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Impacts of Covid-19 on households in ASEAN countries and their implications for human capital development: Medium-run impacts and the role of government support

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ADB Working Paper Series

**IMPACTS OF COVID-19 ON
HOUSEHOLDS IN ASEAN COUNTRIES
AND THEIR IMPLICATIONS FOR
HUMAN CAPITAL DEVELOPMENT:
MEDIUM-RUN IMPACTS AND THE
ROLE OF GOVERNMENT SUPPORT**

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and Kunhyui Kim

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Abstract

The outbreak of the COVID-19 virus and the resulting falls in demand due both to uncertainty and policy interventions such as lockdowns, “social distancing,” and travel restrictions are having a severe impact on Asian economies and hence on Asian households. These negative impacts come through a variety of channels, including loss of employment or reduced working hours, loss of sales and income of a household business, inability to travel to work, an increased need to stay at home to look after children or sick household members, higher prices and/or lack of availability of staple items, reduced access to schooling, etc. At the same time, governments implemented aid programs to support households and businesses. In order to better understand these impacts, we carried out computer-assisted telephone interviews of households in seven ADB developing member countries: Cambodia, the Lao People’s Democratic Republic, Indonesia, Malaysia, the Philippines, Thailand, and Viet Nam. Two waves of the survey were conducted: the first from the end of May to the end of July 2020 and the second from the end of January to February 2021.

The following factors contributed to declines in income and expenditure and the experience of financial difficulty: being in a lower-income group, lower education of household head, female household head, having at least one person who lost their job, and being located in a lockdown area. The receipt of government aid did not vary much by income class, but the amount relative to pre-pandemic income was much higher for lower-income groups. Nonetheless, we could not find positive effects of the receipt of government aid on household income or expenditure. One of the most striking findings is that 60% of households experienced financial difficulties during the first-wave period, and this ratio actually increased to 78% in the second-wave period. This suggests that the prolonged nature of the pandemic has put increasing strains on household finances, even though incomes have stabilized somewhat. Only about 7% of children who stopped attending school could not participate in online learning, but some could only participate partially due to weak/insufficient Internet connections and a lack of digital devices. Two COVID-19-related factors—having at least one person who lost their job or had their working hours reduced and experiencing financial difficulties—significantly affect the intensity of online classes taken by children in an average household. This has negative implications for longer-term human capital formation.

Keywords: COVID-19, ASEAN, household income, employment, consumption, household finance, government aid

JEL Classification: D14, G51, H12, H84, I10, I24, J6

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1. INTRODUCTION

The outbreak of the COVID-19 virus and the resulting falls in demand due both to uncertainty and policy interventions such as lockdowns, “social distancing,” and travel restrictions are having a severe impact on Asian economies and hence on Asian households. These negative impacts come through a variety of channels, including loss of employment or reduced working hours, loss of sales and income of a household business, inability to travel to work, an increased need to stay at home to look after children or sick household members, higher prices and/or lack of availability of staple items, reduced access to schooling, etc. Low-income and vulnerable groups are likely to be particularly susceptible due to a lack of resources they can draw on during periods of reduced income. In order to develop appropriate policy responses, it is necessary to obtain a correct understanding of the current situation of households. As part of the Asian Development Bank’s overall strategy to deal with the current crisis, ADBI has carried out surveys of households with a view to better understanding the size, aspects, and incidence of impacts on them, especially vulnerable groups. This study focuses on the effects of the pandemic and government aid on household income, consumption, the experience of financial difficulty, and children’s participation in online learning.

Specifically, we carried out two waves of computer-assisted telephone interview (CATI) surveys of households in seven ADB developing member countries: Cambodia, the Lao People’s Democratic Republic (Lao PDR), Indonesia, Malaysia, the Philippines, Thailand, and Viet Nam. (Face-to-face surveys were impractical due to the lockdowns being implemented in response to the pandemic.) The first wave was carried out from the end of May to the end of July 2020 and the second wave from the end of January to February 2021.¹ Representative samples of 1,000 households in each country were surveyed. Extra efforts were made to sample the same households in each wave. For most countries we were able to get results for the same household in about half the cases, i.e., a panel sample of about 500 households per country. The paper reports the results for the panel sample, while some results for the whole sample are given in the Appendix.

2. LITERATURE REVIEW

In some ASEAN economies, the first cases of COVID-19 were reported quite early, in January 2020. Since then, the disease has continued to spread in the region. ASEAN economies’ governments have instituted various restrictions to contain the spread of the disease within their boundaries, such as movement restrictions, border closures, social distancing, quarantine, and closure of nonessential services. Implementation of such stringent measures could disrupt the economy and ultimately people’s living standards. Economies in the region have faced disruptions in several ways, including the loss of jobs and income, and potentially reduced accumulation of human capital for children (Demeke, Kariuki, and Wanjiru 2020; ILO 2020; UN-Habitat and WFP 2020).

¹ Preliminary results from the first-wave survey were reported in Morgan and Trinh (2021).

Many studies have shown profound impacts of the COVID-19 pandemic on economic activities. McKibbin and Fernando (2020) argue that pandemics can affect households, governments, and businesses through increased business costs, increased public healthcare expenditures, changes in labor supply due to mortality and morbidity, etc. COVID-19-related restrictions have obstructed all stages of the food supply chain, including production, distribution, processing, and consumption (Siche 2020; Torero 2020), and have caused damage to perishable agricultural commodities such as meat and vegetables (Nicola et al. 2020).

While various studies have examined potential impacts of the pandemic on global and national economic indicators such as poverty, government expenditures, GDP growth, budget deficits, and employment (ILO 2020; Nicola et al. 2020; Sumner, Hoy, and Ortiz-Juarez 2020; UN-Habitat and WFP 2020), there is limited information on how the pandemic and associated lockdown policies are affecting individuals at the household level. Economic effects of a pandemic may disproportionately impact members of society, depending on their income status, livelihood strategies, access to markets, etc. Therefore, it is important to understand the household-level impacts as well as the support mechanisms that could contribute to income smoothing.

Kansiime et al. (2020) assessed effects of the COVID-19 pandemic on household income and food security in two East African countries, using online survey data from 442 respondents. They found that more than two thirds of the respondents experienced income shocks due to the COVID-19 crisis. Food security and dietary quality worsened: The proportion of food-insecure² respondents increased by 38% and 44% in Kenya and Uganda, respectively. Results from probit regressions show that low-income households and those dependent on labor income were more vulnerable to income shocks and consumed less food during the COVID-19 pandemic than other respondent categories.

Ceballos, Kannan, and Kramer (2020) and Harris et al. (2020) studied the impacts of COVID-19 and related restrictions on smallholders in Haryana and Odisha states in India and reported a large degree of heterogeneity in the impacts of COVID-19 responses on agricultural activity, income, and food security. They found substantial heterogeneity in how the lockdown affected farmers in these two states, which was likely related to differences in market infrastructure and differences in state-specific COVID-19-related policies. Harris et al. (2020) investigated effects of the COVID-19-induced shock on the production, sales, prices, incomes, and diets of vegetable farmers in India as both producers and consumers of nutrient-dense foods. They found that a majority of farmers reported negative impacts on production, sales, prices, and incomes. Price reductions were reported by over 80% of farmers, and reductions of more than half by 50% of them. The data also showed a higher level of vulnerability among female farmers in terms of both livelihoods and diet, and differential effects on smaller and larger farms.

We add to the growing body of literature on the impacts of the COVID-19 pandemic by examining its implications for household income, household financial viability, and the effects of government aid in seven Southeast Asian economies. The results should contribute to guiding policy discussions on the provision of necessary measures to cope with the potential negative impacts of the COVID-19 pandemic.

² Food insecurity is defined as the disruption of food intake or eating patterns because of a lack of money and other resources.

3. ADBI HOUSEHOLD SURVEY IN ASEAN COUNTRIES

We carried out our household surveys in seven ASEAN countries: Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Thailand, and Viet Nam.³ The survey was designed by ADBI and implemented by survey companies in those countries. The survey was conducted twice: the first wave from the end of May through July 2020 and the second wave from the end of January through February 2021. The overall sample size in both waves was about 1,000, but only about half of the respondents were covered in both periods. This yielded a panel data set of about 500 households per country. Generally, figures and empirical results in the paper are based on the panel data set.⁴ However, figures and empirical results on the effects of government and other aid on households in the COVID-19 pandemic (Sections 5 and 7) are exclusively focused on the second-wave respondents, as the first-wave questionnaire did not include survey questions regarding the actual receipt of government and other aid by households. Major characteristics of the survey include:

- Computer-assisted telephone survey (due to COVID-19)
- Respondent: household head or person knowledgeable about the household's finances
- Length of interview: 12–15 mins (in some countries about 17–19 mins, partly due to screening questions)
- The questionnaire collected information on:
 - Characteristics of the households, including number of members, gender, number employed, number in school, age of head of household, education level, urban vs. rural residence, and income, including types of income;
 - Application for government aid in the first-wave survey
 - Aid received from government and other institutions in the second-wave survey;
 - Changes in income, employment, and working hours in the first and second waves compared with the base periods of end-2019 and June 2020, respectively; and
 - Whether or not the household experienced financial difficulties, and, if so, what coping measures it used, including reducing consumption, borrowing, delaying payments, and applying for government aid.

Table 1 presents a summary of our sample (urban vs. rural, gender of household head, and by income group).

³ The first wave of the survey was also carried out in Myanmar, but it was not possible to carry out the second wave there due to changed conditions. Therefore, the results are not included in this paper.

⁴ Figures and regression results using the total sample including respondents that answered either in the first or second round are presented in the Appendix. Appendix A shows the total sample and Appendix C shows the regression results using the total sample.

Table 1: Characteristics of the Panel Sample (Both-period Respondents)*The first wave*

Country	Total	Urban	Rural	Male HH Head	Female HH Head	Quantile 1 (Poorest)	Quantile 2	Quantile 3	Quantile 4 (Richest)
Cambodia	504	165	339	388	116	138	156	100	110
Indonesia	529	226	303	339	190	157	166	125	81
Lao PDR	578	195	383	362	216	193	129	96	160
Malaysia	244	159	85	212	32	55	73	54	61
Philippines	450	224	226	334	116	133	115	113	89
Thailand	635	251	384	446	189	156	182	162	135
Viet Nam	551	193	358	366	185	151	131	125	137
TOTAL	3,491	1,413	2,078	2,447	1,044	983	952	775	773

The second wave

Country	Total	Urban	Rural	Male HH Head	Female HH Head	Quantile 1 (Poorest)	Quantile 2	Quantile 3	Quantile 4 (Richest)
Cambodia	504	164	340	389	115	163	101	115	125
Indonesia	529	226	303	341	188	241	148	108	32
Lao PDR	578	193	385	373	205	235	120	76	147
Malaysia	244	157	87	207	37	70	70	53	51
Philippines	450	224	226	333	117	135	160	65	90
Thailand	635	252	383	446	189	162	171	174	128
Viet Nam	551	194	357	367	184	191	131	103	120
TOTAL	3,491	1,410	2,081	2,456	1,035	1,197	901	694	693

Quantile = income class.

Note: Some households refused to disclose or did not know their total income. Those who refused/did not know are not included in the estimation.

Source: Authors' calculation based on ADBI's database.

4. BACKGROUND ON COVID-19 IN ASEAN ECONOMIES

Table 2 presents the progress of COVID-19 in the seven ASEAN countries in which we implemented our survey. It shows the progress of COVID-19 on four major dates: the date when the first case of, and first death from, COVID-19 was identified in each country, end of May, end of August, and end of December (for both 2020 and 2021). By the time our first wave was completed (July 2020), the COVID-19 spread seemed to be under control in most countries except for Indonesia and the Philippines. Indonesia and the Philippines also had by far the highest numbers of deaths due to COVID-19. Beginning with the second wave (end of January 2021), most countries show a larger number of total COVID-19 cases and deaths than at the beginning of 2020.

Table 2: Progress of COVID-19 Pandemic in Seven ASEAN Economies

	Cambodia	Indonesia	Lao PDR	Malaysia	Philippines	Thailand	Viet Nam
First case (date)	28 Jan	02 Mar	25 Mar	25 Jan	30 Jan	13 Jan	24 Jan
Total cases (by 31 May 2020)	125	26,473	19	7,762	17,224	3,081	328
Total cases (by 31 Aug 2020)	274	174,796	22	9,334	217,377	3,412	1,040
Total cases (by 31 Dec 2020)	366	743,198	41	110,485	472,523	6,884	1,456
Total cases (by 31 May 2021)	30,094	1,821,703	1,851	565,533	1,223,617	159,792	7,168
Total cases (by 31 Aug 2021)	92,616	4,089,801	14,816	1,725,357	1,976,030	1,204,729	449,489
Total cases (by 31 Dec 2021)	120,487	4,262,720	110,054	2,754,513	2,841,018	2,223,435	1,714,742
First death (date)	NA	12 Mar	NA	18 Mar	2 Feb	01 Mar	01 Aug
Total deaths (by 31 May 2020)	0	1,613	0	115	950	57	0
Total deaths (by 31 Aug 2020)	0	7,417	0	126	3,520	58	32
Total deaths (by 31 Dec 2020)	0	22,138	0	463	9,230	61	35
Total deaths (by 31 May 2021)	214	50,578	3	2,729	20,860	1,031	47
Total deaths (by 31 Aug 2021)	1,892	133,023	14	16,382	33,330	11,589	11,064
Total deaths (by 31 Dec 2021)	3,012	144,094	360	31,462	51,373	21,698	32,168

Source: Our World Database and World Health Organization (WHO). See <https://covid19.who.int/region/wpro/country/ph> for more details.

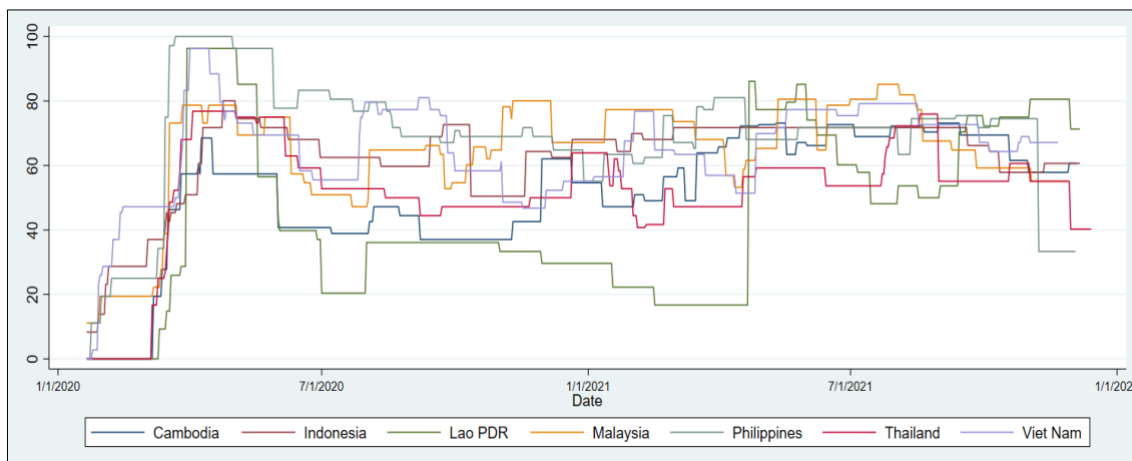
5. GOVERNMENT CONTAINMENT MEASURES AND ECONOMIC SUPPORT PROGRAMS

5.1 Government Containment Measures and Government Economic Support Policies

ASEAN governments have implemented various measures, including school closures, lockdowns and social distancing requirements, and border closures. However, the times at which each country implemented such policies are different. The intensity and duration of such measures also differ by country. Figure 1 presents stringency indices of the measures that ASEAN countries have adopted to contain the spread of COVID-19, as calculated by a team at Oxford University (Hale et al. 2020). Among those countries, Viet Nam adopted relatively strict measures quite early. As a result, Viet Nam suffered less from the pandemic than did other populous countries such as Indonesia and the Philippines. While both Indonesia and the Philippines implemented some measures such as border closures quite early, the intensity of such measures seemed low, which allowed the rapid increase of cases in these two countries. This forced Indonesia and the Philippines to prolong their nonpharmaceutical interventions, especially in the Philippines.

