CHARACTERISTICS OF THE VIETNAMESE RURAL ECONOMY

Evidence from a 2020 Rural Household Survey in 12 Provinces of Vietnam

22 July 2022

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

PREFACE

This report dates back to 2002 when the first Vietnam Access to Resources Household Survey (VARHS) was carried out. The results of the VARHS02 inspired the Central Institute for Economic Management (CIEM) of the Ministry of Planning and Investment (MPI) and the Centre for Agricultural Policy Consulting of the Institute of Policy and Strategy for Agriculture and Rural Development (CAP-IPSARD) of the Ministry of Agriculture and Rural Development (MARD), the Institute of Labour Science and Social Affairs (ILSSA) of the Ministry of Labour, Invalids and Social Affairs (MoLISA), and the Development Economics Research Group (DERG) of the University of Copenhagen (UCPH-DERG), together with Danida, to plan and carry out another survey in 2006 and subsequently in 2008 and in 2010.

UNU-WIDER engaged from 2010 when Danish support started to wind down, and UNU-WIDER supported further surveys in 2012 and 2014. A comprehensive Oxford University Press (OUP) volume was published in 2017 in the UNU-WIDER Studies in Development Economics relying on the complete 2006-14 panel data set.[1] Subsequently further survey rounds were carried out in 2016 and 2018, also with the support of UNU-WIDER. In 2020 responsibility shifted back to UCPH-DERG and the 2020 survey on which the present report is based builds in particular on the information collected in 2018 and 2020.

ILSSA carried out a wide range of tasks related to the planning and implementation of the 2020 survey in the field, and UCPH-DERG collaborated with CIEM and ILSSA in all aspects of survey design and data analysis to ensure that the VARHS project develops both the data required to deliver policy-relevant research to decision makers and the research capacity to take advantage of that data.

The VARHS surveys were designed as collaborative research efforts with the explicit objective of complementing the large and nationally representative Vietnam Household Living Standards Survey (VHLSS) conducted biennially by the General Statistics Office (GSO). Some households surveyed in the VARHS have also been surveyed in the VHLSS. The VARHS thus has a specific focus on collecting data and gaining an understanding of the access to and interaction of rural Vietnamese households with the markets for land, labour and credit. Moreover, as in previous survey rounds, attention was paid in 2020 to collecting agricultural data at the plot level of individual farmers.

[1] See Tarp (2017) which is freely downloadable from the following web-site: https://www.wider.unu.edu/publication/growth-structural-transformation-and-rural-change-viet-nam-0

The present report provides an overview of key insights from the VARHS20 database, comparing them, wherever feasible and appropriate, with results from earlier surveys with a particular focus on VARHS18. It should be noted, however, that the report by no means provides exhaustive coverage of the data collected, and the reader is encouraged to refer to the household and commune questionnaires that were used in the collection of data to see the comprehensive set of issues addressed.

Further in-depth studies of selected issues on the Vietnamese rural economy are underway, and the ambition is to continue and expand the panel database.

Professor Finn Tarp

Professor, UCPH-DERG

22 July 2022

ACKNOWLEDGEMENTS

The team of authors behind the present report is grateful to the present and former President of CIEM, respectively Dr Tran Thi Hong Minh and Dr Nguyen Dinh Cung, and the former and present Directors of ILSSA, respectively Dr Bui Ton Hien and Dr Dao Quang Vinh, who have guided our work from beginning to end, and promoted effective collaboration between all partners.

The core research team was led by Dr Saurabh Singhal (Lancaster University), who together with Dr Smriti Sharma (Newcastle University) worked closely with me in all stages of coordinating and supervising the work. Individual chapters were prepared with the kind and effective collaboration of Alessandra Hidalgo Arestegui and Ariana De Cross (Chapters 2-3), Hoda El-Enbaby (Chapter 4), and Timothy Kell-Fien (Chapters 5-6), all associated with Lancaster University.

Our work would not have been possible without professional interaction, advice and encouragement from many individuals and institutions. We highlight our thanks to:

- For the productive and stimulating collaboration with the survey and data teams from ILSSA. They were coordinated by Dr Dao Quang Vinh and his staff including Vice Director, Mr. Le Ngu Binh, Hoang Manh Cam and Nguyễn Hải Ninh, Ha Thu Huong, Thanh Tuan. While drafting was the responsibility of UCPH-DERG we received many helpful comments from the ILLSA team. The survey would not have been possible without the efforts of these and many other ILSSA staff too numerous to name here in compiling the questionnaires, training enumerators, implementing the survey in the field, and cleaning the data. We wish to highlight this as the survey was carried out under the complex constraints created by the onset of the Covid-19 pandemic in early 2020.

- Colleagues at CIEM for their guidance and support throughout the process, in particular tDr Dang Thu Hoai, and former Vice-President Mrs Vu Xuan Nguyet Hong, who have been tireless in providing support for the project that enabled the production of this report. While drafting was the responsibility of UCPH-DERG we received many helpful comments from the CIEM team. Thanks are also due to Dr. Luu Duc Hai for continued support and engagement.

- The many staff at the University of Copenhagen, who have supported us in our work on doing our best to keep the collaboration with Vietnam on a solid path.

Moreover, on behalf of the study team I would like to express a deep appreciation for the time that the several thousand rural households in 12 provinces of Vietnam made available in 2020 during the interviews carried out as part of this study. It is hoped that the present report will prove useful in the search for policies geared towards improving their livelihoods.

Finally, while advice has been received from many colleagues and friends, the research team takes full responsibility for any remaining errors or shortcomings in interpretation. All the usual caveats apply.

Professor Finn Tarp

Professor, University of Copenhagen

22 July 2022

INTRODUCTION

Following the successful implementation of the *Doi Moi* reform programme, Vietnam has experienced outstanding economic progress, for example in aggregate output and poverty reduction. For many years, Vietnam developed much faster than the typical developing country; and since 2014 the difference in GDP per capita growth between Viet Nam and the average for the group of low and middle Income countries has widened significantly. Following the international financial crisis of 2008-09 Viet Nam experienced relatively high inflation rates, but they were managed quite well and it was only with the outbreak of the Covid-19 pandemic in 2020 that serious challenges to the socio-economic performance of Vietnam took centre stage.

On this background it is important to stress that Vietnam faces many challenges, and this includes the aftermath of the Covid-19 impact. This impact is not captured in the present report as the survey was carried out before the more serious effects set in. However, when the 2022 survey has been implemented we will be able to address this question head-on due to the availability of data on a "before-and-after" basis. To be sure, to regain elevated levels of growth, Vietnamese policymakers and citizens must constantly adapt to changing circumstances. The overall purpose of the VARHS survey is to contribute to making sure that this process is informed by high-quality, systematic, and rigorous evidence. The survey collects a broad range of detailed information about economic and social aspects of the lives of households in rural areas of 12 provinces in North, South, and central Viet Nam.

While the survey includes respondents from all parts of the country, a substantial number of households are sampled in poor upland provinces in the North-West and Central Highlands. In addition to providing general information about development in rural Viet Nam, the VARHS surveys and VARHS reports are particularly concerned about highlighting the fact that these regions continue to lag behind other regions in a number of dimensions, and to understand why that is the case. The extent to which this is the case in light of the Covid-19 pandemic will be a particular topic on the upcoming 2020 survey.

As in the reports based on previous rounds of sizethe VARHS survey, this report maintains a strong focus on income-generating activities and living conditions in rural areas, land relations, credit market, risk-coping and social capital (CIEM 2007, 2009, 2011, 2013, 2015, 2017). The report also focuses on labour and migration, information and trust, and constraints to the expansion of household enterprises in order to better understand the fast-changing circumstances of rural areas, where migration and non-farm enterprises play increasingly

important roles. While these changes are natural components of a process of economic development, citizens and policy makers need to handle them in ways that minimizes economic inequality and social problems.

The report is based on a sample of 2,582 rural households, which make up our 2018-2020 panel that is in focus in this report. Most of these households are re-sampled from the 2004 VHLSS sample in rural areas of the 12 VARHS provinces, ex-Ha Tay, Phu Tho, Lao Cai, Dien Bien, Lai Chau, Nghe An, Quang Nam, Khanh Hoa, Dak Lak, Dak Nong, Lam Dong and Long An (and from the 2002 VHLSS sample in Ha Tay, Phu Tho, Quang Nam and Long An). However, because this strategy cannot include households that came into existence after 2004, the former VHLSS-based sample is somewhat biased toward older households. To solve this problem, and to replace households that could not be re-interviewed, the sample has gradually been supplemented with other households as explained in previous reports. This ensures that the VARHS sample continues to be as close to being representative of the rural population in each of the 12 provinces covered as possible.[2]

The report mainly focuses on presenting results for the households surveyed in 2020. However, a particular effort is made to compare what happened between 2018 and 2020 relying on the panel of 2,582 households.[3]

All money value figures included in this report are inflation-adjusted to reflect changes in prices over time and differences in prices across regions. The price index used was constructed using data from the Vietnamese Household Living Standards Survey.

The outline of the report is as follows: Chapter 1 presents basic information on the report sample and on poverty, living standards and economic well-being. Chapter 2 explores a range of issues related to land, while Chapter 3 focuses on agriculture production and market access. Chapter 4 investigates, in turn, the role of non-farm, household enterprises, while Chapter 5 focuses on migration of household members to other areas. Credit is the topic of the final Chapter 6.

[2] Data are also available on 945 additional households from the five provinces covered by the original Danida ARD-SPS programme, namely Lao Cai, Dien Bien, Lai Chau, Dak Lak and Dak Nong. The purpose of surveying these households was to evaluate the effects of a range of measures under the ARD-SPS programme. Since the sampling strategy used for these households was specific to the introduction of this programme these households are not included in this report. They are included in other studies based on VARHS.

[3] Due to missing data, the numbers of observations in the figures and tables presented below may in some cases differ somewhat from the number stated here.

1. CHAPTER 1: POVERTY, LIVING STANDARDS AND ECONOMIC WELL-BEING

1.1. Introduction

This chapter presents and discusses results on poverty, living conditions, and human capital indicators of education and health. In each table or figure, statistics are disaggregated by province, gender and ethnicity of the household head, and by socioeconomic status as defined by the food expenditure quintile. Results are also reported from 2018 where appropriate to examine changes over time.

Poverty is a multidimensional aspect. Therefore, several characteristics that are important for overall wellbeing are examined. Poverty dynamics are presented in Section 1.2, followed by human capital indicators such as education and health in Sections 1.3 and 1.4 respectively. Finally, living conditions such as access to safe water and garbage disposal are presented in Sections 1.5.

1.2. Poverty Dynamics

We begin with the summary statistics for gender, age and ethnicity of the household head, household size and the percentage of households that are classified as poor by the Ministry of Labour, Invalids, and Social Affairs (MoLISA) in each province in Table 1.1.

For the overall sample, 73 percent of the household heads are male. There is a lot of variation across provinces with Lai Chau having the highest proportion of households with a male head (92 percent) and Khanh Hoa the lowest (64 percent). The average age of the household head is 57 years. Household heads in Quang Nam, Phu Tho and Long An are slightly older than the average (59-60 years) while those in Dak Nong are younger (approximately 51 years). The average household size is 4 with Dien Bien having slightly larger households (5.21) and Quang Nam having the smallest (3.61).

The Kinh are the ethnic majority group in Vietnam, constituting about 86 percent of the population.[4] There are 53 other officially recognized ethnic groups in Vietnam, mainly residing in the mountainous Northern region and the Central Highlands. Table 1.1 shows that approximately 80 percent of the households in the VARHS sample are Kinh. This is slightly lower than the national average as the minority-dominated provinces in the Northern Uplands and Central Highlands are included in the survey in line with the original

[4] The ethnicity of the household is based on that of the household head. Ethnicity of other household members may differ (for example, due to inter-ethnic marriages) but this information is not available under the VARHS.

design of the interventions the survey was supposed to help evaluate. For example, only 10-13 percent of the households in Dien Bien and Lai Chau are Kinh. On the other hand, almost all the households in Ha Tay and Long An are Kinh.

Table 1.1 Summary statistics

	HH surveyed, number	HH surveyed, percent	Gender of HH head, percent male	Age of HH head	Ethnicity of HH head, percent Kinh	HH size	HH classified as poor by authorities, percent
Province							
Ha Tay	564	21.84	73.05	57.69	99.65	3.81	1.07
Lao Cai	101	3.91	85.15	52.61	22.77	4.53	22.77
Phu Tho	370	14.32	71.89	59.15	80.81	3.65	4.61
Lai Chau	124	4.80	91.94	52.10	12.90	5.01	19.51
Dien Bien	121	4.68	86.78	53.94	9.92	5.21	15.83
Nghe An	218	8.44	74.77	58.39	86.70	3.62	9.22
Quang Nam	316	12.23	69.62	60.10	96.20	3.61	4.47
Khanh Hoa	103	3.99	64.08	55.69	85.44	3.82	5.83
Dak Lak	154	5.96	79.22	54.49	70.13	4.00	6.04
Dak Nong	126	4.88	77.78	51.30	72.22	4.02	4.76
Lam Dong	76	2.90	74.67	52.11	58.67	4.16	2.67
Long An	311	12.04	66.56	59.15	99.68	4.08	3.23
Total 2020	2583	100	74.14	57.04	79.21	3.96	6.07
Total 2018 panel	2582		75.52	55.68	78.97	4.06	9.67
Total 2020 panel	2582		74.13	57.05	79.20	3.96	6.07

The last column of Table 1.1 shows the percentage of the surveyed households that are classified as poor by MoLISA. Overall, 6.07 percent of the households are classified as poor with substantial variation across provinces. Less than 4 percent of the households in Ha Tay, Lam Dong, and Long An are poor while more than 10 percent of the households in located in Lao Cai, Lai Chau, and Dien Bien are poor.

Table 1.1 also presents the same statistics for the households that were interviewed in both 2018 and 2020, thereby allowing for comparisons over time. Overall, the change in general household characteristics between 2018-2020 is small, which is unsurprising given that the same households are followed over time. We find that the share of households classified as poor has decreased substantially –

from 9.67 in 2018 to 6.07 in 2020 – despite the VARHS 2020 survey period overlapping with the initial phase of the COVID-19 pandemic. We discuss this is more detail below.

Prior to 2016, MoLISA used an income-based poverty measure, defining the poverty line for each five-year Socioeconomic Development Plan (SEDP), for example, 2005-10, 2011-15, etc. In 2015, the Government of Vietnam decided to shift to a multidimensional poverty approach for the 2016-20 period (Decision No.59/2015/QD-TTg). Under this new method, the poverty line combines income poverty measurement with a multidimensional poverty measure: a rural household is deemed poor if either monthly per capita income is equal to or below 700,000 VND (900,000 for urban households), or if monthly per capita income falls between 700,000-1,000,000 VND (900,000-1,300,000 VND for urban households) and the household is deprived in at least 3 out of 10 indicators measuring access to 5 basic social services (health, education, housing, clean water and sanitation, and information).

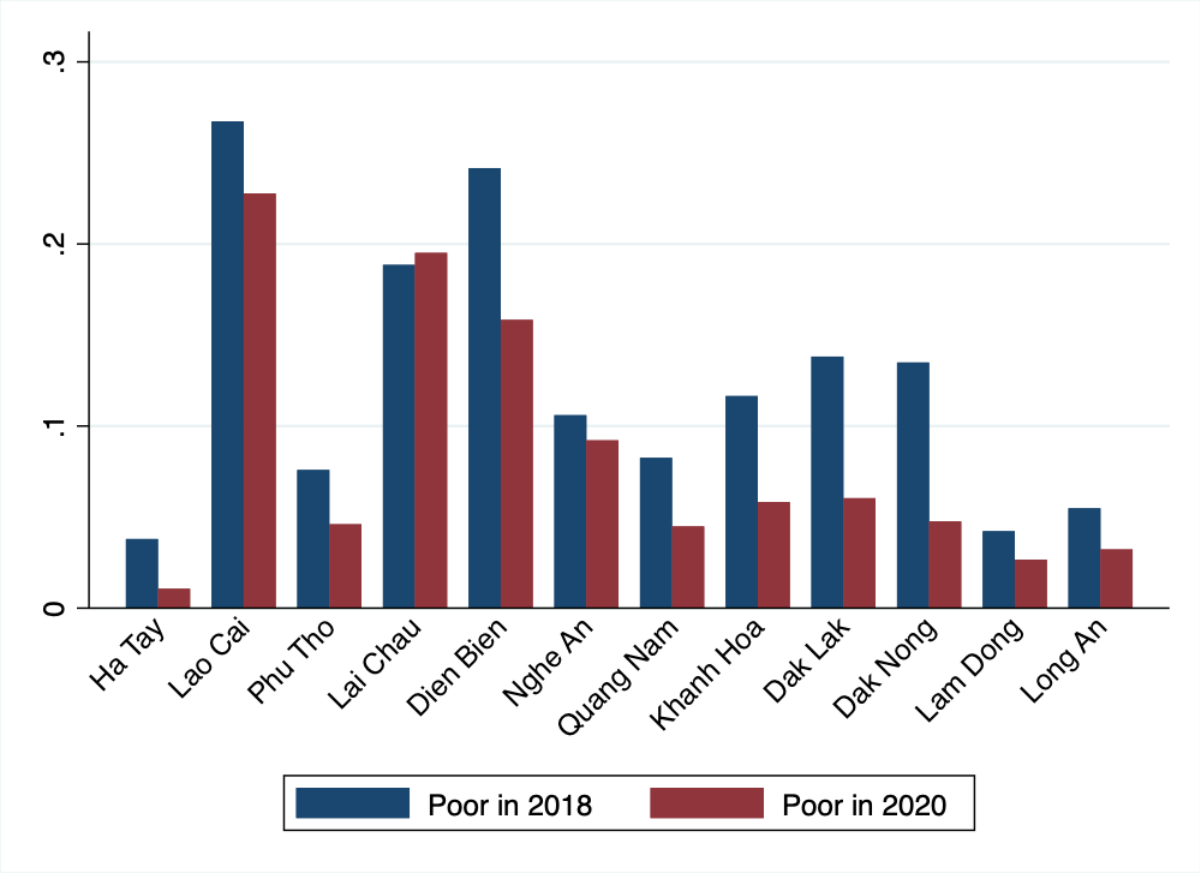
The ten indicators are: (i) health – access to health services and health insurance; (ii) education - education level of adults and school attendance of children; (iii) housing – housing area and quality; (iv) water and sanitation – water source and hygienic toilet; (v) access to information – access to communication services and assets for access to information (UNDP, 2018).[5]

We explore the declining trend in poverty in greater detail in Figures 1.1 and 1.2. Figure 1.1.1 shows the change in poverty status at the provincial level between 2018 and 2020. Except Lai Chau, poverty rates declined in all the provinces.[6]

[5] As per the new decree (Decree No. 07/2021/ND-CP), these measures will change again for the period 2022-2025 (they remain the same for 2021). For the new period, a rural household will be considered poor if monthly income per capita is equal to or below VND 1,500,000 (2,000,000 VND for urban households) and the household is deprived in at least 3 indicators out of 12 indicators of access to social services.

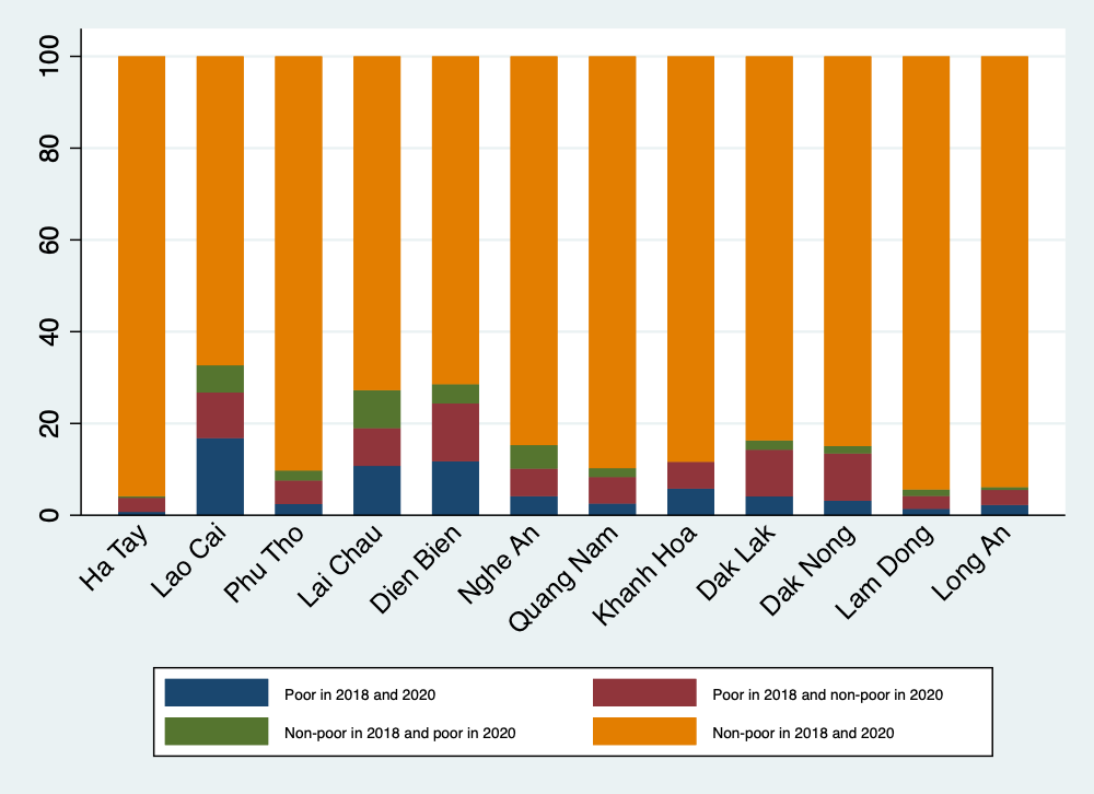
[6] It is yet not clear if the increase in Lai Chau is a trend or a result of COVID-19.

Figure 1.1 Changes in poverty status between 2018 and 2020 by province (percent)



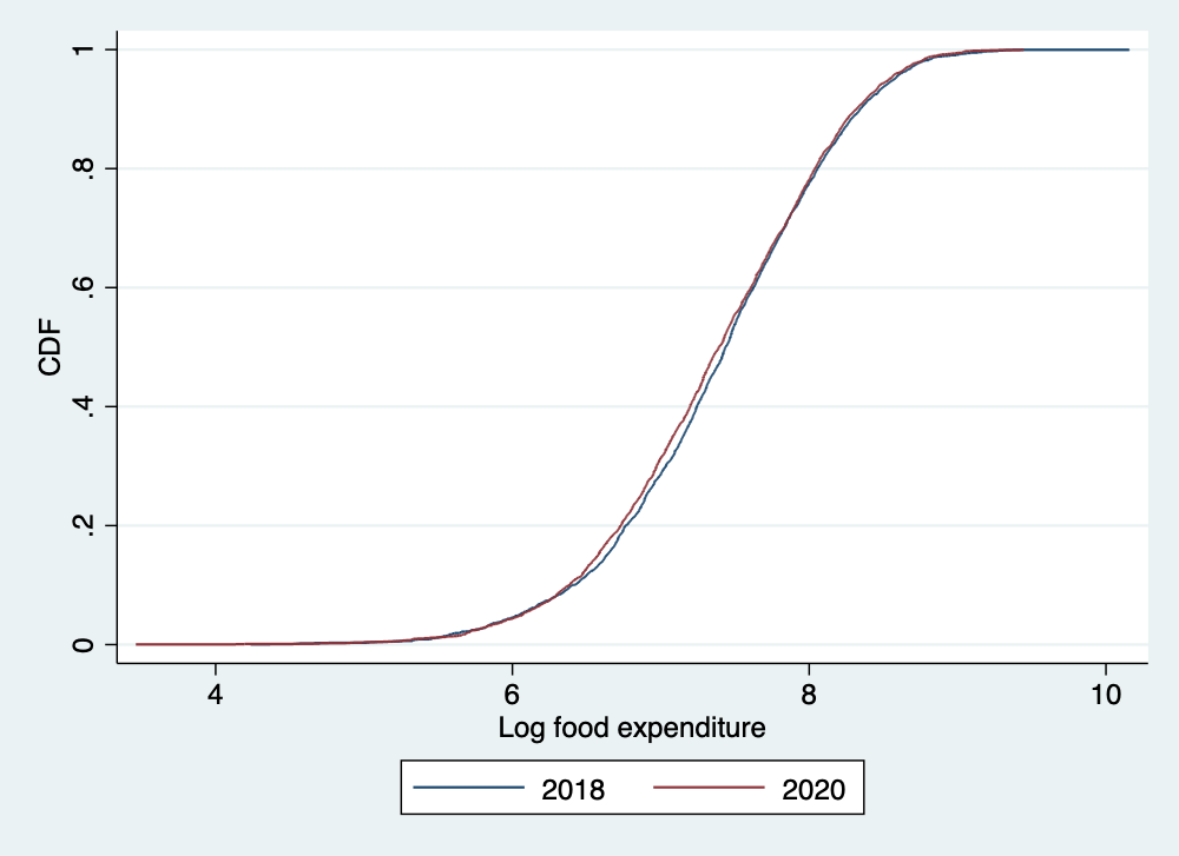
In Figure 1.2, we explore the dynamics of transition in and out of poverty across the provinces. Except Lao Cai, Lai Chau, Dien Bien, and Nghe An, we find that the poverty status of most of the households remains the same in all the other provinces (i.e., either poor or non-poor in both 2018 and 2020). But in Lao Cai, Lai Chau, Dien Bien, and Nghe An, a high share of households move from being non-poor to poor status over the two-year period. Lao Cai, Dien Bien, Lai Chau, Dak Lak and Dak Nong also have a high ratio of households moving from poor to non-poor between survey rounds.

Figure 1.2 Poverty dynamics between 2018 and 2020 by province (percent)



Next, we investigate changes in poverty by looking at changes in the distribution of households' food consumption expenditure between 2018 and 2020. Figure 1.3 shows the cumulative distribution of real food consumption expenditure for 2018 and 2020. To minimize the influence of households with exceptionally high or low recorded consumption expenditure, the natural logarithm is used. A Kolmogorov-Smirnov test for equality of distribution functions rejects that both distributions are the same. The distribution of (log) food consumption expenditure in 2020 lies to the left of that in 2018, indicating that household food consumption expenditure significantly decreased between the two survey rounds. In terms of mean, the average household real food expenditure fell from 2,129, 306 VND in 2018 to 2,058, 263 VND in 2020, implying a 3.3% decline over the mean. This is a worrying reversal compared to the previous reports that have consistently found an increase in food consumption over time (e.g., Ayala-Cantu et al., 2017).

Figure 1.3 Cumulative distribution of log food expenditure in 2018 and 2020

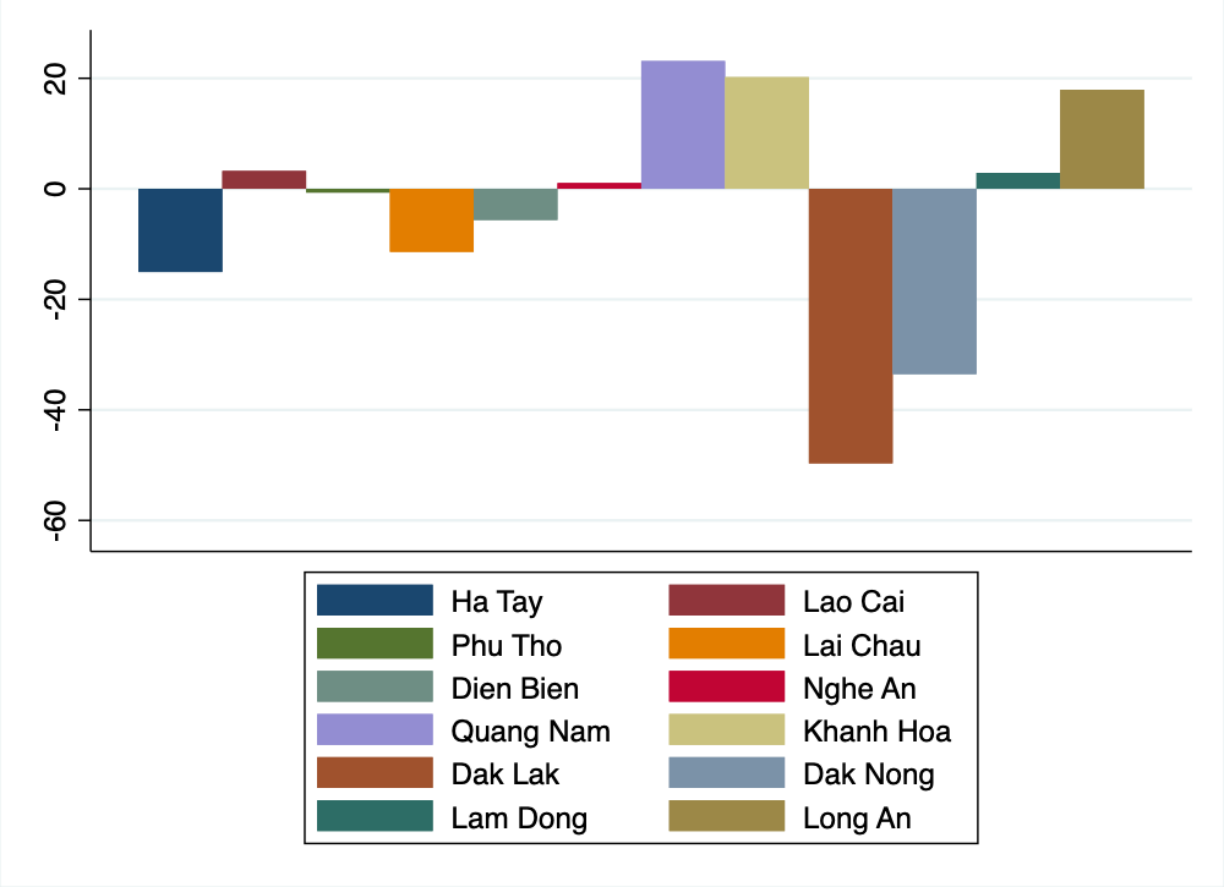


This decline in food consumption is a clear indicator of the effects on the first wave of the COVID-19 pandemic on rural households. While community spread in first wave of the pandemic in Vietnam was swiftly contained resulting in very few cases of deaths, the targeted lockdowns, business closures and mass quarantines had an economic impact on livelihoods. In rapid phone surveys done by the World Bank in June 2020, almost 75 percent of the households reported a reduction in income, mainly stemming from job loss, reduction in working hours and wages, and lower income from household enterprises (World Bank, 2020). Other surveys/studies conducted in mid-2020 also find substantial income and job loss, particularly in the services and manufacturing industries due to a reduction in domestic and international demand (ILSSA, 2020; UNDP, 2020). In rural areas, food supply chains were affects, with farmers unable to sell agricultural produce or having to reduce prices (Thang et al., 2020). Given that food consumption is a good proxy for household income, the VARHS data also suggest that the pandemic reduced incomes in the short run in Vietnam. This finding may appear to be at odds with the decline in poverty rates noted

above, but it is possible that since income is just one component in the current multidimensional approach to poverty, a (mild) decline in incomes due to the pandemic was not sufficient to affect the poverty status.

In Figure 1.4, we explore the change in food consumption in greater detail across the provinces. The data show that between 2018 and 2020, food consumption declined 30-45 percent in Dak Lak and Dak Nong. These provinces in the Central Highlands also suffered from a wide outbreak of diphtheria during summer 2020, which lead to isolation of parts of the population for testing. The provinces of Ha Tay and Lai Chau also saw declines of more than 10 percent. On the other hand, Quang Nam, Khanh Hoa and Long An experienced a substantial increase in consumption, highlighting the uneven effects of the pandemic across the country.

Figure 1.4 Percentage change in food expenditure between 2018 and 2020



Next, we look at the effects of COVID-19 on household expenditures in more detail. The VARHS 2020 survey asked households "how did COVID-19 change your weekly expenditure" across four categories: healthcare, education, food, and other expenses. Table 1.2 shows that households' reported weekly expenditures increased across all categories. Column 1 shows that healthcare expenses increased by 16

percent with substantial variation across provinces. Expenditures in Khanh Hoa rose by close to 50 percent but declined by 4 percent in Dien Bien. The changes were similar for female and male headed households and across ethnic groups, and greater for wealthier households relative to poorer one. Column 2 shows that education expenses increased by 29 percent, with households in Khanh Hoa reporting an increase of over 50 percent. With school closures and a shift to online teaching during the first wave, it is possible that expenses on electronic equipment (computers, phones), internet connections, and tutoring support account for some of this increase (UNICEF, 2020; ILSSA, 2020). The smaller increase in spending in the northern provinces and the Central Highlands possibly indicate an exacerbation of the digital divide – those in remote provinces had limited internet coverage and resources to keep up with the demands of online instruction (UNICEF, 2020). Column 3 shows that nominal food expenses increased by 37 percent on average for the VARHS households.

Once again there is considerable spatial variation, with provinces such as Lao Cai and Phu Tho reporting more than a 50 percent increase, while Lam Dong and Dak Nong report only a 3 percent increase. This suggests that disruptions to the food supply chain may have increased expenses for households. This is explored in greater detail later in the report. Given the previous finding that real food expenditures declined relative to 2018, this increase in nominal food expenses reported in Table 1.2 may appear contradictory. An explanation for this is that food prices spiked in early 2020 – a combination of a shortage of pork at the end of 2019, and an increase in the international price of rice due to a ban on rice exports by Vietnam (and other exporters) in the early part of the pandemic (World Bank, 2020) – which would have raised expenses but left households worse off in real terms. It should also be borne in mind that statistics in Table 1.2 are with reference to the pre-pandemic situation in 2020, and not a comparison with 2018.

Table 1.2 Increase in weekly spending due to COVID-19

	Healthcare expenses, percent	Education expenses, percent	Food expenses, percent	Other expenses, percent
Total 2020	16.43	29.03	37.57	39.1
Province				
Ha Tay	7.49	23.44	43.97	47.53
Lao Cai	13.45	19.64	57.82	63.47
Phu Tho	20.85	37.02	59.81	58.39
Lai Chau	18.39	18.14	47.20	35.12
Dien Bien	-4.01	6.28	9.60	12.52
Nghe An	11.56	38.20	27.64	28.76
Quang Nam	18.91	28.65	34.63	37.30
Khanh Hoa	47.57	50.89	40.19	41.36
Dak Lak	36.19	45.69	31.36	32.59
Dak Nong	3.41	18.58	3.06	2.86
Lam Dong	3.31	16.91	2.73	1.20
Long An	24.79	31.51	34.50	40.21
Gender of HH head				
Female	17.21	31.74	38.16	40.71
Male	16.16	28.08	37.36	38.53
Ethnicity of HH head				
Non-Kinh	14.39	22.47	33.25	33.02
Kinh	16.96	30.75	38.70	40.69
Food expenditure quintile				
Poorest	13.08	30.75	32.25	35.09
2nd poorest	16.13	27.62	37.64	36.87
Middle	16.43	28.65	39.82	38.26
2nd richest	17.86	26.71	40.44	42.26
Richest	18.64	31.40	37.57	42.98

Note: N= 2,583

1.3. Education

As mentioned earlier, MoLISA has taken a multidimensional approach to poverty since 2016. The following sections explore changes in access to essential services such as education, health, adequate housing, clean water supply, sanitation, etc.

