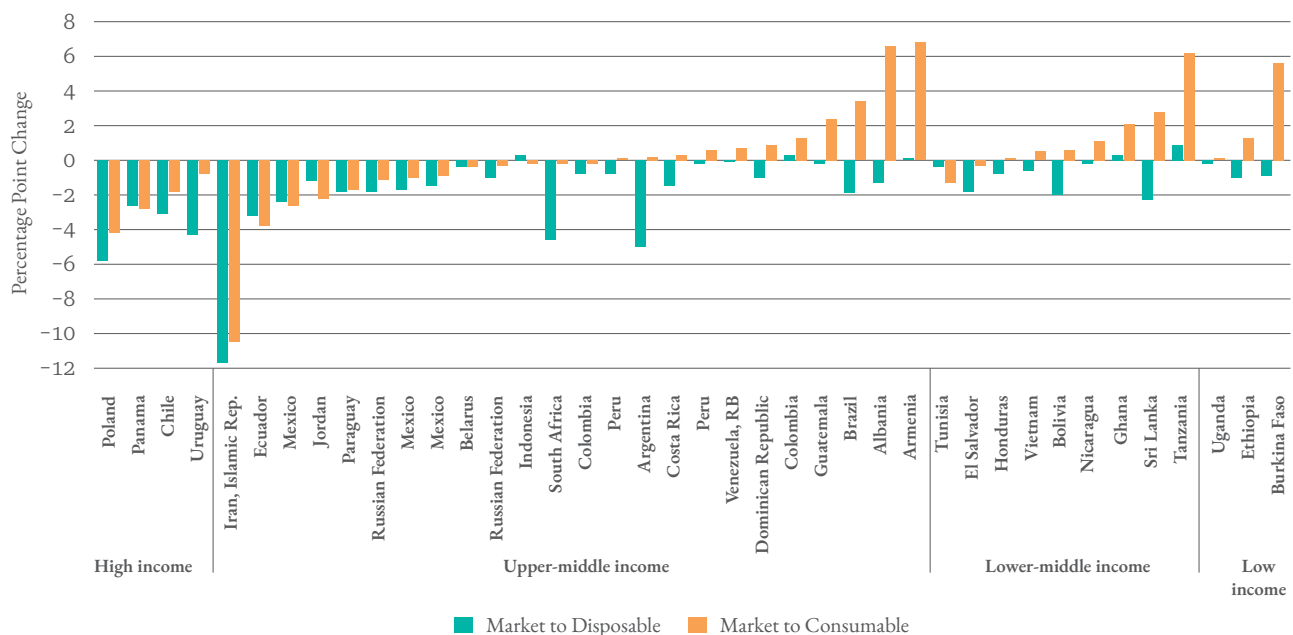
Note: Pensions treated as deferred income. Poverty is measured at the relevant World Bank international poverty line for each country's income level: $1.90 for low-income countries, $3.20 for lower middle-income countries, $5.50 for upper middle-income and high-income countries.
Source: CEQ and World Bank databases and World Bank calculations.

The impact of fiscal policy on reducing inequality is more mixed across economies from different levels of development. The reduction in inequality from Vietnam's fiscal policy is around average for lower- middle-income countries. When excluding in-kind health and education spending, only Guinea does not see inequality decrease; in all other countries inequality declines. The 2.9-point decrease in Vietnam ranks in the middle of lower-middle-income countries (Figure 7.10 Panel A). Similarly, when in-kind spending is included (Figure 7.10 Panel B), Vietnam's ranking among these countries remains unchanged, although it gets closer to the best performers.

Indirect taxation tends to be main source of burden for the poor

Of the 33 low, lower and upper-middle-income countries out of the 48 countries for which data are available in the CEQ cross-country database, the increase in poverty occurs when moving from disposable income to consumable income (Figure 7.9).[60] That is, the burden of indirect taxes such as VAT and excises can cause households to become impoverished if there is not an offsetting benefit from direct cash transfers. However, in all high-income countries except for Romania and around half of upper middle-income countries, poverty is reduced at both the disposable and consumable income stage; direct transfers are well targeted enough with sufficient coverage generosity to more than offset the effect of indirect taxation.

A reliance on indirect taxation initially presents a trade-off with respect to revenue collection and equity (Fuchs, Sosa, and Wai-Poi, 2021). Some countries apply extensive VAT exemptions or preferential rates to staples such as food and clothing. These exemptions can be quite meaningful to poorer households for whom these items make up a greater share of their consumption baskets. At the same time, richer households also consume these goods and in greater amounts, meaning that richer households usually benefit more from the often considerable tax expenditures. Countries with such exemptions have more neutral or even progressive indirect taxation incidence but lower revenue collection, as is discussed in Fuchs et al. (2021) and Wai-Poi et al. (2022).

The degree of informality in an economy should also be considered. Indirect taxes are usually not applied to purchases of goods and services at informal locations, such as street stalls.

Some degree of indirect taxation is still included in the price, as inputs into production are often bought on the formal market (such as electricity), but VAT is not applied to the final good, meaning the effective tax rate is lower. As Bachas, Gadenne, and Jensen (2020) show for 31 developing countries, the share of household consumption spent in the informal sector declines with income; the rich face an effective rate twice as high as that of the poor on average. This phenomenon reverses the revenue-equity trade-off of exemptions and preferential rates: greater informality means more progressive indirect taxation but lower overall collection rates.

Progressive combinations of indirect taxes and direct transfers

The mix of taxes used by a country has a strong influence on how progressive its fiscal policy will be. Direct taxes, such as corporate and personal income taxes, property taxes, and inheritance taxes, are powerful tools for reducing inequality. They are paid largely by richer households, directly reducing the inequality arising from market incomes. But part of the revenues can also be used to finance pro-poor investments, such as in human capital and physical infrastructure, thus indirectly reducing inequality in the future. Indirect taxes, such as VAT and excises, are much less progressive (as has been seen to be the case in Vietnam) and often regressive, representing a greater percentage of market incomes for poorer households. However, collecting personal income tax requires significant tax administrative capacity. As a consequence, most developing countries rely largely on increasing indirect taxation as they increase tax revenues as a percentage of GDP and move to a higher income level. Fuchs, Sosa, and Wai-Poi (2021) show that as countries move from low income to lower-middle to upper-middle-income levels, they largely increase their tax revenues not through progressive personal income tax but instead through greater levels of less progressive indirect taxation (Figure 7.11). Even non-OECD high-income countries are more reliant on indirect taxation relative to direct taxation. It is only in OECD high-income countries that direct taxation outweighs indirect taxation in the revenue mix. Consequently, for upper-middle-income countries looking to transition to high-income status, strengthening tax administrative capacity and broadening the personal income tax base is a sound way to both increase revenue collection and reduce inequality. For other developing countries, greater revenues are realistically going to be collected through indirect taxes.