ASEAN governments have also implemented various economic policies to mitigate the negative effects of COVID-19 on firms and households, which are summarized in Table 3. Those policies range from direct money transfer to wage subsidies, (utility) price subsidies, and training facilities to help individuals who lost jobs.

Figure 1: Stringency Index of Government Nonpharmaceutical Intervention Measures



Source: Hale et al. (2020).

Table 3: ASEAN Countries’ Government Economic Support Policies

Country	Policies Toward Households
Cambodia	Social assistance of nearly USD400 million (incl. USD300 million for a new monthly cash transfer program for poor and vulnerable households and USD100 million cash for a work program). USD64 million allocated for wage subsidies and skills training programs; several tax relief measures.
Indonesia	About IDR710 trillion (about USD50 billion or 4.4% of GDP) in stimulus packages have been approved; increased benefits and broader coverage of existing social assistance schemes to low-income households; expanded unemployment benefit; and tax relief.
Lao PDR	Income tax exemption for low-income civil servants and employees of private sector; compensation of 60% of workers’ salary (for eligible workers); an unemployment allowance for terminated workers; and a new electricity tariff.
Malaysia	Five stimulus packages, accounting for 4.3% of GDP: electricity discounts and temporary paid leave; cash transfers to low-income households; wage subsidies to help employers retain workers; employees allowed special withdrawals from their Employment Provident Fund (EPF); and hiring and training subsidies.
Philippines	A PHP595.6 billion fiscal package (about 3.1% of 2019 GDP) for vulnerable individuals and groups including a cash aid program for 18 million low-income households (each is expected to receive from PHP10,000 to PHP16,000) and social protection measures for vulnerable workers, including displaced and overseas Filipino workers.
Thailand	Three packages (amounting to 9.6% of GDP) to assist workers, farmers, and entrepreneurs (including THB5,000/month/person for three months to about 14 million nonfarm workers outside the social security system and 10 million farmers); support for individuals and businesses through soft loans and tax relief; lower water and electricity bills; and coverage of social security contributions.
Viet Nam	A fiscal support package valued up to 3.6% of GDP; measures including deferred tax payments; deferred contributions to the pension fund and survivorship fund; cash transfer package worth VND36 trillion (0.5% of GDP) for affected workers and households with monthly cash transfers provided for no more than three months (about 10% of population).

Source: IMF (2020).

5.2 Government Aid to Households in ASEAN

ASEAN governments supported households with both financial and nonfinancial aids. Table 4 shows the survey results for whether households received any kind of aid from the government.⁵ On average, 35% of households received government financial aid and 15% received nonfinancial aid. Well over half of households in Malaysia, the Philippines, and Thailand received aid. The results for the income quantile groups are shown in Appendix B. The richest income quantile group (Quantile 4) was somewhat less likely to receive financial government aid. This suggests that the distribution of government aid for COVID-19 was somewhat effective in reaching the neediest groups, although the difference was not large.

Table 4 further shows that the percentages of those receiving financial aid among those who applied for government aid are similar to the results from the total sample.⁶ Overall, two-thirds of the households that applied for government financial aid received it. Again, the shares were highest in Malaysia, the Philippines, and Thailand. Furthermore, households in all income quantile groups who applied for aid were about equally likely to receive it (Appendix B). However, those in the highest income quantile were more likely to receive nonfinancial aid. This may imply that the richest group had relatively more information about applying for government aid during the pandemic.

Table 4: Share of Households that Received Government Aid and the Reasons for Not Receiving Government Aid
(% by Country)

	KHM	IDN	LAO	MYS	PHL	THA	VNM	Total
<i>Share of receiving government aid, total (A.1)</i>								
Government aid, financial	3.2%	28.9%	0.3%	68.0%	64.0%	82.2%	11.4%	34.7%
Government aid, others	0.6%	25.3%	2.6%	23.4%	67.1%	1.4%	1.3%	15.1%
Government aid, both	0.2%	9.3	0.0%	20.5%	41.6%	0.9%	0.9%	8.5%
Government aid, either	3.5%	44.9%	2.9%	70.9%	89.5%	82.7%	11.8%	41.3%
<i>Share of receiving government aid who applied</i>								
Government aid, financial	11.8%	42.9%	0.0%	81.0%	70.5%	92.6%	44.0%	68.1%
Government aid, others	0.0%	45.7%	8.3%	34.2%	66.4%	2.9%	12.0%	37.8%
Government aid, both	0.0%	16.4%	0.0%	31.6%	45.2%	2.3%	8.0%	23.7%
Government aid, either	11.8%	72.2%	8.3%	83.6%	91.7%	93.2%	48.0%	82.2%
<i>Share receiving government aid who did not apply, total</i>								
<i>Of those who applied, reasons for not receiving government aid</i>	83.3%	10.7%	0%	55.6%	60.0%	22.2%	0%	34.3%
Applied but not eligible								
Applied but not received because of complicated procedure	0%	75.0%	0%	22.2%	26.6%	77.8%	100%	52.9%
Applied, will receive later	0%	14.3%	0%	22.2%	6.7%	0%	0%	10.0%
Others	16.7%	0%	0%	0%	6.7%	0%	0%	2.8%

Note: No observations for Lao PDR on the reasons for not receiving government aid. "Share of receiving government aid, total" refers to receiving aid from the total sample, regardless of applying for the aid or not. "Government aid, both" refers to receiving both government financial aid and government nonfinancial aid. "Government aid, either" refers to receiving either government financial aid or government nonfinancial aid.

Source: Authors' calculation.

⁵ Appendix B presents the figures for Table 4. It includes the survey results on nongovernment aid (other aids) and results by income quantile. Households in each country received more government aid than aid from other sources.

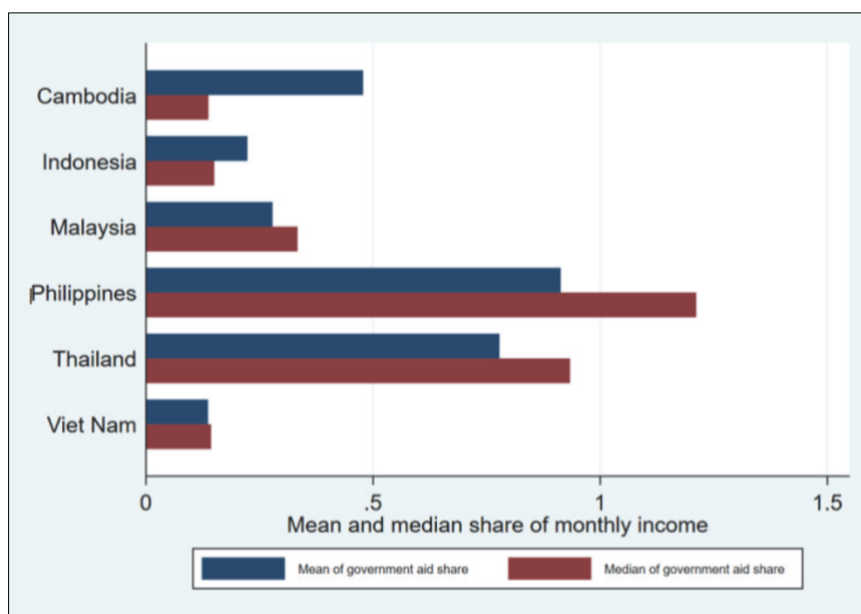
⁶ Total refers to the both-wave respondents here.

Table 4 shows the reasons for not receiving government aid among those who applied for government aid in the first-wave survey. For households in Indonesia, Thailand, and Viet Nam, complicated procedures hampered households from receiving government aid. Eligibility requirements mainly prevented households in Cambodia, Malaysia, and the Philippines from receiving government aid.

5.3 Government Aid to Households in ASEAN Relative to Past Average Income

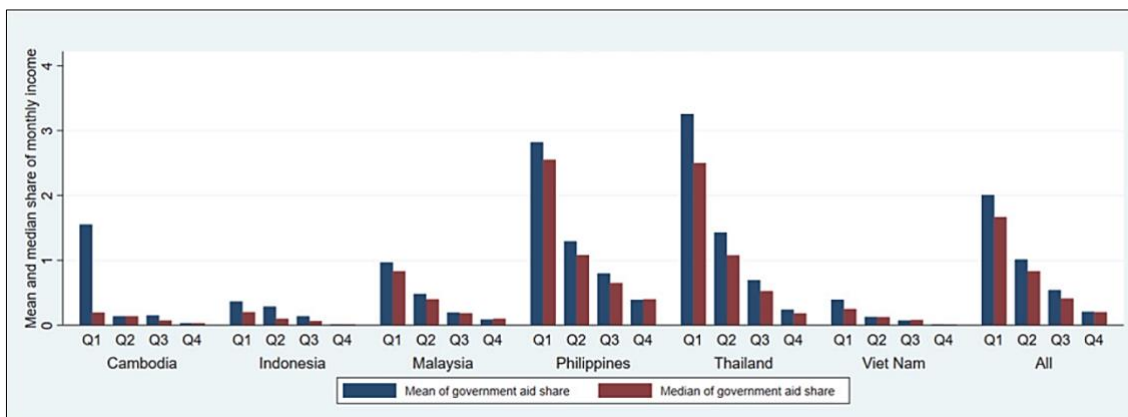
This section compares government aid received with the households’ pre-pandemic average monthly income. Information on the amount of government aid was collected during the second-wave survey. Figures 2 and 3 show the mean and median shares of government aid as a share of pre-pandemic household income. (We do not show data for Lao PDR as they seem not to be reliable.) Relative to pre-pandemic income, on average, households in the Philippines and Thailand received the most aid, and those in Indonesia and Viet Nam received the least aid (Figure 3). Regardless of the country, the poorest income group (Quantile 1) received the most government aid relative to their income (Figure 3). This implies that government aid had a proportionately greater impact on the poorest groups.

Figure 2: Share of Government Aid in Pre-pandemic Monthly Average Income by Country



Source: Authors’ calculation.

Figure 3: Share of Government Aid in Pre-pandemic Monthly Average Income by Quantile and Country



Source: Authors' calculation.

5.4 The Determinants of Applying for Government Aid and Receiving Government Aid

This section describes our analysis of the determinants of applying for and receiving government aid. We conduct probit regressions using the following equations:

$$ApplyAid_i = \alpha_0 + \alpha_1 SEC_i + \alpha_2 HH_i + \alpha_3 COVID_i + \alpha_4 Income_i + \mu_i \tag{1}$$

$$GovAid_i = \beta_0 + \beta_1 SEC_i + \beta_2 HH_i + \beta_3 COVID_i + \beta_4 Income_i + \delta_i, \tag{2}$$

where $ApplyAid_i$ and $GovAid_i$ take the value of one if household i applied for or received government aid (either financial or other), respectively. Specifically, we use the first-wave information on applying for government aid and the second-wave information on receiving government aid. For independent variables, all data are taken from the first-wave survey.

SEC_i is a vector of income quantiles by each household i . HH_i includes household characteristics such as sources of income; education, age, and sex of the household head; living area (rural or urban); and the size of the household. $COVID_i$ indicates impacts of COVID-19: experiencing job loss or locating in a lockdown area. $Income_i$ refers to the changes in income during the pandemic: remain, decrease up to 50%, and decrease more than 50% relative to the base period.⁷ We conduct probit regressions for both all countries together and for each country separately. We control for each country when conducting the regressions using all countries.

Tables 5 and 6 show regression results for Equations (1) and (2) where the coefficients indicate average marginal effects.⁸ Regression results for all countries show that richer income quantile groups were less likely to apply for aid than the poorest income quantile (income quantile 1). This pattern is seen in all countries, although the coefficients in some cases are not significant. The size of the household was positively associated with both applying for and receiving government aid. On the other hand,

⁷ Increase of income is dropped due to multicollinearity.

⁸ Observations for probit regression results (Tables 5 and 6) are slightly different as some observations are dropped due to multicollinearity; missing slots are the results of dropped observations due to multicollinearity.

being in a lockdown area and declines in income showed statistically insignificant results on receiving government aid: negative for being in a lockdown area, and positive for declines in income. Results for individual countries were generally similar, but often not significant.