In this section, we present statistics on education. Table 1.3 presents data on the formal education of the head of the household in 2020. Overall, the percentage of household heads that cannot read or write is only 3.8 percent (column 1). The mountainous provinces of Lao Cai and Lai Chau have higher rates of illiteracy compared to the other provinces. There is also variation among those that cannot read or write across ethnicity with non-Kinh heads having a higher prevalence of illiteracy (8.9 percent) compared to Kinh household heads (2.5 percent). Female household heads are also more likely to be illiterate.

We find that for the sample overall, 17.6 percent of household heads can read and write but never completed primary school, 28 percent completed primary school, 32.6 percent of the sample completed lower secondary school, and 18 percent the sample managed to complete upper secondary school. More male and Kinh household heads completed either lower or upper secondary school relative to female and non-Kinh household heads, respectively. For example, 20.3 percent of Kinh heads completed upper secondary school compared to 8.4 percent of non-Kinh heads. The education gap across ethnic groups has remained consistent since the start of the VARHS survey in 2006.[7] Finally, as expected the level of education increases as we move up the food expenditure quintiles. The last row of Table 1.3 shows the comparable statistics from 2018. There is little change between 2018 and 2020.[8]

[7] See Singhal and Beck (2017) for ethnic gaps in education over 2006-2014 in Vietnam.
[8] Differences between education levels in 2018 and 2020 are likely due to a change in the household head.

Table 1.3 Highest formal education level of HH head in 2020

	Cannot read and write, percent	Can read and write but did not complete primary, percent	Completed lower primary, percent	Completed lower secondary, percent	Completed Upper secondary, percent
Total 2020	3.76	17.62	28.20	32.61	17.82
Province					
Ha Tay	1.77	12.23	24.47	41.31	20.21
Lao Cai	10.89	24.75	37.62	19.80	6.93
Phu Tho	1.35	8.11	24.32	42.43	23.78
Lai Chau	15.32	39.52	17.74	13.71	13.71
Dien Bien	3.31	42.98	22.31	19.83	11.57
Nghe An	2.29	15.14	18.35	36.70	27.52
Quang Nam	1.90	14.60	26.35	38.73	18.41
Khanh Hoa	7.77	17.48	35.92	25.24	13.59
Dak Lak	6.49	20.13	29.22	28.57	15.58
Dak Nong	3.17	10.32	42.86	30.16	13.49
Lam Dong	1.33	12.00	50.67	20.00	8.00
Long An	4.50	25.72	37.30	19.29	13.18
Gender of HH head					
Female	7.78	27.84	29.34	23.65	11.38
Male	2.35	14.05	27.80	35.74	20.06
Ethnicity of HH head					
Non-Kinh	8.75	32.22	32.03	18.62	8.38
Kinh	2.44	13.79	27.19	36.28	20.29
Food expenditure quintile					
Poorest	7.57	24.08	28.16	27.57	12.62
2nd poorest	3.86	21.04	29.34	27.03	18.73
Middle	3.10	18.22	30.81	32.75	15.12
2nd richest	2.13	12.96	26.31	37.14	21.47
Richest	2.13	11.82	26.36	38.57	21.12
Total 2018 panel	5.89	16.00	29.20	31.29	17.62

Note: N 2020= 2,583; N 2018 panel =2,582

In Table 1.4 we further investigate educational status of household heads by looking at the level of professional education obtained by the head. Table 1.4 presents statistics of professional education of head in 2020 by province, gender, ethnicity, and household food expenditures. Table 1.4 shows that most household heads - almost 84 percent - have no professional education and approximately 7.4 percent have some short-term vocational training.

As with formal education, we see similar patterns in variations across provinces, ethnicity, gender and poverty levels. The percentage of heads without any professional education is higher for female heads and ethnic minorities. For example, while 82 percent of household heads who are Kinh do not have any professional education, for the non-Kinh this is almost 92 percent. Once again, the percentage of households without any professional education is higher in the northern mountainous provinces such as Lai Chau and Lao Cai, and in the Central Highland province of Lam Dong. The richer households are also less likely to have no diplomas.

On comparing the 2018 and the 2020 data we find that there has been a small increase in household heads without qualifications, and a decline in households without short-term vocational training. These differences are likely due to a change in the household head (e.g., due to death of the husband).

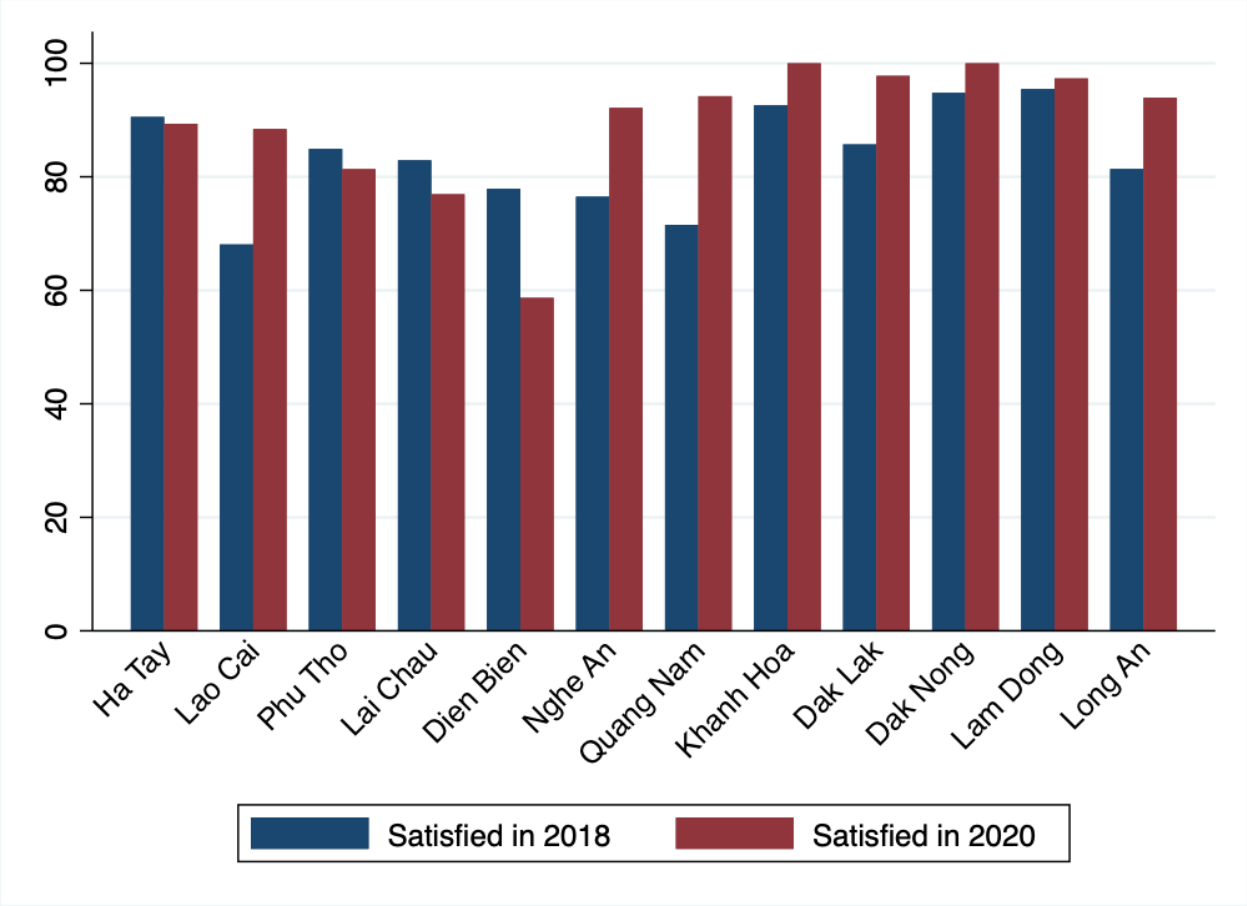
Table 1.4 Highest professional education level of HH head in 2020

	No Diploma, percent	Short term Vocational training, percent	Intermediate vocational (technical), percent	Intermediate vocational (socio-economic), percent	College or University, percent
Total 2020	83.86	7.36	1.94	2.13	4.72
Province					
Ha Tay	78.90	11.17	2.66	2.13	5.14
Lao Cai	94.06	2.97	0.99	0.99	0.99
Phu Tho	80.81	4.86	3.78	4.05	6.49
Lai Chau	91.13	2.42	0.81	0.00	5.65
Dien Bien	88.43	4.13	1.65	2.48	3.31
Nghe An	77.52	11.01	3.67	2.29	5.50
Quang Nam	89.24	4.43	0.32	0.63	5.38
Khanh Hoa	85.44	4.85	1.94	2.91	4.85
Dak Lak	90.26	5.84	0.00	1.30	2.60
Dak Nong	86.51	5.56	0.79	2.38	4.76
Lam Dong	94.67	2.67	0.00	2.67	0.00
Long An	80.06	11.90	1.61	2.25	4.18
Gender of HH head					
Female	88.77	4.34	1.20	1.50	4.19
Male	82.14	8.41	2.19	2.35	4.91
Ethnicity of HH head					
Non-Kinh	92.36	2.61	0.93	2.05	2.05
Kinh	81.62	8.60	2.20	2.15	5.43
Food expenditure quintile					
Poorest	90.68	4.66	1.17	1.55	1.94
2nd poorest	82.24	6.56	3.09	3.47	4.63
Middle	87.21	5.81	2.13	1.16	3.68
2nd richest	81.82	9.09	0.97	1.35	6.77
Richest	77.37	10.64	2.32	3.09	6.58
Total 2018 panel	80.67	9.91	1.74	3.45	4.22

Note: N 2020= 2,583; N 2018 panel =2,582

While, so far, we have only looked at the educational status of the household heads, the VARHS survey also asks if the households heads were satisfied with the education services that were available for their children. There are significant inter-province differences in the percentage of households that are satisfied with education of children, as presented in Figure 1.5. While there is near universal satisfaction in provinces such as Khanh Hoa, Dak Lak, Dak Nong, and Lam Dong, just over half the households in Dien Bien report that they find educational services for their children to be adequate in 2020. Further, changes in satisfaction rates also differ across provinces. While most provinces saw an increase in satisfaction rates between 2018 and 2020, Dien Bien, Lai Chau and Phu Tho report steady declines during this period. The state of education in Dien Bien is particularly worrying.

Figure 1.5 Satisfaction with education of children (percent)



1.4. Health

In this section, we present statistics on wellbeing as measured by health status. Quality of health is assessed on three fronts – illness suffered among household members during the two weeks prior to being

surveyed, the number of days lost due to illness in the 12 months preceding the survey, and whether the household considers the current availability of healthcare sufficient for their needs.

The first column of Table 1.5 presents the percentage of households that reported at least one family member to be sick in the two weeks preceding the survey. Overall, 25 percent of the households in the sample had one or more sick household members, but this number varies a lot across provinces.

Khanh Hoa reported the lowest number of households with a sick member (5.8 percent) while Long An reported the highest (36.6 percent). Female-headed households are more likely to have had one or more sick family members compared to male-headed households (35 percent vs. 21 percent). The percentage of Kinh households that had a sick member is also higher than that of other ethnic minority households. The likelihood of sickness in the household is similar across food expenditure groups. Finally, on comparing results from the 2018-2020 panel, we find that the probability of at least one sick household member decreased by about 4 percentage points between the two years and this decrease is statistically significant. A likely explanation for this decrease are the social distancing measures placed by the government early on in the pandemic which may have limited the spread of some common diseases such as the flu and common colds.

The second column of Table 1.5 reports the average number of days lost per family member due to sickness in the 12 months preceding the survey.[9] Overall, on average households lost almost 12 days per capita due to sickness in the year preceding the survey. Once again, there are substantial differences across provinces, gender and ethnicity of the household head and food consumption levels. As expected, poor households report losing more days due to sickness than richer households (18.6 days per capita vs. 7.4). Female-headed (Kinh) households also lose more days than male-headed (ethnic minority) households.

In the last column of Table 1.5 we present the percentage of households that are satisfied with the availability of health services. Overall, we find that nearly 83 percent of the households report the current level of healthcare to be sufficient for their needs. However, the level of self-reported satisfaction is extremely low in Dien Bien (54 percent), whereas households in Lam Dong and Khanh Hoa report near universal levels of satisfaction. Kinh households are more likely to find healthcare to be adequate than ethnic minority households (85 pervent vs. 78 percent). Satisfaction levels are stable across the food consumption levels. Finally, compared with 2018, satisfaction in 2020 was significantly higher. This could

[9] We exclude family members aged 6 or below when calculating the number of days lost per capita due to sickness.

be a result of both an increase in healthcare investments made by the government during this time period and a reflection of the satisfaction with the government's handling of the initial phase of the pandemic.

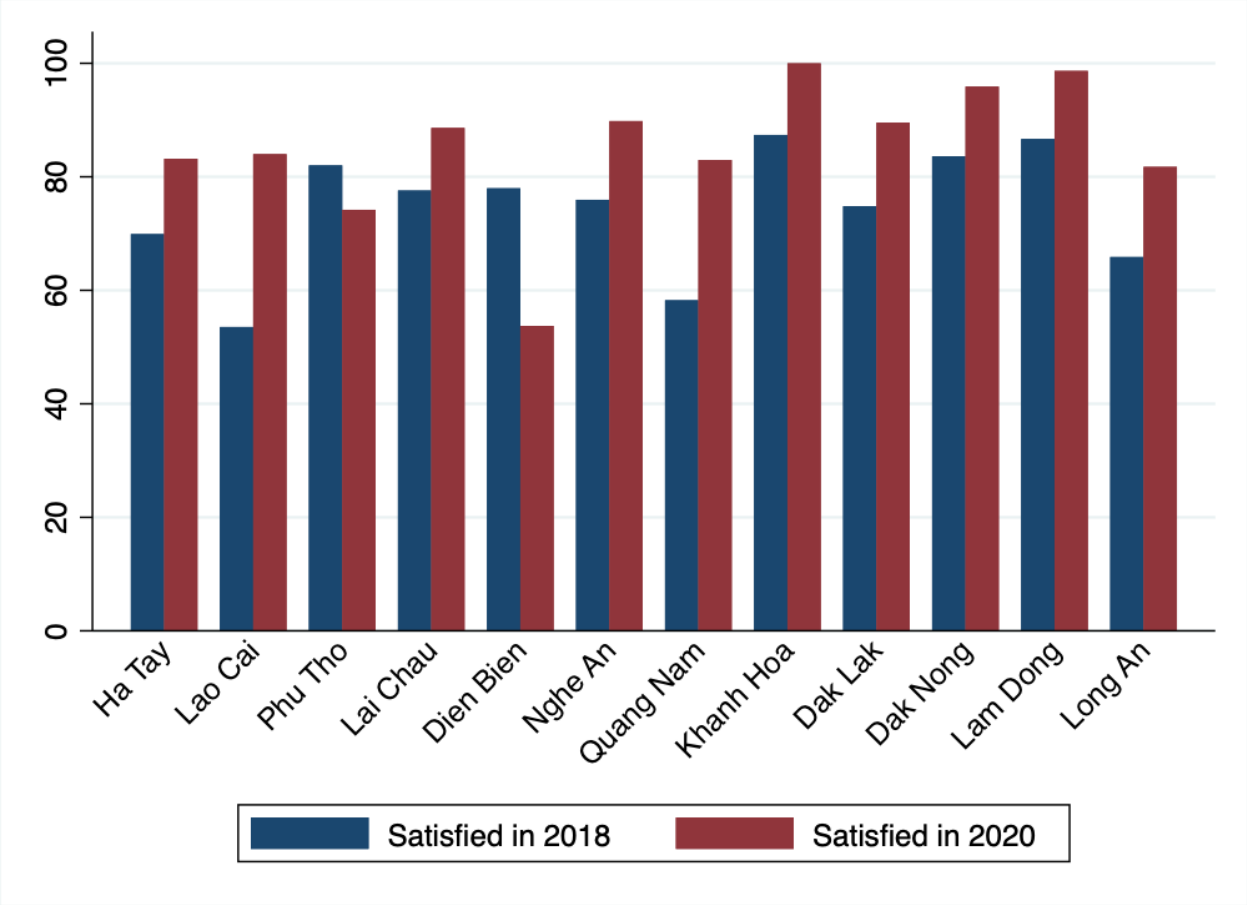
Table 1.5 Health

	HH with at least 1 member sick – in past 2 weeks, percent	Days lost due to sickness in past 12 months, per capita	Healthcare sufficient, percent
Total 2020	24.62	11.84	83.28
Province			
Ha Tay	26.06	15.19	83.18
Lao Cai	11.88	5.26	84.0
Phu Tho	27.57	11.23	74.18
Lai Chau	11.29	6.72	88.62
Dien Bien	18.18	5.96	53.72
Nghe An	33.03	9.53	89.81
Quang Nam	35.76	14.82	83.01
Khanh Hoa	5.83	12.12	100
Dak Lak	7.79	3.11	89.54
Dak Nong	9.52	6.82	95.90
Lam Dong	13.33	8.49	98.66
Long An	36.66	18.61	81.75
Gender of HH head			
Female	34.73	18.64	83.82
Male	21.10	9.47	83.09
Ethnicity of HH head			
Non-Kinh	14.53	7.05	78.05
Kinh	27.27	13.09	84.67
Food expenditure quintile			
Poorest	25.83	18.63	83.86
2nd poorest	24.13	13.53	83.76
Middle	23.06	9.31	84.54
2nd richest	25.73	10.38	81.78
Richest	24.37	7.36	82.45
Total 2018 panel	28.31***	12.02	72.56***
Total 2020 panel	24.63***	11.84	83.27***

Note: *Difference between 2018 and 2020 is significant at 10 percent level; ** significant at 5 percent level; *** significant at 1 percent level. N 2020= 2,583 (N 2018 panel =2,582, N 2020 panel = 2,582)

In the figure below we examine changes in self-reported satisfaction across provinces between 2018 and 2020. We find that satisfaction with healthcare increased over time for all provinces except for Dien Bien and Phu Tho. Put together, the results indicate that the households in the northern provinces – a majority of whom are ethnic minority – continue to lag behind in access to healthcare (also see Tran et al., 2016).

Figure 1.6 Satisfaction with healthcare (percent)



1.5. Living conditions

In this section, we consider important aspects of the living conditions of rural households, such as the quality of housing, access to services such as safe water, good sanitation and energy use, and distance to schools, hospitals and roads.

1.5.1. Quality of housing

Another measure of economic wellbeing is the quality of housing. The VARHS survey collects data on the material used for constructing residential building floors, walls, and roofs. Solid material such as cement, brick, and concrete are considered superior building materials.

Table 1.6 presents statistics on housing. Among the provinces, Dien Bien continues to have the lowest prevalence of households with good quality housing whereas households in Ha Tay and Khanh Hoa on average live in much higher quality buildings; for example, almost all households from Ha Tay and Khanh Hoa have outer walls compared to less than 12 percent of houses in Dien Bien. Female headed households are more likely to have solid floor, walls, and roofs. Comparing households across ethnic groups we find large gaps between the quality of houses belonging to the Kinh relative to those belonging to minority groups. As with many of the other living conditions, the richest households are better off as they have a higher share of houses with good quality floor, walls, and roof.

If we compare the households that are part of the panel, we see that the overall quality of housing has increased slightly for outer walls and roof quality. In 2018, 84 percent of households had high-quality roofs and in 2020 this had increased to 86.5 percent and this increase is statistically significant. The differences in floor quality are not statistically significant between the two rounds. Finally, we also note that the percentage of households with good quality housing is much higher than those reported in the previous VARHS 2016 report (Ayala-Cantu et. al, 2017), indicating substantial progress.

Table 1.6 Quality of housing

	Outer walls in brick, stone or concrete, percent	Floor in cement brick or marble/tiles, percent	Roof in concrete, cement, galvanized iron or tiles, percent
Total 2020	85.56	90.94	86.45
Province			
Ha Tay	99.29	99.47	97.70
Lao Cai	42.57	71.29	47.52
Phu Tho	95.13	97.03	78.37
Lai Chau	31.45	64.51	53.23
Dien Bien	11.57	19.01	47.11
Nghe An	89.91	94.04	96.79
Quang Nam	95.87	98.73	98.73
Khanh Hoa	98.06	100.0	95.15
Dak Lak	85.07	90.90	98.05
Dak Nong	89.68	95.24	90.48
Lam Dong	84.00	97.33	88.00
Long An	94.85	96.78	86.49
Gender of HH head			
Female	91.91	94.46	88.47
Male	83.34	89.46	85.74
Ethnicity of HH head			
Non-Kinh	44.13	62.94	61.82
Kinh	96.43	98.29	92.91
Food expenditure quintile			
Poorest	78.83	85.83	83.49
2nd poorest	79.34	88.41	77.79
Middle	83.33	90.69	86.05
2nd richest	90.52	93.23	90.52
Richest	95.74	96.52	94.39
Total 2018 panel	83.62*	90.39	84.31**
Total 2020 panel	85.56*	90.94	86.45**

Note: *Difference between 2018 and 2020 is significant at 10 percent level; ** significant at 5 percent level.*** significant at 1 percent level. N 2020= 2,583 (N 2018 panel =2,582, N 2020 panel = 2,582)

1.5.2. Access to services

In this section, we report the percentage of households with access to key services that are proxies for environmental sanitation and health - safe drinking water, good toilets and garbage disposal. We consider a household as having a 'good' toilet if it has an improved toilet facility such as a flush, squat, or double-vault compost toilet. A household is considered to have good water access if the main source of cooking and drinking water is reported to be tap, well or a tank. Good garbage disposal includes households where garbage is either collected by someone or taken to a waste site by the household.

As the data presented in the first column of Table 1.7 show, access to a good toilet varies greatly by provinces. While all households in Ha Tay have access to a good toilet, it is relatively low in Lai Chau (74 percent). While there is not much of a difference by the gender of the household head, difference across ethnicity groups is stark. We find that 98 percent of Kinh households have access to good toilets compared to 80 percent of non-Kinh households. This gap between the ethnic groups has been consistent over time and shows no signs of narrowing (Singhal and Beck, 2017).

Similar differences appear for access to safe water and good garbage disposal. While nearly all the households have access to safe water in provinces such as Dak Lak, Dak Nong, Quang Nam and Long An, alarmingly less than a third of the households in Lai Chau and Dien Bien have access to safe water for cooking and drinking. The inter-province differences are even starker when we look at garbage disposal in the last column of Table 1.7. While over 90 percent of households in Ha Tay and Quang Nam dispose their garbage safely, only 5 percent of households in Dien Bien and 20 percent in Lai Chau do so. A majority of the households in these provinces continue to burn their garbage. Once again, there are large gaps between the ethnic majority and minority households (70 vs. 19 percent).

Finally, for the three services considered in Table 1.7, we find that access increases as we move up the food expenditure quintiles. On turning to the panel data, we find that there have been small, significant improvements with respect to access to good toilets and garbage disposal between 2018 and 2020. However, there is also a significant small decline in access to clean water between the two years. The reason for this is not clear.

Table 1.7 Access to toilets, water and garbage disposal

	Good toilet, percent	Good water, percent	Good garbage disposal, percent
Total 2020	94.19	83.54	59.23
Province			
Ha Tay	100	77.66	94.33
Lao Cai	82.18	42.57	25.74
Phu Tho	97.57	94.32	42.16
Lai Chau	73.39	33.06	20.16
Dien Bien	80.99	19.01	4.96
Nghe An	92.20	90.37	70.18
Quang Nam	99.37	98.10	90.51
Khanh Hoa	89.32	95.14	69.90
Dak Lak	92.21	100	65.58
Dak Nong	96.03	100	38.89
Lam Dong	93.33	96.00	45.33
Long An	95.18	98.71	28.94
Gender of HH head			
Female	95.06	89.52	63.47
Male	93.89	81.46	57.75
Ethnicity of HH head			
Non-Kinh	79.89	50.28	18.81
Kinh	97.95	92.28	69.84
Food expenditure quintile			
Poorest	88.93	73.98	54.95
2nd poorest	93.24	76.06	52.12
Middle	92.44	81.39	53.88
2nd richest	97.29	91.49	64.79
Richest	99.03	94.78	70.41
Total 2018 panel	88.96***	86.13***	55.19***
Total 2020 panel	94.19***	83.54***	59.22***

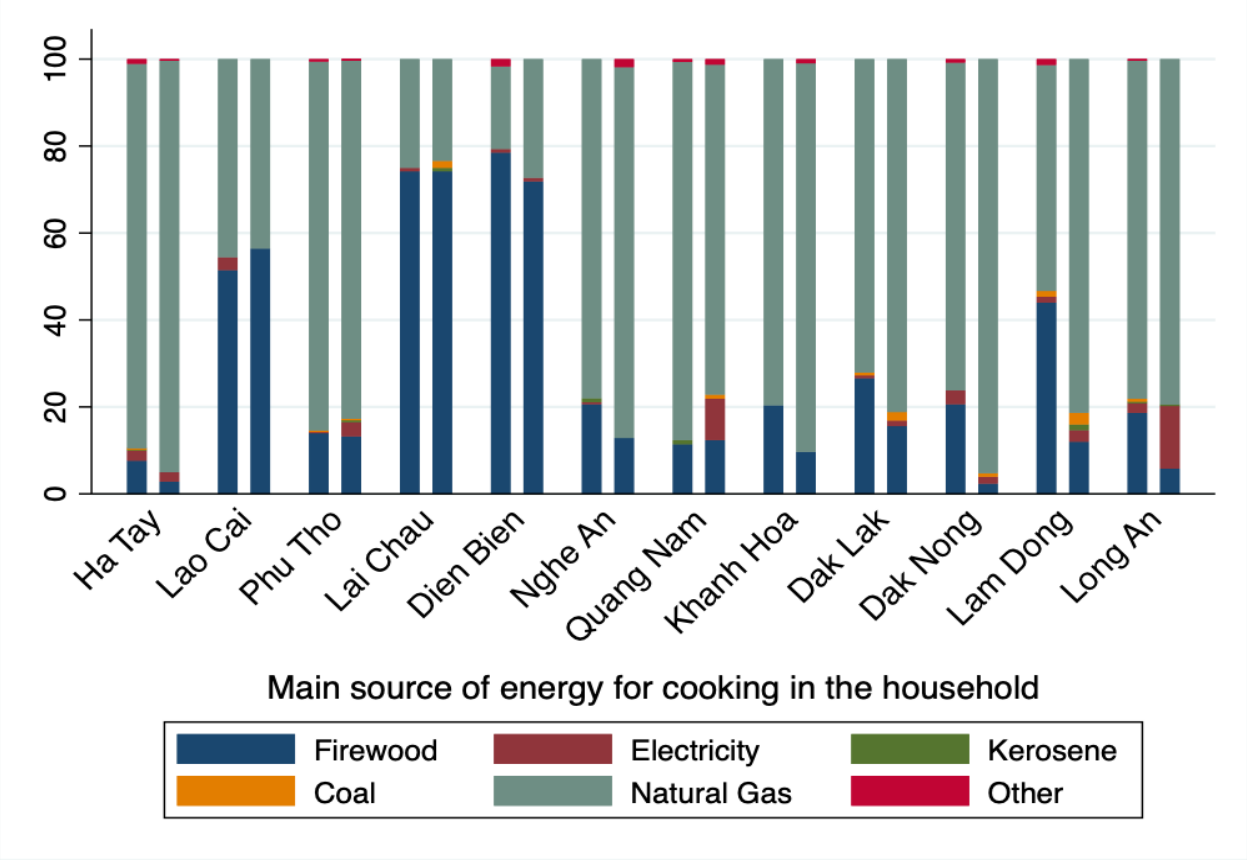
Note: *Difference between 2018 and 2020 is significant at 10 percent level; ** significant at 5 percent level.*** significant at 1 percent level. N 2020= 2,583 (N 2018 panel =2,582, N 2020 panel = 2,582)

Another important service is the availability of improved energy sources for cooking. In particular, a movement away from the use of firewood towards natural gas or electricity would be considered an

improvement in living conditions. Figure 1.7 presents the differences in the main energy source for cooking used by households across provinces. For each province, the first column depicts the main energy sources for 2018 and the second for 2020.

As can been seen from the figure, there has been a decline in the reliance on firewood as the main source of energy for cooking in most provinces. Overall, the percentage of households relying on firewood fell from 23 percent in 2018 to 17 percent in 2020, continuing the declining trend noted in the previous report (Ayala-Cantu et al., 2017 report that usage of firewood was 33 percent in 2016). This declining trend is also evident in all the provinces, except Dien Bien and Lai Chau where approximately 74-78 percent of the households continue to rely on firewood for cooking. The use of firewood was the lowest in Ha Tay in 2018 (8 percent) and dropped even lower in 2020 (3 percent). Concurrently, there has also been an increase in the use of natural gas for cooking – from 88 percent in 2018 to 95 percent in 2020 for the balanced panel sample. Among other clean energy sources, Long An shows an increased use of electricity for cooking – from 2 percent in 2018 to 14.5 percent in 2020.

Figure 1.7 Distribution of the main energy use for cooking (percent)



1.6. Conclusion

In this chapter, we have presented key information on important characteristics of the rural households surveyed under the VARHS in 2020 and compared them to the 2018 data. The results indicate that overall, households in the mountainous Northern Uplands – Lao Cai, Dien Bien and Lai Chau – lag behind on a number of indicators of welfare such as poverty mobility, access to health education and other services.

The changes to household welfare have been assessed in the context of the COVID-19 pandemic. While the official poverty rate fell between 2018 and 2020, the data show that real food expenditures also decreased during this period. This is a dramatic reversal, one likely linked to the disruptions to food supply chains, loss of jobs and incomes, and the increase in food prices caused by the pandemic.

Other dimensions tracked by the government in its multidimensional approach to poverty show uneven progress. There is some decline in the number of household heads with professional qualifications, and satisfaction with the quality of educational services varied vastly across the provinces. The probability of having a sick household member decreased – possibly due to social distancing and reductions in travel. Provision of other social services have continued to improve - between 2018 and 2020 there was an increase in the provision of some services such as good toilets, garbage disposal, and natural gas for cooking. However, substantial differences continue to persist across ethnic groups, and we also witness variation across food expenditure quintiles with poorer households lagging behind richer households in terms of living conditions.

References

Ayala-Cantu, L., Beni, T., Markussen, T., Narciso, G., Newman, C., Singh, A., Singhal, S., Tarp, F., Zille, H. (2017). "Characteristics of the Vietnamese Rural Economy: Evidence from a 2016 Rural Household Survey in 12 Provinces of Vietnam". Helsinki: UNU-WIDER.

Institute of Labour Science and Social Affairs (ILSSA) (2020). "Assessing the Impact of COVID-19 Pandemic and Policy Recommendations on Labour and Employment Policies for Post-Pandemic Recovery". Hanoi: ILSSA.

Singhal S., and Beck, U. (2017). "Ethnic Disadvantage in Vietnam: Evidence Using Panel Data". In Growth, Structural Transformation and Rural Change in Viet Nam: A Rising Dragon on the Move, ed. F. Tarp, 256– 275. Oxford: Oxford University Press.

Tran, B. X., Nguyen, L. H., Nong, V. M., & Nguyen, C. T. (2016). “Health status and health service utilization in remote and mountainous areas in Vietnam”. Health and Quality of Life Outcomes, 14(1), 85.

Tran, T.,C., Truong, T., T., T., Nguyen, L., T., H., Nguyen, T.,T. (2020). “Impacts of Covid-19 pandemic on smallholder farmers and vulnerable rural people in Viet Nam”. FTTC Agricultural Policy Platform, Article #2676.

UNDP (2018). “Multidimensional poverty in Vietnam: Reducing poverty in all its dimensions to ensure a good quality life for all”. UNDP, Hanoi.

UNDP (2020). “COVID-19 Socio-economic Impact on Vulnerable Households and Enterprises in Vietnam: A Gender-sensitive Assessment”. UNDP, Hanoi.

UNICEF (2020). “Rapid Assessment Impacts of COVID-19 on children and their households in Viet Nam”. UNICEF, Hanoi.

World Bank (2020). “What will be the new normal for Vietnam? The Economic Impact of Covid-19”. Washington DC: The World Bank.

2. Chapter 2: Land

Vietnam has a population of 96.5 million people and 33 million hectares of land, or 0.34 hectares per capita. This is significantly lower than the world average of 1.6 global hectares per person in 2019, signifying Vietnam's high population density. In 2018, about 39% of the total land area in Vietnam was agricultural land, up 34% from 2014.[10] The land is not only crucial for agriculture, forestry, and aquaculture but also for the development of urban and industrial regions. As Vietnam is becoming a nation highly attractive to foreign emerging market investors, Vietnamese land and related policy characteristics are fundamental for governments and investors alike.

This chapter considers several issues relevant to land use in Vietnam, including land distribution and fragmentation, land titling, and households' participation in land markets. The VARHS 2020 survey includes a precise command of data on land owned and rented by households and land parted within recent years. Information is collected on land fragmentation, size, location, source of acquisition, investment status, property rights, and other details. This chapter builds on this data, considering differences and patterns across provinces, socioeconomic groups, and male- and female-headed households.

2.1. Land Fragmentation

This section provides an overview of the distribution and fragmentation of land used by households. Table 2.1 displays the number of plots and the total size of land owned by households, the average plot size, as well as the land fragmentation measured as the number of plots per household. Column 1 provides information about the share of households that are landless, meaning without land for agricultural purposes. Overall, 18.3 percent of the sampled households do not own land, an estimated increase of 2 percentage points from 2018.

Landlessness is a significantly larger problem among female-headed households (28.1% are landless) than among male-headed households (only 14.8% are landless). There is no apparent discrepancy in landlessness among different socioeconomic groups; thus, landlessness does not seem to correspond to poverty. However, land ownership does serve as a form of economic and emotional insurance, especially for poorer households. This is particularly important during a global crisis, as was seen in 2020 with the COVID-19 pandemic. The land offers a minimal amount of food and income for households and provides

[10] World Bank (2022): https://data.worldbank.org/indicator/AG.LND.AGRI.ZS?locations=VN

dignity to individuals during hard times. Protecting the livelihoods of poor and landless households is an important concern.

Table 2.1 Distribution and fragmentation of owned land

Group	Landless percent	Total land for agriculture (sqm), mean	Total land for agriculture (sqm), median	Annual land (sqm), mean	Number of plots per HH, mean	Number of plots per HH, max	Plots sharing border with other plots, percent	Plot size (sqm), mean	Plot Size (sqm), median
Total 2020	18.3	6,615	2,463	4,420	3.9	16	8.1	1,748	700
Province									
Ha Tay	11.9	1,864	1,324	1,592	3.9	12	3.9	590	396
Lao Cai	5.9	8,946	5,650	4,963	4.7	13	4.6	1,864	1,230
Phu Tho	16.5	1,938	1,440	1,671	4.8	16	4.9	667	423
Lai Chau	9.7	7,663	6,700	6,553	4.8	10	7.2	1,471	1,261
Dien Bien	3.3	12,171	8,300	9,975	6.1	12	7.1	2,309	1,660
Nghe An	18.8	5,264	2,200	2,997	3.7	12	5.9	1,262	726
Quang Nam	18.4	3,122	2,000	2,356	4.0	14	5.3	809	581
Khanh Hoa	43.7	10,066	4,081	5,320	2.4	8	2.2	1,751	889
Dak Lak	24.7	12,884	8,950	7,227	3.2	11	13.2	3,247	2,516
Dak Nong	24.6	18,412	15,000	3,211	3.0	9	9.3	6,366	4,183
Lam Dong	12.0	13,049	8,300	5,735	3.2	10	8.7	4,176	3,132
Long An	32.2	13,964	5,900	15,255	2.6	13	24.3	3,083	1,580
Gender of Household Head									
Female	28.1	5,084	1,840	4,155	3.2	12	7.4	1,306	563
Male	14.8	7,063	2,702	4,498	4.1	16	8.3	1,902	765
Food expenditure quintile									
Poorest	21.2	6,285	2,480	4,062	3.5	14	6.0	1,718	795
2nd poorest	20.1	6,734	2,765	4,316	3.9	16	5.9	1,697	750
Middle	16.7	6,558	2,581	4,023	4.0	16	8.3	1,788	729
2nd richest	15.3	6,611	2,200	4,291	4.1	13	10.4	1,850	600
Richest	18.2	6,891	2,216	5,389	3.9	14	9.9	1,686	686
Total 2018	16.3	6,792	2,500	4,645	4.0	19	9.1	1,829	715

Landlessness varies across the twelve surveyed provinces and seems to be more common in the Southern ones. Khanh Hoa and Long An have the highest shares of landless households (43.7% and 32.2%, respectively), consistent with the last version of this report (2016), although each of these provinces has higher shares of landlessness than in 2016. Lao Cai, Lai Chau, and Dien Bien have the lowest shares of landless households (5.9%, 9.7%, and 3.3%, respectively). Lam Dong has experienced a 200% increase in landlessness since 2016, from 4% to 12% of households being landless.