Figure 7.10. Impact of fiscal policy on inequality by country income level
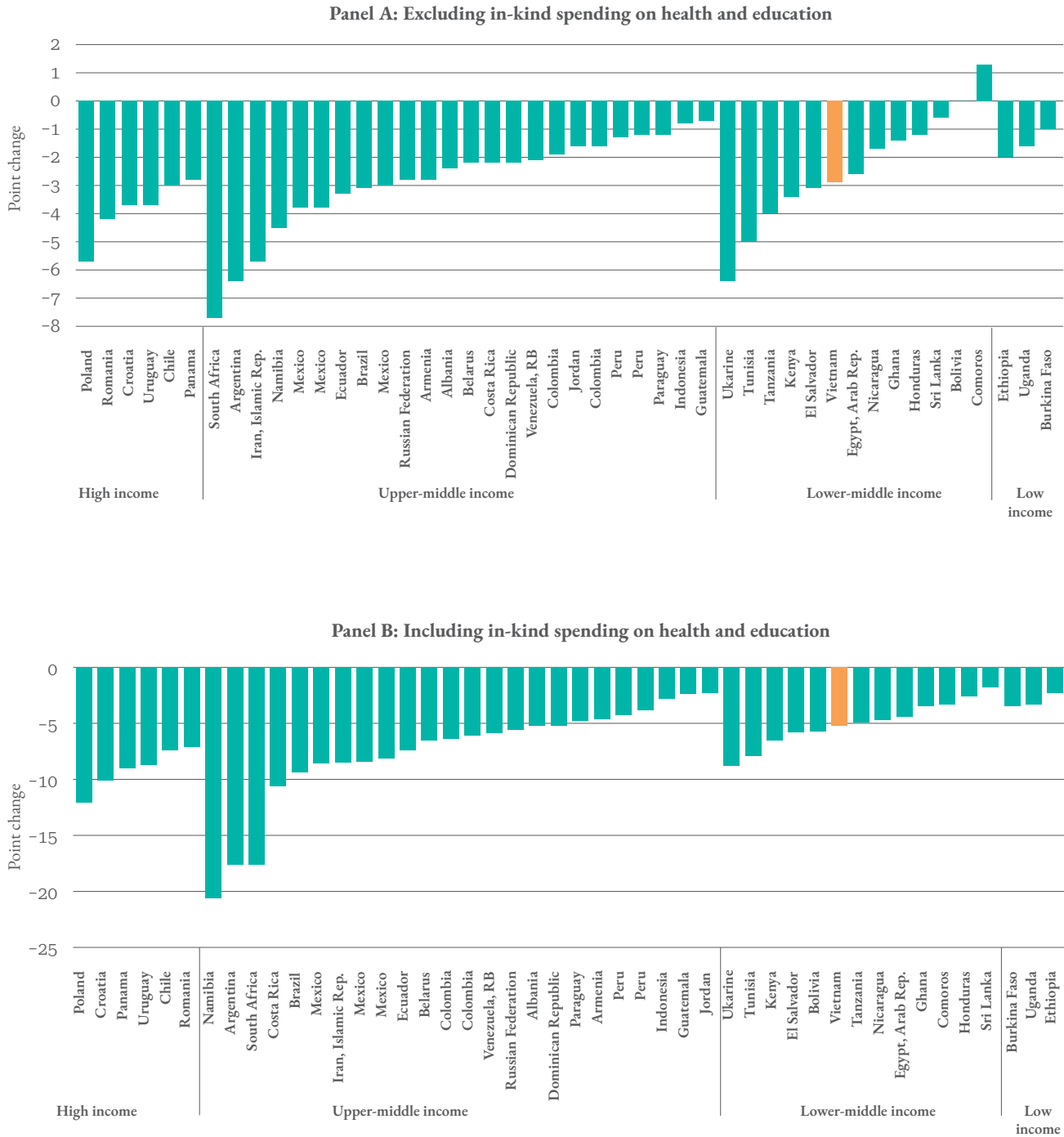
Panel A: Excluding in-kind spending on health and education

Panel B: Including in-kind spending on health and education

Note: Pensions treated as deferred income.

Source: CEQ and World Bank databases and World Bank calculations (see Rodriguez and Wai-Poi, 2020).

Figure 7.11. Tax mix by country income level, direct and indirect taxes
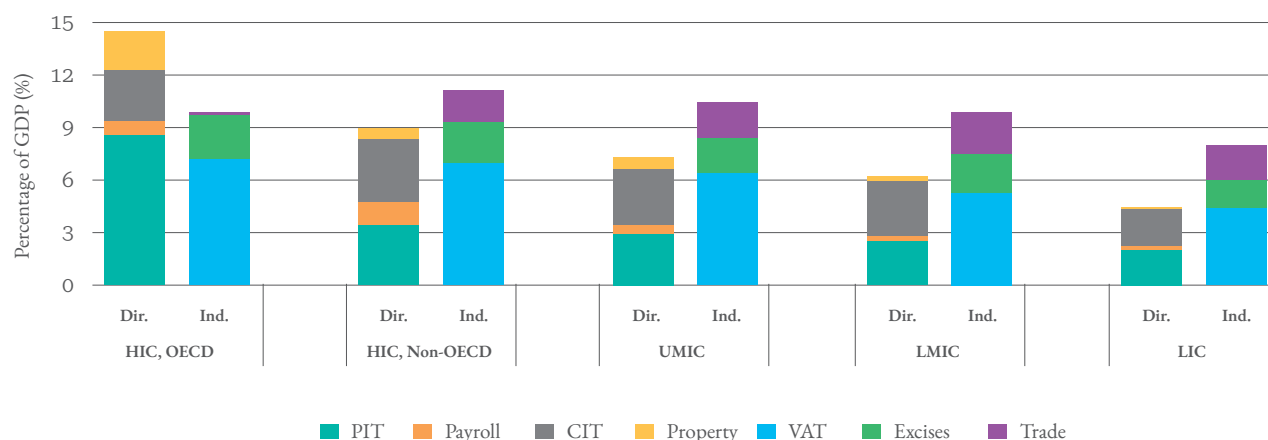
Note: CIT = corporate income tax; Dir. = direct taxes (CIT, payroll tax, PIT, property tax); HIC = high-income country; Ind. = indirect taxes (excise, trade tax, VAT); LIC = low-income country; LMIC = lower-middle-income country; OECD = Organisation for Economic Co-operation and Development; PIT = personal income tax; UMIC = upper-middle-income country; VAT = value added tax."

Source: Fuchs, Sosa and Wai-Poi (2021), World Bank staff calculations based on data from IMF World database.

Non-progressive taxation can be combined with progressive transfers to achieve a net progressive fiscal system. As this chapter has made clear, the impact on poverty and inequality of taxes should not be considered in isolation. All taxes will place a burden on at least some households. It is the net effect of these taxes *and the spending they finance* which determines the extent to which a fiscal system reduces poverty and inequality. The most effective instrument for reducing inequality is targeted direct cash transfers. In almost all countries, poorer households enjoy a greater share of cash transfer spending than richer households (Fuchs et al., 2021) which represents an even greater percentage of their market income. Thus a combination of increased indirect taxes—perhaps through the removal of inefficient exemptions and preferential rates—can both raise revenues and reduce poverty and inequality if it is combined with an expansion of a targeted safety net.[61]

Moreover, fiscal policy can reduce inequality without necessarily spending more. Inefficient spending on energy and food subsidies can be better directed toward targeted direct transfers. A fraction of the subsidy spending can achieve greater reductions in poverty and inequality when spent as targeted cash transfers (Fuchs, Sosa, and Wai-Poi, 2021).

Reducing household disparities through health and education spending

Vietnam's health and education spending, while progressive, reduces inequality less relative to cash transfers than in other countries; in part this is because of relatively low spending levels on health. Almost all countries reduce inequality through public investments in education and health. The issues with quality and value of such spending to households notwithstanding, in most countries spending on human capital accounts for the majority of the inequality-reducing effect of fiscal policy (Figure 7.12.). Vietnam is relatively unusual in that less than half (around two-fifths) of the fiscal impact on inequality comes from health and education spending. In part this reflects relatively low spending levels in these sectors. For example, while Vietnam's education spending (4.0 percent of GDP) is broadly in line with that of upper middle income (3.9 percent) and middle income (3.7 percent) averages, it is lower in health (2.3 percent compared to 3.3 percent for upper middle income countries and 2.8 percent for middle income ones).[62]