Table 5: Determinants of Applying for Government Aid

Variables	(1) ALL	(2) KHM	(3) IDN	(4) LAO	(5) MYS	(6) PHL	(7) THA	(8) VNM
Quantile 2	-0.038** (0.018)	-0.012 (0.023)	-0.091** (0.044)	0.001 (0.019)	-0.055 (0.075)	-0.011 (0.061)	-0.030 (0.051)	-0.078** (0.035)
Quantile 3	-0.113*** (0.018)	-0.020 (0.025)	-0.144*** (0.049)	-0.026* (0.016)	-0.064 (0.094)	-0.183*** (0.068)	-0.176*** (0.050)	-0.126*** (0.031)
Quantile 4 (richest)	-0.150*** (0.018)	-0.022 (0.023)	-0.222*** (0.058)	-0.021 (0.014)	-0.342*** (0.079)	-0.152** (0.077)	-0.184*** (0.056)	-0.130*** (0.030)
Income source: Agriculture	0.018 (0.030)	0.067 (0.042)	0.093 (0.076)	0.015 (0.017)	0.049 (0.127)	-0.185 (0.114)	0.060 (0.091)	0.020 (0.048)
Income source: Business	0.005 (0.029)	0.048 (0.039)	0.066 (0.073)	-0.023 (0.016)	0.117 (0.098)	-0.059 (0.110)	0.035 (0.095)	0.009 (0.046)
Income source: Wage	-0.025 (0.029)	0.029 (0.041)	0.060 (0.073)	0.014 (0.019)	0.088 (0.104)	-0.220* (0.113)	-0.104 (0.094)	0.042 (0.053)
Income source: Government	-0.077** (0.034)		0.042 (0.106)		0.016 (0.156)	-0.254** (0.101)	-0.093 (0.101)	0.024 (0.046)
Income source: Others	0.020 (0.033)		-0.078 (0.080)	0.014 (0.017)	0.433*** (0.153)	0.025 (0.118)	-0.135 (0.123)	0.102** (0.045)
Multiple income sources	0.005 (0.032)	-0.050 (0.045)	0.038 (0.083)	-0.022 (0.020)		0.094 (0.126)	0.038 (0.103)	-0.051 (0.048)
High school degree	0.029* (0.016)	-0.007 (0.018)	-0.042 (0.047)	0.039* (0.024)	0.001 (0.072)	0.077 (0.056)	0.024 (0.048)	0.023 (0.028)
More than high school degree	-0.029* (0.015)	-0.020 (0.019)	-0.189*** (0.051)	0.006 (0.016)	-0.042 (0.063)	0.020 (0.059)	-0.046 (0.042)	-0.005 (0.030)
HH head aged 30–39	0.005 (0.023)	0.006 (0.028)	0.039 (0.069)	-0.003 (0.012)	-0.215** (0.103)	0.059 (0.082)	0.031 (0.082)	
HH head aged 40–49	0.040* (0.023)	0.015 (0.032)	0.166** (0.069)	0.032 (0.022)	-0.172* (0.102)	0.032 (0.084)	-0.002 (0.079)	
HH head aged 50–59	-0.003 (0.024)	0.007 (0.030)	0.005 (0.072)	0.035 (0.025)	-0.176* (0.097)	-0.059 (0.085)	-0.054 (0.078)	
HH head aged more than 60	-0.019 (0.026)	0.010 (0.036)	0.024 (0.093)	0.036 (0.046)	-0.162 (0.117)	-0.033 (0.102)	-0.115 (0.080)	
HH head being male	-0.001 (0.013)	-0.000 (0.019)	-0.052 (0.036)	0.001 (0.013)	-0.123 (0.089)	0.051 (0.052)	0.039 (0.037)	-0.026 (0.023)
HH in rural area	-0.019 (0.013)	0.004 (0.018)	-0.122*** (0.037)	0.007 (0.011)	-0.036 (0.057)	-0.022 (0.051)	0.027 (0.036)	0.025 (0.025)
HH size	0.012*** (0.003)	-0.005 (0.004)	0.028** (0.012)	0.001 (0.003)	0.051*** (0.012)	0.013 (0.011)	0.010 (0.010)	-0.005 (0.008)
Experienced job loss	0.037** (0.017)	0.032 (0.022)	-0.034 (0.062)	0.025* (0.015)	0.167** (0.083)	0.075 (0.048)	0.079 (0.057)	0.037 (0.032)
Located in lockdown areas	0.049*** (0.017)	0.109*** (0.038)	0.031 (0.036)	0.020 (0.019)	-0.056 (0.053)		0.146*** (0.041)	
Income unchanged	0.013 (0.035)		-0.160 (0.100)				-0.224 (0.193)	
Income decrease (<=50%)	0.131*** (0.035)		0.021 (0.098)				-0.042 (0.193)	
Income decrease (>50%)	0.159*** (0.037)		0.147 (0.101)				-0.099 (0.194)	
Observations	3,305	446	527	467	221	444	629	414
Country FE	Yes							

*** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' estimation using ADBI database. Note: Standard errors in parentheses.

Table 6: Determinants of Receiving Government Aid

Variables	(1) ALL	(2) KHM	(3) IDN	(4) LAO	(5) MYS	(6) PHL	(7) THA	(8) VNM
Quantile 2	-0.041** (0.016)	-0.075** (0.035)	-0.062 (0.054)		0.087 (0.081)	0.031 (0.040)	-0.085** (0.038)	-0.092* (0.049)
Quantile 3	-0.056*** (0.017)	-0.051 (0.043)	-0.153** (0.060)	-0.028 (0.035)	-0.015 (0.100)	0.001 (0.047)	-0.055 (0.039)	-0.095* (0.051)
Quantile 4 (richest)	-0.084*** (0.019)	-0.067 (0.042)	-0.080 (0.075)	-0.033 (0.027)	-0.076 (0.102)	0.034 (0.045)	-0.115** (0.045)	-0.189*** (0.043)
Income source: Agriculture	0.006 (0.027)	0.011 (0.063)	0.075 (0.107)	-0.006 (0.028)	0.293** (0.146)	-0.007 (0.055)	0.015 (0.075)	-0.067 (0.053)
Income source: Business	-0.011 (0.027)	0.086 (0.062)	-0.017 (0.103)	-0.041 (0.035)	-0.034 (0.102)	-0.064 (0.055)	-0.028 (0.075)	0.055 (0.051)
Income source: Wage	0.021 (0.027)	0.092 (0.063)	0.031 (0.104)	0.062* (0.037)	0.152 (0.115)	-0.016 (0.057)	0.013 (0.075)	0.021 (0.054)
Income source: Government	-0.051 (0.032)		0.010 (0.144)		0.436** (0.192)	-0.049 (0.054)	-0.169** (0.086)	-0.045 (0.061)
Income source: Others	-0.022 (0.032)		-0.128 (0.106)	-0.002 (0.037)	0.175 (0.185)	-0.078 (0.057)	0.001 (0.097)	0.077 (0.063)
Multiple income sources	0.010 (0.031)	-0.093 (0.067)	-0.000 (0.114)	0.014 (0.044)		-0.019 (0.066)	0.132 (0.089)	0.001 (0.058)
High school degree	-0.016 (0.015)	-0.060*** (0.021)	-0.030 (0.057)	-0.058** (0.025)	-0.014 (0.088)	0.026 (0.034)	-0.020 (0.041)	-0.041 (0.033)
More than high school degree	-0.049*** (0.016)		-0.240*** (0.064)	-0.015 (0.034)	-0.085 (0.072)	-0.001 (0.038)	0.010 (0.034)	0.013 (0.048)
HH head aged 30–39	-0.013 (0.021)	-0.027 (0.049)	0.017 (0.086)	0.036 (0.028)	-0.128 (0.079)	-0.040 (0.047)	-0.015 (0.059)	-0.019 (0.046)
HH head aged 40–49	0.008 (0.021)	0.017 (0.052)	0.041 (0.083)	0.055 (0.041)	-0.084 (0.081)	-0.049 (0.045)	-0.047 (0.057)	0.078 (0.055)
HH head aged 50–59	-0.022 (0.023)	0.045 (0.056)	-0.134 (0.090)	0.078* (0.047)	-0.234*** (0.088)	-0.048 (0.048)	-0.072 (0.062)	0.088 (0.058)
HH head aged more than 60	0.011 (0.026)	-0.016 (0.051)	-0.034 (0.108)	0.009 (0.037)	-0.217* (0.115)	0.023 (0.046)	-0.039 (0.064)	0.120* (0.062)
HH head being male	-0.021 (0.013)	0.011 (0.028)	-0.027 (0.045)	0.046* (0.025)	-0.197*** (0.068)	-0.015 (0.031)	-0.053* (0.031)	-0.020 (0.029)
HH in rural area	0.001 (0.013)	-0.029 (0.033)	-0.084* (0.044)		-0.104* (0.062)	-0.013 (0.032)	0.084** (0.033)	0.029 (0.031)
HH size	0.007** (0.003)	0.005 (0.006)	0.012 (0.014)	0.007 (0.005)	0.032** (0.015)	-0.006 (0.006)	0.012 (0.009)	-0.006 (0.010)
Experienced job loss	-0.007 (0.018)	0.019 (0.040)	-0.079 (0.085)	0.013 (0.033)	0.049 (0.108)	-0.008 (0.030)	-0.034 (0.049)	0.021 (0.047)
Located in lockdown areas	-0.001 (0.016)	0.151** (0.063)	0.036 (0.044)	-0.011 (0.032)	0.008 (0.058)		-0.055 (0.036)	0.023 (0.062)
Income unchanged	-0.025 (0.043)		-0.048 (0.139)	-0.070 (0.092)	0.170 (0.132)		-0.065 (0.147)	
Income decrease (<=50%)	0.014 (0.042)		-0.074 (0.131)	-0.087 (0.091)	0.157 (0.137)		0.027 (0.143)	
Income decrease (>50%)	0.016 (0.043)		-0.061 (0.133)	-0.068 (0.097)	0.346** (0.140)		0.055 (0.145)	
Observations	3,305	280	527	258	233	444	629	479
Country FE	Yes							

*** p<0.01, ** p<0.05, * p<0.1.

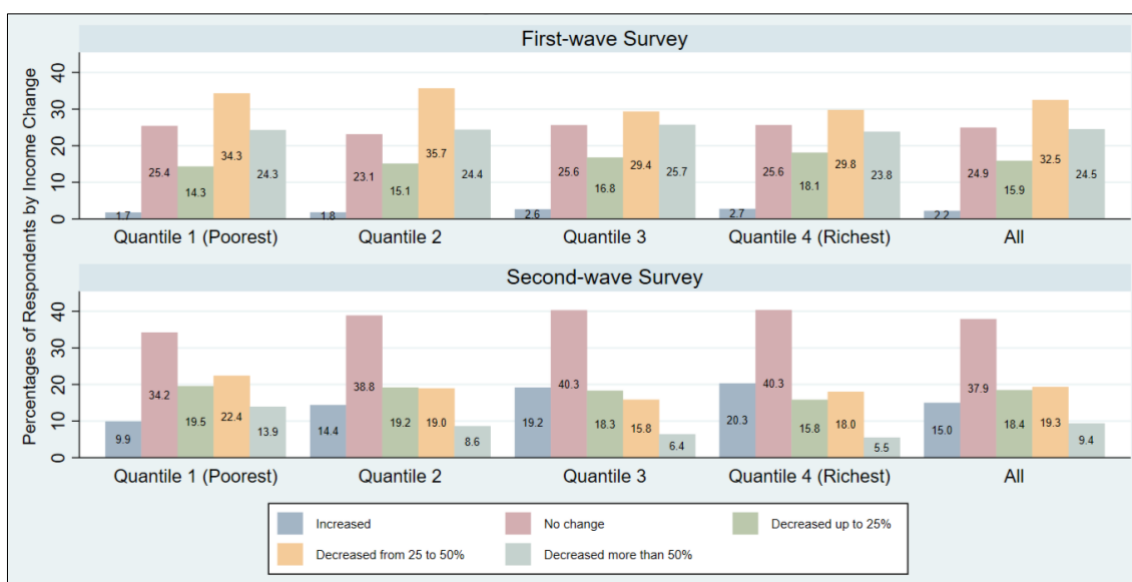
Source: Authors' estimation using ADBI database. Note: Standard errors in parentheses.

6. COVID-19 IMPACTS AND COPING STRATEGIES

6.1 Impacts of COVID-19 on Household Income

Figure 4 presents the impact of COVID-19 on household income. More than 70% of households experienced income declines during the first-wave survey, whereas 45% of households experienced income declines during the second-wave survey relative to the first-wave level. The probability of income decline decreased significantly during the middle of 2020 compared to the beginning of 2021, but this was from a lower base, so income overall deteriorated further. The patterns of income decline in the total sample are similar across income quantile groups, but poorer income groups generally fared worse, implying a worsening income distribution. The richest income group (quantile 4) showed a relatively low percentage for “decreased more than 50%” for both waves.

Figure 4: Effects of COVID-19 on Household Income, % of Households



Source: Authors' calculation based on ADBI's database.

6.2 Determinants of Household Income during the Pandemic

We examine the effects of the COVID-19 pandemic on household income by estimating the following equation:

$$iDecline_{it} = \alpha_0 + \alpha_1 SEC_{it} + \alpha_2 HH_{it} + \alpha_3 COVID_{it} + \alpha_4 SecondWave_i + \mu_i + \delta_{it}, \quad (3)$$

in which $iDecline_{it}$ in Equation (3) is a dummy variable that takes a value of one if household i experienced a decline in income during period t , and where t indicates the first or second wave of the survey.⁹ SEC_{it} is a set of dummy variables indicating the income class that household i belongs to.¹⁰ HH_{it} is a set of household characteristics

⁹ The results here are for the panel data. The regression results for the total sample are given in the Appendix.

¹⁰ Due to differences across countries in categorizing income classes (some countries have four classes, some have six classes, and some use wealth rather than income to construct income classes), we reconstruct four income quantile classes: up to 25%, 50%, 75%, and 100%.

as earlier. $COVID_{it}$ is a set of variables reflecting COVID-19-induced effects such as whether household i had anyone who lost their job, and whether the house was located in a lockdown area or not. $SecondWave_i$ refers to the period of the second wave (June–December 2020). μ_i and δ_{it} indicate time-invariant and time-variant error terms. We estimate the above equations for pooled data of seven countries (with country and time dummies) and separately for each of the seven countries (with time dummy).

Table 7 presents the estimation results for Equation (3). The first column reports the results using pooled data and the subsequent columns show results for the individual countries. As expected, the second-wave dummy negatively affects the income decline, indicating that, from June 2020 to December 2020, the magnitude of income decline diminished.

For the pooled data, higher income quantiles showed significantly less tendency for income to decline than the reference group (quantile 1). The results for Thailand and Viet Nam also showed this pattern clearly, while the results for Malaysia and the Philippines were similar, but less significant. The results for Cambodia, Indonesia, and Lao PDR were mixed and generally not significant. These results imply that the income inequality may have widened as a result of the COVID-19 pandemic, although the results are not consistent across countries.

The pandemic may affect the likelihood of decline of different sources of income differently. All countries showed the pattern that households with income from household businesses were more likely to experience a decline in income. Government income was associated with smaller income declines in all countries, which is not surprising. Results for other income sources were not consistent or generally significant.

Higher levels of education of the household head were generally negatively associated with the likelihood of experiencing an income decline. In particular, having more than a high school education reduced income declines in all countries, although not all results were significant.

The household head's age was not associated with income decline in the pooled sample, and the results across countries were not consistent, although they were significant in some cases. For the pooled sample, having a male household head was significantly associated with a smaller income decline, but the country-specific results were not significant except for Thailand and Viet Nam. The effects of other household characteristics such as household size and household location were generally not found to be significant.

Having someone in the household who lost their job (or had to reduce their working hours) was positively associated with income declines in the pooled sample and for all countries except Cambodia. The effect of a household being located in a lockdown area was significant and positive only in Indonesia and Thailand.