Columns 2 and 3 illustrate the amount of land for agriculture owned by households. There is a clear discrepancy in the amount of agricultural land available in the North and South, with significantly more land available in the southern provinces. Remaining consistent with the landlessness data, it is seen that female-headed households own less agricultural land than male-headed households. There is no significant difference in the amount of agricultural land owned by different socioeconomic groups.

Column 5 provides information on land fragmentation across the provinces, precisely the average number of land plots per household. The land is significantly more fragmented in the northern provinces, with the most fragmented province being Dien Bien and the least fragmented province being Khanh Hoa. The average plot size is significantly more prominent in the southern provinces (columns 8 and 9), where landlessness is also more common. Dien Bien is the province with both the lowest share of landlessness and the highest number of plots per household. This can be partially explained by the fact that northern Vietnam is more densely populated than the south. However, it is also important to note the different histories and cultural differences of each region. As will be discussed later on, southern Vietnam is more westernized and market-friendly, while the north depends more on state allocation of land, relating more to the country's communist roots. As such, land allocation in the north may be more equitable. Overall, the number of plots per household is 3.9, a very slight decrease from 2018 (4.0).

Landlessness among households between 2018 and 2020 is shown in a transition matrix in Table 2.2. During this period, 15.2% of households were entirely landless. Only 1.1% of households escaped landlessness during this period, while 3.2% became landless. The 4.3% of households that changed their land status during the period suggests that although status varied less from 2018 to 2020 than during the last version of this report (7.3% changed status from 2014 to 2016), land distribution is still not entirely static.

Table 2.2 Landlesness transition matrix, 2018-2020 (percent)

Group	Between 2018 and 2020
Never landless	**80.6**
Became landless	**3.2**
Escaped landlessness	**1.1**
Always landless	**15.2**
Number of households	**2,466**

Table 2.3 provides an overview of different sources of land acquisition. 44.3% of land owned in 2020 was acquired from the state, and this trend was especially strong in Ha Tay, Phu Tho, Nghe An, and Quang Nam (relatively northern provinces). This is consistent with the data from 2016. Other provinces acquired less land directly from the state, and southern provinces Dak Nong, Lam Dong, and Long An (again consistent with the 2016 data) mainly relied on sales markets or inheritance to acquire land.

Variance may also be seen across socioeconomic groups. Although all groups are almost equally as likely to have obtained their land from the state, wealthier groups are slightly more likely to inherit or buy the land. The poorest quintile is 11.7 percentage points more likely to have “cleared and occupied” land than the wealthiest quintile. This is to be expected, as these households have less capital and agency to purchase land. Female-headed households are 7.2 percentage points more likely to have obtained their land from the state. In contrast, male-headed households are 6.8 percentage points more likely than female-headed households to have cleared and occupied land.

Table 2.3 Plots acquired by source (percent)

Group	State	Inheritance	Sales market (bought)	Cleared and Occupied	Exchanged	Obtained	Other
Total 2020	44.3	26.8	11.3	12.1	0.7	0.1	4.8
Province							
Ha Tay	59.9	25.9	6.5	0.7	0.5	0.1	6.4
Lao Cai	33.5	42.2	6.6	17.2	0.0	0.0	0.6
Phu Tho	66.2	21.3	5.3	2.1	1.0	0.3	3.9
Lai Chau	19.3	19.6	2.7	56.9	0.0	0.0	1.5
Dien Bien	20.3	28.3	3.7	46.2	0.0	0.0	1.5
Nghe An	50.6	25.6	7.3	4.8	4.9	0.1	6.8
Quang Nam	67.9	18.2	3.8	2.1	0.1	0.2	7.8
Khanh Hoa	23.8	35.1	23.8	13.7	0.0	0.0	3.6
Dak Lak	15.3	17.1	39.8	22.7	0.2	0.0	4.8
Dak Nong	9.4	16.5	48.7	24.1	0.0	0.3	1.0
Lam Dong	5.9	27.4	26.6	37.1	0.0	0.0	3.0
Long An	9.5	58.1	24.9	0.5	0.2	0.0	6.8
Gender of Household Head							
Female	49.9	27.0	12.0	6.7	0.3	0.2	3.9
Male	42.7	26.7	11.1	13.5	0.8	0.1	5.1
Food expenditure quintile							
Poorest	45.3	22.7	11.7	15.4	0.9	0.1	4.1
2nd poorest	42.0	28.3	10.1	15.3	0.9	0.1	3.5
Middle	42.5	27.5	9.3	16.6	0.3	0.1	3.7
2nd richest	45.5	25.9	11.4	9.9	0.7	0.1	6.5
Richest	46.0	29.0	13.8	3.7	0.8	0.3	6.4
Total 2018	43.5	27.1	11.1	12.0	0.6	0.2	5.6
Number of plots in 2020	9977						
Number of plots in 2018	10466						

Table 2.4 provides further information on the sources of the acquired land, specifying recently acquired plots.

Table 2.4 Sources of recently acquired plots (past three years)

Acquirement source of plots (less than 3 years)	Total		North		South	
	Total	Percent	Total	Percent	Total	Percent
Total	231	100	164	100	67	100
State/Commune	82	35.5	75	45.7	7	10.4
Inheritance	32	13.9	21	12.8	11	16.4
Sales market (bought)	87	37.7	41	25.0	46	68.7
Cleared and occupied	19	8.2	16	9.8	3	4.5
Exchanged	11	4.8	11	6.7	0	0.0

As established in Table 2.3, the state is the most common source of acquired land overall. However, there is a disparity between the sources of land acquisition in the northern and southern provinces. While the northern provinces acquired 45.7% of their land directly from the state, this figure was only 10.4% in the south. On the other hand, the north acquired only 25% of its land from land markets, whereas the south was much more active in the markets and acquired 68.7% of the land. This trend is consistent with the sociopolitical landscape of northern and southern Vietnam. While the south is becoming westernized and relying more on capitalist markets, the northern provinces relate more to Vietnam's communist roots, hence relying on land allocation by the state. Furthermore, as asserted by the 2016 version of this report (Ayala-cantu, L. et al. 2017), households in the northern provinces are more likely to perceive land as "inalienable to the family", while southern households, being more capitalism-friendly, view land as a commodity that may be traded on the market.

2.2. Land Titles

Private ownership of land is not permitted in Vietnam; however, the right to use of land as dictated by the state may be obtained. Ownership of the right to use land is certified with a Land Use Rights Certificate (LURC), also known as a Red Book. In some cases, this grants users the right to sell, exchange, rent out, bequeath, or mortgage land. . Vietnamese land law includes two kinds of LURC: (i) Land used for the stable and long term; (ii) Land used for a limited term (Bellemare et al. 2020). LURCs are accorded by land registration offices under the Ministry of Natural Resources and Environment (MONRE).

In figure 2.1, we can observe that 75.1 percent of owned plots in the VARHS 2020 sample had a LURC. This is almost the same proportion as the 2018 (75.9 percent). The provinces with the largest proportions of plots with LURC are Phu Tho, Quang Nam and Long An with 90.5, 93.4 and 97.1 percent. The province with the smallest proportion is Dien Bien 25.2, this is one of the mountainous provinces. One possible reason is that households may have increased land appropriation through clearance of forested land, and therefore, do not have LURCs for these relatively new plots. When analyzing who is the households head, we can see that female-headed households are slightly more likely to have plots with a LURC. Regarding the socioeconomic divisions following the food consumption quintiles, we can see there is a difference of almost 19 percent among the poorest and richest quintile. What is more, this gap has largely increase since 2018, when it was only about 5 percent.

Figure 2.1 Proportions of plots owned with a LURC (percent)

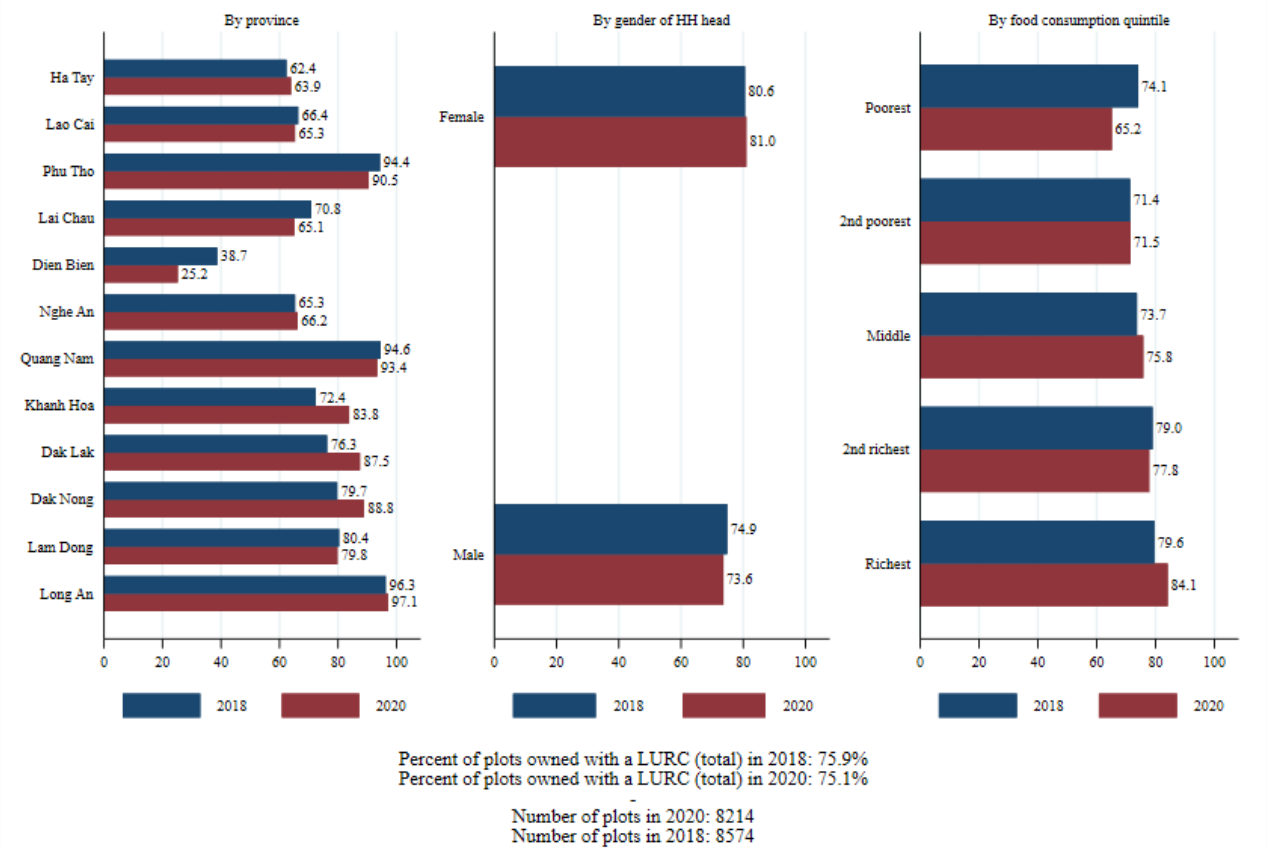


Table 2.5 contributes an overview of the reasons for land plots not having LURCs. The most common reason, accounting for 36.1% of the total plots without LURCs, is that households made informal agreements to use land without receiving a Red Book (RB), also known as LURCs. This was even more common in the south (44.2%), although still the most frequent response in the north (34.9%). This was a

significant development from 2018, when 46.9% of the total had agreements to use land with LURCs. Significantly increased from 2016 to 2018 is the reason "RB ready but not collected from the authorities". In 2016, 11.3% of households reported this; in 2018, this number increased to 20%. This may be due to fears that authorities will take advantage of the opportunity to enforce payment of due debts, fees, other responsibilities, or distrust of corrupt officials who may demand bribes for LURCs (Sharma et al., 2021).

Table 2.5 Reasons for a plot not having a LURC (percent)

Group	2020			2018		
	Total	North	South	Total	North	South
Total	100	100	100	100	100	100
Land in conflict	0.4	0.3	0.8	0.1	0.1	0.3
Land acquired and no RB yet	12.7	12.7	12.3	18.8	18.7	19.4
Agreement to be using land but do not hold RB	36.1	34.9	44.2	46.9	45.9	50.9
Redbook ready but not collected from the authorities	30.4	32.1	19.2	20.0	23.6	3.7
Don't know what a RB is	3.1	3.4	1.2	1.5	1.5	1.3
Other	17.3	16.6	22.3	12.8	10.2	24.4
Number of households	2044			2064		

Further, it is plausible that in 2020 households had completed the process to receive LURCs but struggled to access collection offices. Many families live in rural areas, and as such, collection offices may be inaccessible. Further, the COVID-19 pandemic and associated lockdowns may have caused the closure of collection offices, as well as the inability of individuals to travel to access the offices.

Table 2.6 shows the name registration structure in LURCs. Following the 1993 Land Law introduction, it was impossible to list more than one name in LURCs, usually the head of household (HH). After the new Land Law in 2003, however, it was made possible for listed individuals to add the name of their spouse to shared RBs. This legislation was largely aimed at securing the rights of women; inclusion in LURCs provided women with the ability to participate in legal decision making, as well as offering security in the event of their husbands' death (Newman, Tarp, & van den Broeck 2015).

Household listings on LURCs have progressed considerably in the last decade, with 27.5% of LURCs now containing the names of both the HH and the spouse. In 2016 this number was 20.7%, and in 2014, only 8.6%. This is likely due to enforcement of the 2013 Land Law and 2014 Law on Marriage and Family. Married couples are now required to register both names for a jointly owned plot unless jointly decided

only to register one name. It is plausible that in the last six years, this law has come into force at an increasing level, and thus the number of LURCs with only one name listing is decreasing.

Table 2.6 Name registration structure in LURC (percent)

Group	Only Head	Only Spouse	Both Head and Spouse	Other
Total 2020	51.1	10.5	27.5	10.9
Province				
Ha Tay	46.4	8.0	32.9	12.7
Lao Cai	18.4	7.8	65.4	8.5
Phu Tho	72.0	15.8	1.5	10.7
Lai Chau	16.3	6.6	57.4	19.7
Dien Bien	69.5	12.1	11.5	6.9
Nghe An	19.6	10.7	53.8	16.0
Quang Nam	64.5	10.5	18.3	6.6
Khanh Hoa	24.4	15.3	47.2	13.1
Dak Lak	20.7	5.2	70.0	4.2
Dak Nong	58.1	9.0	26.3	6.6
Lam Dong	54.7	8.2	31.2	5.9
Long An	71.0	10.9	3.3	14.8
Gender of Household Head				
Female	46.3	30.5	5.8	17.4
Male	52.4	5.0	33.5	9.0
Food expenditure quintile				
Poorest	39.6	12.1	37.6	10.7
2nd poorest	47.2	13.0	31.3	8.6
Middle	51.2	10.9	27.8	10.1
2nd richest	54.0	7.5	26.3	12.2
Richest	59.6	9.9	18.0	12.5
Number of plots	6148			

Interestingly, the spread of socioeconomic differences about LURC listings has varied dramatically from 2016. In 2016 there was no significant difference amongst the groups. However, in 2020, there is a significantly larger portion of the poorest quintile in which both the head and spouse of households are listed on the LURC (Ayala-cantu, L. et al. 2017).

There is also a noticeable variance across provinces, but not across north vs south. Progressing from the 2016 data, no provinces have greater than 75% of LURCs with only the HH listed. The provinces with the greatest share of only the head listed Phu Tho and Long An with 72% and 71%, respectively. Dak Lak, the province with the highest share of only HH listed in 2016 (77.4%), shows considerable progress, now with only 20.7% of LURCs listing just the HH and 70% listing both spouses. It is plausible that the effort by Dak Lak to ensure that issued land meets guidelines is motivated by the desire to become an investment target. Energy and agricultural production are highly attractive markets to foreign investors who wish to put into the Vietnamese economy. It has been reported that Dak Lak's Department of Planning and Investment is seeking to transform the province into a more attractive investment destination (VIR, 2020).

From a perspective of gender, there is a curious difference between male and female-headed households. Among male-headed households, it seems that listings on LURCs have become more inclusive: 33.5% of LURCs now list both the head and the spouse, up 9.1 percentage points from 2016. However, among female-headed households, both "only HH" and "both HH and spouse" listings have decreased by 8.3 and 0.6 percentage points, respectively. Meanwhile, "only spouse" listings have increased by 8.6 percentage points, signifying the likelihood that a smaller proportion of women are now listed on LURCs. There is also more of a pattern across socioeconomic groups than in 2016; richer quartiles tend to have more listings of "only HH" and less of "both HH and spouse", while listings on poorer households' LURCs are more evenly spread across the categories. Gender equality among LURC listings is an important policy and development concern. Buchhave et al., (2020) found that households benefit from having jointly titled LURCs and increased their expenditures by an average of 1.6% for agricultural land and 2.5% for residential land. Individuals also benefit from having explicit land-use rights. People listed on LURCs increase their use of healthcare services by 15%, and women who are included on LURCs are 2.33 percentage points more likely to be employed in the non-farm sector.

2.3. Restrictions on Land Use

The Vietnamese government closely supervises and manages all land use. To ensure food security, it occasionally imposes restrictions on land use, such as on the choice of crops and non-agricultural land use. Table 2.7 shows the share and type of restrictions on land in each province.

Table 2.7 Restrictions on non-residential plots (percent)

Group	Formal restrictions on choice of crops		Types of restrictions on choice of crops			Construct fixed structure (not allowed)	Convert into non-agricultural use (not allowed)
	2018	2020	Rice (all seasons)	Rice (some seasons)	Others		
Total 2020	31.4	30.9	19.8	9.7	1.3	13.5	14.0
Province							
Ha Tay	59.7	60.5	37.5	21.3	1.7	9.2	8.7
Lao Cai	3.9	2.2	0.0	2.2	0.0	3.7	5.9
Phu Tho	25.8	34.1	17.5	14.9	1.7	5.2	5.9
Lai Chau	11.3	3.1	0.0	2.8	0.2	3.3	2.9
Dien Bien	8.1	4.6	3.3	1.2	0.0	6.0	3.1
Nghe An	52.1	46.9	28.3	15.1	3.5	16.9	16.9
Quang Nam	45.3	39.5	33.4	5.0	1.0	10.3	19.4
Khanh Hoa	36.2	13.1	12.4	0.7	0.0	29.8	32.8
Dak Lak	1.6	1.3	0.0	1.3	0.0	43.8	43.9
Dak Nong	0.6	4.2	0.4	3.9	0.0	35.8	21.5
Lam Dong	38.0	0.0	0.0	0.0	0.0	39.3	28.6
Long An	9.4	25.1	21.1	0.9	3.2	24.8	25.1
Gender of Household Head							
Female	37.5	35.6	25.9	8.4	1.4	13.5	14.0
Male	29.9	29.7	18.3	10.0	1.3	13.5	14.0
Food expenditure quintile							
Poorest	29.5	19.1	13.9	4.9	0.3	11.0	10.5
2nd poorest	32.2	21.4	11.6	8.5	1.3	12.7	12.7
Middle	30.3	28.3	15.0	11.6	1.7	15.4	15.9
2nd richest	32.9	37.5	24.2	12.1	1.2	13.4	14.6
Richest	31.5	46.3	33.5	10.7	2.1	14.7	15.7
Total 2018			20.8	7.7	2.9	16.9	20.5
Number of plots 2020		7484					
Number of plots 2018		8182					

In the 2010s, land restrictions were relaxed. However, it seems they have stayed relatively consistent since 2016. In 2018, 31.4% of the land in Vietnam had been placed under formal restriction, and in 2020, this percentage reduced to 30.9%. Moreover, 13.5% of land was not permitted to be used for building fixed structures. It was supposed in the 2016 version of this report that restrictions were reduced from 2014 to 2016 in attempts to encourage investment (Markussen, Tarp and van den Broeck, 2011), and it

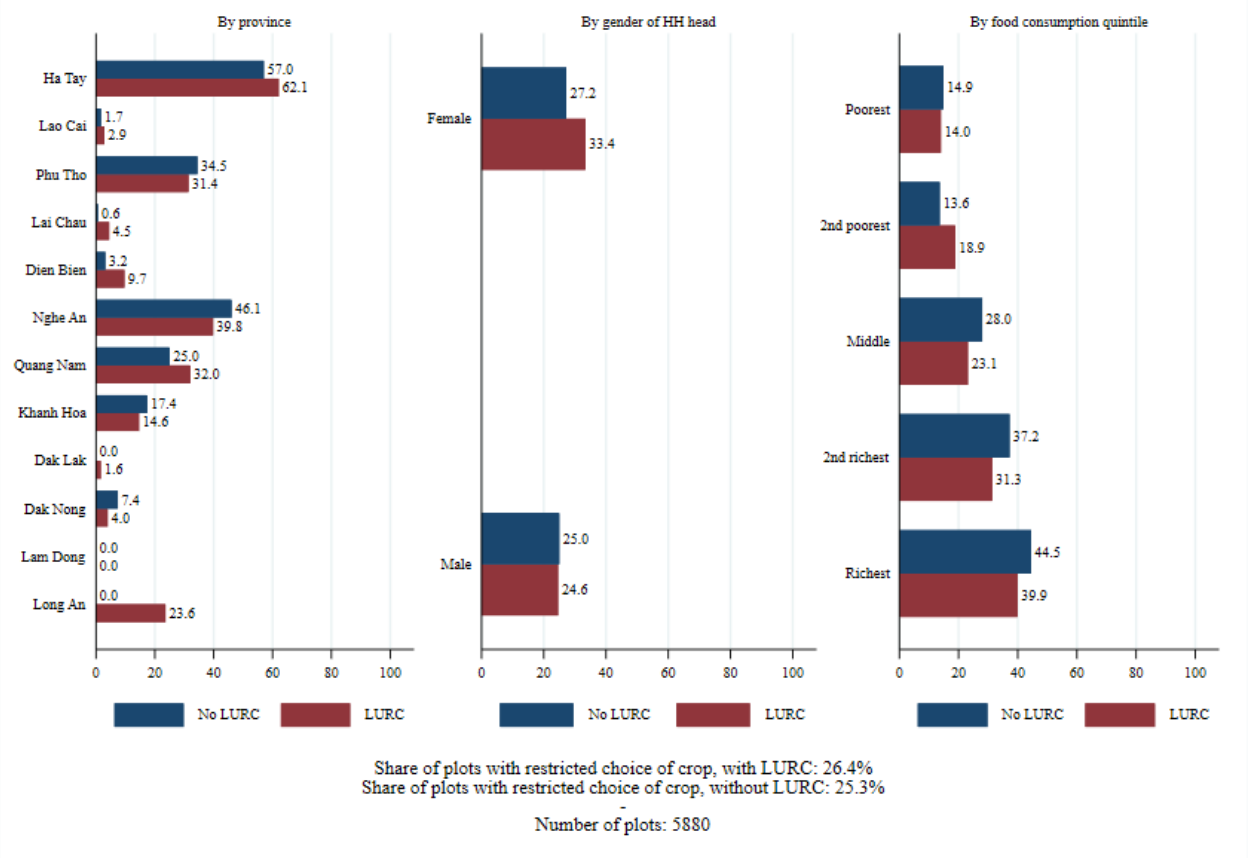
may be assumed that this has succeeded. As of September 2020, foreign investment had disbursed USD 13.76 billion, or 98.6% over the period in September 2019.

Although the average level of restriction has not changed considerably, there has been variation across the provinces since 2016 to 2020. Ha Tay and Quang Nam have seen significant restriction increases (19.2 and 9.9 percentage points, respectively). In contrast, Phu Tho, Dien Bien, and Long An have seen considerable decreases in restriction (14.9, 10.2, and 9.6 percentage points, respectively). The most common type of restriction is on rice (all seasons), and this type of restriction was increased in both Ha Tay and Quang Nam. Phu Tho and Dien Bien saw significant decreases in restriction on the construction of fixed structures (9.1 and 13.9 percentage points, respectively). Across regions, there is significantly more restriction on building fixed structures in the southern provinces.

Remaining consistent with the 2018 data, the richer quintiles are more likely to have restrictions on their land use and, most likely, rice (all seasons). According to Ayala-Cantu, et al. (2017) this was because the state perceived the plots owned by richer quintiles to be of the highest importance to guarantee food security, and this assumption remains plausible.

In figure 2.2, we can observe the share of restricted plots according to Red Book status. Plots with a LURC are more likely to be restricted in the choice of crops than plots without LURC. However, the difference among both conditions is minimal: around 1 percent.

Figure 2.2 Share of plots with restricted choice of crop, by red book status (percent)



2.4. Investment in Land

This section explores land-related investment. Table 2.8 describes the share of plots with irrigation or bushes/trees (perennial crops). Investigating a possible correlation between LURC status and investment gives information on plots with and without LURCs separately. As a major aim of land titling, this is of high interest to provide tenure security and encourage investment in the land.

In both 2018 and 2020, 80.7% of all plots owned and used were irrigated. In both years, plots with LURCs were more irrigated; however, neither category significantly increased in irrigation level from either 2018 or 2016. Surprisingly, seven provinces had more irrigation in plots without LURCs. However, only Dak Lak and Lam Dong showed differences in irrigation margins greater than 5 percentage points (11.2 and 10.6 percentage point difference, respectively). In terms of perennial crop status, the difference between plots with and without LURCs has increased since 2018. Around 18% of plots had perennial crops in 2020, a slight decrease from 18.6% of plots in 2018. Across different socioeconomic groups, there is not much

differentiation, although richer quintiles seem to have slightly more irrigation, while poorer quintiles have slightly higher numbers of perennial crops. There does not seem to be significant variance across genders.

Table 2.8 Current status of land investment – irrigation facilities and perennial crops (percent)

Group	Percent of plots with irrigation			Percent of plots with tree/bushes		
	All plots owned and used	No LURC	LURC	All plots owned and used	No LURC	LURC
Total 2020	80.7	73.2	83.6	18.0	11.8	20.3
Province						
Ha Tay	90.7	92.2	89.3	5.9	5.4	6.3
Lao Cai	70.0	71.3	69.3	17.4	16.9	17.7
Phu Tho	88.9	89.7	88.8	8.1	10.3	7.9
Lai Chau	94.1	96.8	92.6	8.1	4.4	10.1
Dien Bien	38.9	27.5	70.7	8.0	8.7	6.1
Nghe An	72.4	67.9	75.9	18.9	9.9	25.9
Quang Nam	79.8	83.3	79.6	12.9	13.3	12.9
Khanh Hoa	70.7	57.1	75.2	22.9	37.1	18.1
Dak Lak	75.3	85.1	73.9	55.3	36.2	58.2
Dak Nong	94.3	92.9	94.5	79.7	75.0	80.2
Lam Dong	91.5	100.0	89.4	69.1	81.1	66.2
Long An	80.0	66.7	80.2	24.3	50.0	24.0
Gender of Household Head						
Female	79.2	73.6	80.7	16.6	10.2	18.3
Male	81.1	73.1	84.4	18.3	12.1	20.9
Food expenditure quintile						
Poorest	73.5	64.3	79.0	20.5	9.1	27.4
2nd poorest	78.8	68.5	83.2	18.5	12.3	21.1
Middle	84.3	80.7	85.5	17.7	14.5	18.7
2nd richest	85.9	77.4	88.9	17.3	13.7	18.5
Richest	79.9	79.6	79.9	16.3	9.5	18.0
Total 2018	80.7	71.5	83.6	18.6	15.0	19.7
Number of plots 2020		7139				
Number of plots 2018		7718				

Table 2.9 supplies information on investments made in the two years before the VARHS survey being conducted, spanning the categories of irrigation, structures for aquaculture, other structures, and perennial crops. Investment into irrigation and soil/water conservation was the most common type of investment in 2020 (up 0.8 percentage points from 2018). Investment in structures (aquaculture and others) did not change significantly from 2018 to 2020, but investment in perennial crops dropped by 4.2 percentage points from 2018 levels. This may be out of a lack of necessity; perennial crops do not need to be replanted (or repurchased) each year. Investments from 2018 have likely held through 2020.

The northern province of Lai Chau had by far the highest levels of investment in irrigation and structures for aquaculture, and the southern province of Dak Nong had by far the highest levels of investment into perennial crops. There was not great variance across investments into permanent structures.

In terms of socioeconomic status, there is no relevant pattern across the types of investment, although unsurprisingly richer quintiles are more likely to have invested into their plots in the last two years. The same is seen across female vs male-headed households, with male-headed households having invested more into their plots over the last two years. It may be hypothesized that this is because male-headed households have more disposable income. Vietnam is a patriarchal society, and as such, it is plausible that single mothers lead female-headed households with less capital.

Table 2.9 Household investment (last two years)

Group	Irrigation/soil/water conservation		Structures for aquaculture		Other (semi-) permanent structures		Trees and bushes	
	Percent	Value ('000) VND	Percent	Value ('000) VND	Percent	Value ('000) VND	Percent	Value ('000) VND
Total 2020	6.0	3,903	1.0	5,764	0.9	101,152	2.9	15,623
Province								
Ha Tay	6.6	1,738	0.4	2,667	0.7	59,088	0.9	10,943
Lao Cai	10.9	3,253	2.0	990	0.0	0	1.0	9,033
Phu Tho	5.1	10,641	1.9	4,054	1.1	48,018	1.6	12,744
Lai Chau	31.5	5,213	4.8	4,830	0.8	0	3.2	3,450
Dien Bien	0.0	0	0.0	0	0.8	55,249	0.0	0
Nghe An	2.3	407	0.5	18,182	0.5	4,545	1.8	1,164
Quang Nam	0.9	606	0.0	0	1.3	254,541	3.2	13,558
Khanh Hoa	13.6	2,147	1.0	1,821	0.0	0	0.0	0
Dak Lak	0.0	0	0.0	0	1.9	56,324	3.9	10,194
Dak Nong	0.8	9,099	0.8	9,099	0.0	0	14.3	12,082
Lam Dong	1.3	1,812	0.0	0	0.0	0	5.3	10,568
Long An	8.4	2,252	2.3	8,837	1.3	137,498	5.5	32,739
Gender of Household Head								
Female	5.2	1,246	0.6	9,066	0.4	48,707	2.4	18,420
Male	6.3	4,672	1.2	5,190	1.0	109,433	3.1	14,864
Food expenditure quintile								
Poorest	2.5	1,650	0.4	4,780	0.2	55,249	0.8	5,747
2nd poorest	6.2	3,267	1.9	3,565	0.6	304,270	3.5	8,385
Middle	8.3	7,445	1.2	7,195	1.0	5,540	3.1	6,734
2nd richest	5.0	1,427	0.8	7,711	1.0	89,457	3.1	31,268
Richest	8.1	2,993	1.0	7,282	1.5	97,788	4.1	18,561
Total 2018	5.2	8,554	1.6	27,225	0.7	95,301	7.1	11,009
Number of households 2020		2583						
Number of households 2018		2604						

2.5. Land Transactions

This section discusses transactions made in land markets, which became increasingly popular following the Land Law of 2003. It expands on the analysis of land transactions from section 2.2, focusing on land value and rental/sales markets. See section 2.2 for more detail on the acquisition of land and land legislation.

Table 2.10 offers information on the approximate sales value of agricultural land, both annual and perennial. It must be noted that these values are based on subjective estimates of VARHS survey respondents. This data is also limited in accuracy as many respondents were unable to assess the sales value of their plots (thus, there are many missing values).

Ha Tay and Khanh Hoa provinces present as having very high sales values of agricultural and annual land, although they are of somewhat average value when it comes to perennial land. However, the perennial land of Long An stands out as being exceptionally more valuable than that of other provinces. The provinces of Dien Bien and Nghe An are the least valuable for all types of land, and perennial land in Nghe An is exceptionally cheap. Overall, agricultural and annual land are the most valuable across Vietnam (valued at 226,000 and 244,000 VND/sqm, respectively), while perennial land is much cheaper (valued at 106,000 VND/sqm).

Unsurprisingly, poorer households tend to report lower sales values for their land plots, except for a few exceptions (see the poorest quintile, perennial land). Male-headed households also report higher plot values than female-headed households, except in the case of perennial land. Overall, all types of land sales have increased dramatically from 2018, even though 15,647 VND less was invested in 2020 than in 2018. This could dispel the assumption from the 2016 version of this report that investments were the principal driver of increasing land values. Instead, this growth is likely a result of increased foreign investment into Vietnam.

Table 2.10 Approximate sales values of agricultural, annual, and perennial land ('000 VND/sqm.)

Group	Appro. Sales value of agricultural land	Appro. Sales value of annual land	Appro. Sales value of perennial land
Total 2020	226	244	106
Province			
Ha Tay	472	479	90
Lao Cai	222	229	171
Phu Tho	184	185	134
Lai Chau	26	26	33
Dien Bien	43	44	4
Nghe An	84	86	68
Quang Nam	122	123	117
Khanh Hoa	884	931	182
Dak Lak	102	119	81
Dak Nong	75	183	47
Lam Dong	88	139	71
Long An	200	184	307
Gender of Household Head			
Female	219	227	147
Male	228	249	99
Food expenditure quintile			
Poorest	194	203	119
2nd poorest	199	221	64
Middle	248	280	71
2nd richest	174	187	97
Richest	291	303	186
Total 2018	182	199	86
Number of plots 2020	3384		
Number of plots 2018	3718		

Table 2.11 explores whether and how households' part with their land plots, providing information on the share of households who part with land and how they do it. Overall, 7.5% of households parted with land in 2020, down 11.6 % from 2018. Presumably, this is because of insecurity due to the pandemic; households faced both increased economic insecurity and stay-in-place mandates by the state.