Figure 7.12. Reduction in inequality from cash and non-cash fiscal instruments
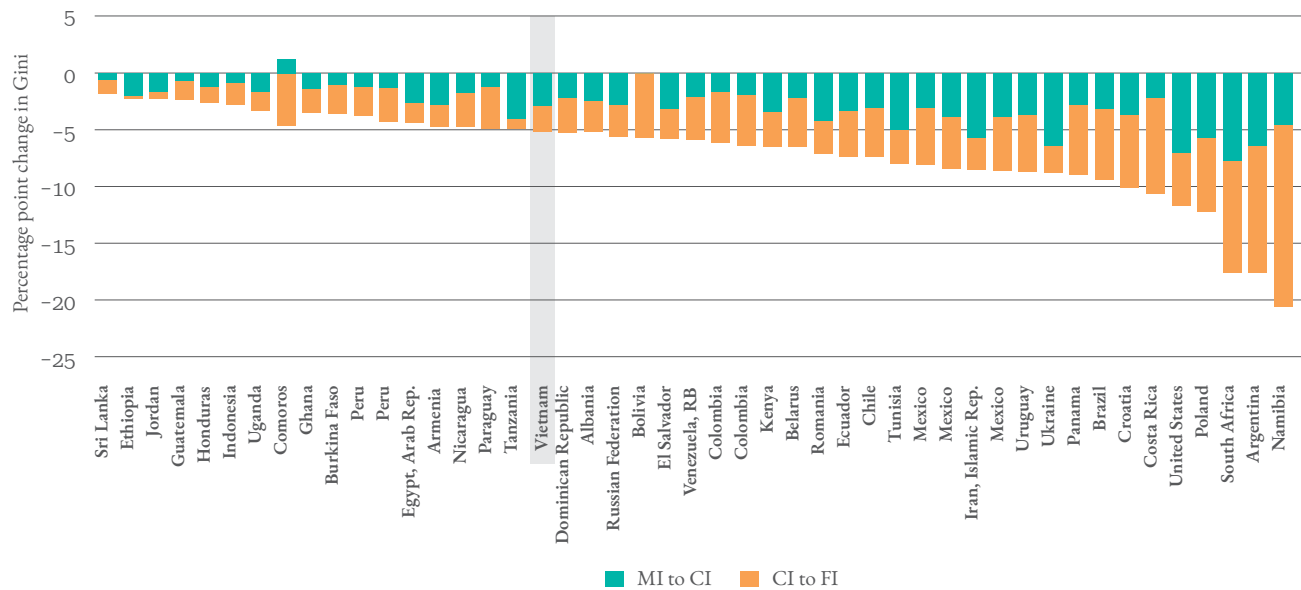
Note: Pensions as deferred income treatment.

Source: CEQ and World Bank databases and World Bank calculations (see Rodriguez and Wai-Poi, 2020)

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7.6. Notes

[53] The CEQ approach was developed by the Commitment to Equity Institute (CEQ Institute) at Tulane University. The methodology, implementation guidelines, applications, and software of the CEQ approach can be found in Nora Lustig (2018).

[54] Pensions can either be treated as deferred income–a person makes contributions when they are working and this is in effect saving, and then they draw down on this income when they retire—or they can be treated as government taxes and transfers—contributions are treated as a tax and payments are treated as a transfer. In the case of Vietnam, the baseline treats pensions as deferred income. See the companion CEQ report for a more detailed discussion of the results when pensions are treated as taxes and transfers.

[55] 2020 VHLSS data does not provide a pre-COVID baseline.

[56] See Fuchs and Gonzalez Icaza (2019) for a more detailed discussion.

[57] Excluding acquisition of non-financial assets.

[58] Technically, the change in Gini (points) per 1,000 billion dong of expenditure (or revenue in the case of taxes).

[59] The welfare quintiles are not based on a monetary aggregate such as consumption or income but are rather a generalized welfare measure based on a number of proxies for household welfare such as household demographics, asset ownership, and housing quality, depending on the underlying data source, condensed into a single welfare index (technically, the first component of a Principal Component Analysis).

[60] In only nine countries does poverty increase when moving from market income to disposable income.

[61] Phillip et al. (2018) show that even removing VAT exemptions and spending 75 percent of proceeds on an untargeted universal cash transfer both raises revenues and reduces inequality.

[62] Based on latest data from World Development Indicators; middle income averages are for both lower and upper middle income countries.

ANNEX	7.1

Key assumptions in modelling tax and transfer incidence in Vietnam

Direct taxes

Households that have income from formal non-agricultural business activities are currently taxed along the progressive personal income tax (PIT) rates. If these types of incomes should be taxed according to the 0.5–5% business income tax rates, more details would be needed on the criteria according to which these rates are assigned.

Voluntary health insurance contributions for the self-employed are randomly assigned to those with a voluntary health insurance card and calibrated to the number of voluntary contributors in the administrative data; pensioners pay the full 4.5 percent contributions (employer plus employee rates).

Formality for PIT purposes is assigned to employees who report having paid leave, pay SSC, and have an employment contract; self-employed with a registered business are considered formal. Only formal workers pay PIT. The number of PIT taxpayers in 2018 is not available.

Gifts are taxed according to formal regulations (gifts from outside the family above 10 million per year). It is unlikely that all gifted assets are declared; lack of data on the number of payers/aggregate revenues prevents more careful calibration.

Land value is used as a proxy for land size when assigning the rate of the non-agricultural land taxes. Information on how many households pay what rate and the aggregate revenues coming from households is not available.

Cash transfers

All cash transfers are taken directly from the data. Not all programs are included due to lack of data.

Indirect taxes and subsidies

The Input-Output (IO) table used in the simulation of environmental taxes has highly aggregated categories, requiring blunt assumptions about the pass-through of these taxes. All information about the proportion of the output of a given sector that can be attributed to the production of the taxed product has been used.

Administrative data on electricity subsidy spending is not available. The current analysis applies the difference between the "cost-of-return" for one kWh of electricity and the subsidized price for one kWh.

In-kind transfers

In the case of both health and education, the aggregate annual public expenditure less household expenditures on public services is used as the measure for the total value of in-kind transfers. Data from past years on costs of each level of education or each kind of treatment are used, then uprated while maintaining their proportion to the total government expenditures in 2018. This allows a distinction between expensive public provision of treatments or education and assignment to particular households in the data.

Steffen Flessa and Nghiem Tran Dung (2004) estimate the costs of each kind of health intervention in Vietnam (inpatient vs. outpatient at various types of facility); these values are uprated to match the total public spending on healthcare in 2018.

Data on aggregate public expenditures and the number of students enrolled at each level are combined with data from past years on expenditures on each level of education to uprate these values while maintaining their proportionality to total government expenditures in 2018. Data on public spending per student could improve accuracy.

Chapter 8.
Policies for the way forward

Policies are discussed following the Last Mile to Next Mile framework of this report. Over the last decade, rapid economic growth was broadly inclusive and livelihoods in Vietnam improved dramatically. The rapid speed of developmental change, however, left some behind who did not have the opportunity to join the most vibrant sectors of the economy and has also created a large class of the population that are not poor but also not yet middle class. Thus, the poverty and equity agenda is no longer only about raising minimum living standards and tackling chronic poverty; it is also about creating new and sustainable economic pathways for a more aspirational population. The emergence of COVID-19 added to challenges looming in regard to skills, productivity, climate change, and an aging society. Whether these constraints to Last Mile poverty reduction and Next Mile high-income development challenges end up being short-term growing pains or long-term bottlenecks to the welfare trajectory of Vietnam's households will depend in part on policy and prioritization.

8.1. Addressing a new context and *Last Mile* Chronic Challenges

Many of the principal constraints to Last Mile chronic poverty reduction challenges remain similar to those that existed at the beginning of decade. These constraints and evidence-based policy recommendations are summarized in Table 8.1. Several key policies that are important for continuing tackling Last Mile poverty reduction challenges are further summarized. Readers can also refer to a selection of reports that discusses these issues and recommendations in detail (World Bank, 2018; 2019a; 2019b and Pimhidzai and Niu, 2020).

Moreover, COVID-19 highlighted new issues that require policy attention. A particular challenge that was revealed was the need to provide safety nets and options for groups of people who may not be poor or registered in the social protection system but who face economic insecurity. A second emerging area of concern is the accumulated effect of inequality, learning losses, and income and employment losses on poor and low-income households (World Bank, 2020f).

Modernize the agriculture sector and move up the value chain

For households remaining in agriculture, farm incomes and productivity need to increase for this activity to be an adequate income source. Improving access to productive resources, such as land, improved technologies, and extension advisory services, as well as better linkage to favorable input and output markets, are critical to sustain and improve agricultural productivity. Access to new knowledge and innovations, including the application of appropriate digital technologies, would support productivity growth by substituting for labor intensity, driving down production costs, improving the quality of produce, and broadening profit margins for farmers. The type of agriculture may be different, more specialized, and better integrated across the value chain. This will require new skills and knowledge beyond predominantly primary-level agriculture. The provision of new skills will also increasingly be critical to allow

those with limited access to productive agricultural resources to migrate to other sectors. Commercialization and better value-chain integration would help maintain agriculture that is more competitive and productive. This process needs to be managed with better policies to provide the right skills, knowledge, and technological options for those remaining to be competitive, while also supporting those transitioning to other sectors.