Table 7: Determinants of Having Income Decline Due to the COVID-19 Pandemic

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables	All Countries	KHM	IDN	LAO	MYS	PHL	THA	VNM
Period Jun–Dec 2020	−0.102*** (0.029)	−0.291*** (0.028)	−0.144*** (0.038)	−0.130*** (0.041)	−0.275*** (0.033)	−0.353*** (0.024)	−0.183*** (0.047)	−0.245*** (0.011)
Quantile 2	−0.041*** (0.015)	−0.047 (0.038)	0.003 (0.033)	0.062 (0.039)	−0.123** (0.061)	−0.036 (0.037)	−0.120*** (0.034)	−0.055 (0.039)
Quantile 3	−0.082*** (0.016)	−0.064 (0.042)	−0.040 (0.038)	−0.066 (0.045)	−0.091 (0.069)	−0.019 (0.045)	−0.214*** (0.034)	−0.110** (0.044)
Quantile 4 (richest)	−0.075*** (0.017)	0.025 (0.038)	−0.104* (0.055)	0.034 (0.039)	−0.140* (0.071)	−0.071 (0.046)	−0.301*** (0.038)	−0.104** (0.045)
Income source: Agriculture	0.019 (0.020)	−0.029 (0.079)	0.072 (0.047)	0.016 (0.046)	−0.036 (0.130)	0.085** (0.039)	0.018 (0.048)	0.082 (0.057)
Income source: Business	0.176*** (0.018)	0.133* (0.078)	0.103** (0.040)	0.165*** (0.043)	0.310*** (0.108)	0.118*** (0.040)	0.212*** (0.045)	0.245*** (0.055)
Income source: Wage	−0.014 (0.019)	−0.005 (0.078)	−0.105** (0.041)	−0.057 (0.046)	0.059 (0.106)	0.031 (0.048)	0.011 (0.048)	0.096* (0.056)
Income source: Government	−0.104*** (0.022)	−0.232*** (0.090)	−0.111** (0.052)	−0.046 (0.080)	−0.129 (0.128)	−0.078* (0.040)	−0.050 (0.046)	−0.059 (0.063)
Income source: Others	0.023 (0.020)	0.150* (0.091)	0.065 (0.043)	0.046 (0.044)	−0.125 (0.108)	0.003 (0.040)	0.036 (0.057)	−0.010 (0.059)
Multiple income sources	0.006 (0.022)	0.115 (0.089)	−0.024 (0.051)	−0.003 (0.053)	0.135 (0.125)	−0.051 (0.049)	−0.028 (0.053)	−0.066 (0.062)
High school degree	−0.007 (0.015)	0.017 (0.033)	0.014 (0.037)	−0.061 (0.038)	−0.007 (0.063)	−0.000 (0.038)	−0.017 (0.039)	0.020 (0.037)
More than high school degree	−0.068*** (0.015)	−0.086* (0.048)	−0.074* (0.041)	−0.109*** (0.041)	−0.125** (0.054)	−0.026 (0.038)	−0.012 (0.034)	−0.009 (0.046)
HH head aged 30–39	0.010 (0.021)	−0.076 (0.046)	−0.036 (0.052)	0.093** (0.045)	−0.095 (0.074)	0.046 (0.054)	0.063 (0.064)	0.009 (0.056)
HH head aged 40–49	−0.006 (0.021)	−0.098** (0.048)	−0.004 (0.050)	0.088* (0.048)	−0.125* (0.074)	0.022 (0.056)	0.015 (0.061)	−0.006 (0.059)
HH head aged 50–59	−0.016 (0.022)	−0.086* (0.051)	−0.050 (0.055)	0.067 (0.048)	−0.168** (0.075)	0.093* (0.055)	0.012 (0.062)	−0.036 (0.064)
HH head aged more than 60	−0.025 (0.025)	−0.132** (0.063)	−0.065 (0.072)	−0.036 (0.063)	−0.080 (0.088)	0.006 (0.067)	0.023 (0.065)	−0.023 (0.064)
HH head being male	−0.039*** (0.013)	−0.027 (0.033)	−0.019 (0.029)	−0.018 (0.033)	0.007 (0.069)	−0.045 (0.034)	−0.055* (0.030)	−0.075** (0.034)
HH in rural area	0.005 (0.012)	0.048 (0.032)	−0.014 (0.029)	0.032 (0.036)	0.019 (0.047)	0.018 (0.032)	−0.016 (0.029)	−0.013 (0.034)
HH size	0.002 (0.008)	−0.006 (0.008)	0.003 (0.007)	0.012 (0.011)	0.012 (0.007)	0.014 (0.008)	0.025** (0.010)	0.007** (0.003)
Experienced job loss	0.230*** (0.054)	0.065 (0.054)	0.225*** (0.042)	0.240*** (0.064)	0.108*** (0.040)	0.164*** (0.051)	0.140** (0.055)	0.168*** (0.019)
Located in lockdown areas	0.039 (0.093)	−0.023 (0.028)	0.094*** (0.035)	−0.055 (0.040)		−0.002 (0.029)	0.106** (0.044)	0.006 (0.014)
Observations	6,653	940	1,058	1,014	468	899	1,258	1,015
Country FE	Yes							

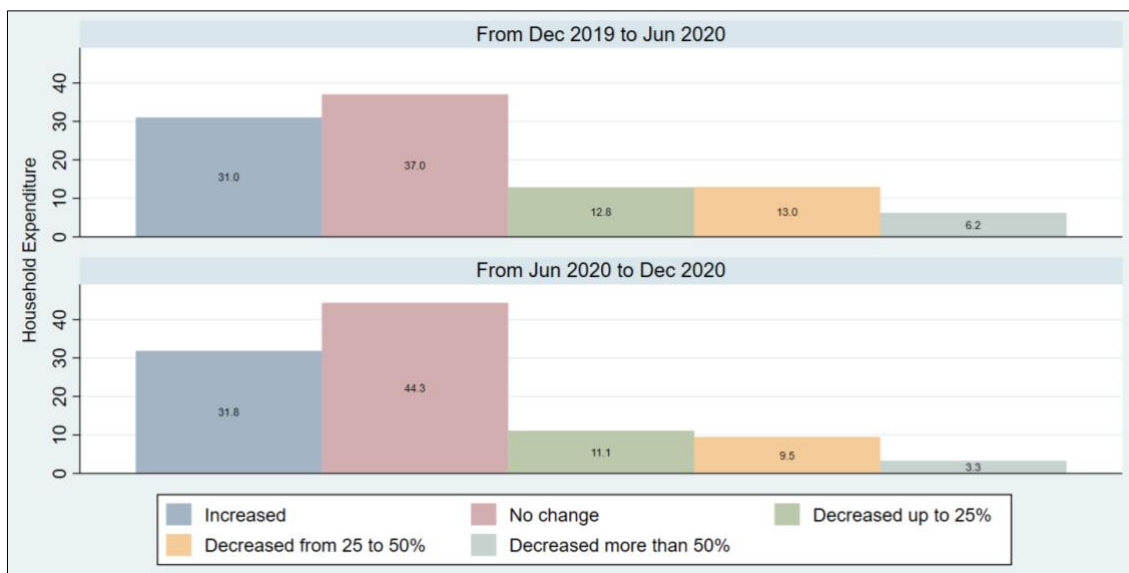
Notes: Standard errors are in brackets. *, **, and *** denote statistically significant at 10%, 5%, and 1% confidence levels, respectively. We control for each country in the pooled sample (column 1). "Located in lockdown areas" for the Philippines was dropped due to multicollinearity as the variable only had two observations of "No," one for each of the first-wave survey and second-wave survey.

Source: Authors' estimation using ADBI database.

6.3 Factors Affecting Household Expenditure Due to COVID-19

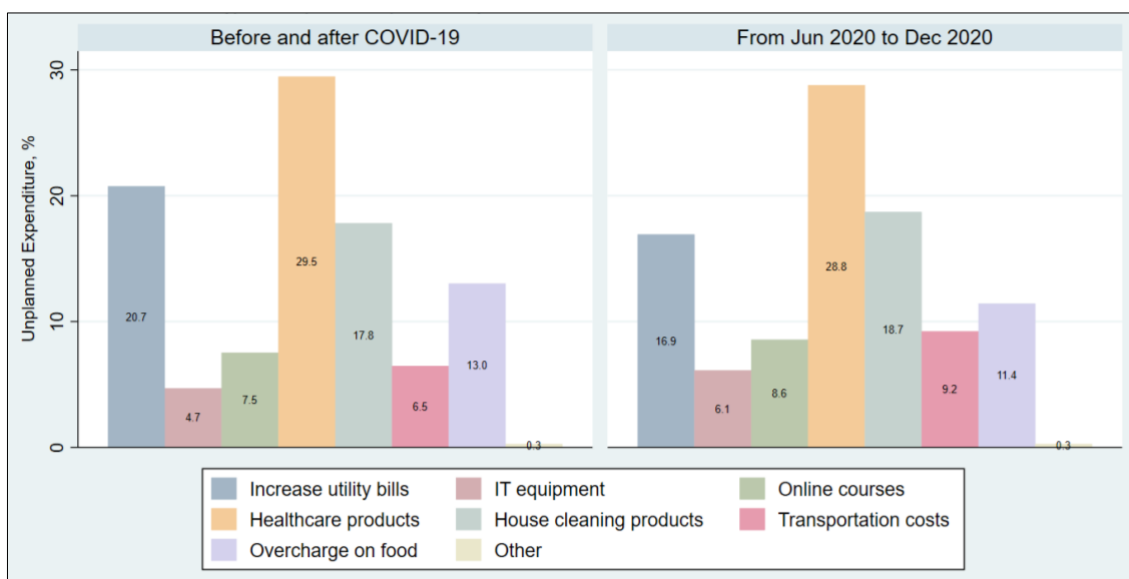
As shown in Figure 5, only 32% of households in our sample reported that their expenditures declined, which was much lower than the approximately 73% of households that experienced a decline in incomes from December 2019 to June 2020 and 47% from July to December 2020. Nearly 30% of households actually increased their expenditure.

Figure 5: Changes in Household Expenditure, % of Households



Source: Authors' calculation based on ADBI's database.

Figure 6: Types of Unexpected Expenditure, % of Households with Unexpected Expenditure



Source: Authors' calculation based on ADBI's database.

There are several reasons for the expenditure increases. Figure 6 reports unexpected expenditures by households during the COVID-19 period. Nearly 47% of households had to spend more for healthcare products and household cleaning products for both periods. Unexpectedly higher utility bills were also a source of increasing expenditure (17–20%), while nearly 13% of households had to pay more for food.

We examine the effects of the COVID-19 pandemic on household expenditure by estimating the following equation:

$$ExpDec_{it} = \vartheta_0 + \vartheta_1 SEC_{it} + \vartheta_2 HH_{it} + \vartheta_3 COVID_{it} + \vartheta_4 SecondWave_i + \xi_i + \tau_{it}, \quad (4)$$

in which $ExpDec_{it}$ in Equation (4) is a dummy variable that takes a value of one if household i experienced a decrease in expenditure. All other variables are identical to Equation (3). The results are shown in Table 8.

Identically to Table 7, Table 8 also presents the results for the pooled data in the first column and the results for individual countries in the subsequent columns. The second-wave dummy negatively affects the expenditure decline. In the period from June 2020 to December 2020, expenditure decline was alleviated along with the alleviated income decline, which was shown in Table 5.

The income class of household only shows statistically significant results for the Philippines, Thailand, and Viet Nam (especially the latter), although the results were very significant for the total sample and the signs for the other countries were generally consistent.

Different sources of income, household head education, and household head age show mixed results on expenditure decline. In particular, Viet Nam shows statistically significant results for most of the variables whereas other countries generally show statistically insignificant results. Households with income sources from agriculture and business experienced expenditure declines in the Philippines and Viet Nam. Households with business income showed a greater tendency for expenditure declines. Household heads with more than a high school degree suffered more decline in expenditures in Viet Nam. Household heads with a higher education were generally less likely to experience expenditure declines except in the case of Viet Nam. Older household heads generally were more likely to see declines in consumption.

Overall, households experiencing a job loss faced larger expenditure declines than those who did not, but the results were only significant in Cambodia, Malaysia, and Viet Nam. Households located in a lockdown area also faced larger expenditure decline except in the case of Lao PDR.

Table 1: Determinants of Having Expenditure Decline Due to the COVID-19 Pandemic

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables	All Countries	KHM	IDN	LAO	MYS	PHL	THA	VNM
Period Jun-Dec 2020	-0.067*** (0.011)	-0.048 (0.032)	-0.060** (0.027)	-0.075*** (0.027)	-0.044 (0.035)	-0.112*** (0.035)	-0.077*** (0.020)	-0.154*** (0.045)
Quantile 2	-0.046*** (0.014)	-0.061 (0.043)	0.051 (0.035)	-0.026 (0.029)	-0.017 (0.059)	-0.075* (0.042)	-0.053* (0.029)	-0.133*** (0.042)
Quantile 3	-0.052*** (0.016)	-0.034 (0.047)	-0.010 (0.039)	-0.017 (0.036)	0.030 (0.069)	-0.081 (0.050)	-0.043 (0.029)	-0.154*** (0.046)
Quantile 4 (richest)	-0.060*** (0.017)	-0.063 (0.048)	-0.071 (0.044)	-0.009 (0.029)	-0.041 (0.064)	-0.135** (0.053)	-0.018 (0.035)	-0.143*** (0.047)
Income source: Agriculture	0.042** (0.019)	-0.082 (0.085)	0.094* (0.050)	0.041 (0.033)	-0.129 (0.116)	0.149*** (0.044)	-0.093* (0.048)	0.105* (0.056)
Income source: Business	0.067*** (0.018)	-0.055 (0.079)	0.048 (0.044)	0.052 (0.032)	0.025 (0.103)	0.115** (0.046)	-0.065 (0.048)	0.202*** (0.053)
Income source: Wage	0.021 (0.019)	-0.082 (0.081)	-0.003 (0.046)	0.054* (0.033)	-0.113 (0.107)	0.064 (0.052)	-0.107** (0.048)	0.156*** (0.055)
Income source: Government	-0.013 (0.021)	-0.430** (0.177)	-0.078 (0.057)	0.057 (0.055)	-0.059 (0.107)	0.036 (0.045)	-0.065 (0.049)	-0.043 (0.060)
Income source: Others	0.004 (0.019)	-0.074 (0.090)	0.044 (0.046)	-0.010 (0.029)	0.030 (0.095)	0.008 (0.048)	-0.086* (0.051)	0.020 (0.061)
Multiple income sources	-0.054** (0.021)	0.024 (0.091)	-0.045 (0.054)	-0.043 (0.038)	0.006 (0.114)	-0.204*** (0.052)	0.113** (0.054)	-0.130** (0.062)
High school degree	-0.008 (0.014)	-0.021 (0.040)	-0.040 (0.040)	-0.021 (0.030)	0.014 (0.078)	0.004 (0.043)	-0.003 (0.027)	0.070* (0.038)
More than high school degree	-0.026* (0.015)	-0.066 (0.054)	-0.014 (0.044)	-0.055* (0.029)	-0.056 (0.054)	-0.076* (0.043)	-0.013 (0.026)	0.106** (0.048)
HH head aged 30–39	0.046** (0.020)	0.064 (0.058)	0.106* (0.055)	-0.023 (0.034)	-0.052 (0.078)	0.181*** (0.058)	-0.012 (0.043)	0.093* (0.055)
HH head aged 40–49	0.072*** (0.020)	0.083 (0.057)	0.130** (0.054)	0.029 (0.038)	-0.077 (0.076)	0.216*** (0.062)	0.001 (0.043)	0.155*** (0.058)
HH head aged 50–59	0.081*** (0.022)	0.051 (0.063)	0.194*** (0.060)	0.037 (0.039)	-0.014 (0.085)	0.218*** (0.062)	0.014 (0.045)	0.154** (0.061)
HH head aged more than 60	0.085*** (0.024)	0.083 (0.072)	0.119* (0.071)	0.001 (0.049)	-0.001 (0.094)	0.151** (0.069)	0.034 (0.048)	0.151** (0.062)
HH head being male	-0.019 (0.013)	-0.028 (0.039)	0.009 (0.030)	-0.034 (0.025)	-0.026 (0.064)	-0.093** (0.041)	0.013 (0.021)	-0.028 (0.034)
HH in rural area	0.008 (0.012)	0.040 (0.039)	-0.013 (0.029)	0.036 (0.027)	0.048 (0.050)	0.050 (0.035)	-0.040* (0.023)	-0.033 (0.035)
HH size	0.002 (0.003)	-0.002 (0.008)	-0.007 (0.009)	-0.001 (0.006)	0.016 (0.012)	0.009 (0.009)	-0.000 (0.006)	0.005 (0.010)
Experienced job loss	0.066*** (0.017)	0.122** (0.051)	0.031 (0.052)	-0.007 (0.034)	0.186*** (0.064)	0.063 (0.040)	0.025 (0.038)	0.162*** (0.052)
Located in lockdown areas	0.027** (0.013)	0.160 (0.105)	0.085*** (0.028)	-0.075*** (0.027)	0.003 (0.037)		0.048** (0.022)	-0.011 (0.046)
Observations	6,601	940	1,051	1,014	468	896	1,258	973
Country FE	Yes							

Note: Standard errors are in brackets. *, **, and *** denote statistically significant at 10%, 5%, and 1% confidence levels, respectively. We control for each country in the pooled sample (column 1). "Located in lockdown areas" for the Philippines was dropped due to multicollinearity as the variable only had two observations of "No," one for each of the first-wave survey and second-wave survey. Observations vary for some countries as some respondents did not answer particular questions.