Table 2.11 Modes of parting with plots (percent)

Group	Share of HHs who departed with land	Exchanged	Sold	Gave	Expelled	Abandoned	Other	Total Plots
Total 2020	7.5	9.7	15.7	37.3	19.7	5.5	12.1	381
Province								
Ha Tay	8.2	17.0	8.0	40.0	17.0	3.0	15.0	100
Lao Cai	4.0	0.0	42.9	0.0	28.6	0.0	28.6	14
Phu Tho	8.9	11.9	9.5	51.2	16.7	1.2	9.5	84
Lai Chau	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Dien Bien	4.1	0.0	27.3	0.0	0.0	72.7	0.0	11
Nghe An	8.7	0.0	3.6	35.7	32.1	10.7	17.9	28
Quang Nam	11.7	13.4	4.5	23.9	37.3	3.0	17.9	67
Khanh Hoa	5.8	0.0	10.0	70.0	20.0	0.0	0.0	10
Dak Lak	6.5	0.0	47.4	31.6	0.0	21.1	0.0	19
Dak Nong	8.7	0.0	38.5	30.8	30.8	0.0	0.0	13
Lam Dong	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Long An	7.4	2.9	45.7	45.7	0.0	0.0	5.7	35
Gender of Household Head								
Female	9.0	7.0	20.2	41.2	21.9	3.5	6.1	114
Male	7.0	10.9	13.9	35.6	18.7	6.4	14.6	267
Food expenditure quintile								
Poorest	7.2	7.6	9.1	53.0	15.2	6.1	9.1	66
2nd poorest	5.4	0.0	21.4	41.4	5.7	7.1	24.3	70
Middle	7.8	13.6	10.6	39.4	24.2	4.5	7.6	66
2nd richest	7.2	5.5	15.1	39.7	17.8	8.2	13.7	73
Richest	10.1	17.9	19.8	21.7	30.2	2.8	7.5	106
Total 2018	11.6	14.5	10.9	27.6	21.9	6.3	18.8	681
Number of households 2018		2604						
Number of households 2020		2583						

Out of the plots parted with, the most common mode was giving away. This was also the most common method of parting with land in 2018, although it is at a greater margin in 2020. It was especially recurrent among female-headed households, 41.2% of whom (out of those who parted with land) gave land away, while male-headed households both parted with and gave away less land.

The greatest margin of difference is seen among socioeconomic groups. 53% of the poorest quintile who parted with land did so by giving the land away; this number is 21.7% in the richest quintile. The opposite is seen in selling land: 19.8% of the richest quintile who parted with land sold it, while this number is only 9.1% in the poorest quintile. This is possibly explained by richer populations having higher access to and knowledge of markets.

The province with the highest share of households who parted with the land is Quang Nam; this province also has the highest share of those who were expelled from the land. There were also significantly more expulsions among richer households, as well as among northern provinces. This suggests land redistribution, which is presumably more common in the north where central planning is looked upon more favorably and use of land markets is less common.

Table 2.12 investigates land recipients, uncovering interesting correlations between modes of parting with land and the recipients of land postpartum. Most plots in 2020 were acquired by either the children of LURC owners (29.4%) or the state (28.6%). As to be expected, in cases where expulsion or exchanging was the cause of parting with land, the state was the recipient. In many cases, given away land was acquired by the child or other relative of the LURC owner, and in this way, it may be inherited.

Table 2.12 Recipients of land (percent)

Group	Parent	Child	Sibling	Other relative	Neighbour	Other person	State	Private Organization	Other
Total 2020	2.4	29.4	5.0	11.5	5.0	13.4	28.6	0.8	2.9
Exchanged	0.0	0.0	2.7	2.7	0.0	10.8	83.8	0.0	0.0
Sold	0.0	1.7	3.3	10.0	28.3	50.0	0.0	1.7	3.3
Gaveaway	2.8	75.4	5.6	14.8	0.0	1.4	0.0	0.0	0.0
Expelled	0.0	0.0	0.0	4.0	1.3	10.7	81.3	2.7	0.0
Abandoned	0.0	0.0	19.0	38.1	4.8	9.5	4.8	0.0	14.3
Other	10.9	8.7	8.7	10.9	0.0	10.9	34.8	0.0	13.0
Number of observations			381						

2.6. Challenges with Land

Climate change and agriculture are undeniably related terms; however, the topic is often neglected or not given enough weight. For several years now, evidence has shown that, as the years go by, the natural wasting of land may be highly affected by changes in temperature as well as a higher incidence of natural

disasters. Therefore, this section aims to shed light on the current status of land environmental problems and the prevalence of lands affected by natural disasters.

Table 2.13 reports the proportion of plots (excluding residential and fish and shrimp ponds) that have experienced any environmental problems across the 12 surveyed provinces and what these problems are for the affected plots. Overall, only 15.2% of plots experienced land-related environmental problems, down 2.3 percentage points from 2018. The northern province of Dien Bien and the central province of Dak Lak experience the most problems (37.4% and 25.1% of plots, respectively). The southern province Dak Nong experiences the fewest problems (1.4% of plots) and reports no issues other than the formation of gullies (ravines formed by running water). 17.7% of plots overall struggle with gullies, while over half (53.1%) experience problems arising from dry land. Few plots struggle with stony soils/clay or sedimentation, except for Long An (36.2% of plots experience sedimentation problems).

As expected, there is no significant difference between female and male-headed households regarding experiencing environmental problems. Overall, there is no difference across income quintiles, except for the frequency of gully formation. The poorest two quintiles experience gullies more frequently than the middle and richest quintiles.

Table 2.14 explores plot quality compared to the village's average land fertility. Overall, these figures have not changed much since 2018, although there are both fewer plots with less than average fertility and fewer plots with better than average fertility. Southern province Long An is the most unequal, with 7.1% of plots worse than the village's average and 17.3% of plots better than average.

Female-headed households have a higher share of plots that are better than average compared to land fertility in the village. From a production perspective, there is a greater discrepancy amongst the lowest quintile, although all quintiles are relatively equal when it comes to the share of "less than average" plots.

Table 2.13 Experienced problems in the plot with any of the following conditions (percent)

Group	Experienced any problem	Modes of parting with land						
		Gullies	Dry land	Low-lying land	Sedimentation	Landslide	Stony soils/ clay	Other
Total 2020	15.2	17.7	53.1	15.8	2.6	8.2	1.1	1.5
Province								
Ha Tay	13.4	3.0	48.5	40.6	0.0	5.9	0.5	1.5
Lao Cai	8.7	28.1	25.0	0.0	6.3	40.6	0.0	0.0
Phu Tho	10.6	18.9	47.6	25.9	3.5	0.0	0.0	4.2
Lai Chau	9.6	6.8	56.8	2.3	2.3	31.8	0.0	0.0
Dien Bien	37.4	59.2	37.1	0.0	0.0	0.0	2.3	1.4
Nghe An	16.0	3.9	74.8	12.6	0.0	7.8	0.0	1.0
Quang Nam	20.9	4.4	62.1	9.2	0.5	21.4	1.9	0.5
Khanh Hoa	7.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0
Dak Lak	25.1	12.8	85.1	0.0	0.0	0.0	2.1	0.0
Dak Nong	1.4	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Lam Dong	12.5	0.0	95.8	0.0	0.0	0.0	0.0	4.2
Long An	10.3	0.0	10.3	46.6	36.2	3.4	0.0	3.4
Gender of Household Head								
Female	16.6	17.3	47.4	19.7	4.4	7.6	2.0	1.6
Male	14.9	17.8	54.8	14.7	2.1	8.4	0.8	1.5
Income quintile								
Poorest	15.4	24.7	43.4	12.8	3.2	12.3	1.4	2.3
2nd poorest	14.9	26.2	42.3	16.9	1.2	9.7	0.8	2.8
Middle	16.1	12.0	64.8	11.6	2.0	7.6	0.8	1.2
2nd richest	15.2	11.5	61.9	20.2	2.8	3.2	0.0	0.5
Richest	14.7	13.1	53.0	18.2	4.5	8.1	2.5	0.5
Total 2018	17.5	13.8	57.6	17.1	1.5	4.9	2.7	2.5
Number of plots 2020		7433						
Number of plots 2018		8153						

Note: Residential lands and fish and shrimp ponds are excluded.

Table 2.15 investigates the natural changes in quality of plots. Overall, many more plots worsened due to weather (12%) than improved (3.9%). Dien Bien and Ha Tay saw the greatest decreases in plot quality (25% and 18.1%, respectively). Only Dak Nong saw slightly more plots improve than worsen. Generally, northern provinces improved more than southern provinces did.

Table 2.14 The quality of the plot compared to the average land fertility in the village (percent)

Group	Less than average	Better than average
Total 2020	4.2	5.1
Province		
Ha Tay	3.8	6.7
Lao Cai	0.9	1.2
Phu Tho	2.6	8.6
Lai Chau	3.1	1.3
Dien Bien	8.0	2.8
Nghe An	4.5	2.9
Quang Nam	6.5	0.0
Khanh Hoa	0.8	2.4
Dak Lak	6.5	0.0
Dak Nong	0.0	2.8
Lam Dong	0.0	9.6
Long An	7.1	17.3
Gender of Household Head		
Female	4.7	6.1
Male	4.1	4.9
Production quintile		
Lowest	4.4	7.8
2nd lowest	4.8	3.7
Middle	4.6	3.4
2nd highest	3.4	4.1
Highest	4.3	5.3
Total 2018	4.9	6.6
Number of plots 2020	6462	
Number of plots 2018	7234	

Male-headed households experienced both more improvement and more worsening than female-headed households, although by a small margin. From a socioeconomic perspective, 5.1% of plots belonging to the richest quintile experienced improvement, while only 1.9% of plots owned by the poorest quintile experienced improvement. Overall, there was not much discrepancy among income quintiles when it came to the worsening of plots.

Table 2.15 Noticed any natural changes in quality of the plot due to the weather compared to the last 3 years

Group	Improved	Got worse
Total 2020	3.9	12.0
Province		
Ha Tay	6.1	18.1
Lao Cai	6.3	6.6
Phu Tho	3.0	9.1
Lai Chau	4.0	7.0
Dien Bien	2.3	25.0
Nghe An	4.0	15.0
Quang Nam	2.7	11.9
Khanh Hoa	0.0	0.0
Dak Lak	4.1	7.0
Dak Nong	1.1	0.4
Lam Dong	1.1	7.3
Long An	7.0	10.0
Gender of Household Head		
Female	2.9	11.8
Male	4.2	12.0
Income quintile		
Poorest	1.9	11.6
2nd poorest	4.9	10.7
Middle	4.0	12.7
2nd richest	3.6	12.0
Richest	5.1	13.2
Total 2018	4.0	9.5
Number of plots 2020	6444	
Number of plots 2018	7183	

2.7. Summary

This chapter outlines matters relating to land in the twelve VARHS provinces, including land distribution and fragmentation, land titles, restrictions on land use, investment in land plots, and land transactions and sales markets. It considered several cases where differentiation occurred, including across socioeconomic groups, genders, and geographic regions. It was noted that in the south, land distribution

is more unequal; there are more landless people and those who do own land have larger plots. Land markets are also more active in the south, where the sociopolitical and cultural standards allow for more capitalist activity. There were higher levels of expulsion from land in the north, where government reallocation of land is more common.

The socioeconomic differentiation within land ownership is mostly related to land market activity. It has been established that richer households are more active in the land markets, while poorer households are more likely to clear and occupy land. Poorer households are also more likely to own less valuable land, although unreliable data may cloud this estimation. However, poverty does not appear to correlate with landlessness, as there are similar shares of poor and rich landless households. This suggests that agricultural income is likely the differentiator between poor and rich households.

Across most of the data, there are also differences between male and female-headed households; for example, female-headed households are more likely to be landless and less likely to invest in their plots. The share of women represented on the LURCs of female-headed households has decreased since 2016. On the other hand, the share of women who are represented on the LURCs of male-headed households has increased since 2016, demonstrating some progress. The most common reason for households not having a LURC at all is that they have made agreements to use the land without obtaining a LURC, although it is also common for some households to have LURCs ready but not have collected them. This could be a consequence of COVID-19 lockdowns and shelter-in-place mandates. Altogether, there continue to be significant differences across female and male headed households and poor and wealthy households, highlighting continued inequality in access to land, land quality and investments.

Overall, landlessness in Vietnam has increased since 2018 by about 2 percentage points, and since 2016 from about 6.8 percentage points. A possible explanation for this is the ongoing structural change in Vietnam, for example, employment movement out of agriculture and into manufacturing and services. The percentage of households partaking in agricultural activities fell from 83.5% to 62.9% between 1992 and 2016 (Liu et al., 2020). Given this trend, it is plausible that households have sold or abandoned their agricultural land in favor of beginning work in manufacturing or services, thus decreasing ownership of agricultural land over time.

References

Ayala-cantu, L., T. Beni, T. Markussen, G. Narciso, C. Newman, A. Singh, S. Singhal, F. Tarp and H. Zille (2017). "Characteristics Of The Vietnamese Rural Economy: Evidence From A 2016 Rural Household Survey In 12 Provinces Of Viet Nam". Helsinki: UNU-WIDER.

Bellemare, M. F., Chua, K., Santamaria, J., & Vu, K. (2020). Tenurial security and agricultural investment: Evidence from Vietnam. *Food Policy*, 94, 101839.

Buchhave, H., Cuong, N.V., Nguyen, G.T. and Pham, H.T.M. (2020). "Benefits of Joint Land Titling in Vietnam". World Bank Group.

Liu, Y., Barrett, C. B., Pham, T., & Violette, W. (2020). The intertemporal evolution of agriculture and labor over a rapid structural transformation: Lessons from Vietnam. *Food Policy*, 94, 101913.

Nguyen, J. (2020). "FDI Data Shows Vietnam's Steady Economic Growth". Vietnam Briefing News. Available at: https://www.vietnam-briefing.com/news/fdi-data-shows-vietnams-steady-economic-growth.html/ [Accessed 15 Jul. 2021]

Sharma, S., Singhal, S., & Tarp, F. (2021). "Corruption and mental health: Evidence from Vietnam". Journal of Economic Behavior & Organization, 185, 125-137.

VIR, V.I.R. (2020). "Dak Lak seeks to become investment magnet". Vietnam Investment Review. Available at: https://vir.com.vn/dak-lak-seeks-to-become-investment-magnet-79369.html [Accessed 1 Aug. 2021]

3. Chapter 3: agriculture production and market access

VARHS 2020 report includes extensive relevant information about the association between agricultural and commercialization activities of the households. Both activities play a major role in the economic structure of these families in rural areas. The idea is to bring attention to the complete production process: input, output and finally, the development of the product on the market.

Due to the problematic situation lived during the COVID-19 outbreak, this report includes a summarized discussion about the possible effects of the pandemic on agricultural-related activities for Vietnamese households. In that sense, this edition of the VARHS report includes some questions exploring the difficulties faced by households because of the COVID-19 in the agriculture production and commercialization process.

3.1. Households' participation in agricultural activities

This section discusses the nature of households' participation in agriculture and livestock/aquaculture production. Table 3.1 provides information on the proportion of households involved in each of the 12 VARHS provinces, making special consideration of gender and socioeconomic differences. Overall, the percentage of households participating in any agricultural activity decreased with respect to 2018. Crop production was down by 5.5 percentage points from 2018, consistent with the overall decreasing trend noted earlier between 2014 and 2016 (participation in crop production was 81.8 and 76.1, respectively). In general, fewer households engage in livestock/aquaculture production than crop production, and this number fell 10.8 percentage points relative to 2018. This may be due to higher capital requirements or obstacles faced during the pandemic. There has also been an overall trend in the proportion of households raising livestock (Ayala-cantu et al., 2017).

Table 3.1 Proportion of households involved in agricultural or livestock/aquacultural production (percent)

Group	Crop Production			Livestock/Aquacultural		
	2018	2020	Difference	2018	2020	Difference
Total	74.4	68.9	-5.5	68.0	57.2	-10.8
Province						
Ha Tay	64.9	59.4	-5.5	29.3	24.3	-5.0
Lao Cai	90.7	84.2	-6.6	80.4	68.3	-12.1
Phu Tho	71.5	68.6	-2.9	65.3	69.7	4.5
Lai Chau	88.2	88.7	0.5	90.8	90.3	-0.4
Dien Bien	93.9	95.0	1.2	94.7	92.6	-2.2
Nghe An	81.9	74.3	-7.6	82.4	72.5	-9.9
Quang Nam	69.8	60.4	-9.3	42.8	31.3	-11.4
Khanh Hoa	46.6	44.7	-1.9	50.5	7.8	-42.7
Dak Lak	83.8	78.6	-5.2	51.3	19.5	-31.8
Dak Nong	88.1	87.3	-0.8	55.6	23.0	-32.5
Lam Dong	89.3	84.0	-5.3	69.3	21.3	-48.0
Long An	72.0	60.1	-11.9	34.7	22.5	-12.2
Gender of Household Head						
Female	62.6	54.9	-7.7	41.6	31.3	-10.3
Male	78.2	73.7	-4.4	56.7	46.4	-10.3
Income quintile						
Poorest	73.3	64.8	-8.5	61.9	48.0	-13.9
2nd poorest	82.0	78.1	-3.9	65.8	55.1	-10.7
Middle	77.6	76.6	-1.0	53.7	48.6	-5.0
2nd richest	71.6	65.6	-6.0	45.0	33.7	-11.4
Richest	67.7	59.3	-8.4	39.4	27.1	-12.3
Observations	2466	2466		2466	2466	

There are only two provinces with an overall increase in crop production: Dien Bien and Lai Chau, with 1.2 ad 0.5 percent, respectively. However, the magnitudes are quite small. The other provinces report a decrease in the proportion of households dedicated to crop production. As for livestock or aquaculture activities, only Phu Tho exhibits an increase in the proportion of households with such activities (4.5 percent). One possible explanation is structural transformation, for example, movement out of agriculture and agriculture-related activities (Liu et al., 2020).

As in previous years, female-headed households are less likely to engage in any agricultural-related activity than their male-headed counterparts. We can see a more pronounced difference in the crop

production than livestock and aquaculture activities among female and male household heads. In 2020, female-headed households were 18.8 percentage points and 15.1 percentage points less than their counterpart's male-headed households for crop production and livestock and aquaculture, respectively. Furthermore, there is an overall decrease between 2018 and 2020 with different trends in these activities. On the one hand, livestock and aquaculture activities exhibits a more substantial drop in female-headed households than their counterparts: 10.3 compared to 7.7 percent; on the other hand, livestock and aquaculture activities show a 10.3 percent decrease in male-headed households compared to their female-headed counterparts with 4.4 percent.

Looking at household participation in agricultural activities by income levels, there are important highlights. In 2018 the highest income quintile and the second-highest both had the lowest participation rate for crop production, while only the highest had the lowest rate in livestock/aquaculture in both years as well as for crop production in 2020. This relationship is not necessarily linear but has grown compared to previous years. For crop production in 2020, the lowest income quintile has a participation of 73.3, compared to 82 and 77.6 percent from the following quintiles. Moreover, for livestock and aquaculture, the lowest income quintile has a participation of 61.9 while the following quintiles of 65.8 and 53.7, respectively.

3.2. Selection of crops and livestock production

This section shows more precisely what households grow and what animals they have for livestock production. Rice gets to be the most popular crop with 55.4 percent of plots in the sample designated to it, while poultry is the most common livestock, with 79.8 percent of households reporting to have these animals. Table 3.2 shows more specific information on the most common crops in the sample, representing almost 77 percent of all cultivated plots. The sum of percentages is more than 100 percent for livestock, given that households often breed more than one kind of animal.

Table 3.2 Households' selection of crops and livestock

Group	Crop Production					Livestock			
	Rice	Maize	Veg	Fruit	Coffee	Cow	Buffalo	Pig	Poultry
Total	55.4	6.6	2.5	5.0	7.1	26.2	21.4	35.4	79.8
Province									
Ha Tay	64.2	1.1	3.5	8.4	0.0	19.7	2.2	28.5	82.5
Lao Cai	49.6	19.9	1.8	2.3	0.0	14.5	46.4	71.0	94.2
Phu Tho	71.9	7.9	2.2	2.6	0.0	18.2	12.8	28.3	87.2
Lai Chau	61.1	19.9	0.2	2.1	0.0	18.8	55.4	67.9	87.5
Dien Bien	53.9	13.8	2.8	2.1	0.3	27.7	50.9	63.4	75.9
Nghe An	58.0	7.8	9.8	3.2	0.0	31.0	20.9	27.2	91.1
Quang Nam	57.5	2.7	0.5	1.7	0.0	44.4	12.1	22.2	53.5
Khanh Hoa	54.3	1.6	2.4	7.9	1.6	12.5	0.0	0.0	87.5
Dak Lak	33.1	1.3	0.0	2.9	44.2	63.3	0.0	20.0	23.3
Dak Nong	13.4	2.3	1.3	4.0	58.4	10.3	0.0	10.3	100.0
Lam Dong	7.4	0.6	4.0	2.3	62.3	12.5	18.8	0.0	68.8
Long An	54.1	0.0	1.0	20.7	0.0	48.6	0.0	10.0	55.7
Gender of Household Head									
Female	55.3	4.9	3.9	6.0	6.4	25.8	8.6	22.5	84.2
Male	55.4	7.0	2.2	4.8	7.3	26.3	24.4	38.5	78.7
Income quintile									
Poorest	59.3	7.3	3.7	3.8	2.7	25.8	20.2	30.2	80.6
2nd poorest	57.8	9.9	2.6	3.1	5.8	27.0	29.1	44.6	80.4
Middle	52.3	8.5	2.0	4.4	8.7	27.1	27.1	34.7	80.1
2nd richest	58.5	3.2	2.8	5.5	8.2	24.7	13.8	33.3	77.6
Richest	48.6	2.6	1.5	9.2	10.5	25.7	7.1	30.0	79.3
Observations	6362	6362	6362	6362	6362	1098	1098	1098	1098

The crop production distribution shows a significant geographical variation. Most of the provinces grow rice, and more in the northern provinces, while in the south, households focus relatively more on crops such as fruits. There is a strong coffee production in the central provinces, complemented with rice, fruit and vegetables in a much smaller proportion.

For female-headed households, we see more crops of rice, fruit and coffee. We can even see differences in the livestock breeding differences in women and men. A more considerable percentage of female-headed households raised poultry (chicken, duck or quail) in the last 12 months, and the proportion of male-headed households is almost three times more than female-headed households for buffalo

breeding. By income quintiles, we can see that rice, maze and vegetables are grown more by households in the lower quintiles while richer households adopt fruit and coffee. For livestock/aquaculture, the wealthier households breed fewer buffalos.

In table 3.3, we can observe the differences at the province level of the average yield production. The two main crops of the country -rice and maize- have a higher average plot yield in provinces like Dak Lak and Long An.

Table 3.3 Average household production of rice and maize (kg)

Group	Crop production			Maize production		
	2018	2020	Difference	2018	2020	Difference
Total	**3857.9**	**3780.0**	**-77.9**	**953.2**	**1149.3**	**196.1**
Province						
Ha Tay	1376.1	1385.3	9.2	344.6	646.1	301.5
Lao Cai	1713.3	2611.8	898.5	1038.8	1111.7	72.9
Phu Tho	1355.8	1042.8	-313.0	572.7	509.2	-63.4
Lai Chau	2452.7	3509.8	1057.1	812.1	1212.3	400.2
Dien Bien	2583.4	2743.6	160.2	1168.0	1571.4	403.4
Nghe An	1847.7	1771.9	-75.7	635.9	942.9	307.0
Quang Nam	2076.5	2072.7	-3.8	724.9	831.3	106.3
Khanh Hoa	1938.5	3886.8	1948.3	1952.5	4500.0	2547.5
Dak Lak	5975.7	6325.6	349.9	3110.9	8763.3	5652.4
Dak Nong	3553.9	2651.4	-902.6	1495.0	1066.7	-428.3
Lam Dong	1652.3	2367.5	715.2	610.0	3200.0	2590.0
Long An	22986.6	22331.2	-655.4	2312.5	---	----
Gender of Household Head						
Female	4594.5	4344.0	-250.5	753.1	1296.8	543.6
Male	3682.2	3641.0	-41.2	979.3	1129.1	149.8
Income quintile						
Poorest	1647.6	2503.2	855.7	858.3	865.8	7.6
2nd poorest	2522.6	2969.3	446.7	975.7	1366.2	390.4
Middle	3300.5	3134.0	-166.5	1044.8	1245.0	200.2
2nd richest	5544.4	4554.6	-989.8	854.0	885.8	31.7
Richest	7601.2	6866.8	-734.4	1083.0	886.6	-196.5
Observations	4357	3944		4357	3944	

At the national level, the average yield has increased for maize and decreased for rice by a small margin. It is worth noting that households in Khanh Hoa experience a significant increase in average yield for both rice and maize, and Dak Lak increases average maize yield by a considerable margin. The average rice yield in female-headed households has a significant drop, but the average maize yield experiences an increase, closing the difference gap with male-headed households from 2018.

Looking at income quintiles, we can see that richer households seem to have a higher average rice yield; as for maize, we see the highest yield is for middle-income families in 2020. We can see how the richer households are decreasing the average production of rice, and the production of maize for the richest, from 2018 to 2020.

We can analyze the productivity levels for rice and maize by looking at table 3.4. Long An has the highest level of rice yield per square meter in 2020, while the provinces of Dien Bien, Dak Nong and Lam Dong have the lowest level of productivity for this crop. At the national level, the yield per square meter has not changed significantly from 2018 to 2020 for any of the crops. However, we can see that in Lao Cai the productivity levels were significantly higher in 2018. In female-headed households, the rice yield remains the same but the productivity level for maize production increases, having a higher yield compared to male-headed households.

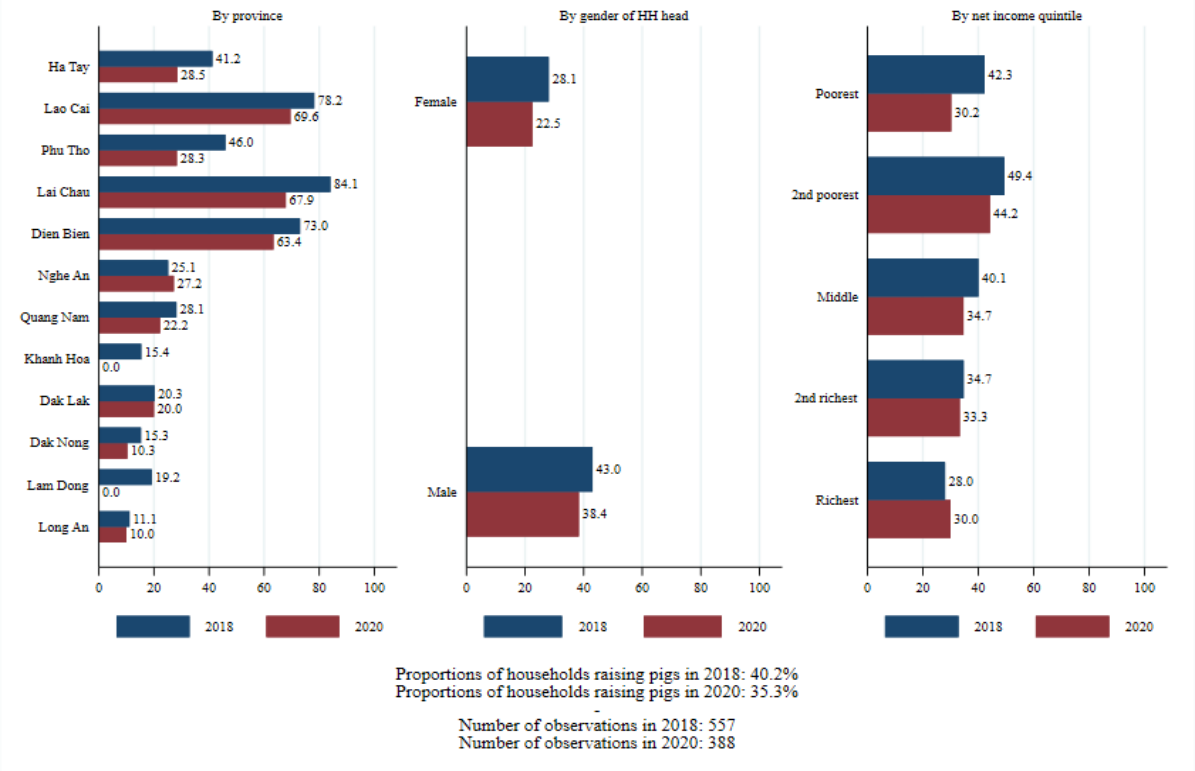
Households in all quintiles report higher or the same productivity levels, except for the second wealthiest households that experienced a significant drop in maize production in 2020.

As shown in table 3.2, the most common livestock are pigs and poultry. In Figures 3.1 and 3.2, we can look at the percentage of households who have raised these animals in the last 12 months for 2018 and 2020. All households across the sampled provinces have reduced the raising of pigs. Moreover, the households in the province of Lai Chau report a significant decrease in pig breeding. There are different variations across provinces for poultry, and now we see significant differences from 2018 that are positive for households in Lao Cai and Dak Nong. For gender, both female- and male-headed households experience a decrease in the breeding of pigs and poultry. All households experience a decrease by income level except the richest quintile, which report an increase in pig breeding and no changes in poultry raising.

Table 3.4 Average plot production per square meter of rice and maize (kg per sqm)

Group	Rice Production			Maize Production		
	2018	2020	Difference	2018	2020	Difference
Total	0.9	1.0	0.0	0.7	0.6	0.0
Province						
Ha Tay	1.0	1.0	0.0	0.5	1.1	0.6
Lao Cai	0.7	0.8	0.1	1.7	0.4	-1.3
Phu Tho	1.0	0.8	-0.1	0.8	0.8	0.0
Lai Chau	0.6	0.8	0.2	0.3	0.5	0.2
Dien Bien	0.7	0.7	0.1	0.4	0.4	0.0
Nghe An	1.0	1.0	0.0	0.5	0.7	0.2
Quang Nam	1.0	1.1	0.1	0.6	0.7	0.1
Khanh Hoa	0.8	1.0	0.2	0.1	0.2	0.1
Dak Lak	1.3	1.1	-0.2	0.6	1.3	0.7
Dak Nong	0.8	0.7	-0.1	0.3	0.3	0.0
Lam Dong	0.5	0.7	0.2	0.2	0.8	0.6
Long An	1.2	1.3	0.2	0.8	---	---
Gender of Household Head						
Female	1.0	1.0	0.0	0.6	0.8	0.2
Male	0.9	1.0	0.0	0.7	0.6	-0.1
Income quintile						
Poorest	0.8	0.9	0.1	0.5	0.7	0.2
2nd poorest	0.8	0.9	0.0	0.5	0.6	0.1
Middle	0.9	1.0	0.0	0.5	0.5	0.1
2nd richest	1.1	1.0	-0.1	1.8	0.7	-1.2
Richest	1.1	1.1	0.0	0.7	0.7	0.0
Production quintile						
Lowest	0.8	0.7	0.0	1.7	0.6	-1.1
2nd lowest	0.8	0.9	0.1	0.6	0.7	0.1
Middle	1.0	0.9	0.0	0.5	0.6	0.0
2nd highest	1.0	1.0	0.0	0.5	0.5	0.0
Highest	1.1	1.1	0.1	0.4	0.5	0.1
Observations	7003	6355		7003	6355	

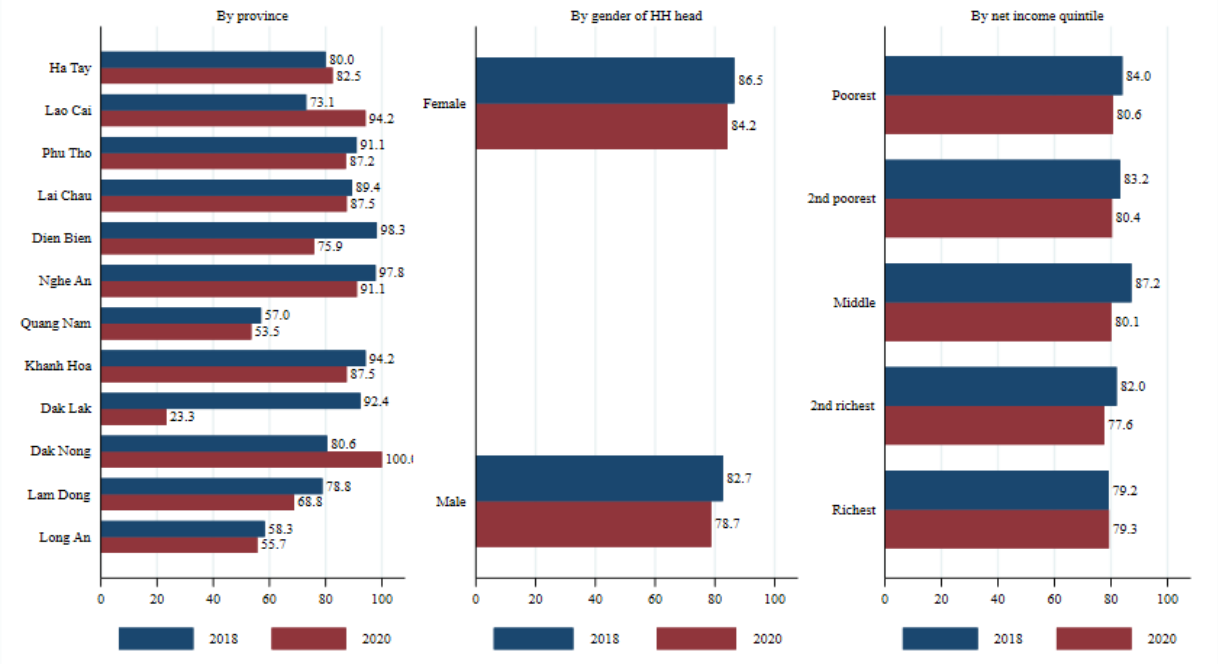
Figure 3.1 Proportions of household raising pigs (2018-2020)



Proportions of households raising pigs in 2018: 40.2%
Proportions of households raising pigs in 2020: 35.3%

Number of observations in 2018: 557
Number of observations in 2020: 388

Figure 3.2 Proportions of households raising poultry (2018-2020)



Proportions of households raising poultry in 2018: 83.4%
Proportions of households raising poultry in 2020: 79.8%

Number of observations in 2018: 1157
Number of observations in 2020: 876

3.3. Input use in crop and livestock production

Producing and selling involve purchasing inputs and using the labour market to hire labour if necessary. Using these inputs allows households to extend their production. Table 3.5 showed how many households in the sample use three different kinds of fertilizer and hired labour. In all provinces, there is high usage of chemical fertilizers; households in Dak Lang report the highest uptake, while those in Quang Nam report the lowest. In Dien Bien, 67.2 percent of farmers use self-provided organic fertilizer, while in Quang Nam and Dak Nong almost 56 percent buy organic fertilizer. More male-headed households use the three kinds of fertilizer and use more hired labour. The richest households use less chemical and self-provided fertilizers and instead buy the last ones. Lam Dong is the province where most farmers hire labour, while the lowest rates of hiring come from Dien Bien and Lao Cai.

We can also see the principal inputs for livestock production in Table 3.5. Using their own production to feed animals is the most common practice; all households in Lam Dong do this, while in Dak Lak only 56.7 percent do it. Buying food has also become common among farmers, and only in Lai Chau it reaches the lowest percentage of usage with 55.4 percent. Hiring labour is not common, meaning that breeding animals do not require intensive labour use compared to growing crops.