Ethnic minority inclusion policies for further labor market integration

Poverty among ethnic minorities is still high, but progress can be seen in larger numbers of workers transitioning out of agriculture and a steady pace of poverty reduction over the last decade. To continue improving their participation in the labor market, laws protecting the rights of ethnic minorities can be strengthened. The Labor Code and related laws could be strengthened to prevent exploitation and discrimination of ethnic minorities (World Bank, 2021c). Equal opportunity legislation needs to be consolidated with affirmative actions with respect to non-discrimination for ethnic minorities in the workplace, especially in the foreign-invested sector. One rationale behind the growing opportunities for ethnic minorities in the labor market is the low labor cost in some labor-intensive sectors. However, ethnic minority youths in these sectors have encountered difficulties and to some extent unequal treatment. Strengthening the enforcement of the Labor Code and related legislation in this context is needed but equally challenging because many stakeholders, especially at the local level, might be resistant to change in order to maintain their comparative advantages in attracting private investment.

Furthermore, understanding and recognizing the heterogeneity in ethnic minority development is needed to ensure that resources can be better targeted to improve development outcomes. Among different ethnic minority groups, there are significant variations in socioeconomic development. These range from differences in educational attainment, main sector of employment, to living conditions and poverty rate, among others. In identifying the needs and areas of support for ethnic minorities, governments should seek to understand the factors that explain these differences in socioeconomic outcomes.

Table 8.1. A new context and Last Mile policy summary

	RECOMMENDATIONS	ADDITIONAL REFERENCES
Small shareholder farmers exhibit low productivity and earnings	For households remaining reliant on agricultural earnings, addressing sub-optimal farmland use patterns is key to unlocking the agricultural potential of the poor by aligning land use with comparative advantages in specific areas. This requires a bolder shift of production from rice and maize to more profitable annual and perennial crops. Key policies to achieving this are: • Enabling the poor to invest in more profitable crops that require costly initial investments, intermediate inputs, or hiring of labor by improving access to credit or land rights. • Strengthening land rights by issuing land titles, which could help increase household access to credit by using land as collateral. • Providing targeted services to the poorest households to improve farm management and business skills to boost agricultural productivity and profits.	World Bank, 2019a
The poor primarily live in more remote areas	Earnings and productivity in household enterprises and family farming can also be improved by strengthening their linkages to the broader economy, with three key measures: • Integrating lagging areas into the broader national economic network to expand their market potential; • Facilitating business linkages between household enterprises and small and medium enterprises; and • Encouraging the agriculture sector to diversify into high-value-added crops and local value chains.	World Bank, 2019a
Lack of labor market inclusion for ethnic minorities	Labor market participation plays an increasingly important role for household income generation and poverty reduction. This aspect should be more central to poverty reduction policies for ethnic minorities. Policies should address constraints to obtaining off-farm opportunities such as low educational attainment, language barriers, or gender-biased household divisions of labor.	World Bank, 2019b
Strengthening area-based targeting financing	Implementation of National Targeting Programs (NTPs) can be strengthened in four areas, namely • Ensuring resource additionality to the lagging communes; • Ensuring allocation of resources based on deprivation at the commune level, so that more deprived communes receive more investments; • Earmarking resources across sub-sectors to ensure that adequate resources are devoted to improving quality of human development services and livelihood interventions; and • Strengthening commune-level monitoring by deploying online data collection and aggregation tools to construct a centralized NTP database.	Pimhidzai and Niu 2020
A new context after COVID-19	Two important lessons from COVID-19 are in regard to social protection modernization, and learning losses. • Both the household and firm COVID-19 relief packages faced some implementation challenges on the ground. In the short term, technology can be leveraged to facilitate self-registration and online registration to identify informal workers needing assistance. Digitalization of payment mechanisms would help make payments more efficient, transparent, and faster. • Children in more remote regions had less access to online learning during school closures. More investment in distance learning and education continuity can minimize learning losses.	World Bank, 2021f

Use technology to reduce economic distance to remote areas

Leveraging digital technologies, integrating network economies, and reducing the cost of migration can help reduce economic distance to rural areas (World Bank, 2019a). The growth of non-agriculture sectors is weaker in rural and low-density areas. A critical factor holding back the poor from being engaged in more off-farm activities is connectivity. These rural economies can become better digitally linked and integrated with the wider economy to expand economic opportunities.

Implementation of National Targeting Programs (NTPs) can be improved to maximize effectiveness

NTPs can provide incremental resources to lagging areas, especially to more deprived communes. The poorest communes face trade-off across many needs and failed to close the gap in access to services relative to better off communes. New NTPs should (i) ensure additionality instead of substitution of resources to disadvantaged communes and (ii) allocate resources to reduce deprivation across communes. Resources can be further prioritized toward investments to improve the quality of human development service delivery. Investments under previous NTPs were heavily focused on infrastructure and less on livelihoods, health, and education. Thus, while connectivity infrastructure improved, commune leaders still identify poor quality of school facilities and poorly equipped health centers as key challenges. Ethnic minority policies should also be more targeted since there is high variation in the outcomes of ethnic minorities across the 53 minority groups. Future NTPs must earmark resources for (i) livelihood interventions, especially promoting value chain participation and (ii) human development investments, especially those promoting progression to tertiary education and facilitating the transition from school to work. It could also provide unconditional commune block grants that would give communes greater control over investment.

Monitoring and evaluation tools can be strengthened, including output and expenditure reporting at the commune level. Commune-level information on achievement of criteria and expenditures is not always readily available at the central level, which hampers both monitoring and targeting of investments. This should be improved by leveraging digital data collection to create a centralized database of investments, outputs, and outcomes to promote evidence-based decision making.

Be observant of existing and widening monetary and non-monetary gaps

COVID-19 highlighted existing inequalities and differences in coping and adaptation. Education outcomes in Vietnam vary by socioeconomic status, and progress in reducing stunting had also stagnated. Women, those in the informal sector, and households in the bottom 20 percent experienced the slowest household income recovery between June 2020 and March 2021. In terms of coping during COVID-19, poor households were more reliant on external sources such as borrowing, while rich households were better able to cope on their own, by tapping into savings.

COVID-19 created unequal impacts which can lead to longer-term implications. Women bear a larger share of caregiving responsibilities, and their labor market activities were more adversely impacted than men's. Informal workers have the fewest safety nets and experienced the most challenges when seeking government cash support. Continuity of education was uneven during COVID-19, and the pandemic has potentially widened gaps in human capital formation because of the uneven capacity of schools across the country. Lost education is unlikely to be recovered, with consequences for lifetime wages; sold assets cannot produce future incomes, and employment scarring is also associated with lower lifetime earnings. Larger businesses and wealthier households were able to make investments to reap larger sales from digital orders, which may lead to widening inequality down the road. Minimizing future disparities will require forward-looking policies and improving existing support systems. International experience suggests that reducing inequality can help accelerate economic growth (Ferreira et al., 2013; World Bank, 2005; 2016b).

| BOX | 8.1. | Gender Dimensions in poverty reduction and inclusion efforts |

Due to intersectionality of gender inequality and ethnicity, ethnic minority women are doubly disadvantaged in various domains. Ethnic minority women face social and economic inequalities compared to ethnic minority men and compared to women nationwide. These are most visible in (i) employment; (ii) in education; (iii) health; and (iv) infrastructure (World Bank, 2022). Focus group discussions revealed that ethnic minority women from Dien Bien province face more disadvantages in terms of language, culture, customs and traditions than the unskilled general labor force (Buchhave, Cunningham, Nguyen, and Weimann-Sandig, 2020). Furthermore, ethnic minority women remain underrepresented in positions of decision making at the central and local levels. By 2017, only 17.5 percent, 12.3 percent and 10 percent of ethnic minority women were leaders and managers at the central, provincial, and district levels respectively.