Source: Authors' estimation using ADBI database.

6.4 Impacts of Pandemic on Household Financial Vulnerability

The pandemic has had profound impacts on household finance. Approximately 60% and 78% of households in our sample reported that they had experienced financial difficulties from the end of May to July 2020, and the end of January to February 2021, respectively (financial difficulty is defined as a lack of financial resources for at least a week) (Figure 7). However, there are quite significant differences across countries.

For the first-wave survey, while more than half of households in Cambodia, Lao PDR, Malaysia, and Viet Nam did not experience financial difficulties, over three quarters of respondents in Indonesia, the Philippines, and Thailand reported that they had experienced financial difficulty. The lower figures in Cambodia, Lao PDR, and Viet Nam could be due to the fact that these economies have suffered less from the pandemic than the other countries did and had relatively mild lockdowns, while Malaysia is a richer country and therefore households are more financially secure. Although Thailand has not suffered from the pandemic as much as Indonesia and the Philippines, the pandemic may have severely affected tourism, which is a very important sector in that country.

The long-lasting pandemic worsened the financial situations of households in all countries. In particular, during the second-wave survey, households in Cambodia and Malaysia suffered significantly more than during the first wave. About half of households overall reported moderate or major difficulty during the second wave, with the highest shares seen in Cambodia, Indonesia, the Philippines, and Thailand.

Figure 7: Households Experiencing Financial Difficulty during the Pandemic, % of Total Households

Those who faced financial difficulty (both first- and second-wave survey)

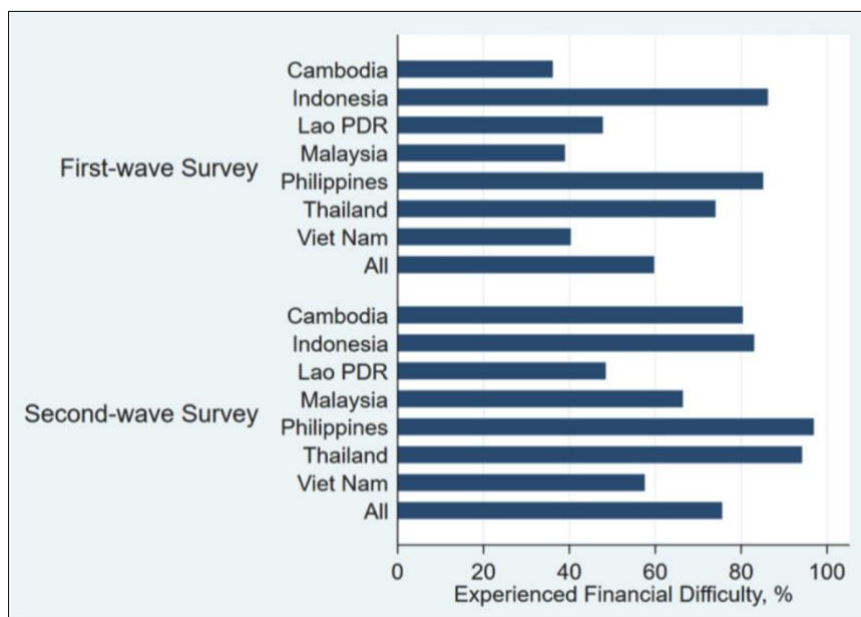
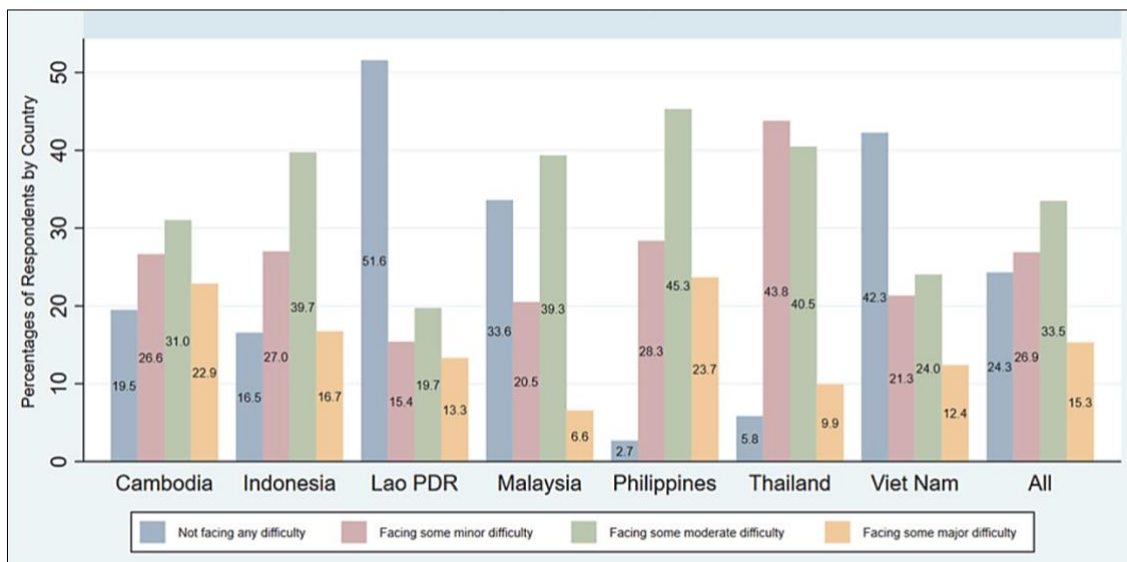


Figure 8: Degree to Which Households Experienced Financial Difficulty during the Second Wave, % of Total Households



Note: Due to data unavailability, we only present decomposed responses for the second-wave survey.

Source: Authors' calculation based on ADBI's database.

We analyze which households are more likely to be financially vulnerable to the pandemic than others. We estimate the following equation:

$$FinDiff_{it} = \beta_0 + \beta_1 SEC_{it} + \beta_2 HH_{it} + \beta_3 COVID_{it} + \beta_4 SecondWave_{it} + \eta_i + \sigma_{it}, \quad (5)$$

in which $FinDiff_{it}$ is a dummy variable that takes the value of one if household i experienced financial difficulties (which is defined as a lack of financial resources for daily expenditure if all the income sources have dried up in a week); SEC_{it} , HH_{it} , $COVID_{it}$, and $SecondWave_{it}$ are identical to those in Equation (5). η_i and σ_{it} indicate the time-invariant and time-variant error terms, respectively. As before, we estimate the above equations for pooled data of seven countries (controlling for each country) and separately for seven countries.

Table 9 presents the estimation results. The first column reports the results using pooled data and the subsequent columns are the results for the individual countries as in the previous results tables. Unlike in the case of income declines, more households experienced financial difficulty in the second-wave period (from June 2020 to December 2020) than in the pre-pandemic period (from December 2019 to June 2020) for households in Malaysia, the Philippines, Thailand, and Viet Nam. This may imply that although income declines occurred immediately after the pandemic, households were able to manage financial difficulties in the short term by drawing down savings. However, as COVID-19 persisted, financial situations worsened as savings were depleted.

Households in the richest income class were less likely to get into financial difficulty than those in the lowest income class by about 15.8 percentage points for the total sample. Higher-income groups in almost all cases were less likely to get into financial difficulty, although not all the results were significant.

Table 9: Determinants of Getting into Financial Difficulty

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables	All Countries	KHM	IDN	LAO	MYS	PHL	THA	VNM
Period Jun–Dec 2020	0.184*** (0.010)	0.457 (38.440)	−0.046** (0.022)	0.058 (0.037)	0.246*** (0.039)	0.136*** (0.020)	0.203*** (0.019)	0.182*** (0.043)
Quantile 2	−0.056*** (0.013)	−0.081 (4.688)	−0.061** (0.025)	−0.023 (0.042)	−0.188*** (0.062)	0.019 (0.019)	−0.006 (0.024)	−0.168*** (0.041)
Quantile 3	−0.092*** (0.014)	−0.108 (6.349)	−0.128*** (0.029)	−0.050 (0.050)	−0.185** (0.076)	−0.027 (0.024)	−0.054** (0.026)	−0.211*** (0.042)
Quantile 4 (richest)	−0.158*** (0.016)	−0.171 (10.371)	−0.196*** (0.048)	−0.014 (0.040)	−0.356*** (0.071)	−0.113*** (0.036)	−0.148*** (0.033)	−0.341*** (0.044)
Income source: Agriculture	0.028 (0.019)	−0.033 (1.923)	0.024 (0.043)	0.123*** (0.047)	−0.086 (0.126)	0.001 (0.026)	0.031 (0.042)	0.079 (0.055)
Income source: Business	0.070*** (0.019)	−0.022 (1.321)	0.046 (0.034)	0.021 (0.047)	0.135 (0.107)	0.022 (0.029)	0.098** (0.043)	0.130** (0.054)
Income source: Wage	0.029 (0.019)	−0.052 (3.105)	−0.001 (0.036)	0.115** (0.047)	−0.015 (0.111)	−0.025 (0.030)	0.036 (0.044)	0.081 (0.055)
Income source: Government	−0.011 (0.023)	−0.178 (11.008)	−0.046 (0.043)	0.136* (0.082)	−0.040 (0.119)	−0.003 (0.029)	−0.003 (0.042)	−0.069 (0.059)
Income source: Others	0.021 (0.020)	0.021 (1.291)	−0.045 (0.036)	0.107** (0.044)	0.037 (0.097)	0.013 (0.027)	0.038 (0.050)	0.019 (0.063)
Multiple income sources	−0.046** (0.022)	0.003 (0.271)	0.045 (0.045)	−0.141** (0.056)	−0.002 (0.122)	−0.025 (0.032)	−0.025 (0.049)	−0.108* (0.061)
High school degree	−0.012 (0.013)	0.008 (0.812)	−0.013 (0.032)	−0.011 (0.042)	−0.066 (0.070)	−0.000 (0.019)	−0.032 (0.030)	0.025 (0.039)
More than high school degree	−0.065*** (0.014)	−0.015 (0.856)	−0.044 (0.033)	−0.023 (0.044)	−0.148*** (0.056)	−0.067*** (0.025)	−0.053** (0.025)	−0.028 (0.047)
HH head aged 30–39	−0.007 (0.019)	−0.061 (6.871)	−0.035 (0.042)	0.048 (0.047)	−0.103 (0.072)	0.009 (0.030)	−0.032 (0.038)	0.031 (0.068)
HH head aged 40–49	−0.005 (0.019)	−0.100 (5.736)	0.001 (0.041)	0.068 (0.051)	−0.081 (0.078)	−0.008 (0.032)	−0.024 (0.036)	0.040 (0.070)
HH head aged 50–59	−0.026 (0.020)	−0.142 (8.353)	−0.027 (0.047)	0.116** (0.056)	−0.100 (0.077)	0.012 (0.031)	−0.046 (0.037)	−0.077 (0.072)
HH head aged more than 60	−0.096*** (0.023)	−0.173 (10.343)	−0.098 (0.062)	−0.098 (0.066)	−0.121 (0.097)	−0.081 (0.049)	−0.085** (0.041)	−0.080 (0.072)
HH head being male	−0.027** (0.012)	−0.038 (2.245)	0.016 (0.024)	−0.049 (0.035)	−0.003 (0.072)	−0.007 (0.021)	−0.021 (0.021)	−0.107*** (0.035)
HH in rural area	0.003 (0.012)	0.070 (4.263)	0.000 (0.023)	−0.068* (0.039)	0.032 (0.049)	−0.023 (0.020)	0.041* (0.022)	−0.064* (0.037)
HH size	0.016*** (0.003)	0.015 (0.840)	0.015** (0.006)	0.011 (0.008)	0.024** (0.011)	0.008* (0.005)	0.028*** (0.007)	0.018* (0.010)
Experienced job loss	0.138*** (0.018)	0.242 (14.754)	0.060 (0.051)	0.186*** (0.044)	0.262*** (0.072)	0.030 (0.022)	0.090** (0.039)	0.071 (0.055)
Located in lockdown areas	0.066*** (0.013)	−0.005 (0.329)	0.027 (0.023)	0.069* (0.038)	−0.006 (0.040)		0.058** (0.025)	−0.011 (0.046)
Observations	6,646	939	1055	1014	468	897	1258	1014
Country FE	Yes							

Notes: Standard errors are in brackets. *, **, and *** denote statistically significant at 10%, 5%, and 1% confidence levels, respectively. We control for each country in the pooled sample (column 1). "Located in lockdown areas" for the Philippines was dropped due to multicollinearity as the variable only had two observations of "No," one for each of the first-wave survey and second-wave survey.

Source: Authors' estimation using ADBI database.

Different sources of income show different relationships with financial difficulty for each country. For example, households in Lao PDR with income sources from agriculture, wages, government support, or elsewhere suffered greater financial difficulty during the pandemic. For the pooled sample, households with business income experienced greater financial difficulty but the results were significant only for Thailand and Viet Nam.

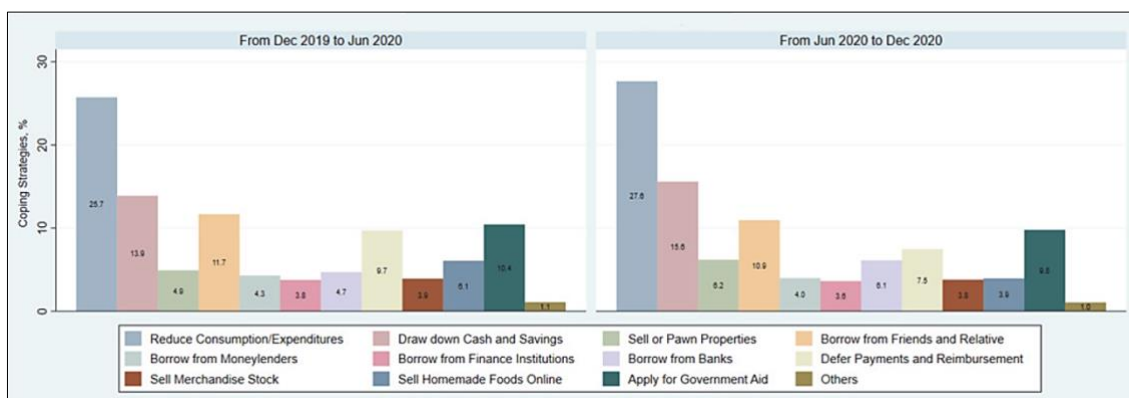
Households whose head had a higher education than a high school degree incurred less financial difficulty in all countries, and the results were significant for the pooled sample and for Malaysia, the Philippines, and Thailand. Household size, on the other hand, positively affected financial difficulty for households, and was significant for all countries except for Cambodia and Lao PDR.