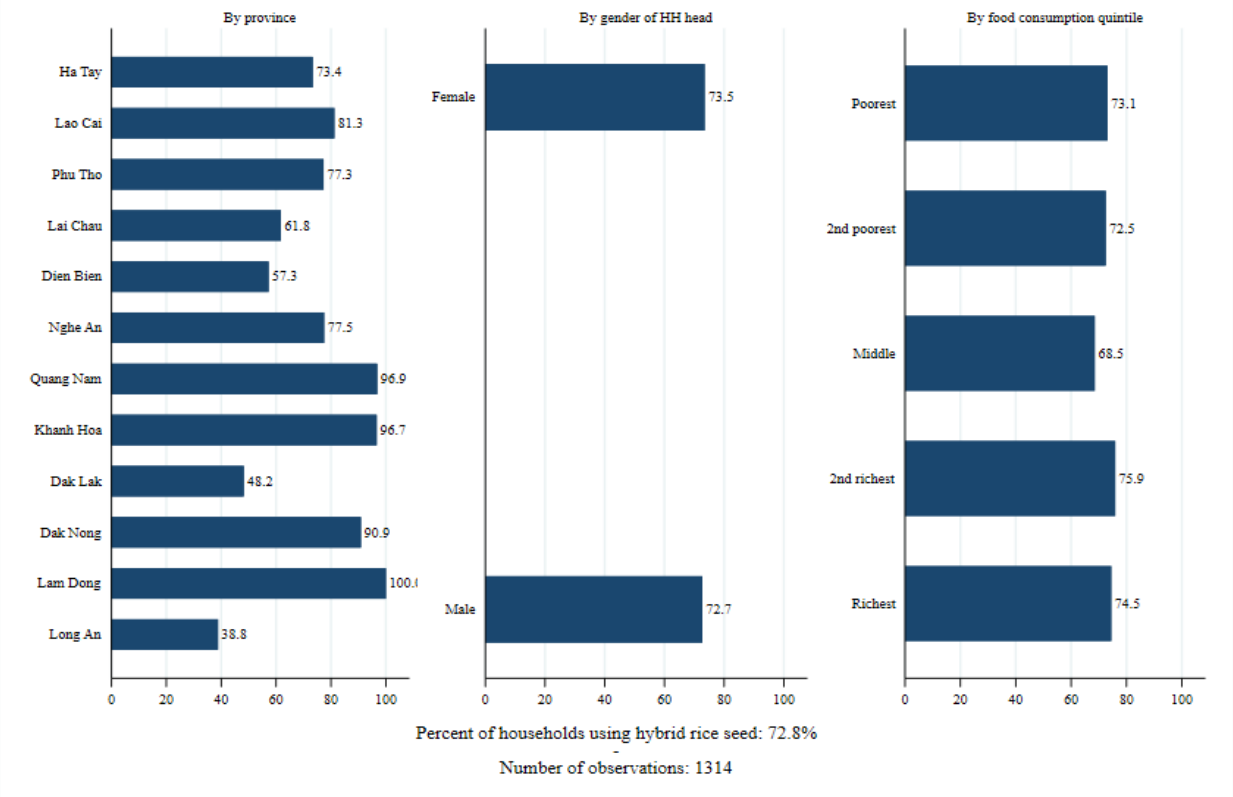
There is hardly any difference in male- or female-headed households when it comes to inputs for animal breeding, but there is a significant difference in energy use. For income quintiles, the richest farmers increase all their inputs except their own production to feed the livestock. For higher production levels, we can observe the same pattern as for income quintiles except in hired labour, with the lowest level of production reporting more than the highest.

Figure 3.3 allows us to examine inputs in rice production in more detail, showing which types of rice seed growers typically use. This choice can be affected by cost, expected yield, and availability. Hybrid seeds seem to be the most commonly used, with 100 percent of households using them in Lam Dong, while in Long An, with the lowest usage, reporting almost 40 percent.

Table 3.5 Selection of inputs in crop and livestock production in 2020

Group	Crop Production				Livestock			
	Chemical	Org (Own)	Org (Bought)	Hired Labour	Feed (Own)	Feed (Bought)	Hired Labour	Energy, fuel
Total	93.8	31.5	29.4	52.8	93.3	82.1	1.6	69.2
Province								
Ha Tay	95.6	26.2	22.7	49.6	89.0	78.7	3.7	78.7
Lao Cai	94.3	44.8	44.8	31.0	98.6	73.9	1.4	98.6
Phu Tho	95.0	36.3	22.8	64.1	94.2	93.4	1.2	73.9
Lai Chau	89.1	57.3	30.9	43.6	98.2	55.4	1.8	92.9
Dien Bien	95.7	67.2	1.7	22.4	95.5	80.2	0.0	69.4
Nghe An	94.5	41.1	11.7	65.6	98.7	89.7	0.0	57.1
Quang Nam	88.5	34.6	55.8	42.3	94.9	77.6	2.0	44.9
Khanh Hoa	91.8	0.0	36.7	65.3	75.0	50.0	0.0	50.0
Dak Lak	99.2	14.0	13.2	62.8	56.7	83.3	0.0	73.3
Dak Nong	96.4	3.6	55.9	46.8	93.1	82.8	0.0	3.4
Lam Dong	98.4	6.3	25.4	71.4	100.0	75.0	0.0	62.5
Long An	89.2	24.1	40.0	64.6	84.3	94.3	7.1	57.1
Gender of Household Head								
Female	90.8	29.4	26.8	50.9	91.8	81.3	1.4	62.5
Male	94.5	32.1	30.1	53.3	93.7	82.2	1.7	70.8
Income quintile								
Poorest	92.1	36.0	21.9	50.0	94.0	78.6	0.8	65.3
2nd poorest	94.9	41.3	23.7	49.3	96.8	79.9	0.4	73.2
Middle	95.8	30.8	32.0	51.3	95.2	81.0	2.0	68.1
2nd richest	93.4	26.1	33.3	56.0	90.8	85.1	2.3	69.0
Richest	91.9	20.9	37.4	58.6	84.8	90.6	4.3	70.3
Production quintile								
Lowest	96.6	30.8	25.5	43.3	95.6	81.8	0.6	64.2
2nd lowest	99.3	35.8	27.0	55.1	98.2	82.2	1.2	71.8
Middle	97.7	38.2	25.6	59.9	97.5	82.9	1.9	77.2
2nd highest	96.8	46.2	25.3	58.9	98.9	75.5	0.0	74.5
Highest	98.5	37.6	39.2	68.8	94.6	80.8	3.1	73.1
Observations	1825	1825	1825	1825	1092	1092	1092	1092

Figure 3.3 Use of hybrid rice seed



There is no difference in the types of seed in female- or male-headed households. Middle-income families use fewer hybrid seeds compared to the rest of the income quintiles.

Table 3.6 shows the average household expenditure on inputs for rice and maize. Monetary expenditures have increased in the production of both rice and maize with respect to 2018. Nevertheless, when looking at the disaggregated data, we can see there are differences in expenditure. Provinces like Dak Nong and Lam Dong report a significant drop in their input expense for rice crops, while Khanh Hoa and Lao Cai present significant increases for the same crops. For maize crops, households in Phu Tho and Dak Nong report a slight decrease in expenditure, while in Khanh Hoa and Lam Dong, average household expenditure on inputs grows significantly.

Table 3.6 Average household expenditure on inputs ('000 VND)

Group	Rice production			Maize production		
	2018	2020	% Difference	2018	2020	% Difference
Total	11057.5	11064.4	0.1	1802.3	2094.8	16.2
Province						
Ha Tay	4448.1	4434.3	-0.3	853.8	1412.9	65.5
Lao Cai	4050.4	5705.7	40.9	1948.8	2004.5	2.9
Phu Tho	4933.4	3496.4	-29.1	1503.2	1250.1	-16.8
Lai Chau	6472.9	9513.8	47.0	1605.9	2513.4	56.5
Dien Bien	3962.7	5195.7	31.1	1409.7	1651.1	17.1
Nghe An	6855.1	6105.5	-10.9	1735.9	2694.3	55.2
Quang Nam	6462.6	6673.8	3.3	2067.9	2202.5	6.5
Khanh Hoa	5458.5	9426.2	72.7	4038.8	12750.5	215.7
Dak Lak	20046.3	16608.0	-17.2	4957.6	13010.5	162.4
Dak Nong	14231.1	5979.4	-58.0	2456.9	1700.0	-30.8
Lam Dong	7718.5	4412.5	-42.8	1054.5	5909.1	460.3
Long An	61397.5	67709.4	10.3	4665.5	----	-----
Gender of Household Head						
Female	12703.1	13167.2	3.7	1831.0	2235.0	22.1
Male	10663.3	10544.2	-1.1	1798.5	2075.8	15.4
Income quintile						
Poorest	4921.2	7600.3	54.4	1653.8	1864.6	12.8
2nd poorest	7224.3	8570.6	18.6	1669.4	2117.6	26.8
Middle	9699.5	9068.5	-6.5	2065.2	2102.7	1.8
2nd richest	16274.5	12401.3	-23.8	1817.5	2836.9	56.1
Richest	20724.6	21212.8	2.4	2013.7	1743.1	-13.4
Observations	1423	1316		378	310	

Table 3.6 shows that female-headed households expend more on inputs for both rice and maize production relative to men, even expanding the gap for maize crops in 2020 relative to the small gap in 2018. There is a positive relationship between input expending on the rice growing and income quintile. However, this is not true for maize production in 2018 or 2020, where the households that expend the most on inputs are those in the middle and second richest quintile.

3.4. Market access for rice seeds

Table 3.7 reports the type of stores where farmers usually purchase their rice seeds and the average distance to their preferred place to obtain the seeds. The largest proportion of rice farmers obtain their seeds from cooperatives or communes (37 percent). Then is followed by the local market (21.1 percent), stockist (17 percent), and company (11.7 percent). What is more, almost 13 percent of rice farmers never buy seeds from any external source. Some provinces such as Dak Lak and Dak Nong, half of rice growers buy their seeds in local markets.

It is also observed that households from the poorest income quintile mainly buy their seeds from the cooperative (41.1 percent). What is more, we can confirm that as the households move along to the richest income quintiles, it is less frequent to decline all purchase procurement sources. On the other side, the households with high production concentrate on buying the rice seeds from local markets (32 percent) above the other shop options.

It is intriguing that despite the long distances from the primary source of rice seed, the rice farmers continue buying it. For example, in provinces like Lao Cai and Lai Chau, the distance to the seed shops is 36 and 38 kms.

Table 3.7 Sources for rice seed procurement and distance to preferred seed purchase location

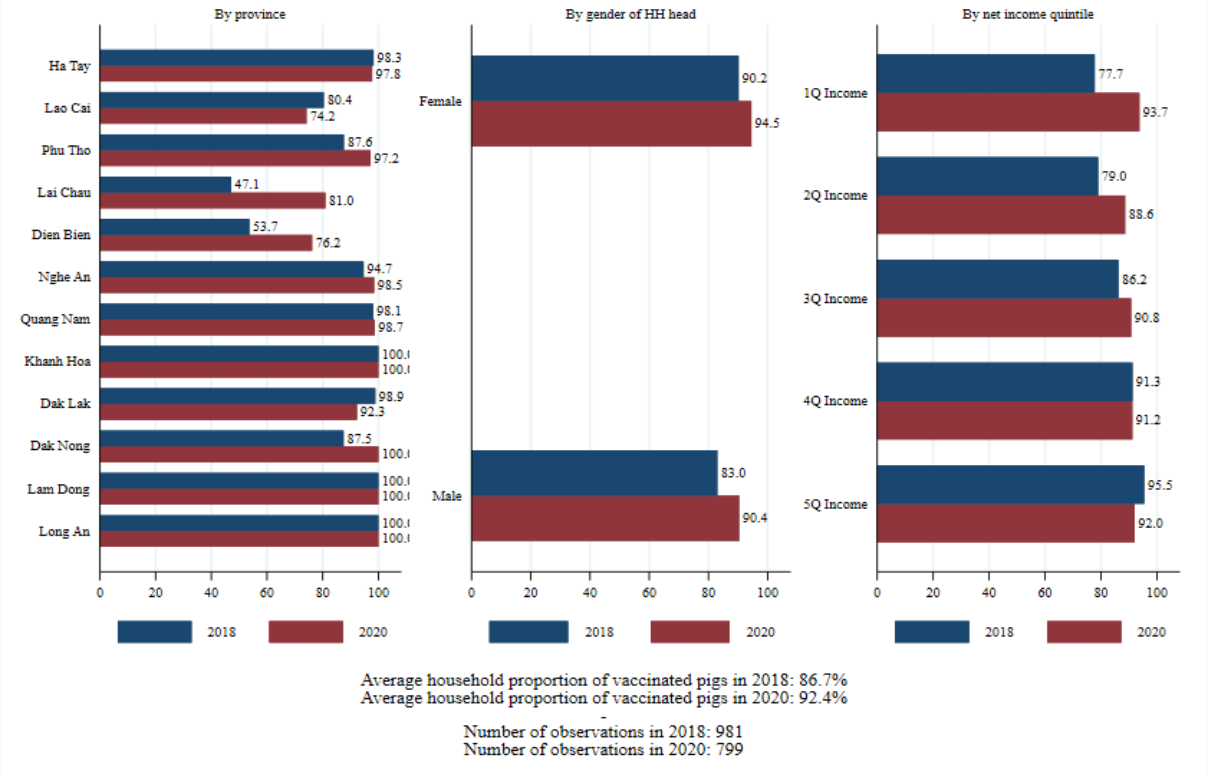
Group	Never buys	Cooperative	Company	Local market	Stockist	Other	Distance (Kms)
Total	12.9	37.0	11.7	21.1	17.0	0.3	6.1
Province							
Ha Tay	5.5	50.4	13.9	7.7	22.6	0.0	3.0
Lao Cai	23.8	41.3	1.3	28.8	5.0	0.0	36.0
Phu Tho	12.2	28.6	16.4	17.2	25.6	0.0	1.8
Lai Chau	42.2	16.7	3.9	29.4	6.9	1.0	38.1
Dien Bien	23.6	29.1	5.5	39.1	2.7	0.0	2.7
Nghe An	2.3	71.1	11.7	7.0	7.0	0.8	2.3
Quang Nam	6.9	29.6	8.8	32.7	21.4	0.6	2.2
Khanh Hoa	23.3	70.0	3.3	0.0	0.0	3.3	1.5
Dak Lak	0.0	41.1	3.6	50.0	5.4	0.0	2.5
Dak Nong	4.5	27.3	9.1	50.0	9.1	0.0	2.4
Lam Dong	9.1	18.2	45.5	27.3	0.0	0.0	1.7
Long An	14.6	7.8	25.2	15.5	36.9	0.0	3.2
Gender of Household Head							
Female	10.0	37.3	15.4	14.2	22.7	0.4	3.5
Male	13.7	36.9	10.7	22.8	15.6	0.3	6.7
Income quintile							
Poorest	13.6	41.1	12.5	17.7	14.3	0.8	11.2
2nd poorest	16.6	37.2	8.6	22.8	14.5	0.3	2.4
Middle	14.7	33.6	9.9	23.3	18.5	0.0	3.4
2nd richest	11.2	36.5	10.8	22.0	19.5	0.0	2.1
Richest	5.3	36.8	19.5	18.4	19.5	0.5	13.5
Production quintile							
Lowest	14.0	36.6	12.8	20.6	16.0	0.0	1.8
2nd lowest	14.6	35.1	12.3	18.7	19.0	0.4	2.1
Middle	9.0	44.5	12.1	13.3	20.7	0.4	3.5
2nd highest	15.3	42.3	7.3	21.8	13.3	0.0	21.7
Highest	10.5	26.6	13.3	32.0	16.8	0.8	2.8
Observations	1,313	1,313	1,313	1,313	1,313	1,313	1,121

3.5. Vaccinated livestock

Figures 3.4 and 3.5 reports the average household's proportion of vaccinated main livestock, which means pigs and poultry, from 2018 to 2020. Overall, there has been an increase in the total of vaccinated pigs and poultry at the national level: 5.7 and 13 percent, respectively. At the province level, only Lao Cai exhibits a downward trend in the vaccinated pigs. In poultry, there are more provinces with a decrease from 2018 to 2020: Ha Tay, Lao Cai, Quang Nam, Khan Hoa and Lam Dong. The largest decline is the case of Lao Cai, which exhibits a reduction of almost 40 percent of vaccinated poultry.

Besides, there is no remarkable difference among female and male-headed households regarding vaccinated pigs and poultry. Regarding income levels, figure 3.4 and 3.5 report a higher increase in the proportion of vaccinated livestock for the households with lower income levels in the period of 2018 to 2020. Both figures illustrated that households with low production levels report a higher proportion of vaccinated pigs and poultry. This may be related to the size of livestock in these low-production households and the importance of the vaccination rate for the process of commercialization.

Figure 3.4 Average household proportion of vaccinated pigs



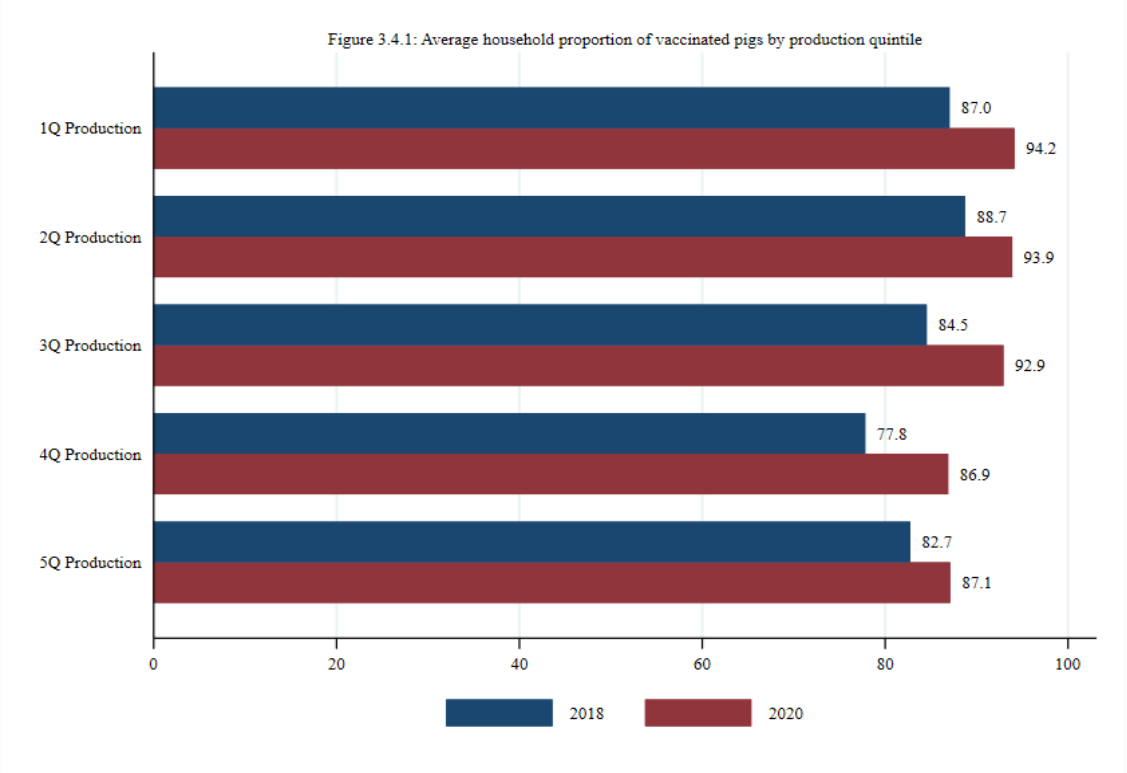
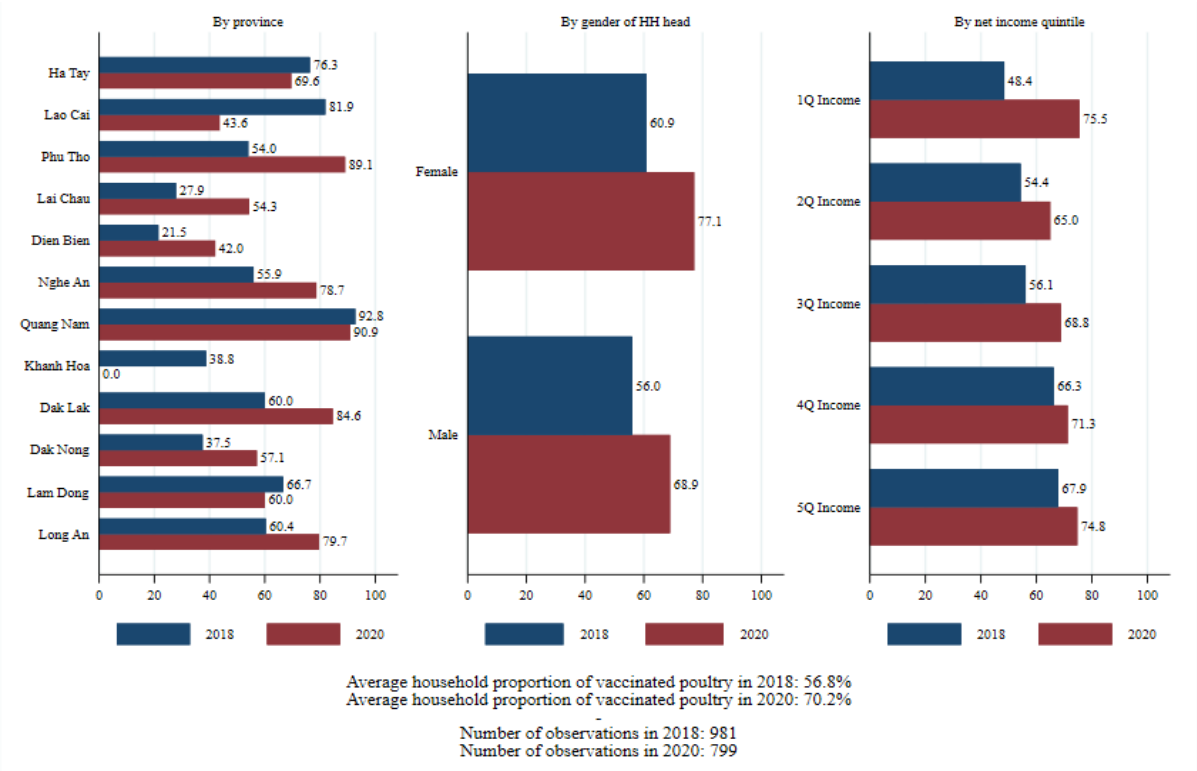
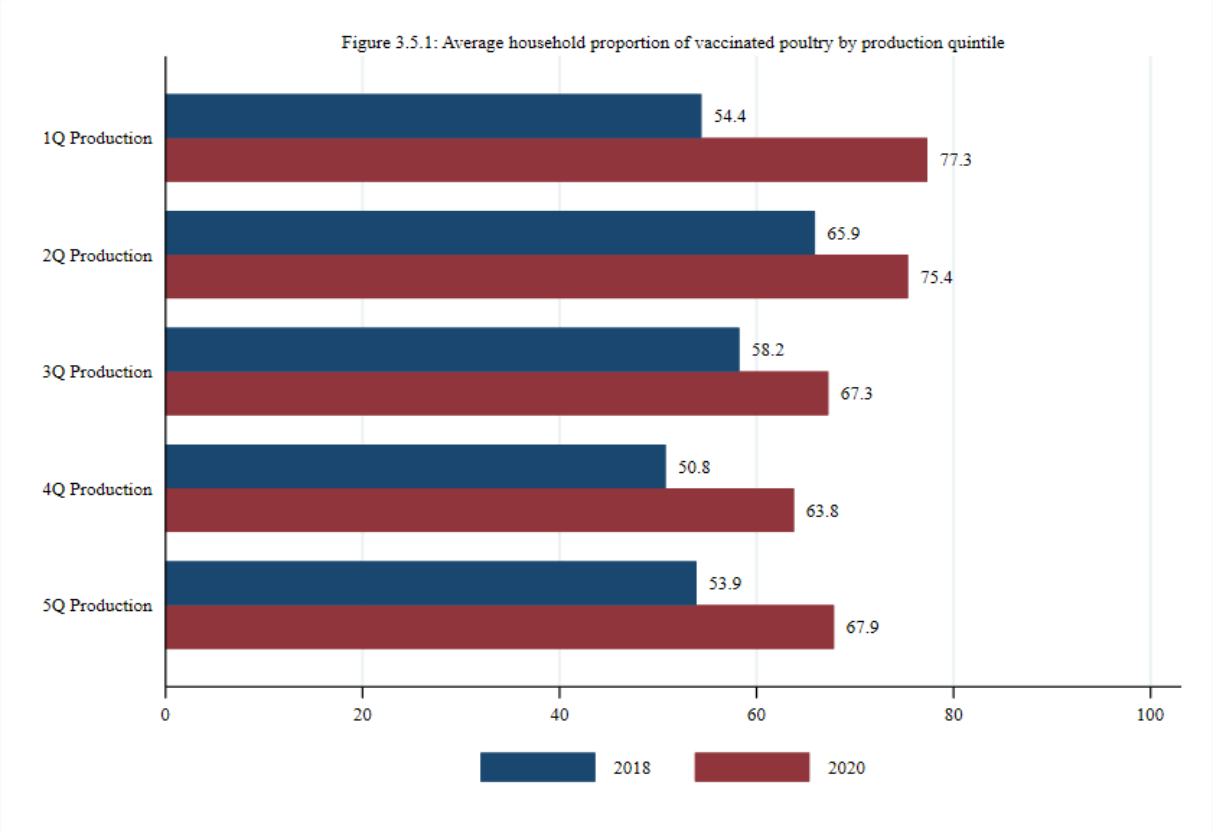


Figure 3.5 Average household proportion of vaccinated poultry





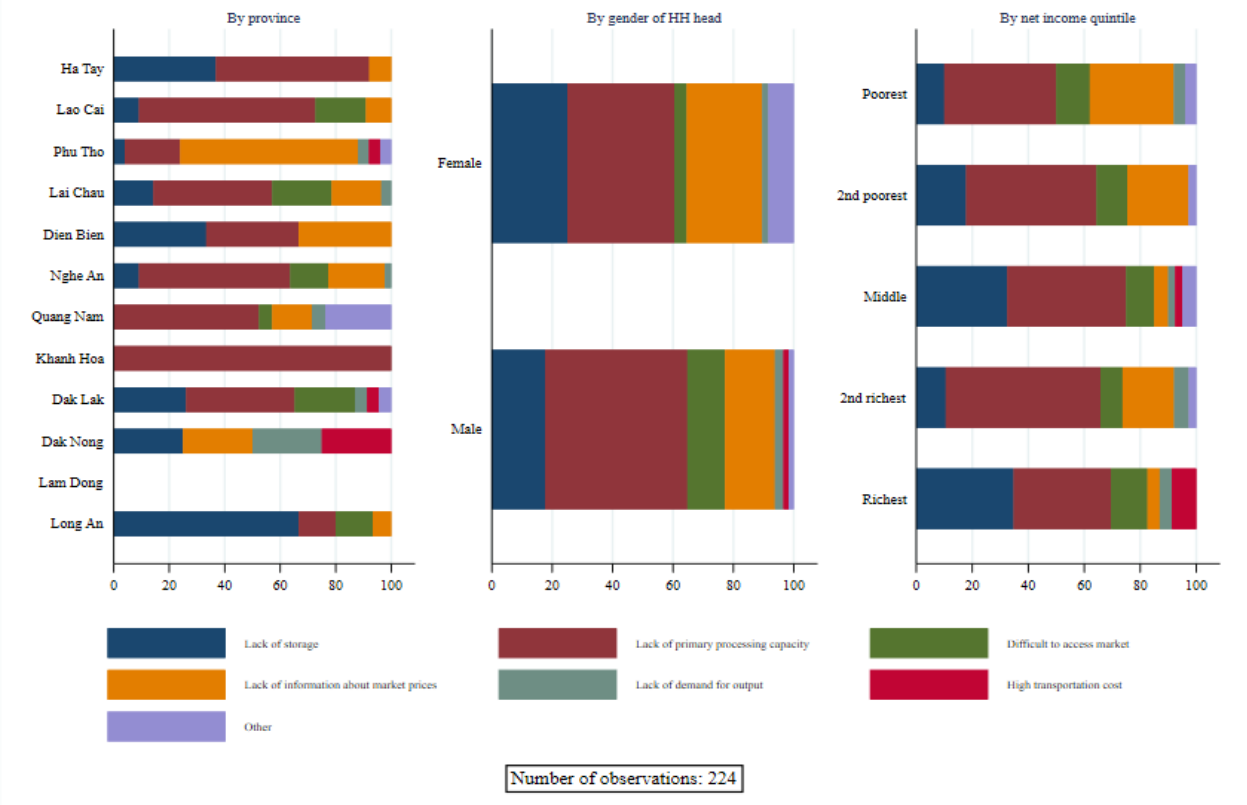
3.6. Commercialization

In this section, we use the information of the VARHS 2020 regarding problems at the time of selling the output. The most common difficulties reported are the lack of primary processing capacity, lack of storage and lack of information about market prices. Considering we can only collect information from 224 households, any statistics at the province level should be carefully interpreted. For example, at the province level, we have no observations for Lam Dong households. In that sense, we can be tempted to say that in Khan Hoa 100 percent of households report their main difficulty when selling in the market is lack of primary processing capacity (including drying). However, this percent only represents 1 household out of 224 living in Khan Hoa.

Regarding whom is the household head of the family, there are slight differences in the most common difficulties reported. For example, it is more usual for male-headed households to report lack of primary processing capacity compared to their counterpart female-headed. In terms of income, we can see that as the households are located in the poorest income quintile, the lack of market prices represents a

significant percent. Nonetheless, this proportion is not declining as the income increase. Besides, we can confirm that one of the most common difficulties for wealthier families is the lack of storage and lack of primary processing capacity.

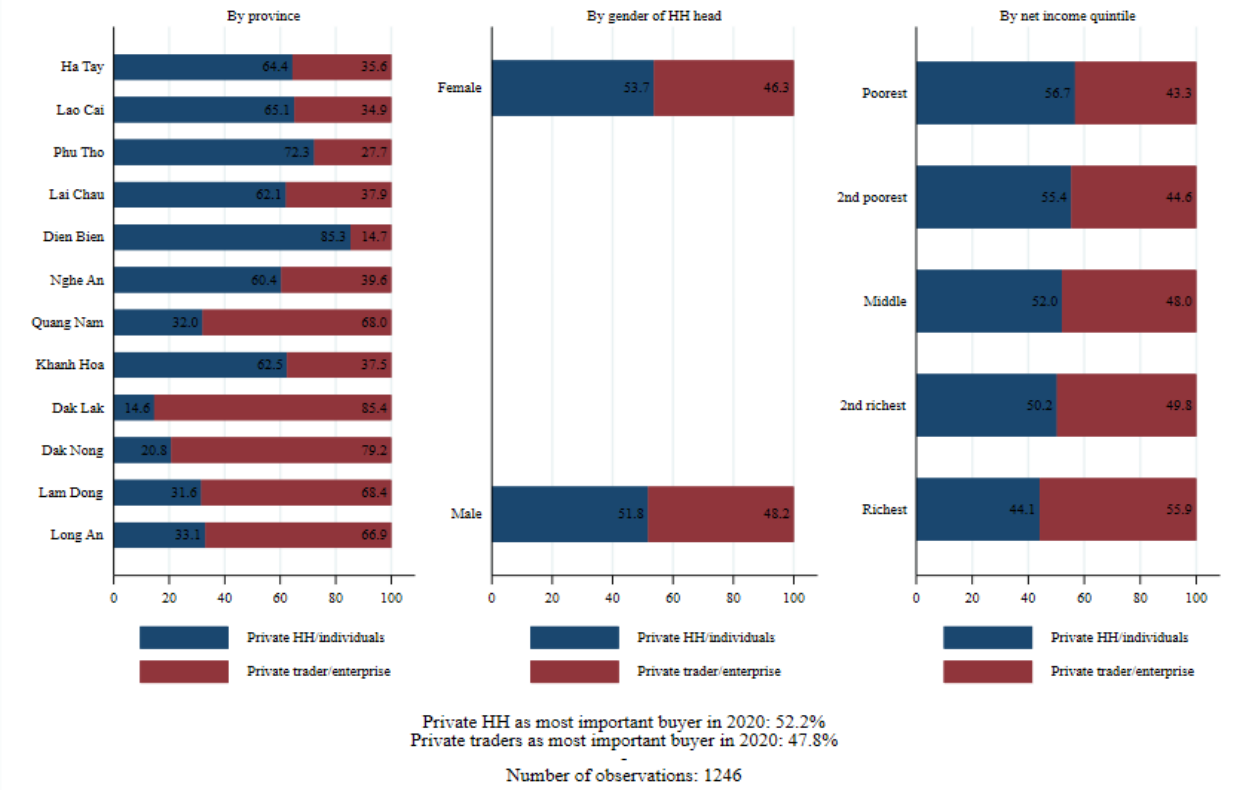
Figure 3.6 Most important difficulty after harvest in 2020 (percent)



In Figure 3.7, we can observe that the most critical buyers for agricultural products in 2020 are private traders. Almost 55 percent of households report these options as their main source of selling and marketing their products, compared to 45.1 percent of private households' options. At the province level, we observe 3 provinces (Dak Lak, Dak Nong and Lam Dong) with more than 80 percent of households reporting their sales only with private or entrepreneurship traders. Contrary to Dien Bien, which exhibits more than 80 percent in transactions performed only with private households and individuals. At the household head level, we can see male-headed households prefer selling their crops via traders than their female counterparts (difference of 8 percent more).

The figure also illustrates how the preference for private traders or enterprises grows as the households are located at higher income levels. At the same time, there is a strong preference for these transactions with private trades at the households with the lowest production levels.

Figure 3.7 Most important buyer in 2020



Private HH as most important buyer in 2020: 52.2%
Private traders as most important buyer in 2020: 47.8%

Number of observations: 1246

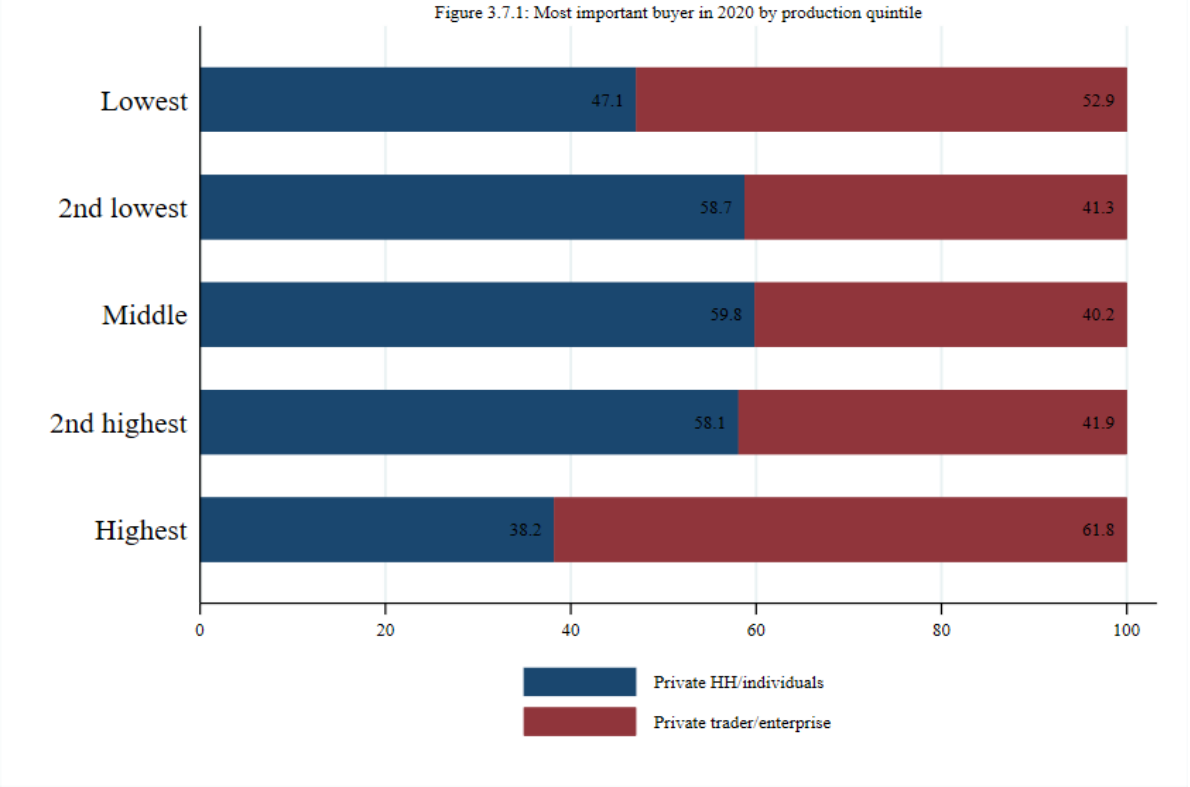


Table 3.8 illustrates how much of the total production output is destined for trade for the two most important crops in Vietnam: maize and rice. In 2020, the ratio of this proportion was around 0.4 for rice and 0-3 for maize. This means, on average, households set aside for sale about 40 percent in the case of rice farmers and 30 percent for maize farmers. Besides, only on maize crops, there is an overall increase from 2018 to 2020 in the ratio of production to trade of 0.1.