Increased attention to promoting joint land titling. To increase poverty reduction and shared prosperity it is relevant to speed up the share of land titles that are signed jointly by men and women. Research by the ABP2-Gender Theme finds that the provision for joint land titling in the 2003 Land Law has positive impact on the empowerment of women, household income, expenditure, and access to credit. Households that have joint-titled Land-Use Rights Certificates (LURCs, naming both members of a married couple as owners of land use rights, increase their expenditure by between 1.6 percentage points (for agricultural land) and 2.5 percentage points (for residential land). For residential land, having a joint-titled LURCs increases formal credit levels by 30 percent and informal credit levels by 17.33 percent. A joint-titled LURC for residential land also increases the share of non-farm business income by 1.8 percentage points (Buchhave, Nguyen, Nguyen, 2020). Women named in LURCs for agricultural and residential land are more likely to have held non-farm jobs in the previous year by 1.76 and 3.12 percent-age points, respectively. For a woman in an ethnic minority, being named in an agricultural LURC increases her likelihood of having wage employment by 3.74 percentage points and nonfarm employment by 3.62 percentage points. The country and its people are however not reaping the benefits of LURCs to the extent possible because the conversion to single to joint land titles are progressing slowly since they are left to the initiative mainly of individual household members, who are either not aware of the benefit and/or process. This evidence has informed policy dialogue within the Government and latest in June 2021, the Minister of MoNRE dispatched an official letter (No. 3362/BTNMT-TCQLDD) to provincial people's committees requesting for enhancing the application for joint land titling.

| BOX | 8.2. | Data for better lives in Vietnam |

Vietnam scored 66 on the Statistical Performance Index (SPI) which places it in the middle quintile in terms of statistical performance. The SPI framework, developed by the World Bank Group, assesses the maturity and performance of national statistical systems in five key areas: data use, data services, data products, data sources, and data infrastructure (Dang et al, 2021). Between 2018 and 2019, Vietnam's scores on the SPI have declined marginally.

BOX   **8.2.**   Data for better lives in Vietnam (Continued)

Figure B.8.2.1. Statistical Performance Index scores, 2019
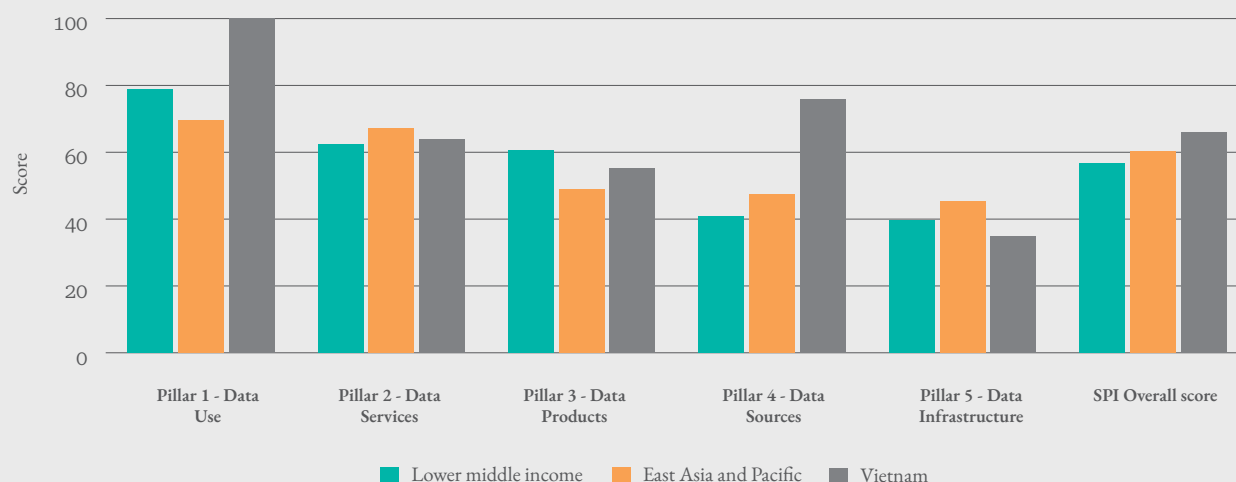
Source: World Bank (2021a, 2021b).

While Vietnam performs fairly well compared to its peers on the SPI, the country still suffers from several shortcomings in its statistical practices:

1. The Vietnam Household Living Standard Survey (VHLSS)—the main socioeconomic survey—has only 9,000 observations for the expenditure module. Thus, the sample is not representative at the provincial level, which is the main policy and spending administrative unit in Vietnam. In Indonesia, for example, the sample is representative at the district level (of which there are 500), thus enabling proper monitoring and analysis of household expenditure.

2. Currently, there are few health surveys available. Understanding health-related issues such risk factors, health behaviors, and non-health determinants such as socioeconomic status is essential to improving the health and well-being of citizens and in turn the development of the country.

3. Access to data remains limited. In 2020, Vietnam was ranked 91st out of 187 countries on the Open Data Inventory. This ranking reflected a mixed performance in terms of coverage and openness. The current Law on Statistics (2015) has reduced openness on micro data sharing, which is a step backward from the previous legislation approved in 2003. This has resulted in the discontinuation of the micro data portal hosted by the General Statistics Office (GSO). Open data needs to be widened to improve the value of data. When data are not widely available to the general public, its benefits are not fully realized in ways that promote social and economic development.

Overall, data can be used more effectively to improve development outcomes in Vietnam. This involves improving on aspects described above, but also requires innovation to stay relevant and provide the needed data for evidence-based policymaking as Vietnam makes strides toward its high-income aspirations.

8.2. Reaching Next Mile Aspirations

The Next Mile is the journey to upper and high-income country living standards. For society, this means creating more economic opportunities to build a strong middle class while at the same time expanding support to low-income and economically vulnerable households. The millions who have escaped poverty over the last decade now need to continue climbing up the economic ladder, be provided safety nets to prevent them from falling back into poverty, and be equipped with the human capital and skills to engage in more productive and sophisticated work. Policy actions for the Next Mile include investing in skills for the future, investing in higher-quality education, modernizing social protection systems for idiosyncratic shocks, and leveraging fiscal policy to fund inclusive investments. Table 8.2 summarizes the main recommendations to achieve Next Mile aspirations with regard to promoting education, social protection, and fiscal reforms while narrowing inequality and promoting the middle-class and lifting low-income households to higher levels of income.

Equitable human capital formation

Break intergenerational poverty traps with equitable education

Investing in human capital can enable Vietnam to exploit emerging opportunities while maintaining its competitiveness in a dynamic global marketplace. Multiple demographic trends highlight the importance of broad-based investment in human capital, including declining fertility rates, rising life expectancies, and a shrinking working-age population. As the dependency ratio increases, a highly productive workforce will be critical to support the elderly (World Bank and MPI, 2016). COVID-19 has brought additional challenges to human capital development, affecting nutritional attainment, health and educational continuity, and outcomes (World Bank, 2021f). Investment in human capital is now more important than ever, to prevent a reversal of progress already made, as well as preparing future generations for a rapidly evolving economic landscape.

One of the urgent tasks for the future of education in Vietnam is to develop a bold vision and long-term strategies to improve equitable access to education by 2030. Education policies should address socioeconomic inequality in education and skill development opportunities, which have longer-term implications for intergenerational mobility and socioeconomic development. Higher private expenditures in education are related to greater education completion, but its role in pupils' academic achievement in lower secondary education also signals inadequate teaching and puts poor children at a disadvantage. Reforms to the curricula and learning hours are necessary to close this gap. At the general education level, equity in school completion can be improved by ensuring that students from different backgrounds and with different levels of capacity before entering the formal schooling system have adequate school readiness, providing financial and non-financial incentives, minimizing social barriers that impede education progress, and developing an approach on school-parent contracts. Additionally, evidence suggests that dropouts at secondary schools are higher for children in communes further away from the district center, pointing to challenges in access to tertiary education for pupils in remote areas. Their remoteness increases the cost for post-secondary education, which could be mitigated by raising education aid.

Improving higher education and labor market matching

Continuing improvements in higher education access and quality

Vietnam's access to higher education, as measured by the gross enrolment rate (GER), is below 30 percent, one of the lowest among the East Asian countries. Reasons for low level of access include: (a) absence of a clear financing plan to achieve the originally set quantitative targets, (b) a fragmented tertiary education system of universities, colleges, and VET sectors managed by multiple ministries, (c) an inconsistent regulatory framework that did not encourage private sector expansion even though a high target had been set, (d) insufficient student financial aid coverage for low-income students, (e) under-development of alternative modes of education including e-learning and MOOCs education, and (f) low quantity and quality pipeline of secondary school graduates due to lack of access and learning for children from disadvantaged backgrounds (World Bank, 2020).