Having someone in the household who has lost their job is positively associated with being in financial difficulty for the pooled sample and all countries, although significantly so only in Lao PDR, Malaysia, and Thailand. Being located in a lockdown area also increases the likelihood of having financial difficulty in the pooled sample, but the results were mixed for individual countries.

6.5 Strategies for Coping with Financial Difficulty

In order to cope with financial difficulty, households in our sample adopted various coping strategies (Figure 9). Among those households, the three coping strategies that were most widely adopted in both waves were reducing consumption and expenditure, drawing down cash and savings, and borrowing from friends and relatives. Households also deferred payments and debt repayment, and applied for social and government aid. Some households coped by making homemade foods and selling them online.

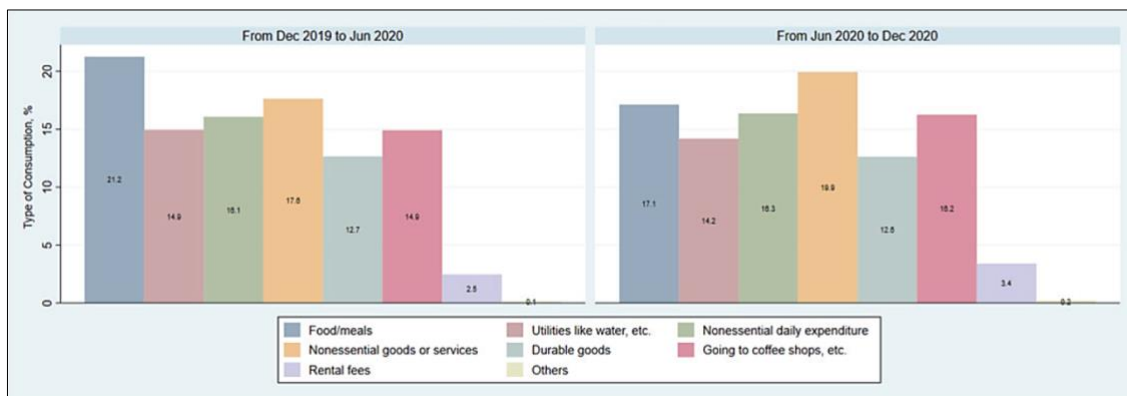
Figure 9: Strategies for Coping with Financial Difficulty,
% of Households Experiencing Financial Difficulty



Source: Authors' calculation based on ADBI's database.

Over 20% of respondents who suffered from financial difficulty reduced their food consumption in the first-wave period while 17% reduced their food consumption in the second period. This may have some implications for food security. Other items that people reduced include utilities and nonessential daily expenditures (Figure 10).

**Figure 10: Types of Consumption Reduced,
% of Households Reducing Consumption**



Source: Authors' calculation based on ADBI's database.

7. EFFECT OF GOVERNMENT AND OTHER AID ON HOUSEHOLDS IN COVID-19 PANDEMIC

7.1 Government Aid and Household Income

In this section, we examine the impact of government aid and aid from other institutions on households experiencing the COVID-19 pandemic using the second-wave survey sample, along with other effects of the COVID-19 pandemic used in previous sections. First, we examine the effects of the COVID-19 pandemic on household income by estimating the following equation:

$$iDecline_i = \alpha_0 + \alpha_1 SEC_i + \alpha_2 HH_i + \alpha_3 COVID_i + \alpha_4 GovAID_i + \alpha_5 OtherAID_i + \mu_i \quad (6)$$

$iDecline_i$ is a dummy variable that takes the value of one if household i experienced a decline in income from the end of January to February 2021. Identically to the equations from the previous sections, SEC_i is a set of dummy variables indicating the income class that household i belongs to; HH_i is a set of household characteristics including sources of income, household head's education, age, gender, the location, and the size; $COVID_i$ is a set of variables reflecting COVID-19-induced effects such as whether household i had anyone who lost their job, and whether the house was located in a lockdown area or not. $GovAID_i$ and $OtherAID_i$ are dummy variables that take the value of one if the household received aid from the government or from other organizations, respectively. To be consistent with the two-period analysis conducted in the previous sections, regressions in this section use the panel data set.

No significant relationship between either government or other aid and income decline is shown in Table 10, except for government aid for the total sample. Overall, government aid was associated with a probability of experiencing income decline. This suggests that government aid was not sufficient to relieve the burden of households that suffered income decline. It is likely that the causality was reversed, i.e., that households with income declines tended to apply for government aid more than others.

Table 10: Effect of Government and Other aid on Having Income Decline during the COVID-19 Pandemic (Second Wave)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables	All Countries	KHM	IDN	LAO	MYS	PHL	THA	VNM
Government aid received	0.048** (0.024)	0.040 (0.110)	0.046 (0.044)	0.083 (0.127)	-0.040 (0.066)	0.101 (0.074)	0.032 (0.049)	0.080 (0.064)
Other aid received	-0.033 (0.043)		-0.002 (0.123)		-0.046 (0.067)	-0.066 (0.083)	0.111 (0.229)	-0.096 (0.110)
SEC 2	-0.081*** (0.022)	-0.093 (0.058)	-0.040 (0.051)	0.078 (0.059)	-0.168** (0.076)	-0.134** (0.058)	-0.157*** (0.054)	-0.071 (0.060)
SEC 3	-0.137*** (0.024)	-0.121** (0.058)	-0.097 (0.060)	-0.018 (0.069)	-0.228*** (0.086)	-0.056 (0.075)	-0.339*** (0.052)	-0.067 (0.065)
SEC 4 (richest)	-0.138*** (0.025)	-0.078 (0.058)	-0.185* (0.097)	0.027 (0.057)	-0.141 (0.096)	-0.127* (0.072)	-0.387*** (0.057)	-0.145** (0.064)
Income source: Agriculture	0.040 (0.026)	-0.014 (0.110)	0.073 (0.065)	0.087 (0.065)	-0.058 (0.153)	0.076 (0.054)	0.001 (0.063)	0.126 (0.077)
Income source: Business	0.171*** (0.024)	0.007 (0.102)	0.124** (0.055)	0.230*** (0.061)	0.392*** (0.121)	0.174*** (0.056)	0.225*** (0.059)	0.211*** (0.074)
Income source: Wage	-0.010 (0.025)	-0.122 (0.103)	-0.124** (0.057)	0.027 (0.066)	0.145 (0.120)	-0.011 (0.071)	0.033 (0.063)	0.138* (0.073)
Income source: Government	-0.051* (0.028)	-0.301* (0.165)	-0.099 (0.070)	0.104 (0.118)	-0.000 (0.140)	-0.030 (0.057)	0.041 (0.061)	-0.070 (0.080)
Income source: Others	0.033 (0.026)	0.082 (0.107)	0.103* (0.059)	0.077 (0.061)	-0.127 (0.108)	-0.036 (0.056)	0.066 (0.070)	0.022 (0.080)
Multiple income sources	-0.008 (0.030)	0.269** (0.119)	-0.049 (0.074)	-0.177** (0.080)	0.046 (0.145)	-0.025 (0.075)	-0.116 (0.073)	-0.094 (0.087)
High school degree	-0.003 (0.021)	0.082 (0.050)	0.021 (0.055)	-0.125** (0.054)	-0.080 (0.094)	0.087 (0.059)	-0.013 (0.051)	-0.023 (0.052)
More than high school degree	-0.057*** (0.022)	0.055 (0.065)	-0.088 (0.063)	-0.209*** (0.053)	-0.161** (0.065)	-0.007 (0.061)	0.026 (0.045)	0.014 (0.062)
HH head aged 30–39	-0.009 (0.032)	-0.114 (0.072)	0.009 (0.094)	0.040 (0.065)	0.023 (0.101)	0.010 (0.093)	0.070 (0.083)	-0.002 (0.087)
HH head aged 40–49	-0.021 (0.032)	-0.133* (0.073)	0.075 (0.091)	0.031 (0.070)	-0.104 (0.104)	0.015 (0.094)	0.008 (0.079)	-0.009 (0.089)
HH head aged 50–59	-0.028 (0.033)	-0.117 (0.077)	0.002 (0.097)	-0.006 (0.072)	-0.110 (0.105)	0.090 (0.093)	-0.027 (0.081)	0.012 (0.093)
HH head aged more than 60	-0.050 (0.036)	-0.135 (0.097)	0.025 (0.111)	-0.138* (0.083)	-0.030 (0.115)	-0.094 (0.108)	0.002 (0.083)	-0.006 (0.094)
HH head being male	-0.031* (0.018)	-0.070 (0.047)	-0.006 (0.044)	0.033 (0.045)	-0.003 (0.077)	-0.073 (0.053)	-0.042 (0.041)	-0.054 (0.047)
HH in rural area	0.011 (0.018)	0.062 (0.047)	-0.005 (0.044)	0.043 (0.049)	0.014 (0.065)	0.024 (0.049)	-0.012 (0.040)	-0.014 (0.048)
HH size	0.001 (0.005)	-0.001 (0.012)	-0.013 (0.011)	0.004 (0.010)	0.010 (0.015)	0.010 (0.012)	-0.005 (0.012)	0.006 (0.014)
Experienced job loss	0.106*** (0.036)	0.062 (0.084)	-0.016 (0.093)	0.229** (0.103)	0.118 (0.105)	0.125 (0.081)	0.145* (0.083)	0.075 (0.096)
Located in lockdown areas	-0.008 (0.022)	0.003 (0.125)	-0.079* (0.043)	0.059 (0.051)	-0.071 (0.057)		-0.008 (0.040)	0.097* (0.054)
Observations	3,329	468	529	507	235	449	629	508
Country FE	Yes							

Notes: Standard errors are in brackets. *, **, and *** denote statistically significant at 10%, 5%, and 1% confidence levels, respectively. We control for each country in the pooled sample (column 1) and time dummies in all samples (columns 1 to 8). "Located in lockdown areas" for the Philippines was dropped due to multicollinearity as the variable only had two observations of "No," one for each of the first-wave survey and second-wave survey. Other aid received for Cambodia and Lao PDR is also dropped due to multicollinearity.

Source: Authors' estimation using ADBI database.

7.2 Government Aid and Household Expenditure

We further empirically test the effects of the COVID-19 pandemic on household expenditure by estimating the following equation:

$$ExpDec_i = \vartheta_0 + \vartheta_1 SEC_i + \vartheta_2 HH_i + \vartheta_3 COVID_i + \vartheta_4 GovAID_i + \vartheta_5 OtherAID_i + \xi_i, \quad (7)$$

where $ExpDec_i$ takes a value of one when there has been a decrease in household expenditures during the period from the end of January to February 2021. Similarly to Equation (6), Equation (7) includes government aid and other aid to examine the impact of aid on household expenditures.

Table 11 shows that government aid instead increased the chance of expenditure decline for households in Indonesia and Viet Nam. This also suggests that households with expenditure declines were more likely to apply for government aid. The coefficients were negative in Cambodia, Malaysia, and Thailand, but not significantly so.

7.3 Government Aid and Financial Difficulties

This section examines whether the aid from government or other institutions alleviated the financial difficulties of households in ASEAN countries. We construct Equation (8) using the second-wave sample among those who answered in both periods as:

$$FinDiff_i = \beta_0 + \beta_1 SEC_i + \beta_2 HH_i + \beta_3 COVID_i + \beta_4 GovAID_i + \beta_5 OtherAID_i + \eta_i, \quad (8)$$

where all variables are identical to those described in previous equations.

Table 12 presents the estimated results. Similarly to Table 11, no noticeable impact of government aid and other aid is shown on alleviating households that experienced financial difficulties during the COVID-19 pandemic. Households that received government aid were more likely to experience financial difficulties in Thailand. This again points to reverse causality as the most likely explanation.

8. EDUCATION IMPACTS OF THE COVID-19 PANDEMIC

8.1 Attending Online Classes during the Pandemic

On average, 61% of households had school-age children in our sample. Table 13 shows the breakdown of school attendance by country, type of household, and gender. Overall, 66% of children physically stopped attending school initially due to the pandemic. Moreover, in general, children from poorer households and urban households stopped going to school more during the pandemic. Boys overall tended to stop going to school more during the pandemic as well. However, the results varied by country.

Table 11: Effect of Government and Other Aid on Having Expenditure Decline during the COVID-19 Pandemic

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables	All Countries	KHM	IDN	LAO	MYS	PHL	THA	VNM
Government aid received	0.023 (0.021)	-0.032 (0.120)	0.068* (0.038)		-0.038 (0.062)	0.119 (0.076)	-0.009 (0.033)	0.130** (0.056)
Other aid received	-0.002 (0.036)	0.421* (0.252)	-0.310** (0.158)		-0.026 (0.065)	0.142* (0.080)	0.192 (0.184)	-0.050 (0.098)
SEC 2	-0.070*** (0.019)	-0.085 (0.061)	0.047 (0.046)	-0.034 (0.039)	-0.126* (0.069)	-0.148** (0.058)	-0.084** (0.036)	-0.123** (0.055)
SEC 3	-0.081*** (0.021)	-0.037 (0.063)	-0.032 (0.050)	-0.019 (0.052)	-0.067 (0.088)	-0.142* (0.073)	-0.101*** (0.036)	-0.163*** (0.060)
SEC 4 (richest)	-0.064*** (0.022)	-0.084 (0.061)	0.004 (0.081)	-0.030 (0.041)	-0.080 (0.090)	-0.092 (0.071)	-0.027 (0.048)	-0.176*** (0.057)
Income source: Agriculture	0.062*** (0.022)	-0.119 (0.113)	0.135** (0.055)	0.050 (0.046)	-0.220 (0.138)	0.151*** (0.052)	-0.066 (0.046)	0.142** (0.069)
Income source: Business	0.077*** (0.021)	-0.121 (0.105)	0.064 (0.048)	0.109** (0.044)	0.105 (0.118)	0.077 (0.056)	-0.029 (0.042)	0.164** (0.068)
Income source: Wage	0.036 (0.022)	-0.176* (0.105)	0.004 (0.050)	0.126*** (0.046)	-0.115 (0.113)	0.033 (0.069)	-0.088** (0.045)	0.204*** (0.068)
Income source: Government	0.020 (0.024)	-0.415* (0.217)	-0.066 (0.063)	0.147** (0.066)	-0.090 (0.129)	0.056 (0.056)	-0.040 (0.042)	-0.007 (0.073)
Income source: Others	0.027 (0.022)	-0.174 (0.113)	0.058 (0.052)	0.031 (0.040)	0.019 (0.099)	0.011 (0.055)	-0.025 (0.049)	0.018 (0.070)
Multiple income sources	-0.074*** (0.026)	0.069 (0.121)	-0.063 (0.066)	-0.102* (0.055)	0.042 (0.129)	-0.158** (0.073)	0.035 (0.051)	-0.152* (0.079)
High school degree	-0.012 (0.018)	-0.013 (0.055)	-0.053 (0.050)	-0.041 (0.037)	-0.017 (0.092)	0.031 (0.057)	-0.014 (0.033)	0.068 (0.046)
More than high school degree	-0.022 (0.019)	-0.070 (0.069)	-0.025 (0.056)	-0.065* (0.037)	-0.150** (0.064)	0.013 (0.059)	-0.014 (0.030)	0.126** (0.058)
HH head aged 30–39	0.058** (0.025)	0.096 (0.081)	0.068 (0.071)	-0.020 (0.043)	0.083 (0.084)	0.200*** (0.078)	-0.046 (0.053)	0.089 (0.064)
HH head aged 40–49	0.079*** (0.026)	0.112 (0.081)	0.060 (0.070)	0.046 (0.049)	0.066 (0.086)	0.238*** (0.079)	0.003 (0.054)	0.144** (0.070)
HH head aged 50–59	0.103*** (0.027)	0.124 (0.086)	0.164** (0.079)	0.067 (0.055)	0.081 (0.087)	0.265*** (0.078)	0.051 (0.058)	0.079 (0.069)
HH head aged more than 60	0.081*** (0.030)	0.061 (0.103)	0.055 (0.089)	-0.043 (0.053)	0.068 (0.097)	0.130 (0.091)	0.065 (0.060)	0.120 (0.073)
HH head being male	-0.004 (0.016)	0.010 (0.052)	0.064* (0.038)	-0.010 (0.032)	-0.042 (0.075)	-0.123** (0.052)	0.006 (0.026)	0.009 (0.041)
HH in rural area	-0.000 (0.016)	-0.002 (0.050)	-0.034 (0.038)	0.031 (0.032)	0.007 (0.058)	0.067 (0.047)	0.019 (0.027)	-0.059 (0.043)
HH size	-0.005 (0.004)	-0.005 (0.012)	-0.019 (0.012)	-0.005 (0.008)	0.001 (0.013)	0.007 (0.012)	-0.007 (0.008)	-0.001 (0.013)
Experienced job loss	0.145*** (0.029)	0.129 (0.084)	0.061 (0.084)	0.133** (0.059)	0.176* (0.093)	0.187** (0.082)	0.161*** (0.049)	0.195** (0.081)
Located in lockdown areas	0.013 (0.019)	0.172 (0.123)	0.023 (0.038)	-0.130*** (0.045)	0.003 (0.055)		0.072*** (0.025)	0.002 (0.049)
Observations	3,299	470	524	492	235	447	629	485
Country FE	Yes							