Interestingly, there are provinces with totally (or almost) all the output sold or battered. In rice, Long An has a 1.0 ratio of production to trade; in the case of maize, Lam Dong has 0.9. In addition, there is no remarkable difference among households with female or male households' heads. What is more, we can observe an increase in this ratio of production to trade as the households get wealthier in terms of income. However, this is more pronounced for rice production.

Table 3.9 presents the market participation rate and two essential variables that illustrate market access: the distance to main rice seed suppliers and the distance to the main output buyer. The percentage of output traded for the national sample is 35.7, and we can see this percent highly increase as households are in the highest production levels (6.4 compared to 68.2 for the lowest and highest quintile). Regarding the distance variables, we can observe that the average distance to leading rice seed suppliers is around 5 kilometres and the main rice buyers are 31. These variables potentially illustrate the transactional costa which rice farmers must face.

We can also appreciate a remarkable difference in distance to the primary rice buyer concerned about who the household head is. Female-headed households are willing to travel a much longer distance, on average 15 kilometres more than their male-headed counterparts. Furthermore, distance to the main rice seed supplier is minimal in all production quintiles, except from the highest production level households, which tend to travel around 12 kilometres compared to approximately 3 kilometres in all the other lower quintiles. Additionally, as the households become more productive, they tend to travel few kilometres to their primary rice buyer.

Table 3.8 Average household ratio of production to trade for rice and maize

Group	Rice			Maize		
	2018	2020	Difference	2018	2020	Difference
Total	0.3	0.4	0.0	0.2	0.3	0.1
Province						
Ha Tay	0.3	0.2	-0.1	0.3	0.4	0.1
Lao Cai	0.2	0.3	0.2	0.1	0.3	0.1
Phu Tho	0.2	0.1	-0.1	0.3	0.1	-0.1
Lai Chau	0.2	0.2	0.0	0.1	0.2	0.1
Dien Bien	0.2	0.3	0.1	0.3	0.2	0.0
Nghe An	0.3	0.4	0.1	0.2	0.5	0.3
Quang Nam	0.4	0.5	0.2	0.4	0.8	0.4
Khanh Hoa	0.2	0.6	0.4	0.2	0.0	-0.2
Dak Lak	0.5	0.8	0.3	0.5	0.7	0.2
Dak Nong	0.4	0.6	0.1	0.4	0.8	0.4
Lam Dong	0.3	0.5	0.2	0.4	0.9	0.5
Long An	0.9	1.0	0.0	0.8	----	-----
Gender of Household Head						
Female	0.4	0.4	0.0	0.3	0.3	0.1
Male	0.3	0.4	0.0	0.2	0.3	0.1
Income quintile						
Poorest	0.3	0.3	0.0	0.2	0.2	0.0
2nd poorest	0.3	0.4	0.0	0.2	0.3	0.1
Middle	0.3	0.3	0.0	0.2	0.3	0.1
2nd richest	0.4	0.4	0.0	0.3	0.2	-0.2
Richest	0.4	0.5	0.1	0.4	0.4	0.0
Observations	1,423	1,315		384	315	

Table 3.9 Distance to seed purchase location and main output buyer (rice farmers)

Group	Output traded (percent)	Distance to main rice seed supplier (km)	Distance to main rice buyer (km)
Total	35.7	4.9	31.0
Gender of Household Head			
Female	37.9	6.0	42.2
Male	35.2	4.7	27.7
Production quintile			
Lowest	6.7	1.9	32.9
2nd lowest	20.5	2.2	20.2
Middle	32.2	2.9	12.7
2nd highest	44.3	11.7	9.5
Highest	75.4	6.6	4.9
Observations (2018-2020)	2,736	2,319	3,914

In Table 3.10, we can see the average households' ratio of livestock production to trade (that the total number of animals sold divided by the stock).[11] In 2020, households in Vietnam sold or bartered around 50 percent of pigs and 20 percent of poultry. We can also observe that, on average, there is no difference in this ratio compared to 2018. The province with the highest level of commercialization for pigs is Long An. By contrast, the highest proportion of production to trade for poultry is not concentrated in a singular province. Regarding the ratio of production to trade for pigs, only Dien Bien shows an increase in the ratio from 2018 to 2020; in poultry, there is a similar trend, only Lao Cai, Phu Tho, Quang Nam and Dien Bien presents an overall increase from, 2018 to 2020. Furthermore, we can see a positive association between household's income levels and the ratio of production to trade for both pigs and poultry; as households are wealthier, this ratio increase.

[11] The numerator for this ratio is the sum of the number of live livestock sold, bartered, or given away during the last 12 months, the number of livestock slaughtered for sale or barter during the last 12 months. The denominator is the sum of the number of currently owned livestock, the number of live livestock sold, bartered, or given away during the last 12 months and the number of livestock slaughtered for sale or barter during the last 12 months. This last one represents the stock over the last 12 months.

Table 3.10 Average household ratio of production to trade for pigs and poultry

Group	Pigs			Poultry		
	2018	2020	Difference	2018	2020	Difference
Total	0.5	0.5	0.0	0.2	0.2	0.0
Province						
Ha Tay	0.6	0.6	0.0	0.3	0.3	0.0
Lao Cai	0.7	0.4	-0.3	0.1	0.2	0.1
Phu Tho	0.6	0.4	-0.2	0.2	0.3	0.1
Lai Chau	0.4	0.4	0.0	0.2	0.2	0.0
Dien Bien	0.2	0.7	0.4	0.1	0.2	0.1
Nghe An	0.6	0.5	-0.1	0.2	0.2	-0.1
Quang Nam	0.7	0.4	-0.4	0.3	0.4	0.1
Khanh Hoa	0.3	---	----	0.1	0.1	-0.1
Dak Lak	0.6	0.4	-0.2	0.3	0.2	0.0
Dak Nong	0.6	0.6	0.0	0.2	0.1	-0.1
Lam Dong	0.5	----	-----	0.1	0.0	0.0
Long An	0.8	0.7	-0.1	0.3	0.3	-0.1
Gender of Household Head						
Female	0.5	0.5	-0.1	0.2	0.3	0.0
Male	0.5	0.5	0.0	0.2	0.2	0.0
Income quintile						
Poorest	0.5	0.4	-0.1	0.2	0.2	0.1
2nd poorest	0.5	0.5	0.1	0.2	0.2	0.0
Middle	0.6	0.5	-0.1	0.2	0.2	0.0
2nd richest	0.6	0.5	-0.1	0.2	0.2	0.0
Richest	0.6	0.6	0.0	0.3	0.3	0.0
Observations	557	388		1,157	876	

3.7. Common property resources

One of the most important sources of rural household income is common property resources. The most common type of CPR extraction is the collection of wood used for fuel. As previously discussed in other versions this report, this continues to exemplify the dilemmas related to CPR use: CPRs contribute essential inputs to households' production, such as energy sources. On the other hand, intense CPR

extraction threatens ecological sustainability. In a country as densely populated as Vietnam, such over-use of natural resources is a constant risk.

In table 3.11, we can see there is an important decrease in the proportion of households involved in CPR activities: in the catching of aquatic products from the sea or river activities, a 1.5 percent decrease and 3.8 decreases in the collection of forestry products or hunting. There are remarkable different trends at the province level. In fishing-related activities, some provinces evidence high levels of households involved in these activities (Lai Chau and Lao Cai with 11.8 and 9.3, respectively) while many other provinces do not present any households. In forestry-related activities, the provinces with the largest proportion of households are Lai Chau and Lao Cai with 82.4 and 62.9 percent, respectively.

It is worth noting that there is a larger proportion for male-headed households compared to their counterpart female-headed in these CPR activities. In fishing-related activities, the proportion of households is 2.2 percent larger, and forestry-related activities are 7.6 percent. Furthermore, as households increase in their income level, they are less involved in collecting forestry products or hunting.

Table 3.11 Proportion of households involved in common poor resources activities

Group	Fishing			Forestry		
	2018	2020	Difference	2018	2020	Difference
Total	3.8	2.3	-1.5	14.8	10.9	-3.8
Province						
Ha Tay	1.4	0.5	-0.9	1.8	1.2	-0.5
Lao Cai	0.0	9.3	9.3	49.5	62.9	13.4
Phu Tho	0.0	0.7	0.7	4.9	2.4	-2.4
Lai Chau	5.9	11.8	5.9	82.4	82.4	0.0
Dien Bien	23.7	5.3	-18.4	77.2	42.1	-35.1
Nghe An	6.4	4.4	-2.0	9.3	7.8	-1.5
Quang Nam	0.6	1.6	1.0	6.8	3.5	-3.2
Khanh Hoa	1.9	0.0	-1.9	8.7	5.8	-2.9
Dak Lak	0.6	0.0	-0.6	2.6	6.5	3.9
Dak Nong	7.9	0.0	-7.9	11.1	0.0	-11.1
Lam Dong	0.0	0.0	0.0	28.0	6.7	-21.3
Long An	7.7	2.6	-5.1	5.8	0.3	-5.5
Gender of Household Head						
Female	2.2	0.6	-1.5	7.9	5.3	-2.6
Male	4.3	2.8	-1.5	16.9	12.9	-4.1
Income quintile						
Poorest	4.4	2.9	-1.4	26.5	15.5	-10.9
2nd poorest	4.0	4.1	0.1	23.6	19.3	-4.3
Middle	4.5	2.6	-1.8	14.7	13.8	-0.8
2nd richest	3.9	1.4	-2.4	5.5	5.6	0.2
Richest	2.4	0.4	-2.0	4.0	1.0	-3.0
Observations	2,466	2,466		2,466	2,466	

3.8. Impact of COVID-19

Despite the shock of the pandemic, Vietnam's agriculture sector has remained relatively insulated, especially compared to other sectors like manufacturing and tourism. Nevertheless, any disruption to this sector has the potential to damage the Vietnamese and world economy. Four out of ten Vietnamese are employed in agriculture, and in the 2019 pre-pandemic period, the agriculture industry accounted for nearly 14% of Vietnam's GDP (World Bank, 2020a). While sectors like manufacturing and tourism mainly

suffered due to lockdowns and social distancing measures, the most explicit impact of the pandemic on the agriculture sector is caused by the disruption of supply chains. Disruption is the most common among rural households and the bottom 20% of the income distribution (World Bank).

Although households engaged in non-farm activities reported the largest income losses, 52% of those with their main income stemming from agriculture still reported reduced income, with an average decrease of 29.4% (Trang et al, 2020). Reduced farm incomes can impact working capital available for input application, limiting the quantity and quality of crops for the next season. Moreover, according to a survey by FFTC-AP, 45% of agricultural households in 2020 were unable to buy desired amounts of fertilizers and pesticides or had to switch sources due to price increases. A further 32.5% could not buy inputs due to interrupted supply chains. This especially affected imported input-intensive sub-sectors like aquaculture and husbandry and likely contributed to the 15% decline in aquaculture exports, although it is worth noting that recent salinity intrusion in the Mekong Delta is also likely responsible.

The distribution of agricultural products during the pandemic has also been a considerable challenge. Traditional markets have been interrupted or shut down by social distancing and quarantine measures. E-commerce and innovative exchange centres developed as a result, and many food suppliers have reported increased revenue from selling online rather than by traditional measures. The Vietnamese government promoted the use of e-commerce for agriculture sales, and in 2020 the number of farmers using the platforms was up 191% year-on-year from 2019.

International distribution has also been a significant concern. Many countries closed borders and restricted imports to prevent the spread of COVID-19. Disruptions in global logistics and contractions in demand also impacted export markets. In the case of China (Vietnam's second-biggest agriculture export market), export volume decreased rapidly at the start of the pandemic, as the Chinese government shut all China-Vietnam land border checkpoints in early February 2020. Trade between the two countries gradually resumed due to China's labour shortages, although local media reported many backlogs of agricultural products at the border. According to the US Department of Agriculture, this held an average clearance of 5 days, too long for perishable products (namely fruits and vegetables) to remain in good condition.

Despite these reports, Vietnam's agricultural exports only decreased slightly. Some sub-sectors even increased exports this year. Rice export turnover increased 17.9% in the first six months of 2020 from the same period in 2019. In fact, the World Bank reports that Vietnamese agricultural exports remained

resilient due to the high price of rice on international markets in 2020, which also supported the well-being of many rural households during the pandemic.

Nevertheless, according to the FFTC-AP survey, many households remain optimistic about the near future of agriculture. A World Bank survey revealed that 90% of surveyed households usually operate farming activities by mid-June 2020. Most FFTC-AP survey households also expect to receive some type of government support, such as financial provision, preferential loans, tax breaks, agricultural input materials, and export market opening. The outlook for agriculture's contribution to the national economy is also positive, and its contribution to the Vietnamese GDP stayed relatively constant through the pandemic. It is also expected that the European Union-Vietnam Free Trade Agreement (EVFTA), which became effective in August 2020, will support the agricultural sector and exports due to phasing out of tariff lines.

The VARHS 2020 report includes some information regarding the possible impact of the COVID-19 pandemic on the access to markets and commercialization of the output for rural households in Vietnam. This information is summarized in Figures 3.8 and 3.9. Overall, 15.4 percent of households were somewhat affected by the COVID-19 pandemic in getting access to inputs for households' production. The most affected provinces where Nghe An, Lao Cai, Lai Chau and Dak Lak, with more than 30 percent of households affected. In terms of income level, the households most affected were those in the lowest levels of wealth with 20 percent. As households become wealthier are less likely to face difficulties due to the pandemic when collecting the inputs for production, poor households were the most vulnerable during this pandemic.

In Figure 3.9 makes possible to assess the effects of the COVID-19 pandemic in the process of commercialization once the production was ready. There is a total of 10.9 percent of households affected by a COVID-19 related reason after production. Nighe An is one of the most affected provinces with 42.5 percent of households. Then, is followed by Lao Cai and Lai Chau with 29.9 and 27.7 respectively. What is more, we can observe a similar trend as in Figure 3.8 related to the income level. Households from the poorest background were the most affected by the COVID-19 pandemic after production.

In order to complement the information presented in both figures, Table 3.12 illustrates how the production of maize and rice could differ due to difficulties of getting access to the inputs because of the COVID-19 pandemic. Overall, we can see that those households affected up to some extent by COVID related reasons during the process of getting the inputs to have a much lower average production of rice

and maize: 1248.3 and 132.4 kilograms, respectively. What is more, we can observe that those provinces located in the southern regions were the most affected when comparing to their non-affected counterparts. The reverse trend observed in the northern regions, possibly related to the fact that the households affected in the South were the ones in the highest quintile of rice production. Finally, it is worth mentioning that households in the highest income levels were also the most affected by these COVID-19 shocks, with the largest repercussions in terms of kilograms produced in rice and maize.

Figure 3.8 Proportion of households affected in getting access to inputs for production

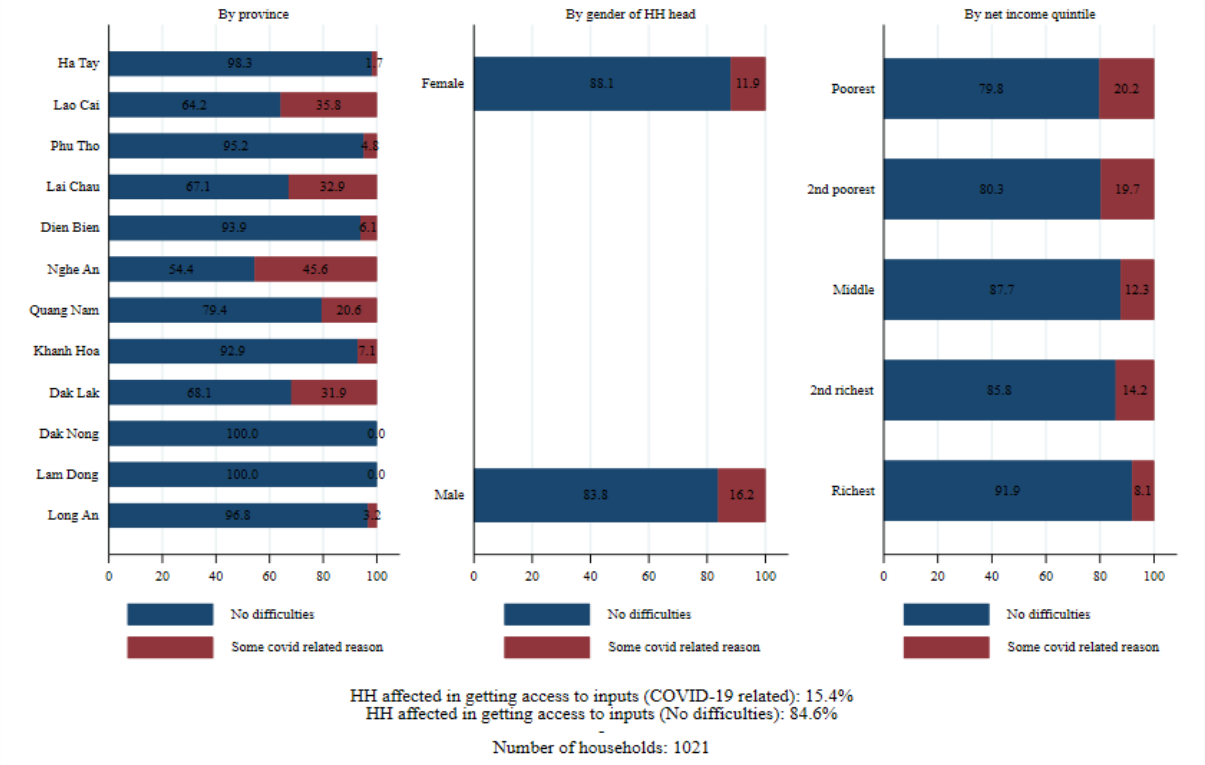


Figure 3.9 Proportion of households affected by COVID-19 after production

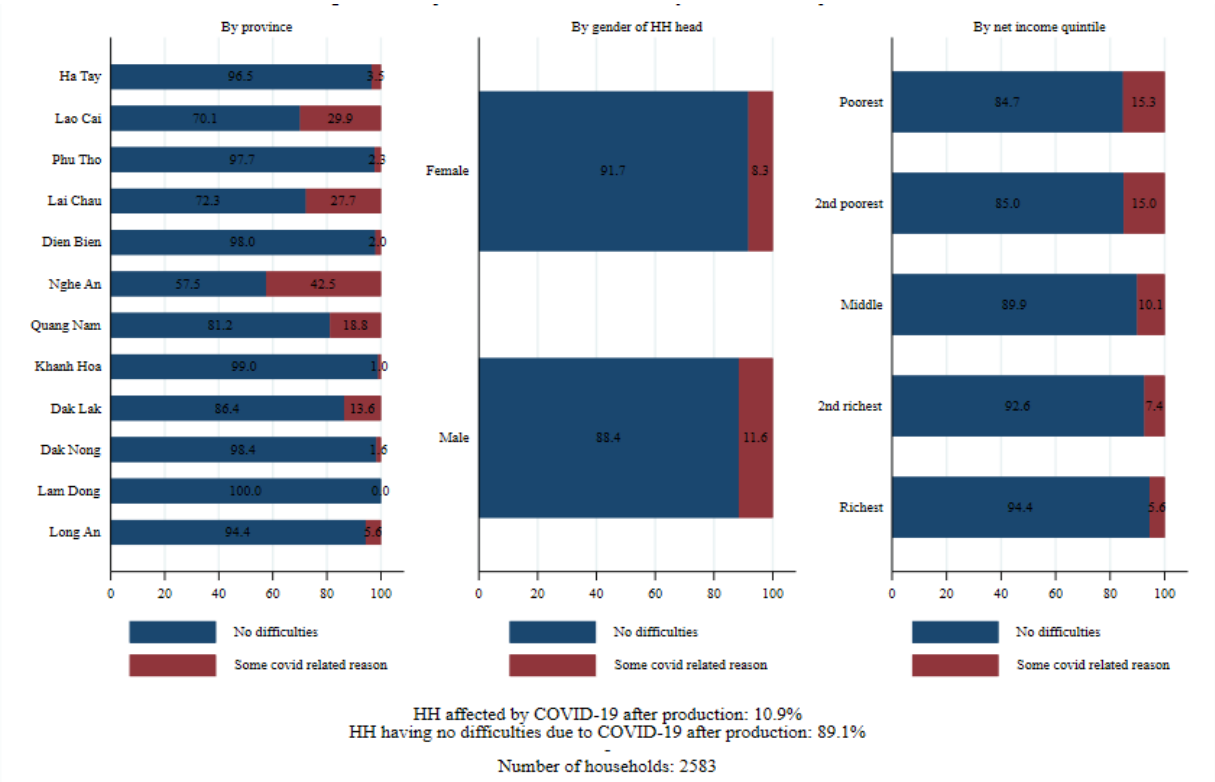


Table 3.12 Difference in rice and maize production: difficulties getting access to input due to COVID-19

Group	Rice production			Maize production		
	With COVID difficulties	Without COVID difficulties	Difference	With COVID difficulties	Without COVID difficulties	Difference
Total	3115.4	4363.7	-1248.3	1291.8	1159.4	132.4
Regions						
South	2997.1	9916.6	-6919.5	280.0	2274.0	-1994.0
North	3157.6	1790.6	1366.9	1334.9	1052.9	282.0
Gender of Household Head						
Female	1609.2	5991.2	-4382.0	643.8	1845.0	-1201.2
Male	3388.1	3956.2	-568.1	1349.4	1064.1	285.4
Income quintile						
Poorest	2267.7	3128.9	-861.2	1046.1	743.8	302.3
2nd poorest	3050.4	3152.7	-102.3	1589.5	1428.6	161.0
Middle	3657.7	3431.6	226.1	1547.5	1360.3	187.2
2nd richest	3454.9	5465.6	-2010.7	660.0	732.9	-72.9
Richest	4037.6	8012.5	-3974.9	785.3	868.1	-82.8
Production quintile						
Lowest	485.5	476.6	8.9	645.2	720.7	-75.5
2nd lowest	979.5	1029.7	-50.2	1333.3	746.5	586.8
Middle	1595.2	1632.4	-37.2	865.7	718.7	147.0
2nd highest	2732.6	2649.9	82.7	1417.4	1361.7	55.6
Highest	6754.2	15260.4	-8506.2	1536.3	2950.0	-1413.7
Observations	137	799		49	172	

3.9. Summary

This chapter provided statistics related to crop production, livestock/aquaculture, and common insufficient resources activities. The proportion of households involved in both agricultural and livestock production has decreased from 2018 to 2020. Overall, this could be related to the diverse impacts of natural conditions in rural Vietnam as well as the COVID-19 pandemic. Furthermore, the ongoing movement from the agricultural sector to the manufacture and service sector could also be a factor underlying these results. There is a diminishing in rice production, but the average household expenditure

on inputs for its production has increased since 2018. Moreover, the increment in expenditure on inputs comes from female-headed households and the richest farmers.

For commercialization, we have a high correlation with the type of crop grown. Over 55 percent of the plots in the sample are used for rice production, and on average, farmers sell around 40 percent of the rice produced. Maize commercialization increases as well, with farmers selling 30 percent of the total produced. Later, we analyze the level of commercialization of the most important livestock for farmers: pigs and poultry. The survey shows that commercialization remains the same for both pigs and poultry between 2018 and 2020, selling 60 and 30 percent of the production for each, respectively. Richer households are the ones that sell more of their production both in agriculture and aquaculture. We show how between 2018 and 2020, there is a reduction of households involved in either of the two CPR activities, forestry being the most common, with only 10 percent of households participating in it.

Finally, we are able to discuss briefly about the possible impacts of the COVID-19 pandemic on the rural economies of households in Vietnam as well as observe the effect during the production process and commercialization.

References

Anh Tu (2021). "Nearly 8,000 Vietnamese farmers take to online sales - VnExpress International". VnExpress International – Latest news, business, travel and analysis from Vietnam. Available at: https://e.vnexpress.net/news/business/economy/nearly-8-000-vietnamese-farmers-take-to-online-sales-4326920.html [Accessed 23 Jul. 2021].

Ayala-cantu, L., T. Beni, T. Markussen, G. Narciso, C. Newman, A. Singh, S. Singhal, F. Tarp and H. Zille (2017). "Characteristics Of The Vietnamese Rural Economy: Evidence From A 2016 Rural Household Survey In 12 Provinces Of Viet Nam". Helsinki: UNU-WIDER.

Cong Thang, T., Thi Thu Trang, T., Thi Hai Linh, N. and Thi Thuy, N. (2020). "Impacts of COVID-19 Pandemic on Smallholder Farmers and Vulnerable Rural People in Vietnam". Food and Fertilizer Technology Center for the Asian and Pacific Region.

Liu, Y., Barrett, C. B., Pham, T., & Violette, W. (2020). "The intertemporal evolution of agriculture and labor over a rapid structural transformation: Lessons from Vietnam". *Food Policy*, 94, 101913.

Tan, S., Tran, T. and Hebous, S. (2020). “Impacts of COVID-19 Firms in Vietnam” . Report No. 2 : Results from the 2nd Round of COVID-19 Business Pulse Survey. Washington, DC: World Bank.

Vo, T. (2021). “Vietnamese Fruit Production and Exports Confront the Challenges of Salinity Intrusion and COVID-19”. United States Department of Agriculture Foreign Agriculture Service.

Yang, J., Panagoulias, P., & Demarchi, G. (2020). “Monitoring COVID-19 Impacts on Households in Vietnam”. Report No. 1.

World Bank. (2020a). “Taking Stock, July 2020: What Will Be the New Normal for Vietnam? The Economic Impact of COVID-19”.

World Bank. (2020b). “COVID-19 Policy Response Notes for Vietnam”.

World Bank. (2021). “The Labor Market and the COVID-19 Outbreak in Vietnam: Impacts and Lessons Learned for Social Protection”. World Bank Group

4. Chapter 4: Non-farm Household Enterprises

4.1. Introduction

The non-agricultural sector has been playing an increasingly important role in the Vietnamese economy. It has been documented that diversification into waged employment and entrepreneurship, away from agriculture, has been welfare improving (Kinghan & Newman, 2017). Yet, it has been reported that being self-employed is less strongly associated with reduced job worries than with being a waged worker (Dang & Giang, 2020; Dang & Nguyen, 2020). Apart from the benefits of diversification and the general risks of self-employment, whether being self-employed is more secure or not in face of a global shock, such as a pandemic, remains unknown.

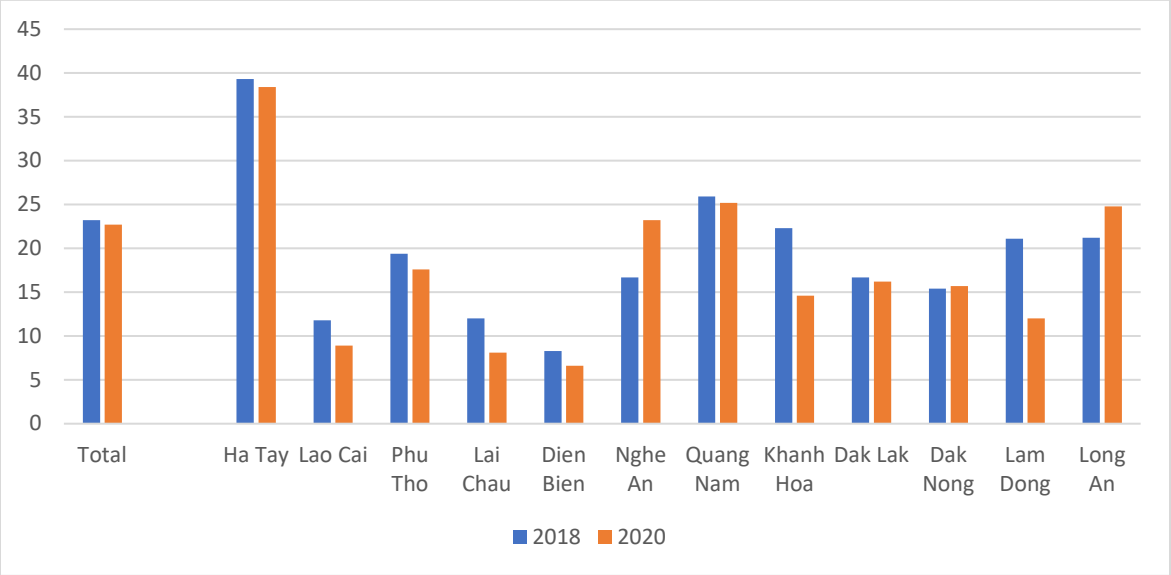
Vietnam succeeded in controlling the spread of the COVID-19 virus, but the impact of the lockdown on the economy has been unavoidable. COVID-19 pandemic increased the unemployment rate and the temporary layoff rate, while it lowered the probability of having a wage job and reduced the number of working hours, in addition to reducing monthly income (Dang & Nguyen, 2020). Most of the impacts were immediate, during the lockdown months, and had a lower magnitude or dissipated by the second half of 2020(Dang & Nguyen, 2020). A few studies have documented income losses and negative impacts from COVID-19 on non-farm household enterprises (NEU, 2020, as cited in (Dang & Giang, 2020)). Meanwhile, a study found that the agricultural sector, including forestry and fishing, was less affected by COVID-19 than manufacturing, tourism, accommodation and food services, transport, wholesale and retail trade (ILO, 2020, as cited in (Do, 2020)).

This chapter presents statistics on non-farm enterprises based on the VARHS 2020. The chapter provides a comparison between 2018 and 2020. VARHS collects data on all non-farm enterprises operated by the households interviewed. In the 2020 round, questions were asked about the impact of COVID on the operations of the household enterprises. The prevalence of household enterprises, their characteristics and their operations are all studied within the chapter, along with some analysis on whether and how COVID-19 affected these enterprises. Such analysis is conducted at the national level, as well as by looking at heterogeneity at the province level and based on the characteristics of the households and the household head. The chapter also looks at the impact of COVID-19 on starting-up and shutting down household enterprises, as well as the impact on their operations.

4.2. Prevalence of household enterprises

The share of households who own or operate a household enterprise did not vary between 2018 and 2020. On average, 22.7 percent of households operated one or more enterprises in 2020, slightly less than in 2018, when 23.2 percent of the sample operated enterprises. For most provinces, the proportion of households with an enterprise has declined in 2020, compared to 2018. Lam Dong witnessed the largest decline, with only 12 percent of households operating an enterprise in 2020, down from 21.1 percent in 2018. Large declines were also witnessed in Khanh Hao and Lai Chau. On the other hand, the share of households operating an enterprise rose in three out of the 12 provinces. In Nghe An, the share of households who own an enterprise rose from 16.7 percent to 23.2 percent. Dak Nong and Long An also witnessed slight increases in the share of households owning enterprises, as shown in Figure 4.1.

Figure 4.1 Share of households with a household enterprise (percent)

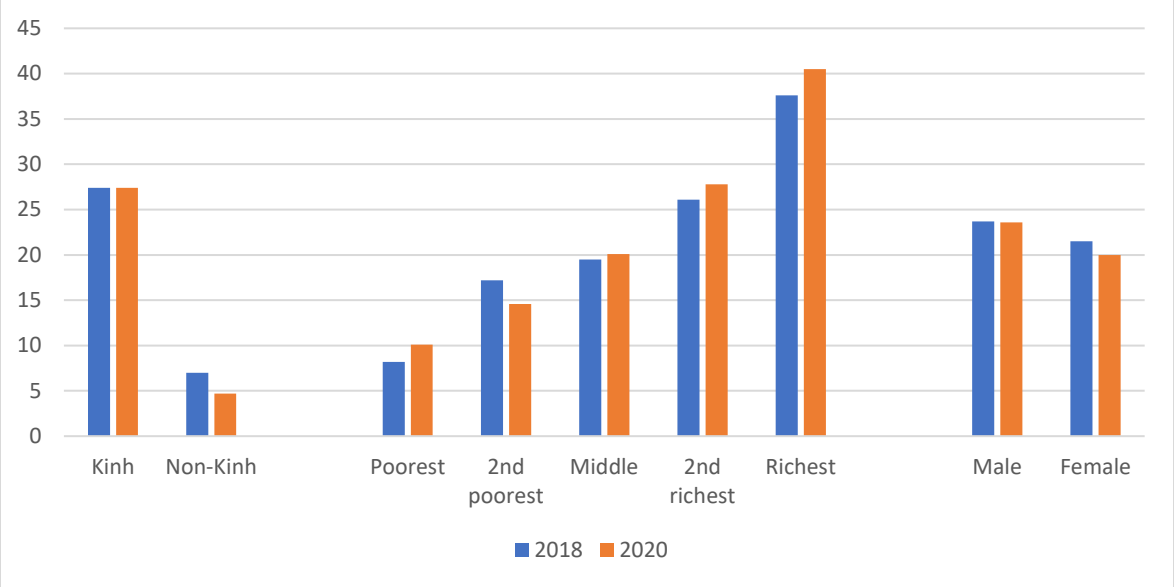


By looking at distinct household conditions and characteristics, it appears that income and ethnicity are the factors where the most heterogeneity in the households' decision to operate a household enterprise. As presented in Figure 4.2, Kinh households were much more likely to operate household enterprises, compared to non-Kinh households, for both 2018 and 2020. In both years, 27.4 percent of Kinh households managed a household enterprise, compared to 7.0 percent of non-Kinh households in 2018 and 4.7 percent in 2020. In terms of wealth, which is proxied by food quintiles, richer households were more likely to own an enterprise compared to poorer households. In 2020, four out of ten households in the richest food quintile owned and operated an enterprise, while this share went down to one of ten for households in the lowest quintile. Increases between 2018 and 2020 were witnessed for all quintiles, with

the exception of the second poorest quintile, where the share of households managing an enterprise dropped from 17.2 percent in 2018 to 14.6 percent in 2020. Finally, male-headed households were slightly more likely to operate household enterprises, compared to female-headed households. This share had remained constant around 24 percent for male-headed households. Yet, the share of female-headed households had declined by about 7 percentage points between both years.

Interpreting these results is challenging. The results may suggest that poorer, female-headed households and non-Kinh households have less appetite for risk-taking. It can also mean that they have less opportunities, less sources of credit or weaker social networks, which does not allow them to diversify their income towards starting-up enterprises. Further analysis is needed to understand the potential barriers that different population groups may be facing in starting-up enterprises.

Figure 4.2 Household enterprises by characteristics (percent with enterprise)



4.3. Income contribution of household enterprises

Household enterprises have been playing an increasing role in the generation of household income, despite the fall in the share of households operating enterprises. In 2020, income from household enterprises accounted for an average of 18.4 percent of household income, compared to 16.5 percent in 2018. Seeing the trend from 2016 indicates that the share of income generated from household enterprises is witnessing an upward trend (Tarp et al., 2017). Meanwhile, wages continued to be the most important source of household income, accounting for 43.4 percent of income sources in 2020; slightly

declining from 44.4 percent in 2018. Other sources of incomes had remained almost constant, accounting for around 21 percent in both 2018 and 2020.