Table 8.2. Next Mile policy summary

RECOMMENDATION		ADDITIONAL REFERENCES
Equitable early human capital formation		
Better education for all	Expanding access to high-quality education across groups is vital to reduce inequalities and increase access to better paying jobs for all. This can be achieved by: • Reforming the structure of the school day to increase instruction hours: Tutoring and differences between quality of schools in poor and non-poor communities explain the variation in academic achievement at lower secondary level, which determines progression to tertiary education. This signals that inadequate teaching places poor children at a disadvantage. This could be addressed by increasing teaching hours in school. • Revision the curricula and pedagogical approach - Teaching and testing should place more emphasis on developing problem solving and critical thinking, the skills that employers deem lacking in Vietnam	World Bank, 2018
Sustaining Upwards Economic Mobility through improving higher education, skills, and labor market outcomes		
Improve higher education and skill formation for a new workforce	Higher education will play a role in the development of a high-skill and high-productivity growth pathway. Improvements can still be made in access and quality of higher education. • Improve access – gaps in education are pronounced across income groups as well as ethnicity. Reducing disparities include addressing insufficient academic readiness, increasing financial aid to disadvantaged students, outreach programs to disadvantaged communities. • Improve skills and quality in particular in science, technology, and innovation. • Improving relevance by creating better networks between education institutions and employers.	World Bank, 2020, 2021e
Improve job transitions and labor mobility	Creating upward economic mobility pathways for existing and aging low and medium-skilled workers is also important. • Facilitate knowledge dissemination of job opportunities and job matching. • Provide older workers with reskilling opportunities. • These labor market interventions should have a focus on assisting vulnerable groups.	World Bank, 2021c, 2021g
Promote firm development and creation of better jobs	Improving the capabilities of firms to realize high-income country status ambitions. • Governments can promote SME capabilities by more widely sharing know-how and information on adopting new technologies and best practices. • Investments can be made to support technology generation, research, commercialization, and transfer of new innovations.	World Bank, 2021e
Modernization of the social protection system is needed to provide responsive safety nets to the economically insecure		
Adapt to a hybrid model to address coverage gaps especially for informal workers	Addressing coverage gaps • A key missing group is the non-poor informal sector. To better target informal workers, among others, the system can move away from a static pool of beneficiaries and become more agile in targeting by setting up a dynamic system based on eligibility determination process using an integrated database system. • Increasing coverage costs money, but better identification can also help by identifying who can contribute, and being more precise about who needs social assistance cash support.	Nguyen and O'Keefe, 2019
Modernization is needed across different aspects: integration, digitalization, and e-payments	Various aspects of the social protection system can be further modernized: • An integrated and centralized data system including deduplication and cleaning of databases and clarification of single source of truth. • Movement to e-payments and other government-to-person (G2P) payments.	Nguyen and O'Keefe, 2019

	RECOMMENDATION	ADDITIONAL REFERENCES
	• Introduction of a data exchange framework, data exchange platform, and APIs with privacy by design incorporated and personal data protection legislation in place.	Nguyen and O'Keefe, 2019
	• Digitalize and reform business processes including on-line registration of new beneficiaries and digital payments (eventually into transactional accounts of beneficiary's choice).	
Financing for a growing middle-class		
Over the longer-term, shift towards more progressive revenue generation	Sophisticated administration and a larger tax base is needed to begin a transition to more progressive revenue generation, requiring • Investments in tax administrative capacity • Broadening greater formalization of the economy	Bachas, Sosa and Wai-Poi (forthcoming)
Adequate spending on equitable education and social protection	As countries get richer and raise sufficient tax revenues, they can increasingly fund progressive transfers and investments in health and education	World Bank, 2019c and 2020 Bachas, Sosa and Wai-Poi (forthcoming)
In the short-run, a combined VAT and social assistance reform can both raise revenues and reduce poverty and inequality	Building a tax base and formalization takes time, in the short-run revenues can be raised by some measures including • Elimination of regressive tax expenditures of VAT exemptions and preferential rates • Increased use of property taxes; property is immobile and such taxes are progressive • Increased use of health taxes which both address negative health externalities and reduce future health spending as well as raise revenues in a progressive manner • The burden of higher VAT can be offset by spending a portion of the new revenues on expanding the social safety net, meaning the combined effect is to raise revenue and reduce poverty and inequality	World Bank, 2021d Fuchs, Gonzalez, and Paz, 2019 Fuchs and Gonzalez, 2019 Bachas, Sosa and Wai-Poi (forthcoming)

Improving the relevance and quality of tertiary education curriculum and staffing can help reduce skill gaps and improve perceptions by businesses who report difficulties recruiting for certain skills. In particular, businesses find it difficult to recruit for leadership and managerial, socio-emotional, or job-specific technical skills. To enhance curriculum quality, policies can be pursued to improve funding of university research, improve staff quality and qualifications, design programs to recruit and retain high quality staff, and to convert higher education teaching status from administrative staff to public servants. The quality of curriculum can also be improved through centrally coordinated investments to increase international accreditation of programs, increase international exchange of students and staff, and the internationalization of curriculum.

Increase collaboration between universities and industry

Stronger engagement with employers on skills development is instrumental in aligning education with labor demand. Surveys of firms and TVET institutions alike show limited engagement of the private sector in either shaping, financing, or providing vocational training. While policies have been put in place to encourage greater employer engagement in skills development, mechanisms for firms to access incentives are complex and, therefore, firms do not take advantage of them. There is a need to simplify and further encourage firms to provide more formal technical and vocational training. On-the-job training linked to employment placement is essential and could be useful to help youths find their first jobs and mature workers to transition into new jobs. Greater links between universities, vocational schools, and employers are needed to ensure that graduates gain relevant skills for the labor market.

Recruitment techniques can be improved to reach the best qualified candidates. Job matching is not competitive since the primary pathway to obtaining employment is through personal networks (Nguyen and Kenichi, 2018). Even when searching for experts, as many as 66 percent of enterprises rely on personal contacts. Successful matching through employment service centers (ESC) results in a small share of new jobs. Focus group studies have also shown that employers feel ESC fees are too expensive, such as for advertising. From the labor supply side, ESCs are also not well utilized: only 0.2 percent of young workers used these centers in 2015. More recent studies also find that workers find ESCs to be ineffective (Buchhave et al., 2020).

Effective options should exist for upskilling and reskilling the current labor force

Upskilling and reskilling the labor force are instrumental for Vietnam to fully harness the potential of its human capital and prepare its workers for higher-quality jobs. Despite significant progress in educational enrollment and attainment, there still exist skills shortages, mismatches between education and occupation, and unequal access to education and training opportunities across gender, location, ethnic groups, and socioeconomic backgrounds. Vietnam's most common occupations are semi-skilled. Technical and vocational education and training (TVET) institutions have a role to play in both upskilling and reskilling the labor force, but they need essential reforms to become modern, results-oriented, and responsive to labor market needs. Around the world, TVET plays a key role not only as part of post-secondary training options for youth but also for reskilling of the workforce, as reskilling is needed more and more with accelerating technological change.

...all with a focus on vulnerable groups

For disadvantaged and vulnerable groups, lowering financial barriers is critical, particularly in the context of increasing tuition fees, as more TVET and higher education institutions are being granted financial autonomy. Introducing universal, well-designed, income-contingent loans, supplemented by an expansion of scholarship programs to the most economically disadvantaged, could significantly improve equitable access to tertiary education and reduce dropouts.

Migrant workers need assistance to help them access better basic services, which will encourage mobility and increase access to non-farm employment opportunities. Migrants face housing challenges (43 percent), followed by lack of income (38 percent) and inability to find a job (34 percent), according to the 2015 Internal Migration Survey (GSO and UNFPA, 2016). The majority of migrant workers live in low-quality, crowded rental dwellings, which, during the COVID-19 pandemic, has exacerbated their risks of contracting the virus. The implementation of social assistance packages for those affected by the COVID-19 pandemic has also highlighted challenges in identifying and registering low-income migrant workers, who are concentrated in the informal sector and are more vulnerable to adverse economic shocks. Interventions to promote labor mobility could aim at lowering the social challenges to migrant workers, namely, unequal access to public services in the host communities, including housing, healthcare, childcare and education, as well as elder care in rural areas (Giles and Huang, 2020).[63] Furthermore, infrastructure interventions aimed at lowering transportation costs, improving ICT connectivity, and easing housing constraints would also encourage migration, especially from remote low-density regions.