Notes: Standard errors are in brackets. *, **, and *** denote statistically significant at 10%, 5%, and 1% confidence levels, respectively. We control for each country in the pooled sample (column 1) and time dummies in all samples (columns 1 to 8). "Located in lockdown areas" for the Philippines was dropped due to multicollinearity as the variable only had two observations of "No," one for each of the first-wave survey and second-wave survey. Some variables are dropped due to multicollinearity.

Source: Authors' estimation using ADBI database.

Table 12: Effect of Government and Other Aid on Having Financial Difficulties during the COVID-19 Pandemic

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables	All Countries	KHM	IDN	LAO	MYS	PHL	THA	VNM
Government aid received	0.028 (0.020)	-0.111 (0.089)	0.013 (0.034)	0.036 (0.126)	0.048 (0.066)	-0.097 (0.078)	0.052*** (0.019)	0.046 (0.066)
Other aid received	0.008 (0.035)		-0.024 (0.079)		0.051 (0.071)		-0.124 (0.083)	-0.004 (0.102)
SEC 2	-0.053*** (0.018)	-0.022 (0.053)	-0.102** (0.040)	0.012 (0.058)	-0.298*** (0.086)		0.009 (0.031)	-0.173*** (0.056)
SEC 3	-0.117*** (0.019)	-0.094* (0.050)	-0.217*** (0.040)	0.021 (0.073)	-0.341*** (0.093)	0.203*** (0.072)	-0.031 (0.031)	-0.275*** (0.058)
SEC 4 (richest)	-0.167*** (0.019)	-0.117** (0.050)	-0.221*** (0.058)	-0.029 (0.058)	-0.369*** (0.094)		-0.063* (0.034)	-0.424*** (0.056)
Income source: Agriculture	0.009 (0.021)	-0.209*** (0.081)	0.016 (0.049)	0.157** (0.067)	-0.249* (0.147)	0.244*** (0.064)	0.015 (0.034)	-0.035 (0.073)
Income source: Business	0.091*** (0.020)	-0.133 (0.082)	0.059 (0.041)	0.203*** (0.065)	0.317*** (0.119)	-0.022 (0.068)	0.074* (0.040)	0.096 (0.070)
Income source: Wage	0.057*** (0.021)	-0.155** (0.079)	-0.027 (0.044)	0.182*** (0.065)	0.092 (0.119)		0.079** (0.039)	0.107 (0.068)
Income source: Government	0.033 (0.025)	-0.350** (0.145)	-0.007 (0.050)	0.097 (0.114)	0.113 (0.139)	0.094 (0.090)	0.075* (0.040)	-0.045 (0.076)
Income source: Others	0.002 (0.021)	-0.094 (0.083)	-0.040 (0.043)	0.133** (0.062)	0.096 (0.116)	-0.160* (0.087)	0.003 (0.045)	-0.082 (0.073)
Multiple income sources	-0.041 (0.025)	0.214** (0.095)	0.014 (0.057)	-0.274*** (0.081)	-0.131 (0.140)	0.084 (0.086)	-0.029 (0.046)	-0.035 (0.082)
High school degree	-0.003 (0.017)	0.071 (0.045)	-0.027 (0.044)	-0.008 (0.056)	-0.058 (0.092)		-0.033 (0.026)	0.047 (0.049)
More than high school degree	-0.035** (0.017)	0.018 (0.052)	0.003 (0.047)	0.029 (0.059)	-0.171*** (0.065)	-0.014 (0.087)	-0.042* (0.022)	0.032 (0.059)
HH head aged 30–39	-0.016 (0.023)	-0.030 (0.070)	-0.111 (0.074)	0.007 (0.068)	0.086 (0.093)	0.116 (0.089)	-0.092* (0.048)	0.008 (0.086)
HH head aged 40–49	0.018 (0.024)	-0.018 (0.071)	-0.064 (0.073)	0.101 (0.072)	0.033 (0.092)	0.256*** (0.085)	-0.044 (0.049)	0.103 (0.087)
HH head aged 50–59	-0.014 (0.025)	-0.074 (0.073)	-0.102 (0.076)	0.107 (0.076)	0.084 (0.098)	0.275*** (0.087)	-0.075 (0.048)	-0.038 (0.088)
HH head aged more than 60	-0.062** (0.027)	-0.118 (0.083)	-0.161* (0.084)	-0.099 (0.092)	-0.042 (0.111)		-0.080 (0.050)	-0.003 (0.092)
HH head being male	-0.019 (0.014)	-0.094** (0.044)	0.035 (0.032)	-0.083* (0.047)	0.113 (0.082)	-0.014 (0.068)	-0.014 (0.020)	-0.007 (0.044)
HH in rural area	0.003 (0.014)	0.065* (0.037)	0.004 (0.031)	-0.048 (0.050)	0.009 (0.065)	-0.005 (0.065)	-0.010 (0.019)	-0.023 (0.045)
HH size	0.018*** (0.004)	0.034*** (0.011)	0.009 (0.009)	0.014 (0.011)	-0.005 (0.016)	0.038** (0.016)	0.015* (0.008)	0.050*** (0.013)
Experienced job loss	0.123*** (0.035)	0.025 (0.070)	0.014 (0.077)	0.455*** (0.124)	0.207** (0.105)	-0.010 (0.098)		0.146 (0.102)
Located in lockdown areas	0.042** (0.017)	-0.147 (0.090)	0.012 (0.032)	0.154*** (0.052)	-0.003 (0.057)		0.055** (0.024)	0.024 (0.054)
Observations	3,322	467	526	507	235	83	603	507
Country FE	Yes							

Notes: Standard errors are in brackets. *, **, and *** denote statistically significant at 10%, 5%, and 1% confidence levels, respectively. We control for each country in the pooled sample (column 1) and time dummies in all samples (columns 1 to 8). "Located in lockdown areas" for the Philippines was dropped due to multicollinearity as the variable only had two observations of "No," one for each of the first-wave survey and second-wave survey. Some variables are dropped due to multicollinearity.

Source: Authors' estimation using ADBI database.

**Table 13: Stopped Going to School Physically during the Pandemic,
% of Subgroup (Among Households with Children)**

	Total	Richer Households	Poorer Households	Urban Households	Rural Households	Boys	Girls
Cambodia	83%	84%	82%	86%	81%	83%	80%
Indonesia	94%	92%	95%	93%	95%	93%	93%
Lao PDR	11%	12%	10%	17%	8%	10%	11%
Malaysia	76%	67%	82%	76%	75%	71%	71%
Philippines	40%	33%	43%	42%	37%	36%	39%
Thailand	92%	91%	92%	86%	95%	93%	92%
Viet Nam	84%	88%	82%	82%	85%	87%	82%
All	66%	65%	67%	67%	65%	65%	63%

Note: Poorer households refer to households in the 1st and 2nd income quantile, and richer households refer to households in the 3rd and 4th income quantile.

Source: Authors' calculation based on ADBI's database.

During the pandemic, many schools closed physically and offered online classes (Table 14). Online learning was only available for 32% of households overall. The table below shows that the online learning during the pandemic (second wave) was readily available in Indonesia (62%), unlike in other economies, especially Lao PDR (7%). This could be because the pandemic was relatively less severe in Lao PDR, as only 11% of students stopped going to school physically during the pandemic there (Table 13). However, among households with school-age children and when online learning was available, participation in online learning was high overall at 93%. Lao PDR also showed a relatively low rate of attending online classes (45%), as students attended school physically more than in other economies.

Table 14: Attending Online Classes during the Pandemic, %

	Cambodia	Indonesia	Lao PDR	Malaysia	Philippines	Thailand	Viet Nam	All
Online Learning Availability	36%	62%	7%	33%	26%	30%	39%	32%
Attending Online Classes when Available	83%	99%	45%	94%	89%	96%	91%	93%

Note: Statistics are based on the second-wave survey except for Lao PDR, as they did not answer on attending online classes for the second-wave survey. "Online Learning Availability" includes both full online classes and partial online classes. "Attending Online Classes when Available" is among households with children attending school before the pandemic and when online learning was available.

Source: Authors' calculation based on ADBI's database.

8.2 Intensity of Taking Online Courses when Offered

We examine factors that determine the intensity of online class taking during the period of the COVID-19 pandemic in ASEAN countries. We estimate the following equation:

$$Intensity_{it} = \theta_0 + \theta_1 SEC_{it} + \theta_2 HH_{it} + \theta_3 COVID_{it} + \theta_5 FinDiff_{it} + \theta_6 SecondWave_i + \zeta_i + \varsigma_{it}, \quad (9)$$

in which $Intensity_{it}$ takes the value of either (1) not taking any online class; (2) taking some, but not all online classes; or (3) taking all online classes. Independent variables are as in previous equations. ζ_i, ζ_{it} refer to the error terms. Since our dependent variable is a Likert-type variable, we used the ordered probit estimation method. However, the results of this regression analysis should be interpreted cautiously since the sample used is limited to those children who study in schools that offer online classes.

Table 15 presents the results for the determinants of the intensity of online course attendance using the sample with both wave respondents. The marginal effects are calculated for each of the three possible outcomes. During the second-wave period, more children were likely to attend all online classes while fewer children were likely to attend no or only some online classes. We did not see any significant difference between household income and the intensity of online course attendance.

Income sources and household characteristics also mattered for the intensity of online class taking for households with agriculture as an income source. Children from households with producing agricultural goods as an income source were less likely to take all online courses and more likely to take either some of the courses or no classes at all, albeit with a low significance level. Households with other income sources show no significant result on the relationship with intensity of online course taking by children.

Children from households whose head has an education level higher than high school education were less likely not to take any online classes or take some online classes, and more likely to take all online classes than children in households with lower education levels (our reference group). Moreover, children in households whose heads are older than 50 were less likely not to take any online course or take online classes partially, and more likely to take all online courses offered. This may be because the older the household head is, the more resilient the household is to external shocks and therefore children are given more resources for their education. This implies that household heads with higher education and older household heads recognize the importance of child education.

Furthermore, children living in lockdown areas also showed that they were more likely to take all online classes, but less likely to take no classes or take classes partially. Children in households that suffered financial difficulty, on the other hand, show the opposite result: less likely to take all classes but likely to take either no classes at all or take classes partially. Households experiencing financial difficulty may find it more difficult to have children participate in online courses via computers and a stable Internet.

Table 15: Factors Determining the Intensity of Online Course Taking

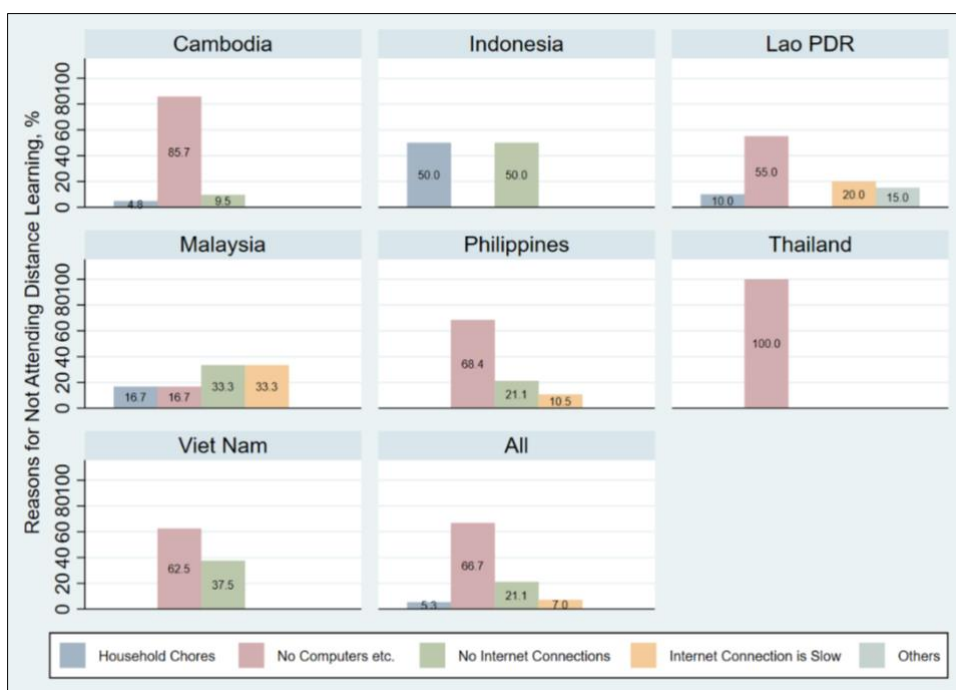
	(1) Not Take	(2) Take Some	(3) Take All
Period Jun–Dec 2020	−0.107*** (0.008)	−0.194*** (0.016)	0.301*** (0.018)
SEC 2	−0.003 (0.008)	−0.005 (0.012)	0.008 (0.020)
SEC 3	0.004 (0.009)	0.006 (0.013)	−0.010 (0.022)
SEC 4 (richest)	−0.008 (0.010)	−0.012 (0.014)	0.021 (0.024)
Income source: Agriculture	0.024* (0.013)	0.034* (0.019)	−0.058* (0.032)
Income source: Business	0.000 (0.012)	0.001 (0.018)	−0.001 (0.030)
Income source: Wage	−0.008 (0.013)	−0.012 (0.018)	0.020 (0.030)
Income source: Government	−0.022 (0.015)	−0.031 (0.022)	0.053 (0.037)
Income source: Others	0.010 (0.014)	0.014 (0.020)	−0.024 (0.035)
Multiple income sources	−0.010 (0.014)	−0.014 (0.020)	0.024 (0.034)
High school degree	−0.003 (0.008)	−0.004 (0.011)	0.008 (0.019)
More than high school degree	−0.017** (0.008)	−0.026** (0.012)	0.043** (0.019)
HH head aged 30–39	−0.010 (0.020)	−0.012 (0.023)	0.023 (0.042)
HH head aged 40–49	−0.023 (0.019)	−0.029 (0.022)	0.052 (0.041)
HH head aged 50–59	−0.033* (0.019)	−0.045** (0.023)	0.078* (0.042)
HH head aged more than 60	−0.043** (0.020)	−0.063** (0.027)	0.107** (0.047)
HH head being male	−0.004 (0.007)	−0.005 (0.010)	0.009 (0.017)
HH in rural area	0.008 (0.007)	0.011 (0.009)	−0.019 (0.016)
HH size	0.001 (0.002)	0.001 (0.003)	−0.002 (0.005)
Experienced job loss	0.009 (0.009)	0.012 (0.013)	−0.021 (0.023)
Located in lockdown areas	−0.037*** (0.009)	−0.052*** (0.012)	0.089*** (0.020)
Financial Difficulty	0.034*** (0.008)	0.048*** (0.011)	−0.082*** (0.019)
Country	Yes	Yes	Yes
Number of observations	2,225	2,225	2,225

Notes: Standard errors are in brackets. *, **, and *** denote significance level at 10%, 5%, and 1%, respectively. We control for country dummies.