As will be discussed across the chapter, variations were mostly witnessed between the provinces. Ha Tay had the largest number of household enterprises, with 249 enterprises from a total of 668 enterprises across all provinces. The proportion of income generated from enterprises in Ha Tay was 38.6 percent in 2020; accounting for the highest income earning activity in Ha Tay in 2020, which had not been the case until 2018. This is surprising since Ha Tay did not experience an increase in the share of households owning an enterprise. The rise in the share of income generated from household enterprises might, thus, be explained by a decline in the share of income generated from wages, as employment had been hit by COVID-19. Dien Bien was at the other end of the spectrum, with only 4.5 percent of household income generated from household enterprises. Household income in Dien Bien remained heavily dependent on agriculture and wage employment, with each accounting for more than 40 percent of household income within the province.

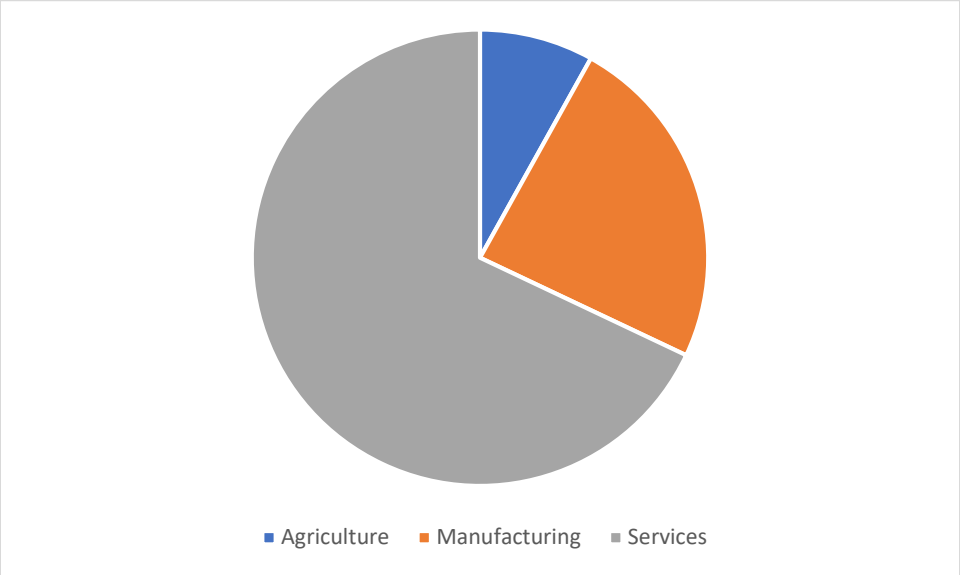
Table 4.1 Diversification of income sources by province (percent)

Share of income from:	Household enterprise	Agriculture	Wage	Other
Total 2020 (N= 2593)	18.4	17.5	43.4	20.7
Province				
Ha Tay	38.6	5.71	34.7	21
Lao Cai	6.01	25.9	48.8	19.3
Phu Tho	11.6	11.6	49.9	26.9
Lai Chau	4.97	28.3	49.6	17.2
Dien Bien	4.54	40.6	43.8	11
Nghe An	17	12.8	31.8	38.5
Quang Nam	12.8	6.45	57.5	23.3
Khanh Hoa	14.4	15.1	59.8	10.7
Dak Lak	12.3	35.1	42.1	10.5
Dak Nong	16	38.7	23	22.3
Lam Dong	7.08	35.3	48.5	9.14
Long An	19.3	23.7	43.1	13.9
Total 2018	16.5	18.1	44.4	21
Significance	***	**	***	

4.4. Characteristics of household enterprises

An overall analysis indicated that the services sector was the dominant sector for household-run enterprises, as figure 4.3 shows. In 2020, more than two-thirds (68 percent) of households-run enterprises were in the services sector, compared to 65.3 percent in 2018. The share of agricultural enterprises also increased from 5.8 percent to 8.1 percent, respectively between 2018 and 2020. In parallel, the share of manufacturing declined from 29 percent in 2018 to 24 percent in 2020.

Figure 4.3 Sectoral distribution of household enterprises 2020 (percent)



A more detailed analysis indicated that the level of formalization of the enterprises differed across provinces. As Table 4.2 shows, 26.2 percent of the 668 household enterprises observed in 2020 had a license. Significant differences were witnessed between provinces, with this share going up to 44.4 percent in Dien Bien (which had nine enterprises) and down to 10 percent in Lao Cai (which had 10 enterprises). The province with the highest number of enterprises was Ha Tay, with 249 enterprises, 31.3 percent of which were formal. Enterprises run by the poorest households were the least likely to be licensed, as only 10.9 percent of enterprises within the lowest food quintile had a license, compared to more than 23 percent for the higher four quintiles.

Heterogeneity was also found based on the gender of household head, household wealth and ethnicity. The share of licensed non-Kinh run enterprises was higher than that of licensed Kinh-run enterprises, by 38 percentage points. In addition, the share of enterprises with a license in male-headed households was higher than that of female-headed households.

Whether the enterprise was located within the family home was also an indication on the level of formality of the enterprise. Nearly half of surveyed household enterprises had been located at home, both in 2018 and 2020. Non-Kinh households were more likely to operate their enterprises from home, compared to enterprises in Kinh households, with 67.9 percent and 50.8 percent of enterprises at home, for non-Kinh and Kinh households, respectively. Meanwhile, 47 percent of households operated in female-headed households were located at home, compared to 52.8 percent for male-headed households. Heterogeneity can also be witnessed across provinces. In many of the provinces where a small number of enterprises

have been surveyed, such as Lao Cai, Lai Chau and Lam Dong, the proportion of enterprises run from home were 70 percent or more. On the other hand, in most provinces with a larger number of enterprises, the share of households run from home was around or less than half; such as in Ha Tay, Long An and Quang Nam, where 45.4 percent, 53.2 percent and 51 percent of enterprises were respectively operated from home.

Despite the differences between the provinces in terms of formalization and operation from home, the number of workers in the household enterprises did not seem to be correlated to the rate of formalization. Across the provinces, the number of individuals working in the household enterprises ranged from 1.3 to 2.3 workers in total. On average, the number of total workers remained around two individuals in both years, witnessing a decline from 2.0 in 2018 to 1.9 in 2020. The number of employed individuals was also around half, showing a decline from 0.6 individuals in 2018 to 0.5 individuals in 2020. Heterogeneity in the number of workers was more apparent between enterprises owned and operated in male- vs. female-headed households. Enterprises in female-headed households had consistently a lower number of workers, and a lower number of hired individuals over the two years. In 2020, enterprises in female-headed households had around 1.5 individuals and hired 0.2 workers on average, while those in male-headed households had 2.1 individuals and hired 0.6 workers.

Table 4.2 Characteristics of household enterprises (percent)

	Share of HHs with household enterprises	Number of HH enterprises observed	HH enterprise had license, percent	HH enterprise located in family home, percent	Number of workers in HH enterprise, inc. HH members, mean	Number of hired workers in enterprise, mean
Total 2020	22.7	2593	26.2	51.5	1.9	0.5
Province						
Ha Tay	38.4	567	31.3	45.4	2.3	0.8
Lao Cai	8.9	101	10	70	1.6	0.2
Phu Tho	17.6	370	37.1	62.9	2.2	0.6
Lai Chau	8.1	124	27.3	72.7	2.2	0.5
Dien Bien	6.6	121	44.4	55.6	1.4	0.0
Nghe An	23.2	220	15.4	38.5	2.0	0.6
Quang Nam	25.2	317	24	51	1.3	0.1
Khanh Hoa	14.6	103	18.8	62.5	1.4	0.0
Dak Lak	16.2	154	13.8	48.3	2.1	0.8
Dak Nong	15.7	127	8.7	73.9	2.0	0.6
Lam Dong	12	75	22.2	77.8	1.4	0.1
Long An	24.8	314	22.3	53.2	1.5	0.2
Gender						
Male	23.6	1923	27.1	52.8	2.1	0.6
Female	20	670	23.2	47	1.5	0.2
Food expenditure quintile						
Poorest	10.1	515	10.9	61.8	1.5	0.0
2nd poorest	14.6	519	23.5	48.1	1.7	0.3
Middle	20.1	518	29.8	53.5	1.5	0.1
2nd richest	27.8	518	26.4	49.7	1.9	0.5
Richest	40.5	523	28.6	50.6	2.3	0.8
Ethnicity of HH head						
Kinh	27.4	2056	25.8	50.8	2.0	0.5
Non-Kinh	4.7	537	35.7	67.9	1.5	0.1
Total 2018	23.2	2620	24.9	51.2	2.0	0.6
Significance					***	**

4.5. Investment and performance

This section examines the financing and economic performance of household enterprises. The average start-up cost of household enterprises in operation in 2020 was about 108.2 million VND, on average, as presented in Table 4.3. The initial investment cost greatly varies by differences in wealth. Initial investment by households within the poorest food quintile was 27.1 million VND in 2020, which is about 16 percent of the average initial investment made by households within the richest quintile, who spent an average of 171.1 million VND to start-up their household enterprises. Huge heterogeneity is also found between provinces. Initial investments were the lowest in Khanh Hao and Lao Cai, where households invested on average less than 40 million VND. In contrast, very high levels of investment were observed in Nghe An, Phu Tho and Ha Tay. Gender of household head was also a major determinant in the amount of initial investment made by the households. Enterprises in female-headed households had initial investments equal to less than half of those in male-headed households. Ethnic minority households also had initial investments around half of those of Kinh households, with the latter investing 110.2 million VND on average, compared to 58.5 million VND for non-Kinh households in 2020.

Three-quarters of households reported that their enterprise were financed completely through self-finance, while 21 percent had a mix of borrowing and self-financing (Table 4.3). The share of self-financing investment capital increased in 2020, compared to 2018, which may reflect less access to credit by household enterprise owners. Financing through self-finance only was the main source of financing across all provinces, with the exception of Dien Bien. In Dien Bien, financing through borrowing along with self-finance was the source of initial investment for 62.5 percent of households. In terms of borrowing, several provinces had no enterprises financed through borrowing only, while in Phu Tho 9.1 percent of households reported investing through borrowing only. Some heterogeneity was also witnessed across the food quintiles and ethnicities. About 29.1 percent of households in the richest food quintile reported investing through both self-financing and borrowing, while this share was 9.1 percent for households in the poorest quintile. Meanwhile, more non-Kinh households relied on borrowing and self-finance or borrowing only to start-up their enterprises, compared to Kinh households. Finally, enterprises in female-headed households were more likely to be financed through self-financing.

Table 4.3 Household enterprise performance: Investment capital, and sources of financing ('000 VND)

	Initial investment ('000 VND), mean	All self-financed, percent	Self-finance and borrowed, percent	All borrowed, percent
Total 2020	108,236	75.1	21	3.9
Province				
Ha Tay	115,947	66.5	27.2	6.3
Lao Cai	38,300	90	10	0
Phu Tho	123,578	63.6	27.3	9.1
Lai Chau	100,600	90	10	0
Dien Bien	97,512	37.5	62.5	0
Nghe An	174,920	78	20	2
Quang Nam	81,527	82.6	15.1	2.3
Khanh Hoa	31,188	87.5	12.5	0
Dak Lak	63,100	80	13.3	6.7
Dak Nong	100,183	87	13	0
Lam Dong	87,222	88.9	11.1	0
Long An	103,636	87.6	12.4	0
Gender of HH head				
Male	123,118	73.5	22.2	4.3
Female	57,307	80.7	17	2.2
Food expenditure quintile				
Poorest	27,135	87.9	9.1	3
2nd poorest	89,829	76.9	15.4	7.7
Middle	60,252	82.2	11.9	5.9
2nd richest	64,590	77.6	19.1	3.3
Richest	171,098	68.4	29.1	2.5
Ethnicity of HH head				
Kinh	110,228	75.5	20.6	3.8
Non-Kinh	58,522	65.2	30.4	4.3
Total 2018	103,561	68.86	27.99	3.14

Note: For 2020, N=668 for initial investment and N=595 for sources of financing. Investment costs in column 1 are presented in nominal terms, since the year the investment took place is unknown.

Large variation can be seen in the revenues, costs and net income generated by household enterprises. The average net income from household enterprises was approximately 115.4 million VND, slightly higher than the average initial start-up cost. Yet, the average varies significantly across provinces, as seen in Table

4.4. The highest net return from household enterprises was in Ha Tay, where the average net income was 159.2 million VND. On the other hand, many provinces had an average net income that is less than half of Ha Tay's enterprises, with the lowest in Lai Chau, with a net income of 60.7 million VND. Average revenues in Lai Chau were slightly higher than one-fifth of revenues in Ha Tay. Revenues and costs were also highest in Ha Tay and Lon An, and lowest in Lai Chau and Dak Lak.

Male-headed households, Kinh households and those in the richest quintile had a much higher net income from the household enterprises they operated, than their counterparts. Enterprises in male-headed households earned an average net gain of 123.2 million VND, compared to 88.7 million VND for female-headed household-affiliated enterprises. An enormous difference existed in the revenues, costs and net income of enterprises in Kinh households, compared to non-Kinh households. Enterprises in non-Kinh households earned less than half of the net income of those in Kinh households, less than a third of revenues and spent about a quarter in total costs. A large variation is also seen among the food quintiles, whereby revenues from enterprises in the richest quintile were about 8 times those of households in the lowest quintile; costs were nearly 12 times and net income was about 3.5 times.

Enterprise performance is highest by household heads with the highest educational attainment. Table 4.5 disaggregates enterprise performance by household head's general and professional education. Households where the head completed upper secondary education invested noticeably more than those with lower education levels, incurred less expenses and earned higher net incomes on average. By looking at professional education, household heads with a bachelor's degree or higher had also invested considerably more than those with lower education levels. They incurred higher costs, but gained much higher revenues and earned a significantly higher net income.

Apart from those who achieved the highest level of education, there is no correlation between educational attainment and firm performance. For lower education levels, Enterprise performance did not seem to follow an ascending order in terms of investment or performance, where the higher the education, the better the performance. Households with heads that cannot read or write had initially invested less than half of those with upper secondary education. Yet, those who cannot read or write did better, on average, than those who completed lower primary education in terms of revenues and net income, and gained higher revenues compared to those who completed secondary education. Meanwhile, the household enterprises with the lowest investment and lowest performance were those in households where the heads had college diplomas or intermediate level vocational education.

Finally, households with access to credit, or namely those who borrowed money, invested more in their enterprises and earned considerably more revenues. The higher revenues allowed them to gain a higher net income even though they had significantly higher expenses, as Table 4.5 shows. Yet, this relationship should not be interpreted as causal, since both access to credit and firm performance may be correlated with other household characteristics that have not been explored.

Table 4.4 Household enterprise performance: Revenue, costs and net income ('000 VND)

	Total revenues from HH enterprise	Total cost for HH enterprise activities	Net income from HH enterprise
Total 2020 (N= 668)	453,628.94	338,200.60	115,428.34
Province			
Ha Tay	679,614.22	520,462.96	159,151.26
Lao Cai	213,726.30	149,085.47	64,640.83
Phu Tho	275,681.00	191,887.44	83,793.56
Lai Chau	150,790.33	90,122.94	60,667.39
Dien Bien	162,676.49	98,148.15	64,528.34
Nghe An	201,362.75	138,670.23	62,692.52
Quang Nam	216,141.67	148,304.66	67,837.02
Khanh Hoa	208,048.71	124,203.09	83,845.62
Dak Lak	118,720.19	54,952.30	63,767.89
Dak Nong	317,648.46	198,834.12	118,814.34
Lam Dong	139,041.50	62,907.70	76,133.80
Long An	666,947.42	525,071.72	141,875.71
Gender of HH head			
Male	489,437.60	366,197.55	123,240.06
Female	331,025.77	242,343.50	88,682.26
Food expenditure quintile			
Poorest	90,464.00	49,126.62	41,337.38
2nd poorest	291,907.41	217,783.39	74,124.02
Middle	303,411.27	229,060.20	74,351.08
2nd richest	339,643.43	198,678.55	140,964.89
Richest	723,346.45	576,776.92	146,569.54
Ethnicity of HH head			
Kinh	467,332.58	349,139.10	118,193.49
Non-Kinh	140,402.74	88,177.78	52,224.96
Total 2018	493,688.54	389,663.30	104,025.24

Note: Differences between 2020 and 2018 are not statistically significant at the 10 percent level for any performance indicator. Values for 2020 are adjusted for inflation, using consumer price index.

Table 4.5 Education of household head, investment, and performance ('000 VND)

	Initial investment	Revenue	Costs	Total net income
Total 2020 (N= 668)	108,235.72	453,628.94	338,200.60	115,428.34
Highest general education, HH head				
Cannot read or write	70,580.70	478,619.10	377,887.39	100,731.71
Completed lower primary	99,903.28	440,649.57	347,717.93	92,931.65
Completed lower secondary	93,217.93	469,199.95	357,884.01	111,315.94
Completed upper secondary	153,608.59	432,319.55	281,436.21	150,883.35
Highest professional education				
No diploma	107,980.82	444,026.62	341,625.48	102,401.14
Short-term vocational	100,163.01	468,128.71	367,246.10	100,882.62
Intermediate level vocational	91,348.94	222,200.62	141,773.21	80,427.41
College diploma	46,000.00	196,407.84	131,830.58	64,577.26
Bachelor degree or higher	210,863.64	1,152,275.86	622,531.16	529,744.72
Borrowing status				
No loan	78,927.92	402,072.66	289,657.93	112,414.73
Has loan	188,970.44	603,473.79	479,286.59	124,187.20

In addition to financial investments, allocating time to the enterprises is an investment that household members have to make. Table 4.6 compares the number of days invested by household members in their enterprises, between 2020 and 2018. On average, household members spent slightly less time in their enterprises in 2020, compared to 2018. In 2020, they spent around 204 days, while in 2018 they spent 207 days. In the majority of provinces, household members have been spending more days working on their enterprises. The largest increase between 2018 and 2020 was in Dien Bien where the number of days being involved in the household enterprise rose by 83.1 percentage points. Dien Bien is the province with the lowest share of income being generated from household enterprises. With COVID-19 hitting the labour market and with the lockdown, it may be that household members decided to dedicate more time to their enterprises. On the other hand, in Phu Tho, time spent on enterprise fell by almost a third. Time spent in household enterprises also fell in Lam Dong, which witnessed the largest decline in the prevalence of enterprises, between 2018 and 2020.

Considerable heterogeneity is also witnessed across provinces in terms of the share of household enterprise labour supply in total labour supply. Table 4.6 shows that the share of enterprise labour supply remained almost equivalent on average, with a slight decline between 2018 and 2020. Differences

between the two years across food quintile groups and based on household head gender and ethnicity were negligible. Meanwhile, some differences were seen across provinces, with the majority of shares declining, but with some provinces witnessing an increase. The largest increase in the share of household enterprise labour supply was witnessed in Nghe An.

Table 4.6 Days per year working in household enterprises

	Number of days involved in household enterprise, 2020	Number of days involved in household enterprise, 2018	Share of household enterprise labour supply in total labour supply, 2020, percent	Share of household enterprise labour supply in total labour supply, 2018, percent
Total	203.829	207.306	15.72	16.05
Province				
Ha Tay	223.07	218.877	28.89	27.68
Lao Cai	157.08	117.81	4.768	5.516
Phu Tho	149.31	224.782	11.95	15.47
Lai Chau	114.71	134.5	4.557	6.529
Dien Bien	190.83	104.19	3.614	4.605
Nghe An	189.17	172.563	17.93	12
Quang Nam	199.14	212.906	15.6	17.18
Khanh Hoa	283.42	206.128	12.45	17.1
Dak Lak	236.46	200.158	9.311	9.93
Dak Nong	229.65	207.548	12.23	9.249
Lam Dong	136.15	155.893	5.88	12.28
Long An	199.79	233.752	14.08	12.28
Gender of HH head				
Male	203.91	205.383	15.9	15.99
Female	203.51	215.601	15.02	16.27
Food expenditure quintile				
Poorest	217.43	211.622	9.99	10.57
2nd poorest	223.19	191.174	12.5	13.45
Middle	184.41	200.565	13.27	13.43
2nd richest	202.95	193.445	16.41	15.04
Richest	204.17	222.087	20.93	20.05
Ethnicity of HH head				
Kinh	205.59	214.057	19.13	19.05
Non-Kinh	160.51	114.882	2.37	3.197

4.6. Constraints to small business development

Enterprise owners did not report facing major constraints in terms of running their businesses. To assess the ease of doing business for households, enterprise owners were asked to report the level of difficulty/ease of specific business-related activities, such as registering their business, complying with business regulations, buying or renting land, borrowing money, hiring workers, among other activities listed in Table 4.7. Most owners of household enterprises reported that they "do not know" whether a constraint affected their enterprise or not, or find most of the surveyed aspects "neither easy nor difficult". No more than 2 percent mentioned that any aspect was "very difficult". About 16 percent mentioned that accessing markets for their products was "difficult", while about the same share reported that it was "easy". Finally, saving money in state or commercial banks had the highest frequency of being reported as "very easy" among all included aspects, with 18 percent mentioning that it was very easy.

Table 4.7 Constraints faced by households with enterprises (percent)

Level of difficulty	Very difficult	Difficult	Neither easy not difficult	Easy	Very easy	Do not know
Register your business	0.64	6.99	26.19	12.42	4.11	49.66
Comply with business regulations	0.88	6.27	37.41	17.01	6.11	32.34
Buy or rent land	1.13	6.72	24.3	15.41	6.36	46.1
Borrow money	1.28	11.74	36.23	12.99	3.13	34.63
Save money in a state or commercial bank	0.48	2.28	22.76	22.12	17.92	34.44
Hire skilled workers	1.36	12.65	24.59	10.34	3.15	47.9
Train employees	0.88	9.09	26.94	7.53	2.36	53.2
Learn about new technologies	0.72	11.37	29.98	10.09	1.96	45.88
Purchase new machinery	1.56	7.89	32.95	14.49	3.6	39.51
Access markets for what you produce	1.64	16.37	45.71	16.21	2.63	17.45
Buy inputs	0.64	5.87	42.55	31.7	7.62	11.62

Corruption did not seem to be imposing significant barriers on the operation of household enterprises. Enterprise owners were asked about their views on corruption and the level of the local infrastructure. Only about 3.9 percent of enterprise owners mentioned that it had a large or very large effect, while 61.1 percent reported that it had no effect on their enterprises. Some differences were witnessed across the provinces, where in Lai Chau, one fifth of owners mentioned that corruption had a large or very large

impact, while in Lam Dong, it was unanimous that corruption had no effect, as reported by the nine enterprise owners interviewed.

Table 4.8 Assessment of corruption and infrastructure by households with enterprises (percent)

		Assessment of costs imposed by corruption			Assessment of local infrastructure		
	N	Large and very large	Small	No effect	Very good and good	Neither good nor bad	Very bad and bad
Total	586	3.9	35	61.1	33.4	62.6	3.9
Province							
Ha Tay	217	1.4	35.5	63.1	49.8	46.1	4.1
Lao Cai	9	11.1	55.6	33.3	22.2	77.8	0
Phu Tho	63	6.3	52.4	41.3	12.7	74.6	12.7
Lai Chau	10	20	50	30	20	70	10
Dien Bien	8	0	25	75	0	100	0
Nghe An	51	5.9	9.8	84.3	33.3	60.8	5.9
Quang Nam	80	3.8	47.5	48.8	25	75	0
Khanh Hoa	15	0	26.7	73.3	66.7	33.3	0
Dak Lak	25	4	12	84	4	92	4
Dak Nong	20	0	60	40	30	70	0
Lam Dong	9	0	0	100	66.7	33.3	0
Long An	79	7.6	26.6	65.8	20.3	78.5	1.3
Gender of the HH head							
Male	454	3.5	36.3	60.1	33	62.6	4.4
Female	132	5.3	30.3	64.4	34.8	62.9	2.3
Food expenditure quintile							
Poorest	51	0	13.7	86.3	25.5	72.5	2
2nd poorest	76	2.6	25	72.4	35.5	60.5	3.9
Middle	103	6.8	29.1	64.1	30.1	65	4.9
2nd richest	143	2.8	40.6	56.6	28.7	67.8	3.5
Richest	213	4.7	42.7	52.6	39.4	56.3	4.2
Ethnicity of HH head							
Kinh	561	3.7	35.3	61	34.6	61.7	3.7
Non-Kinh	25	8	28	64	8	84	8

In terms of the local infrastructure, about one-third of enterprise owners rated the local infrastructure as very good or good. Differences were witnessed across the provinces, with this ratio going down to zero at

Dien Bien, and going up to two-thirds in Lam Dong and Khanh Hoa (Table 4.8). Owners from Kinh origins were much more likely to evaluate the local infrastructure as very good or good, compared to other ethnicities.[12]

4.7. COVID-19 impact

COVID-19 has affected the operations of most HH enterprises: the activity of 62.6 percent of enterprises were affected by COVID, as reported by the enterprise owners. Enterprises owned by households within the top three quintiles of food consumption were more affected by COVID than those in the lowest two quintiles. It is possible that poorer households run enterprises that are more "local" or directed towards the local community, and hence, were not affected by transport restrictions due to COVID.

Huge heterogeneity has been found at the province level. In Dak Nong, only 13 percent of enterprise owners reported that their household enterprise was affected by COVID. On the other hand, 80 and 81.8 percent of enterprises were reported to have been affected by COVID in Lao Cai and Lai Chau, respectively. As a response to COVID, most enterprises either changed labourers or changed their operational time. On average, labourers were changed (reduced) by 81 percent. The highest change in labourers was in Quang Nam, followed by Lao Chai and Lai Chau. In Dak Nong, a change in labourers did not take place, but operational time was changed (reduced) by 83 percent. Operational time was on average reduced by 76.9 percent, across all provinces. In terms of ethnicity, household enterprises belonging to Kinh households reported reducing labourers and operational time more than non-Kinh households.

As a response to COVID, enterprise owners had to undertake different measures. As a first response, almost 9 out of 10 enterprises changed their operational time (Table 4.10), which fell by 76.9 percent (Table 4.9). Changing the number of laborers and changing the operation time of the enterprise were the most common second responses to COVID. About 63 percent of those who reported a second response changed labourers, and about 19 percent changed operational time. In addition to these two main responses, some enterprise owners responded to COVID-19's impact by changing business direction, borrowing, selling assets and property, among other actions.

[12] Ethnic minorities (non-Kinh) are more likely to live in mountainous areas, where the local infrastructure in poorer, compared to areas where the Kinh reside.

Table 4.9 Impact of COVID-19 on enterprise operation (percent)

	HH enterprise affected by COVID, percent	Change in labourers due to COVID, percent	Change in operational time due to COVID, percent
Total (N= 668)	62.6	80.9	76.9
Province			
Ha Tay	69.5	69.7	76.2
Lao Cai	80	80.0	81.3
Phu Tho	72.9	62.5	73.1
Lai Chau	81.8	80.0	81.4
Dien Bien	55.6	-	72.0
Nghe An	55.8	66.7	78.5
Quang Nam	70.8	89.7	76.1
Khanh Hoa	31.3	-	62.0
Dak Lak	44.8	75.0	89.1
Dak Nong	13	0.0	83.3
Lam Dong	44.4	-	75.5
Long An	53.2	56.7	81.6
Gender of the HH head			
Male	63.1	79.6	76.1
Female	60.9	85.4	79.5
Food expenditure quintile			
Poorest	29.1	73.3	74.1
2nd poorest	45.7	86.7	76.9
Middle	62.3	71.5	75.6
2nd richest	73	86.9	78.3
Richest	68.6	81.2	76.7
Ethnicity of HH head			
Kinh	62.7	81.0	77.0
Non-Kinh	60.7	70.0	74.0

Note: Empty cells indicate that there is no reported change in labourers due to COVID in the relevant provinces.

Table 4.10 Responses to COVID-19

	Response 1 to COVID-19		Response 2 to COVID-19		Response 3 to COVID-19	
	N	Percent	N	Percent	N	Percent
Borrow	1	0.23	1	1.85	0	0
Change business direction	4	0.93	1	1.85	1	20
Change operation time	390	90.7	10	18.52	1	20
Change no. labourers	9	2.09	34	62.96	1	20
Sell assets/property	0	0	0	0	1	20
Other	26	6.05	8	14.81	1	20

Households may have also responded to COVID by shutting down their running enterprises, or starting up new ones to accommodate for the loss in waged employment. A causal relationship cannot be concluded on whether households shut down or started up enterprises due to COVID or not. Yet, COVID may be a dominant factor in such decisions, since it's a major shock that is likely to have hit households in different ways and with different magnitudes. On average, households who shut down their enterprises are almost equivalent to those who opened new ones between 2018 and 2020. As Table 4.11 shows, about 7.4 percent of households shut down their enterprises, while 6.8 percent opened new ones, between 2018 and 2020. By comparing the households who kept their enterprises (second column), with those who shut it (third column), the table indicates that about one third of households who operated an enterprise have shut down their enterprises. This share goes up to more than half in Khanh Hoa and to 60 percent in Dien Bien; where also a small number of households started new enterprises. On the other hand, in Nghe An, more than double those who shut down their enterprises have started new enterprises. Nghe An and Ha Tay witnessed the largest increase in new enterprises, where about 10 percent of the population in each of the provinces have started an enterprise between 2018 and 2020.

There is heterogeneity in the changes in enterprise ownership based on ethnicity and household wealth. The majority of non-Kinh households who were operating an enterprise have shut them down between 2018 and 2020. In addition, for non-Kinh households, about half of the share of those who closed their businesses, have opened new ones. Meanwhile, for Kinh households, the share of households who decided to open new enterprises was equal to those who decided to close them down. In terms of food quintiles, more households shut down their enterprises compared to those who started new ones in the poorer three quintiles. A higher share/number of households within the highest two quintiles have opened enterprises.

Table 4.11 Change in operating enterprise status between 2018 and 2020, percent (using balanced panel)

	HH shut down enterprise	Household continued operating its enterprise	Household was never operating an enterprise	HH started new enterprise
Total 2020 (N= 2586)	7.4	16.2	69.6	6.8
Province				
Ha Tay	11.1	29.1	49.9	10
Lao Cai	5	7	86	2
Phu Tho	6.8	13	75.1	5.1
Lai Chau	7.2	4.8	84	4
Dien Bien	5	3.3	88.4	3.3
Nghe An	4.1	12.8	72.6	10.5
Quang Nam	6.9	19.2	67.5	6.3
Khanh Hoa	11.7	10.7	73.8	3.9
Dak Lak	4.5	12.3	77.9	5.2
Dak Nong	4.7	10.2	79.5	5.5
Lam Dong	10.5	10.5	77.6	1.3
Long An	6.4	16	68.7	8.9
Gender of HH head				
Male	7.1	17	69	6.8
Female	8.1	13.8	71.3	6.9
Food expenditure quintile				
Poorest	5.7	6.8	84	3.5
2nd poorest	7.3	10.9	77.9	3.8
Middle	9.1	14.5	69.9	6.6
2nd richest	7.5	19.5	63.9	9.1
Richest	7.4	29.1	52.3	11.2
Ethnicity of HH head				
Kinh	8.1	19.7	64.1	8.1
Non-Kinh	4.5	2.6	90.8	2.1

4.8. Summary

This chapter presents the latest findings on the evolving role of household enterprises for rural Vietnamese households, based on VARHS data. The chapter highlights the heterogeneity across

households in their decision to operate enterprises, the characteristics and financial status of the enterprises, as well as the owners' views about some factors affecting their businesses such as corruption and infrastructure. The impact of COVID-19 on household enterprises was also analysed, shedding light on how enterprise owners coped with such a shock.

The analysis shows that several household characteristics can help predicting differences in enterprise characteristics. Most enterprises run by households are micro-enterprises, operating informally with at least half of them operating from home. Considerable heterogeneity was witnessed across food quintiles and different ethnic groups in the households' decision to operate a household enterprise, the amount of money that households invested to open the enterprises, and the firms' financial performance. High educational attainment and access to credit were also predictors of good financial performance and high initial investments into the enterprises. Meanwhile, the analysis highlights that large variations were witnessed across provinces, such as the share of income generated from household enterprises, the share of household enterprise labour supply, and the extent to which they were affected by COVID-19 restrictions.

The lockdown imposed by the government as a response to the COVID-19 pandemic affected the operations of most household enterprises. The majority of affected enterprises either changed labourers or changed operational time. Some enterprises were shut down between 2018 and 2020, which may or may not have been the result of COVID. On the other hand, COVID did not restrict the initiation of any new enterprises, as some new enterprises started between the two years; which may or more not be related to opportunities coming up because of COVID.

Finally, an enabling investment climate in key to the growth of household enterprises. Households did not report facing large constraints in terms of running their businesses. Corruption did not seem to be imposing significant barriers on the operation of household enterprises, as well. Yet, it is important to ensure that the rules and regulations are inviting the licensing and formalisation of household enterprise, to ensure their sustainability.

References

Dang, H.-A., & Giang, L. (2020). "Turning Vietnam's COVID-19 Success into Economic Recovery: A Job-Focused Analysis of Individual Assessments on Their Finance and the Economy".

Dang, H.-A., & Nguyen, C. V. (2020). "Did a Successful Fight against the COVID-19 Pandemic Come at a Cost? Impacts of the Outbreak on Employment Outcomes in Vietnam".

Do, T. A. (2020). "Economic impacts of Covid-19-The case of Vietnam".

Kinghan, C., & Newman, C. (2017). "The rural non-farm economy". Growth, Structural Transformation, and Rural Change in Viet Nam, 91.

Tarp, F., Vinh, D. Q., & Tuan, N. D. A. (2017). "Characteristics of the Vietnamese rural economy: Evidence from a 2016 rural household survey in 12 provinces of Viet Nam". Tokyo, Japan: United Nations University.

5. Chapter 5: Migration

5.1. Introduction

Since 1989, rates of migration have been on a steady rise in Vietnam (GSO and UNFPA, 2011). According to the 2015 wave of the National Internal Migration Survey of Vietnam, 13.6% of the country's population are migrants. The flow of migrants from rural areas to urban areas is most prevalent in Vietnam, as 79.1% of migrants are born in rural areas. This dynamic is a driving force of the rising overall migration rates in Vietnam. Of the migrants observed in this survey, 39.8% were intraprovincial migrants, 19.3% were interprovincial migrants (within the region) and 40.9% were interregional migrants (GSO and UNFPA, 2015).

A literature seeking to study these dynamics in rural Vietnam has emerged. Nguyen et al. (2019) uses data from the Thailand - Vietnam Socioeconomic Panel to study the impacts of migration on crop production in rural Vietnam. They find that households that receive remittances from migrants increase land productivity and labor allocation to non-farm activities. Households with migrants that do not receive remittances see lower land productivity and crop diversity. Nguyen et al. (2017) studies the impacts of migration on crop production in rural Vietnam and finds that migrant households have increased overall expenditure. Migrant households receiving remittances have increased spending on housing and non-food items while those without remittances spend more on food and healthcare, but less on education. The authors note that migration appears to have a positive impact on construction and healthcare in rural areas, but lack an impact on education. Amare & Hohfeld (2016) studies the relationship between poverty and migration in rural Vietnam. They find that remittances from migrants have a positive impact on asset growth. Nguyen (2020) finds that a decrease in per capita income increases the probability of migration by 6% in rural Vietnam.