Another important area of focus is reducing the burden of child and elderly care and enhancing flexible working arrangements to help women get into more and better jobs. These objectives can be achieved by (i) expanding childcare facilities, (ii) promoting participation in the digital marketplace, and (iii) ensuring that women are named on both agricultural and residential land use rights certificates.

Modernizing social protection to guard against shocks

## A hybrid social protection model can help close the coverage gap

COVID-19 highlighted the need to make more progress on addressing the coverage gap. The economic impact of COVID-19 was disproportionately felt by the non-poor informal sector in many countries, including Vietnam. This led to many ad hoc attempts to expand social assistance and cash transfer programs to this population.

Some countries were able to do so quickly by leveraging a variety of administrative databases, but most faced serious challenges in their horizontal expansions and were unable to reach many affected households (Johnson and Palacios, forthcoming). This highlighted a major gap in many social protection systems that focus on a static pool of social assistance beneficiaries on the one hand and the relatively small formal sector covered by social insurance on the other. While the magnitude of this gap became more evident in 2020–2021, the vulnerability of this large group to various types of shocks was a reality before the pandemic and will be again afterwards.

A key to ensuring that more households are covered against a wide range of risks is extending coverage to the 'missing middle' Figure 8.1 visualizes the gap in social protection coverage which is often referred to as the missing middle. Closing the gap implies blurring the line between social assistance and social insurance and ensuring that the non-poor informal sector is incorporated into administrative databases and that those affected by shocks can be quickly identified. In the last 20 years, many countries including Vietnam have effectively taken this route toward universal coverage in health by subsidizing contributions to social health insurance schemes. A hybrid social assistance-social insurance means that non-poor informal workers make some contributions to covering their risks while the government makes up the difference; this contrasts with true social assistance (where the poor receive

Figure 8.1. Addressing the social protection coverage gap
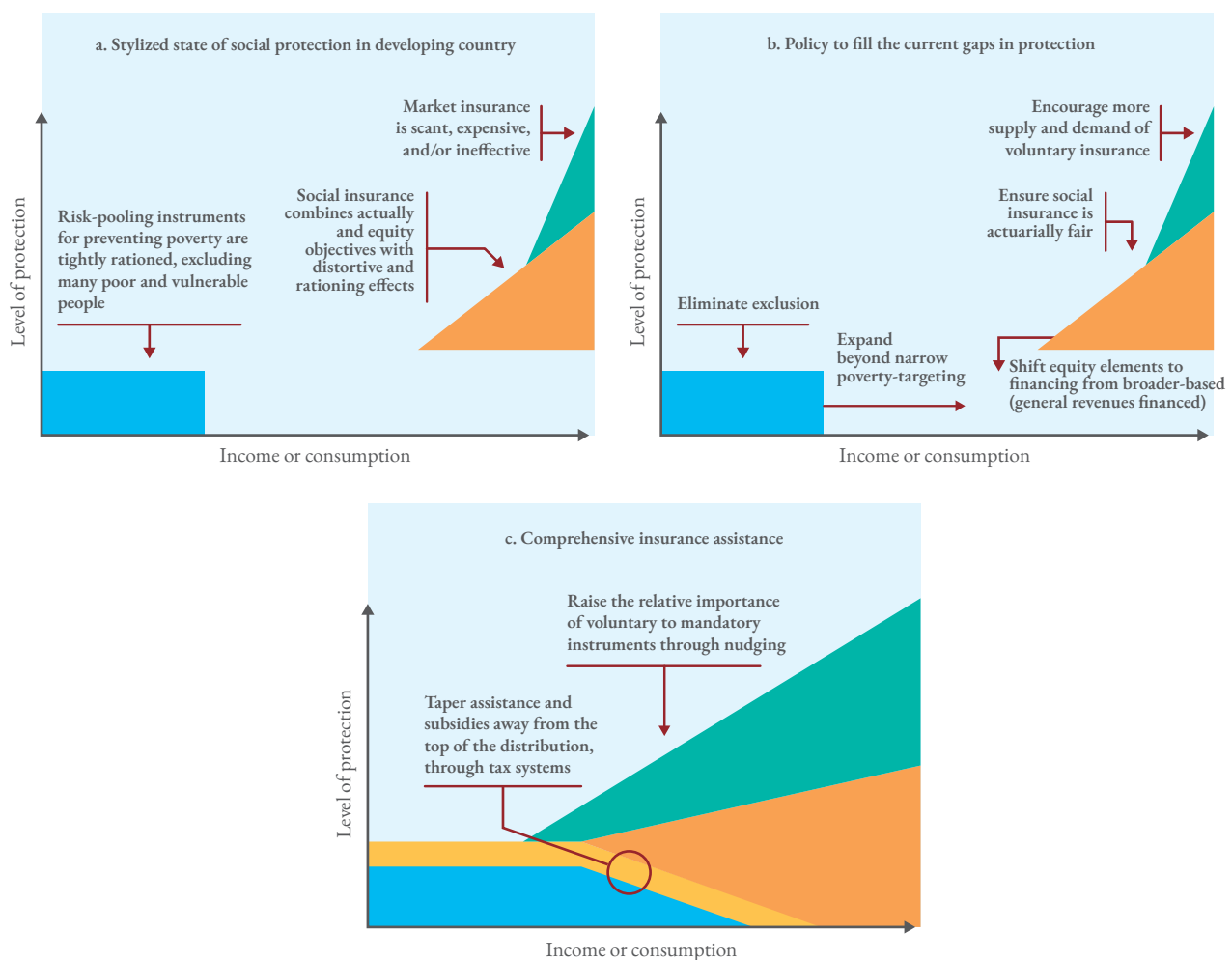
Source: Packard et al. (2019).

non-contributory support) and social insurance (where those who can afford it make premium payments themselves). The result is that Vietnam had achieved health insurance coverage of close to 90 percent of the population, with most of this increase happening in the last decade.

Many Vietnamese who are neither poor nor covered by formal social insurance can afford to make some contributions to enter the system, even if they are partly subsidized by the government. To make such a hybrid policy more affordable, it is useful to differentiate subsidies according to the ability of informal sector workers to contribute. Figure 8.1 assumes that the subsidy is gradually phased out at the upper end of the income distribution. This is similar to Vietnam's policy of differentiating the health insurance subsidy for the poor and near poor. However, poorer households will need support without making contributions.

If well-targeted, reaching more beneficiaries doesn't have to be expensive. As noted in Chapter 1, a transfer of 24.6 trillion VND would be sufficient to eradicate consumption-based poverty in 2016 if perfectly targeted to households who were poor based on the LMIC ($3.20/day 2011PPP) poverty line. As a comparison, the NTP-NRD and SPR-135 budget over the period 2016–2020 was 804 and 20.6 trillion, respectively. With a more robust data system, beneficiaries can be better identified and targeted. One key to improving the coverage of the existing non-contributory social assistance programs is to make eligibility assessment more dynamic, so that those truly in need—a status that changes for better and for worse over time—are receiving assistance. Advances in availability of data and technology are helping to drive not only the dynamic nature of social registries but also their accuracy in assessing household welfare (Grosh et al., 2022).

A centralized, digital, and integrated data system is necessary to be more agile and responsive

A modern social protection system requires the ability to target effectively in a more agile way. Especially in countries with high informality, workers and households are constantly experiencing changes in their employment status and being affected by different idiosyncratic and occasionally covariate shocks. Most countries rely on periodic assessments of the needs and conditions of households to determine their eligibility for different programs. Data collected in this manner may be useful in situations where there is little change in household status, but in rapidly changing environments, however, this approach produces information that can quickly become outdated. This was demonstrated in a number of countries early on during the COVID-19 pandemic.