The rest of the chapter is organized as follows. First we will describe the data used in this chapter, and provide background statistics of the migrants in our sample. Then we will examine the characteristics of migrants. We will then look at the demographics of migrant households in our sample.

5.2. Data

The data used in this chapter is sourced from the 2020 wave of the VARHS. This survey offers rich information on the characteristics and livelihoods of migrants in rural Vietnam, as well as demographic,

socioeconomic and employment data. We utilize this data to examine the origins, destinations, and length of migration of migrants. Table 5.1 offers information on migration patterns for migrants and working migrants in rural Vietnam. In looking at migration patterns, we see that 60.9% of migrants migrate to a different province. This is particularly true for working migrants, with 66% reporting migration to a different province. Working migrants are less likely on average to be living in the same province than non-working migrants, and are more likely to be living abroad.

Table 5.1 Dynamics of Migration

	All Migrants	**Working Migrants**
Same Province	25.6%	17.5%
Different Province	60.9%	66%
Abroad	13.5%	16.4%
N	460	268

In looking at where migrants are coming from, we look to Table 5.2 which shows the distribution of households with migrants and working migrants by province of origin. The first column displays the distribution of residency for households with a migrant. The province with the highest percentage of households with migrants is Phu Tho with 21.8%. Ha Tay and Nghe An are also prominent locations of migrants with 18% and 16% of migrant households. The second column offers residency statistics of working migrant households. Distribution dynamics are similar to those of all migrants, with Phu Tho, Nghe An and Ha Tay accounting for a combined 59.9% of migrant households in our data.

Table 5.2 Provincial Origins of Migrants

	Households with a Migrant %	Households with a Working Migrant %
Ha Tay	18%	14%
Lao Cai	2%	2.9%
Phu Tho	21.8%	25.1%
Lai Chau	6.4%	6.3%
Dien Bien	4.4%	6.8%
Nghe An	16%	20.8%
Quang Nam	11%	5.8%
Khanh Hoa	2%	2.9%
Dak Lak	4.4%	3.9%
Dak Nong	5.2%	3.9%
Lam Dong	2.6%	2.9%
Long An	6.1%	4.8%

Table 5.3 lists the ten most likely destinations of migrants. The provinces of Ha Noi and Ho Chi Minh are by far the two most reported destinations of migrants, representing 36.5% and 19.4% of responses respectively. Quang Nam, Phu Tho, and Bac Ninh combine for another 14% of the distribution. The rest of the provinces that were reported as migrant destinations comprised between 0.3% and 3.1% of the total sample.

Table 5.3 Top 10 Provincial Destinations of Migrants

Province of Destination	%
Ha Noi	36.5
Ho Chi Minh	19.4
Quang Nam	5.5
Phu Tho	5
Bac Ninh	3.5
Da Nang	3.1
Binh Duong	2.9
Nghe An	2.6
Dong Nai	2.4
Lai Chou	1.8

Table 5.4 displays the reasons given for migration for the total sample of migrants, as well as samples of migrants who identify as temporary and permanent migrants. The data shows that the primary reason given for migration is employment with 58.8% of migrants moving for employment opportunities. Migrants looking for work are more likely to be temporary migrants, 65.5% of which seek a move for work while only 25.7% of permanent migrants do the same. Education is also a driver of migration, particularly in temporary migrants. Significant portions of permanent migrants migrate for marriage (37.9%) and family unification (16.7%) reasons as well. In comparing reasons for migration in 2020 and 2018, we see that in the samples of all migrants, distributions of migration reasons are consistent. In the samples of temporary migrants we see a 5.6 pp rise in individuals who migrate for employment reasons. This is associated with slight drops in migration for education, marriage and family unification reasons. In the samples of permanent migrants we find 4.2 pp drops in both the percentage of migrants who leave to pursue employment and education. The percentage of permanent migrants leaving for family unification reasons jumps from 5.7% in 2018 to 16.7% in 2020.

Table 5.4 Reasons for Migration

	2020			2018		
	All Migrants (%)	Temporary Migrants (%)	Permanent Migrants (%)	All Migrants (%)	Temporary Migrants (%)	Permanent Migrants (%)
Work/Looking For Work	58.8%	65.5%	25.7%	57.2%	59.9%	29.9%
Education	25.2%	28.9%	1.5%	26.2%	32.1%	5.7%
Marriage	6.1%	0.3%	37.9%	7.2%	1.3%	41.4%
Army Service	2.4%	3.0%	0.0%	2.1%	3.2%	0%
Family Unification	2.6%	0.0%	16.7%	2.9%	1.6%	5.7%
Other	5.0%	2.4%	18.2%	4.4%	1.9%	17.2%
N	461	336	66	615	374	87

5.3. Migrant Characteristics

Section 5.3 explores the characteristics of migrants in our sample, studying data that offers demographics, occupations, job source, communication, visitation and money transfer of migrants. Table 5.5 summarizes demographic control of all migrants and working migrants respectively in columns 1 and 2. Looking at gender, we see that working migrants are more likely to be male than the average migrant. Additionally, we see that working migrants are more likely to be married. The average age at migration is 26.1 years old for migrants, and working migrants are on average slightly older (28.7 years). Migrants are likely to lack a diploma, as only 35.1% have one, but those working are more likely to have attained one. The average length of time a migrant has been away is 1.8 years, while working migrants tend to be away slightly longer. Similarly to what was seen in table 5.4, working migrants are much less likely to be permanent than the average migrant (16.4% vs. 6.8% respectively).

Table 5.5 Characteristics of Migrants and Working Migrants

	All Migrants	Working Migrants
Male	54%	59.3%
	0.499	0.492
Married	32.1%	38.1%
	0.467	0.486
Age	26.09	28.66
	10.187	9.728
No Diploma	64.9%	57.5%
	0.478	0.495
Years Gone	1.842	1.943
	1.839	1.923
Permanent	16.4%	6.8%
	0.371	0.253
N	461	268

Table 5.6 displays the distribution of occupations of migrants in the data. The largest group of workers in the sample is classified as unskilled, making up 43.6% of the 287 migrants we have employment data for. We also note that 24.7% of migrants are classified as skilled laborers and 16.8% of migrants are employed in mid-level and top-level jobs.

Table 5.6 Migrant Occupations

Unskilled Worker	43.6%
Service Staff	5.2%
Skilled Worker	24.7%
Mid Level Staff	8.4%
Top Level Staff	8.4%
White Collar	9.8%

In looking at the role of migrant networks and job source, Table 5.7 outlines the reported sources of migrant jobs. The most common source of a job for migrants is self seeking, with 49% of migrants finding a job alone. This continues a trend in VARHS surveys of migrants becoming more and more likely to self-seek employment (Ayala-Cantu et al. 2017). Networks are still a considerable source of employment, with relatives and friends accounting for 31.4% of jobs. Employment services assist 7.8% of migrants in our sample with employment, while just 2.4% of migrants were assisted by mass media or government officials, respectively. In comparing job source data between 2018 and 2020 we see no drastic shift in dynamics. We do note, however, a 6.1 pp drop in individuals self seeking employment between 2018 and 2020. This is associated with slight rises in the use of employment services, and government officials to find employment.

Table 5.7 Source of Migrant Jobs

	2020	2018
Self Seeking	49.7%	55.8%
Relative/Friend	31.8%	31.4%
Employment Service	7.9%	4.6%
Mass Media	2.4%	3.1%
Government Official	2.4%	0.9%
Other	5.8%	5.2%

Table 5.8 illustrates the frequency with which families communicate and visit migrants. Households were able to contact migrants very consistently, with 87.5% of households being in contact at least once per month. Only 5.9% of migrants were never in contact with the household. Migrants were able to visit with households at least every 3 months at a rate of 55.4%. More than 19% of migrants never visit with their household. In comparing 2018 and 2020, we note a general rise in migrant contacts and a fall in migrant visits. The percentage of migrants communicating at least once a day with their household rises from 15.4% in 2018 to 23.2% in 2020. The percentage of migrants visiting at least once a week drops from 10.1% in 2018 to 7.2% in 2020, and the percentage of migrants who report never visiting rises from 12.7% in 2018 to 19.7% in 2020.

Table 5.8 Communication and Visitation of Migrants and Households

	2020		2018	
	Frequency of migrant contacts (%)	**Frequency of migrant visits (%)**	**Frequency of migrant contacts (%)**	**Frequency of migrant visits (%)**
At least once a day	23.2%	-	15.4%	-
At least once a week	45.6%	7.2%	49.1%	10.1%
At least once a month	18.7%	27.8%	22.4%	26.1%
At least once every 3 months	2.8%	20.4%	2.1%	20.5%
At least once every 6 months	0.4%	12.8%	0.3%	12.1%
At least once a year	-	6.9%	-	11.4%
Less often	3.5%	5.9%	8.3%	7.2%
Never	5.9%	19.1%	2.3%	12.7%

Table 5.9 displays the frequency of transfers from the household to the migrant for both the total sample, and a sub-sample of working migrants only. Working migrants were much less likely to receive transfers than the average migrant with 6.7% of migrants receiving transfers (24.9% of the main sample reported transfers to the migrant). Most transfers to migrants were relatively frequent, occurring once a month or more frequently. In comparing the transfers from the household to the migrant for all migrants between 2018 and 2020, we see a slight drop in frequency of transfers to the migrant, but similar rates of households that never transfer money to the migrant. In looking at subsamples of working migrants, we see a sharp rise in transfers to working migrants from 0.6% in 2018 to 2.2% in 2020, and note that rates of working migrants receiving transfers more than doubled, with 3.2% in 2018 and 6.7% in 2020. This rise in transfers to migrants may be associated with the Covid-19 pandemic.

Table 5.9 Transfers between Migrants and Households

	2020		2018	
	Frequency of transfers from the household to the migrant	**Frequency of transfers from the household to the migrant -working migrants only -**	**Frequency of transfers from the household to the migrant**	**Frequency of transfers from the household to the migrant -working migrants only -**
Once a month or more frequently	18.9%	2.2%	20.6%	0.6%
Once a Quarter	1.1%	0.4%	1%	0
Less Frequently	5%	4.1%	3.6%	2.6%
Never	75.1%	93.3%	74.8%	96.8%

Table 5.10 displays the frequency of remittances from the migrant to the household for both the total sample, and a sub-sample of working migrants only. As would be expected, working migrants were more likely than the average migrant to send remittances back home. We see that 45.1% of working migrants send money to their household, while only 28.9% of all migrants send money. Of the migrants and working migrants that do send money, 34.6% and 34.8% send money every month or more frequently. Overall rates of migrants and working migrants that send remittances stays similar between 2018 and 2020, however it appears that the remittances are sent less frequently in 2020 than in 2018.

Table 5.10 Frequency of Remittances

	2020		2018	
	All Migrants	**Working Migrants**	**All Migrants**	**Working Migrants**
Once a month or more frequently	10.00%	15.7%	11.5%	18.7%
Less Frequently	18.9%	29.4%	18.1%	26.6%
Never	71.1%	54.9%	70.4%	54.7%

Table 5.11 compares the primary usage and intention of remittances in our sample. The largest discrepancy lies in the usage of remittance for daily meals and other consumption. The primary intended

use of the remittances for 69% of migrants was daily meals and consumption, however only 59% of households reported this as their primary use. We also note that households were more likely to use remittances on medical expenses and savings than intended.

Table 5.11 Intention and Usage of Remittances

	Primary way in which households spent remittances	Primary reason migrant sent remittances
Daily Meals and Other Consumption	59.40%	69.18%
Medical Expenses	4.51%	2.26%
Educational Expenses	6.02%	7.52%
Savings	18.05%	10.53%
Investment	1.5%	0.75%
House construction	3.76%	3.76%
Special Occasion	1.5%	0.75%
Other	5.26%	5.26%
N	133	133

5.4. Household Characteristics

Table 5.12 shows the distribution of food expenditure quintile in samples of households with a migrant, with a working migrant and with no migrant respectively. Households with migrants and working migrants have comparable levels of food expenditure quintile distribution, however households with working migrants have slightly lower expenditure levels. Households with a migrant are more likely to have individuals in the 3rd, 4th and 5th quintiles than households with no migrants.

Table 5.12 Food Quintiles of Migrant Households

Food Quintile	Households with a Migrant	Households with a Working Migrant	Households with no Migrant
1	10.5%	12.6%	21.4%
2	19.2%	17.9%	20.2%
3	21.8%	21.3%	19.7%
4	24.1%	24.2%	19.4%
5	24.4%	24.2%	19.3%
N	344	207	2239

Panel 1 of table 5.13 summarizes household demographics of households with migrants and households with no migrants. The average age of the household head is comparable between households with and without a migrant, at 54.5 years and 57.4 years respectively. However, we see that households with migrants are less likely to have a female household head, with only 18% of migrant households having a female household head. Households with migrants have on average 4.2 members while households without migrants have on average 3.9 members. We see no significant difference in ethnicity between migrant and non-migrant households. Households with migrants have an average net income that is 9,000 higher than those with no migrants. Savings levels between these groups are relatively similar, with migrant households having about 3,000 more in savings. We see that households with a migrant have an average of 3.8 plots of land while households with no migrant have only 3.1 plots. However, households with a migrant had a significantly higher likelihood of having experienced a shock.

Panel 2 of table 5.13 highlights these same demographic variables of households with working migrants and no working migrants. Similar dynamics can be seen between households with and without working migrants and those with and without migrants. Households with no working migrants have slightly older household heads than those with working migrants. Additionally, households with working migrants are less likely to have a female household head and have on average larger household sizes. Interestingly, households with working migrants have increased average net incomes, but significantly lower savings than households with no working migrants.

In panel 3 we compare household demographics between households that receive remittances and households that do not. Households receiving remittances are about twice as likely to have a female

household head than those who do not. Household sizes between the two groups are roughly the same at around 4.2 members on average. Households with no remittances are likely to have greater incomes and greater savings than those who do receive remittances. The two groups have similar rates of reporting shock exposure.

Table 5.13 Household Demographics of Migrant Households

	Panel 1		Panel 2		Panel 3	
	Migrant	No Migrant	Working Migrant	No Working Migrant	Remittance	No Remittance
Age HH Head	54.477	57.42	55.285	57.18	54.351	58.273
Female HH Head	18%	27.1%	17.9%	26.6%	18.3%	9.1%
HH Size	4.177	3.931	4.203	3.943	4.177	4.182
Kinh	79.7%	79.1%	75.4%	79.5%	79.6%	81.8%
Net Income (1000 VND)	169058.64	160064.69	168712.16	160613.46	167607.21	212997.45
Savings (1000 VND)	63633.631	60414.488	55303.431	61338.895	62604.308	94045.455
Plots	3.801	3.122	3.907	3.152	3.824	3.091
Shock	28.8%	18.8%	31.4%	19.1%	28.8%	27.3%

5.5. Covid and Migration

In examining the impacts of the Covid-19 Pandemic on migrants in our sample, we examine the relationship between Covid and employment outcomes. Table 5.14 displays the distribution of impacts of Covid on employment outcomes. We find that 42.8% of migrants are reported to have had no impact from the pandemic on their employment. However, 30.1% of migrants reported reduced working hours/income, 13.1% attributed a job change to the pandemic and 4.8% reported a job loss. In looking at the geographical relationship with covid and migration, we see that migrants that moved to Hanoi or Ho Chi Minh were less likely to report a Covid-19 impact on employment. We see that 17.1% of migrants who moved to other provinces reported a Covid related job change, as opposed to only 8.5% of those who migrated to Hanoi and Ho Chi Minh. Despite a significant portion of our sample reporting changes to employment due to Covid, only 2.83% of our sample of migrants received financial assistance from their household.

Table 5.14 Impact of Covid on Migrant Employment

	Total Sample	Hanoi + Ho Chi Minh	Other Provinces
Lose Job	4.8%	5.2%	4.5%
Change Job	13.1%	8.5%	17.1%
Reduced Working Time/Income	30.1%	30.5%	29.8%
Increased Working Time/Income	0.7%	0%	1.2%
No Impact	42.8%	48.4%	38%
Other	8.6%	7.5%	9.4%
N	458	213	245

5.6. Conclusion

This chapter uses the 2020 and 2018 waves of the VARHS to examine access to migration dynamics in rural Vietnam. Previous literature has studied migration in Vietnam, finding that migrant remittances positively influences land productivity, asset growth and non-farm labor allocation (Nguyen et al, 2019; Amare & Hohfeld). Additionally, research has found that migrant households have higher overall expenditure (Nguyen et al., 2017). This chapter summarizes VARHS data on migration. Additionally, we examine the characteristics of migrants and the demographics of migrant households. Lastly, we look at potential impacts of Covid-19 on migration.

Most migrants in our sample migrate to different provinces within Vietnam, with the majority of migrants coming from Phu Tho, Nghe An and Ha Tay. In looking at the reasons for migration, we see that most migrants move to pursue employment opportunities. It is significantly more likely for a migrant pursuing employment opportunities to be classified as a temporary migrant. Permanent migrants tend to pursue marriage and family unification.

In looking at migrant characteristics, we see that working migrants are more likely to be male and married than the average migrant. The largest classification of working migrants are noted as unskilled, though a significant portion of migrants are reported as being skilled or employed in mid- and top-level jobs. Migrants in our sample largely find employment either independently or relied on relatives and friends to source a job, as opposed to utilizing government services or employment services. Between 2020 and

2018, frequency of communication between migrants and their household increased, while visits decreased..

Migrant Households have slightly higher levels of food expenditure and larger net incomes than those without migrants. Additionally, migrant households have a much higher likelihood of having experienced a shock. Households with working migrants have larger average incomes than those without working migrants, but much lower savings levels. Households that receive remittances are twice as likely to have a female household head, as well as having lower net incomes and greater savings than those that do not.

References

Ayala-Cantu, L., Beni, T., Markussen, T., Narciso, G., Newman, C., Singh, A., Singhal, S., Tarp, F., & Zille, H. 2017. "Characteristics of the Vietnamese Rural Economy: Evidence from a 2016 Rural Household Survey in 12 Provinces of Vietnam". Helsinki: UNU-WIDER.

Amare, M., & Hohfeld, L. (2016). "Poverty transition in rural Vietnam: The role of migration and remittances". The Journal of Development Studies, 52(10): 1463-1478.

General Statistics Office and UNFPA. (2016). "The 2015 National Internal Migration Survey: Major Findings".

General Statistics Office and UNFPA. (2011). "Migration and Urbanization in Vietnam: Patterns, trends and differentials".

Nguyen, C. V. (2020). "The effect of income shocks on migration: evidence from rural Vietnam". Applied Economics Letters, 27(18): 1509-1514.

Nguyen, D. L., Grote, U., & Nguyen, T. T. (2019). "Migration, crop production and non-farm labor diversification in rural Vietnam". Economic Analysis and Policy, 63: 175-187.

Nguyen, D. L., Grote, U., & Nguyen, T. T. (2017). "Migration and rural household expenditures: A case study from Vietnam". Economic Analysis and Policy, 56: 163-175.

6. CHAPTER 6: CREDIT

6.1. Introduction

Access to credit markets in developing countries, particularly rural areas, is oftentimes deficient. Several studies have sought to observe the role and economic significance of credit access in rural Vietnam. Barslund & Tarp (2008) finds that in rural Vietnam formal loans tend to be used for investment and production, while informal loans tend to be allocated towards consumption. They also observe that while education and credit history impact credit allocation in rural vietnam, geographical influences on demand are very important as well. Nguyen (2007) studies the determinants of credit usage in rural Vietnam. They find that financial activity is determined more by household size and agricultural activities rather than education or proximity to banks. They also observe that the least and most educated individuals borrow the least and that formal credit has a positive impact on household consumption while informal credit has less clear impacts. Quach et al. (2005) studies the impacts of access to credit on household poverty in rural vietnam. They find that household credit has a positive impact on the economic welfare of a household, as measured by per-capita expenditure. They also note that credit has a particularly strong impact on poorer households, and observe that the age of the household head, household size, land ownership and savings are key determinants of household borrowing activities.

This chapter utilizes data from the 2018 and 2020 waves of the VARHS to study credit access in rural Vietnam. This chapter will first look at the geographical and demographic dynamics of credit access. Then we will examine the values, sources and usage of loans that individuals have. Additionally, we will examine any time trends that may present themselves in our data. We find that overall credit access has declined in the 2018 and 2020 waves of the VARHS, a trend which can be seen since 2016 (cite previous report).

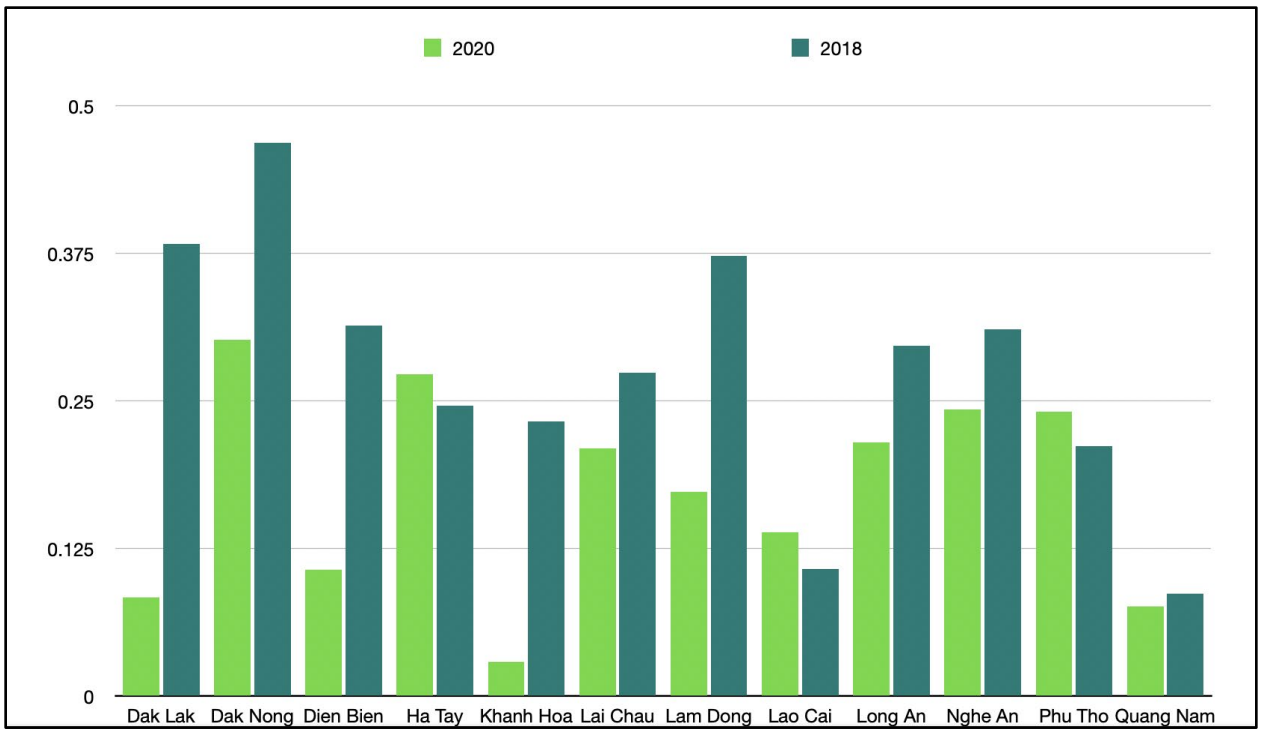
6.2. Who has access to credit?

In this section we will first look at who in our dataset has access to credit, examining location and demographic characteristics.

Figure 6.1 illustrates the percentage of households that report credit access in each province. In 2020, Dak Nong, Ha Tay, Nghe An, Phu Tho and Long An all reported loan access rates of over 20%. Dak Nong leads all provinces with a loan access rate of 30.2%. Relative to 2018, in 2020 we see decreased overall rates of loan access across many provinces. In 2018 Dak Nong, Dak Lak, Lam Dong, Dien Bien and Nghe

An all saw loan access rates of over 30%. This is in contrast to 2020, where only Dak Nong saw rates above 30%.

Figure 6.1 Loan Access by Province



In Table 6.1 we see the demographic characteristics of households who have and do not have loan access in our sample in 2020 and 2018. In 2020, we see that households with access to credit have a significantly larger income than those without access. Additionally households with access to credit have larger household sizes, with 4.3 individuals as opposed to 3.9 individuals in households with no access. Characteristics of household heads may influence a household's likelihood of receiving a loan, as well. We see that 26.6% of households with no credit access have female household heads, while only 22.9% of households with credit access have female heads. Additionally, households with credit access had, on average, younger and less educated household heads. Households in the upper food expenditure quintiles are more likely to have access to credit than not, while this reverses in the lower two quintiles. Women's union and farmer's union membership appears to have a positive relationship with credit access, whereas veterans unions do not.

In comparing data from 2018 and 2020 we see that overall access rates to credit declined to 19.63% in 2020 from 25.45% in 2018. Comparing access to credit in 2018 and 2020 across food expenditure quintiles, we see that while it was harder to get credit for the lowest quintile in 2018, in 2020 the likelihood for

getting credit became smaller in the lowest two quintiles. This dynamic may imply that credit was harder to obtain in 2020 and that only those with higher incomes were able to secure loans. Indeed, 9.9% of households in the lowest food expenditure quintile had access to loans in 2020, a sharp drop from 16.7% in 2018. Similarly, in the second lowest quintile the percentage with access to credit fell from 21.4% in 2018 to 17.9% in 2020. Dynamics in household head characteristics changed little from 2018 to 2020. We note a slight increase in female household head status in households with credit access from 2018 to 2020 and lowered illiteracy rates for all households.

Table 6.1 Household Demographics of Credit Access

	2020			2018		
	No Credit	Access to Credit	Total	No Credit	Access to Credit	Total
Percent of Sample	80.37%	19.63%	100%	74.55%	25.45%	100%
N	2,076	507	2,583	1,942	663	2,605
Household Characteristics						
Income (In 2018 1000s VND)	143404.53	187101.09	151981.44	152496.36	177266.92	158803.15
Household Size	3.874	4.331	3.964	3.876	4.534	4.044
Kinh	0.792	0.791	0.792	.803	.756	.791
Experienced a Shock	0.18	0.288	0.201	.205	.338	.239
Household Head Characteristics						
Female	0.266	0.229	0.259	0.262	.202	.247
Age	57.967	53.187	57.028	56.973	53.358	55.773
Illiterate	0.064	0.059	0.063	0.088	.084	.087
No School	8.4%	9.7%	8.7%	9.7%	8.4%	9.4%
Lower Primary	78.6%	78.7%	78.6%	77.5%	79.8%	78.1%
Lower Secondary	50.8%	48.9%	50.4%	48.9%	48.3%	48.8%
Upper Secondary	18.3%	16.2%	17.8%	17.9%	16.6%	17.6%
Food Expenditure Quintiles						
1	0.225	0.099	0.2	0.212	0.167	0.201
2	0.205	0.179	0.2	0.195	0.214	0.2
3	0.181	0.276	0.2	0.2	0.204	0.201
4	0.194	0.225	0.2	0.195	0.21	0.199
5	0.195	0.221	0.2	0.198	0.205	0.2
Union Membership						
Women's Union	0.626	0.74	0.648	.637	.67	.645
Farmer's Union	0.457	0.559	0.477	.426	.582	.465
Veterans's Union	0.182	0.162	0.178	.179	.17	.176

6.3. What kind of loans are households able to secure?

In this section, we will examine the sizes, sources, and usage of loans in our sample. Table 6.2 displays average loan amounts and sources for individuals' first, second, and third loans. In 2020, there were 504 households that had one loan, while 71 and 12 had second and third loans respectively. Households' first loans tend to be sourced from VBSP and VBARD, with 57.8% of all first loans being received from these two sources. For second and third loans, households were more likely to receive loans from informal and other sources. In 2020, only 8.3% of third loans were granted by the VBSP and none of the loans were given by VBARD.

Table 6.2 Loan Sizes and Sources

	2020			**2018**		
	First Loan	**Second Loan**	**Third Loan**	**First Loan**	**Second Loan**	**Third Loan**
N	**504**	**71**	**12**	**663**	**86**	**21**
Amount Applied For (In 2018 1000s VND)	127,842.21	127,092.32	89,265.46	109,377.53	69,924.42	32,880.95
Source of Loan - % from:						
VBSP	30%	21.1%	8.3%	28.5%	24.4%	4.8%
VBARD	27.8%	11.3%	0%	37.9%	16.3%	9.5%
Informal	20%	26.8%	25%	14.9%	26.7%	42.9%
Other	22.2%	40.8%	66.7%	18.7%	32.6%	42.9%

Table 6.3 displays the stated and actual uses of loans, by source. In 2020, 44.2% of household loan requests cited a stated use concerning farming activities. Loans that were granted with this stated use were mostly sourced from VBSP, VBARD or other formal sources. Additionally, 13.4% claim non-farm activities, 30.4% claim other investment, and 11.9% claim the loans will be used for consumption. However, only 33.9% of households actually use their loans for farming activities. The actual use of loans for non-farm activities, other investment, and consumption are 9%, 8%, and 57% larger than their stated

usage respectively. Loans borrowed from informal sources are more likely to have a stated use directed at consumption than those borrowed from formal sources.

In comparing statistics from the 2020 and 2018 waves of the VARHS, we see an overall consistency in loan usage from all sources. In looking at loans granted by the VBSP we see a significant drop in stated and actual usage of loans for farming activities. This is associated with a rise in stated and actual use of loans in non-farm activities and other investment. Though stated use of consumption for VBSP loans stays similar across waves, the actual use of VBSP loans for consumption rises from 12.7% to 19.4%. We see a similar decline in reported usage of VBARD loans for farming activities that associates a rise in other investment usage. There is a sharp drop in stated and actual usage of informal loans for consumption from 2018 to 2020. Loans coming from other sources see relatively consistent usage from 2018 to 2020.

Table 6.3 Stated and Actual Usage of Loans

	2020		2018	
	Stated Use	**Actual Use**	**Stated Use**	**Actual Use**
All Sources				
Farm Activities	44.2%	33.9%	50.8%	39.7%
Non-Farm Activities	13.4%	14.6%	11.5%	11.4%
Other Investment	30.4%	32.8%	24.8%	30.1%
Consumption	11.9%	18.7%	12.9%	18.7%
VBSP				
Farm Activities	53.9%	36.3%	65.2%	52.1%
Non-Farm Activities	7.1%	8.1%	5%	5.6%
Other Investment	29.1%	36.3%	21%	29.6%
Consumption	9.9%	19.4%	8.8%	12.7%
VBARD				
Farm Activities	48.2%	35.6%	56.3%	42.9%
Non-Farm Activities	11.3%	13.6%	12.6%	11.6%
Other Investment	35.5%	40.7%	25.1%	31.8%
Consumption	5%	10.2%	6.1%	13.6%
Informal				
Farm Activities	13.4%	12.8%	12%	11.3%
Non-Farm Activities	19.6%	19.3%	12.8%	10.4%
Other Investment	39.3%	37.6%	34.2%	34.8%
Consumption	27.7%	30.3%	41%	43.5%
Other				
Farm Activities	55.6%	47.7%	54.6%	46%
Non-Farm Activities	17%	17.7%	16.4%	18%
Other Investment	19.3%	18.5%	21.7%	24.5%
Consumption	8.1%	16.2%	7.2%	11.5%

In looking at requirements to obtain loans, we examine the prevalence of collateral and guarantor requirements for loans. Table 6.4 offers summary statistics of collateral and guarantor requirements by

loan source. We observe that 89.3% of loans required either collateral or a guarantor in 2020. Of this percentage, 30% needed collateral and 59.3% needed a guarantor. Loans sourced from the VBSP largely required a guarantor with 86.8 reporting need for a guarantor and no individuals reporting collateral. Over 80% of loans from VBARD required collateral and 12.2% required a guarantor. Informal loans saw the highest rates of requiring neither collateral or a guarantor with 19.5%, and 78.9% of informal loans cited a guarantor requirement.

In 2020 we see a slight rise in loans that require a guarantor, but a significant drop in loans that require collateral. The rise in guarantor rates appears to come from loans from sources besides VBSP, VBARD and informal loans. Reported need for collateral in informal loans doubled between 2018 and 2020, however VBARD and other loans saw a small drop in collateral requirement. It is important to note that in both years, there are no reports of a household needing both collateral and a guarantor to secure a loan.

Table 6.4 Collateral and Guarantor Requirements

	2020				**2018**			
	Needed Collateral	**Needed Guarantor**	**Needed Both**	**Needed Neither**	**Needed Collateral**	**Needed Guarantor**	**Needed Both**	**Needed Neither**
All Sources	30%	59.3%	0	10.7%	38.4%	54.3%	0	7.3%
VBSP	0%	86.8%	0	13.2%	0%	90.5%	0	9.5%
VBARD	83.8%	12.2%	0	4.1%	86.5%	12%	0	1.5%
Informal	1.6%	78.9%	0	19.5%	0.8%	84.7%	0	14.5%
Other	33.6%	59.1%	0	7.4%	39.8%	52.2%	0	8.1%

6.4. Conclusion

This chapter uses the 2020 and 2018 waves of the VARHS to examine access to credit in rural Vietnam. Economic literature exploring the dynamics of credit in rural Vietnam has found that loan access can influence household economic welfare, formal credit has a positive impact on household welfare and that geography has an important relationship with credit access (Barslund & Tarp, 2008; Nguyen, 2007; Quach et al., 2005). To contribute to the existing work examining credit in rural Vietnam, we begin this chapter examining the characteristics of those that have access to credit. We then examine the details of the loans that households in our sample have been able to secure.

Overall, credit access declined from 25.5% in 2018 to 19.6% in 2020, a trend that can be seen since the 2014 wave of the VARHS. The provinces of Dak Lak, Dak Nong, Dien Ben, Khanh Hoa and Lam Dong saw steep drops in credit access from 2018 to 2020 while the provinces Ha Tay, Lai Chau, Lao Cai, Long An, Nghe An, Phu Tho and Quang Nam maintain comparable levels between 2018 and 2020. Households with credit access have larger incomes, and household sizes than those that do not. Women and farmer union membership is associated with a higher likelihood of a household having a loan. Additionally, household heads of households with credit access are less likely to be women and educated.

In our sample, 504 households had at least one loan, with 71 households reporting two loans and 12 households reporting three loans. The primary source of loans were from VBSP and VBARD banks, especially for households first loans. Households primarily report farming activities as the use of loans. However, 23.3% of these individuals do not actually use their loan for farming activities, instead opting to use the loan on non-farm activities, other-investment, or consumption. To secure loans, 89.3% of loans required either collateral or a guarantor, with 30% and 59.3% reporting a need for collateral and guarantor respectively. Loans sourced from the VBSP required a guarantor 86.8% of the time and never required collateral.

References

Ayala-cantu, L., Beni, T., Markussen, T., Narciso, G., Newman, C., Singh, A., Singhal, S., Tarp, F., and Zille, H.. (2017). "Characteristics Of The Vietnamese Rural Economy: Evidence From A 2016 Rural Household Survey In 12 Provinces Of Vietnam". Helsinki: UNU-WIDER.

Barslund, M., & Tarp, F. (2008). "Formal and informal rural credit in four provinces of Vietnam". The Journal of Development Studies, 44(4): 485-503.

Nguyen, C. H. (2007). "Determinants of credit participation and its impact on household consumption: Evidence from rural Vietnam". Centere for Economic Reform and Transformation Discussion Paper, 2007/03.

Quach, M., Mullineux, A., & Murinde, V. (2005). "Access to credit and household poverty reduction in rural Vietnam: A cross-sectional study". The Birmingham Business School, The University of Birmingham Edgbaston, 1-40.