A better approach is to set up a dynamic system based on an eligibility determination process that allows for rapid and digital application and registration processes and interoperable databases linked via unique individual and household identifiers. Rather than periodically collecting data from households that quickly becomes obsolete, linking various administrative databases where data are regularly updated and linked by common identifiers can facilitate rapid and accurate responses to different shocks. Combined with online applications, this federated data model has proven to be more agile both in crises and in normal times.

An often-cited example is Turkey's Integrated Social Assistance System (ISAS).[64] It draws information in real time from two dozen databases and registries to help determine eligibility for dozens of social programs. Applicants enter their national ID number through a website triggering the process. Local government councils play a role in verifying certain information, but most of the criteria are based on objective information taken from databases such as income tax, property, assets, and others (see MoSFP and World Bank, 2018). This has reduced the processing time dramatically. Before the pandemic, this system allowed the Turkish government to differentiate health insurance contribution subsidy levels and determine eligibility for social assistance benefits. During the COVID-19 pandemic in 2020, it allowed for rapid, electronic registration of millions of households in just a few weeks.

Vietnam now has most of the building blocks needed to move to this kind of federated system. The mass registration campaign for the national ID and the subsequent mandate to link the unique National ID number with major databases early in 2022 has set the stage for effective digitalization of social protection. It will require a series of actions over several years with the collaboration of multiple government stakeholders. Next steps include the following:

- Introduction of common data formats and data dictionary across relevant databases
- Deduplication and cleaning of databases and clarification of single source of truth

- Introduction of a data exchange framework and data exchange platform and APIs with privacy by design incorporated and personal data protection legislation in place
- Digitalization and reform of business processes including on-line registration of new beneficiaries and digital payments (eventually into transactional accounts of beneficiary's choice)

Adapting fiscal policy to help reduce poverty and inequality is a long-term process

Fiscal policy can play a critical role in both driving Vietnam toward high-income status and doing so in an inclusive manner to assist the movement of people into a prosperous middle class. It can achieve this in two ways. First, it can help finance the required investments needed for the country and its workers to become more productive and higher earners, such as those discussed in this chapter so far: modernization of agriculture, better skills and higher quality education, a more robust digital backbone, and accompanying services. Second, it can also finance policies which can address Last Mile and Next Mile constraints today, such as a modern social protection system and strengthening of NTPs. Finally, the revenues required to finance these investments can themselves be more or less progressive.

Fiscal policy can be used in a progressive manner

As countries grow richer, they increasingly raise tax revenues to finance public spending and investments and do so in an increasingly progressive manner; Vietnam should follow this path. As Chapter 7 has shown, developing countries rely on easier to collect but neutral or even regressive indirect taxation. However, as upper middle-income countries look to make the transition to high-income status, they need to broaden their tax base mix and increasingly use more progressive direct taxes such as personal income and property taxes; high-income OECD countries are the only ones to collect the majority of their tax revenues from direct taxation. This supports an inclusive economy both directly by collecting revenues from those most able to afford it and indirectly by financing inclusive investments.

Progressive taxation requires investments in tax administrative capacity and greater formalization of the economy. Key priorities for tax administrative capacity reform include institutional reform, in particular the merger of the General Department of Taxation's (GDT) strategic and risk management functions; review of tax administration business processes and design/implementation of a comprehensive IT system; addressing potential taxation of the growing digital economy; enhancing GDT staff capacity; and creating a unified collection system for personal income tax and social insurance contributions World Bank (2021d). In addition to greater capacity to collect income and property taxes from existing formal workers and firms, this formal tax base needs to be expanded by bringing more informal workers and informal firms into the formal economy. Formal workers not only pay income tax; they also contribute to social insurance schemes. At the same time, they earn higher wages and have better protection, meaning that both workers and state revenues are better off.

Vietnam could also use fiscal policy more proactively to help households manage risk, by financing a modern social protection system and cushioning shocks in a countercyclical fashion. Households face risks on both the macro and the micro level (Chapter 6). A critical policy for helping households manage these risks is a modern social protection system, including targeted social assistance to lift the remaining poor out of poverty; social assistance and social insurance protect the gains already made by much of the rest of the country and help them continue to climb into the middle class; and an adaptive social protection system which can scale up support to existing and new beneficiaries when larger shocks occur. Vietnam needs to bring social protection spending in line with international norms to develop such a system. However, fiscal policy can also manage household risk at a macro level by being used in a countercyclical fashion.

Fiscal policy not only needs to raise adequate revenues in a progressive manner; it also needs to spend in the right way. All of the recommendations in this report require some public investment. Greater revenues will create more fiscal space for such investments. In addition, additional space can be created now by redirecting spending from inefficient and inequitable expenditures such as electricity subsidies, which encourage wasteful energy use and contribute to climate change while mostly benefiting richer households.

Education financing should be targeted to disadvantaged students

Investments should be made on proven interventions to improve access to quality education for disadvantaged students through better targeted funding. Adequate education financing would require (i) higher state budget expenditure for education, (ii) re-allocation of the state budget on education across education subsectors toward a healthier share for tertiary education without compromising general education, and (iii) efficient use of funding. The government has been accelerating deployment of additional state budget for education, including investment in improving physical infrastructure of schools serving students from the lagging ethnic minorities and mountainous areas. However, in the coming years, the government should adopt a broader concept of how needy students are identified, in addition to the current considerations of ethnicity, socioeconomic status, and gender. In particular, there needs to be a focus on low performing students regardless of background. Additional funding may support proven education interventions in early years such as the transition between lower secondary to upper secondary schools, or provision of parenting supports and career guidance among other key areas.

Proper financing requires a more balanced approach between decentralization and centralization as well as a stronger accountability mechanism. Given the increasing decentralization in education financing, it is imperative for the funding allocation process at the central level to take into account locality-specific variations, identifying disparities by regions or local areas, including drilling down to individual ethnic groups and schools as necessary. At the provincial and district level, funding allocation should consider how best to meet the needs of specific ethnic groups from the low socioeconomic backgrounds whose learning outcomes are substantially lower than the average for all students.

In the short term, revenues can be raised through VAT

Building tax capacity and formalizing the economy takes time. In the shorter term, eliminating regressive tax expenditures of VAT exemptions and preferential rates would raise significant revenue. Vietnam's VAT schedule includes many exemptions and lower rates for a range of items (World Bank, 2021d). While these are often on staples such

as food and other items which make up a greater share of the consumption basket of the poor, richer households also consume these goods, and in greater amounts, so the large majority of these tax breaks goes to them.

Research has shown that expanding both the VAT tax base and social protection schemes in tandem has the potential to both raise tax revenues and reduce poverty. While most of the tax expenditures spent on VAT exemptions benefit richer households, they are nonetheless important to the poor. The overall benefit to the poor may be small in absolute Vietnamese dong, but they represent a greater percentage of poorer households' meager incomes than they do of those of richer households, meaning that VAT exemptions are an expensive but progressive instrument which help mitigate the tax burden on poorer households. However, if part of new revenues raised from eliminating such exemptions are transferred to households as cash benefits, poverty and inequality can be reduced while still reserving some of the new revenue for other purposes. Such a result has already been shown for six lower-middle-income countries (Warwick et al 2022), such as Vietnam. If the transfers were targeted more narrowly at the bottom half of the distribution, similar results could be achieved at a lower cost.

In addition, a range of new taxes can be explored, a number of which have positive spillover effects. Non-traditional taxes which would help broaden Vietnam's tax base include taxes on digital transactions. In addition, some taxes not only increase revenue; they also discourage behaviors with negative consequences. Health taxes on products such as alcohol, tobacco, and sugar-sweetened beverages can be new sources of revenue. They can also reduce the harmful effects to health of over-consumption of these goods, which benefits individual health and also reduces public health expenditures in the future, creating further fiscal space for other purposes. Moreover, taken over a lifecycle, these taxes have been shown to be progressive, placing less burden on poorer households, including in Vietnam (Fuchs, Gonzalez, and Paz, 2019; Fuchs and Gonzalez, 2019). See World Bank (2021d) for a discussion on additional key tax reforms for Vietnam including personal income tax and property tax reforms.

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8.4. Notes

[63] The need to take care of the elderly discourages migration for both men and women and contributes to reverse migration. Adult children with elderly parents in rural Vietnam are less likely to migrate.

[64] Other good examples include Chile's Social Protection Information System and Australia's Centrelink.

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