Source: Authors' estimation using ADBI data.

We examined the reasons why some students did not fully attend online classes, given that the school offered them (Figure 11). There are four major reasons: doing household chores; lack of computer/iPad/tablet; lack of Internet connection; and weak/unstable Internet connection. On average, about a third of households with children who did not attend online classes fully did not have facilities for online learning (i.e., devices such as computers). This situation was most common in Cambodia and the Philippines where over 65% of households reported that their children did not attend online classes because they did not have a computer or tablet for their children to use.

Figure 11: Reasons for Not Attending Online Classes Fully (if School Offered), % of Households



Note: The results are among households with school-age children and when online learning is available, using the second-wave survey. The result for Lao PDR uses the first-wave survey as they do not report any observations for the second-wave survey. The results are reasons for not attending online classes fully. Those attending partially are not included in this result.

Source: Authors' calculation based on ADBI's database.

We further examine underlying factors correlated with why some children could not fully take online courses. We estimate the following equation:

$$reason_{it} = \gamma_0 + \gamma_1 SEC_{it} + \gamma_2 HH_{it} + \gamma_3 COVID_{it} + \gamma_5 FinDiff_{it} + \gamma_6 SecondWave_i + \rho_i + \epsilon_{it}, \tag{10}$$

in which $reason_{it}$ is the reason why household i 's children cannot take all online classes (when offered). The dependent variable takes one of four alternatives: (i) doing household chores/working with the family; (ii) not having a computer/iPad/tablet; (iii) not having an Internet connection; and (iv) unstable Internet connection.¹¹

¹¹ The survey also asked for other reasons but, due to a lack of clear information about this type of reason, we did not use other reasons as an alternative reason for not taking online classes.

Table 16: Reasons for Not Fully Attending Online Classes

	(1) Household Chores/Working with the Family	(2) Not Having a Computer/iPad/ Tablet	(3) Not Having an Internet Connection	(4) Unstable Internet Connection
Period Jun–Dec 2020	−0.048*** (0.008)	−0.103*** (0.012)	−0.125*** (0.011)	−0.134*** (0.012)
SEC 2	0.012 (0.010)	−0.033** (0.016)	−0.034** (0.014)	0.011 (0.015)
SEC 3	−0.008 (0.010)	−0.033** (0.016)	−0.025* (0.015)	−0.018 (0.015)
SEC 4 (richest)	−0.014 (0.011)	−0.058*** (0.018)	−0.053*** (0.015)	−0.029* (0.017)
Income source: Agriculture	0.003 (0.011)	0.061*** (0.023)	0.025 (0.019)	−0.005 (0.017)
Income source: Business	−0.002 (0.010)	0.003 (0.020)	−0.011 (0.018)	−0.007 (0.016)
Income source: Wage	−0.014 (0.009)	0.011 (0.020)	−0.001 (0.018)	−0.021 (0.017)
Income source: Government	−0.005 (0.010)	−0.004 (0.021)	−0.004 (0.022)	−0.012 (0.017)
Income source: Others	0.001 (0.010)	0.013 (0.018)	−0.013 (0.016)	−0.011 (0.014)
Multiple income sources	0.011 (0.012)	−0.036 (0.023)	−0.010 (0.020)	0.034* (0.019)
High school degree	0.005 (0.009)	−0.002 (0.015)	−0.017 (0.013)	−0.022* (0.013)
More than high school degree	−0.002 (0.009)	−0.028** (0.014)	−0.037*** (0.012)	−0.011 (0.015)
HH head aged 30–39	−0.074** (0.031)	0.011 (0.031)	0.040* (0.023)	−0.019 (0.032)
HH head aged 40–49	−0.066** (0.031)	−0.001 (0.030)	0.033 (0.022)	−0.025 (0.031)
HH head aged 50–59	−0.084*** (0.031)	−0.002 (0.031)	0.010 (0.023)	−0.017 (0.032)
HH head aged more than 60	−0.081** (0.032)	−0.046 (0.034)	−0.007 (0.027)	−0.029 (0.035)
HH head being male	−0.002 (0.007)	−0.002 (0.011)	−0.004 (0.011)	0.009 (0.011)
HH in rural area	−0.002 (0.007)	0.027*** (0.010)	0.014 (0.010)	0.003 (0.011)
HH size	0.005* (0.003)	0.005 (0.004)	0.001 (0.004)	−0.000 (0.004)
Experienced job loss	−0.017 (0.012)	0.070*** (0.024)	0.063*** (0.022)	−0.025 (0.019)
Located in lockdown areas	0.000 (0.007)	−0.011 (0.010)	−0.025** (0.010)	−0.008 (0.011)
Financial Difficulty	0.008 (0.009)	0.022 (0.014)	0.017 (0.012)	0.000 (0.014)
Number of observations	2,225	2,225	2,225	2,225

Notes: Standard errors are in brackets. *, **, and *** denote significance level at 10%, 5%, and 1%, respectively. We control for country dummies.

Source: Authors' estimation using ADBI data.

Table 16 presents the results for factors related to each of the four reasons why children in an average household could not attend all online classes. All of the reasons were less probable in the second-wave period. Household income class is correlated with the likelihood of not taking all classes because of not having a computer/iPad/tablet or not having an Internet connection, but is generally not related to the reasons of having household chores or an unstable/weak Internet connection. Furthermore, the income sources of households show no significant relationship with the reasons why children could not attend all online classes.

Children in households where the household head had more than a high school education were less likely not to take all online classes due to not having a computer/iPad/tablet or not having an Internet connection. Children in households with an older household head were less likely not to take all classes due to household chores. Living in a rural area was more likely to be the reason for not attending all classes due to not having a computer/iPad/tablet. With regard to COVID-19-induced variables, experiencing a job loss was positively correlated with not taking all online classes due to not having a computer/iPad/tablet, or having no Internet connection, but experience of financial difficulty was not a factor.

9. CONCLUSIONS

The outbreak of the COVID-19 virus and the resulting falls in demand due both to uncertainty and policy interventions such as lockdowns, “social distancing,” and travel restrictions are having a severe impact on Asian economies and hence on Asian households. In this paper, we implemented household surveys in seven ASEAN countries (Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Thailand, and Viet Nam) with a view to understanding the effects of the COVID-19 pandemic on household income, expenditure, experience of financial difficulty, experience of applying for and receiving government aid, and access to online education. The samples were representative of the income classes, and the rural and urban population in each country. Two waves of the survey were conducted: the first from the end of May to the end of July 2020 and the second from the end of January to February 2021.

Most households in all countries experienced significant declines in income and employment, although there was significant variation by country. Nearly three quarters of households experienced declining income (mostly in the range of 26–50% compared with the base period) during the first-wave period, but less than half experienced declines in the second period (47%). Income from all sources declined, but that of household enterprise/self-employment fell most. About a third had household members who lost their jobs or had to reduce their workload. Our empirical results suggest that the following household characteristics were associated with an increased probability of income declines: belonging to a lower income class, having business income, lower education level of the household head, having a female household head, and having at least one person who lost their job. These factors were also correlated with expenditure declines.

About 60% of households experienced financial difficulties during the first-wave period, and this ratio actually increased to 78% in the second-wave period. Furthermore, 49% of households in the second-wave period experienced moderate or major financial difficulty. This suggests that the prolonged nature of the pandemic has put increasing strains on household finances, even though incomes have stabilized somewhat. Similarly to the case of income declines, factors contributing to the experience of financial difficulty include: having lower income and education, having a female

household head, and having at least one person who lost their job or had reduced working hours. In addition, a larger household size and being in a lockdown area also contributed to financial difficulties. Nearly all households experiencing financial difficulties had to reduce consumption, about half drew down cash and savings, while roughly a third borrowed from friends or relatives, delayed payments and debt repayment, and applied for government aid.

About 41% of households received government financial or nonfinancial aid. The shares varied widely by country, ranging from less than 5% in Cambodia and Lao PDR to over 80% in the Philippines and Thailand. The receipt of government aid did not vary much by income class, but the amount relative to pre-pandemic income was much higher for lower-income groups, suggesting some beneficial distributional impact. Factors positively associated with applying for and receiving government aid include: lower income, lower education, household size, experience of job loss, being in a lockdown area, and income decline. Nonetheless, we could not find positive effects of the receipt of government aid on household income, expenditure, or the experience of financial difficulty. It appears that reverse causality was more important, i.e., households experiencing difficulty were more likely to apply for government aid.

About 66% of children stopped going to school physically as a result of the pandemic. Many schools offered online classes, but there was great variation by country. Only about 7% of children who stopped attending school could not participate in online learning programs, but more could only participate partially, due to weak/insufficient Internet connections and a lack of digital devices. Of all the factors determining the intensity of online class taking, two COVID-19-related factors—having at least one person who lost their job or had working hours reduced and was experiencing financial difficulties—had the greatest negative impact. This has negative implications for longer-term human capital formation.

APPENDIX A: CHARACTERISTICS OF THE TOTAL SAMPLE

The first wave

Country	Total	Urban	Rural	Male HH Head	Female HH Head	Quantile 1 (Poorest)	Quantile 2	Quantile 3	Quantile 4 (Richest)
Cambodia	1,026	332	694	770	256	293	305	207	221
Indonesia	1,046	443	603	676	370	288	329	245	184
Lao PDR	1,000	348	652	598	402	366	228	156	250
Malaysia	1,006	638	368	877	129	256	308	197	233
Philippines	1,000	520	480	746	254	265	260	271	204
Thailand	1,000	400	600	709	291	252	278	259	211
Viet Nam	1,000	366	634	659	341	285	248	210	241
TOTAL	7,078	3,047	4,031	5,035	2,043	2,005	1,956	1,545	1,544

The second wave

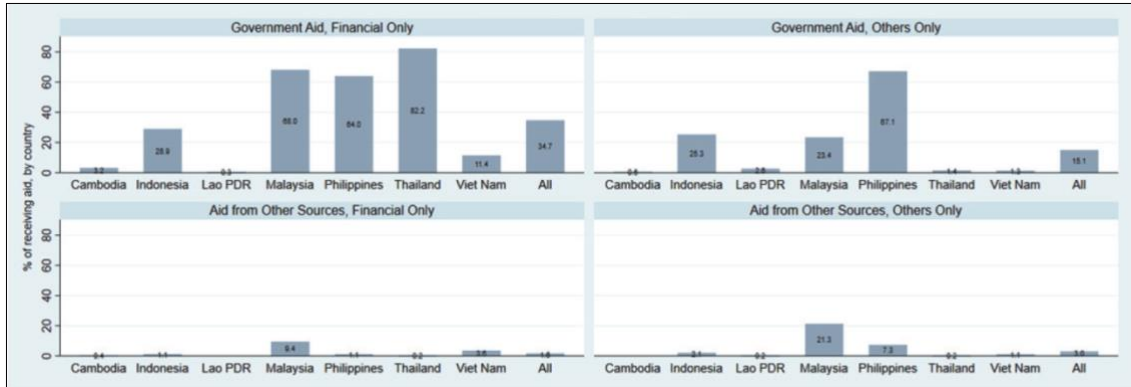
Country	Total	Urban	Rural	Male HH Head	Female HH Head	Quantile 1 (Poorest)	Quantile 2	Quantile 3	Quantile 4 (Richest)
Cambodia	1,025	325	700	755	270	269	229	279	248
Indonesia	1,035	448	587	623	412	324	203	310	198
Lao PDR	1,000	350	650	724	276	260	328	167	245
Malaysia	1,003	618	384	813	190	276	304	185	238
Philippines	1,000	520	480	747	253	251	340	168	241
Thailand	1,000	402	598	668	332	268	257	271	204
Viet Nam	1,026	404	620	675	351	307	272	195	242
TOTAL	7,089	3,067	4,019	5,005	2,084	1,955	1,933	1,575	1,616

Quantile = income class.

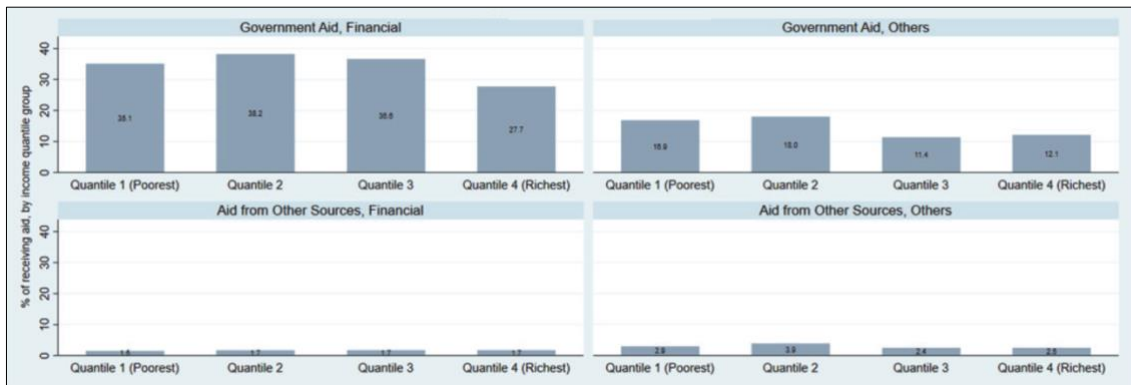
Source: Authors' calculation based on ADBI's database.

APPENDIX B: HOUSEHOLDS THAT RECEIVED GOVERNMENT OR OTHER SUPPORT (% BY COUNTRY, BY INCOME QUANTILE, AND OF THOSE WHO APPLIED FOR AID)

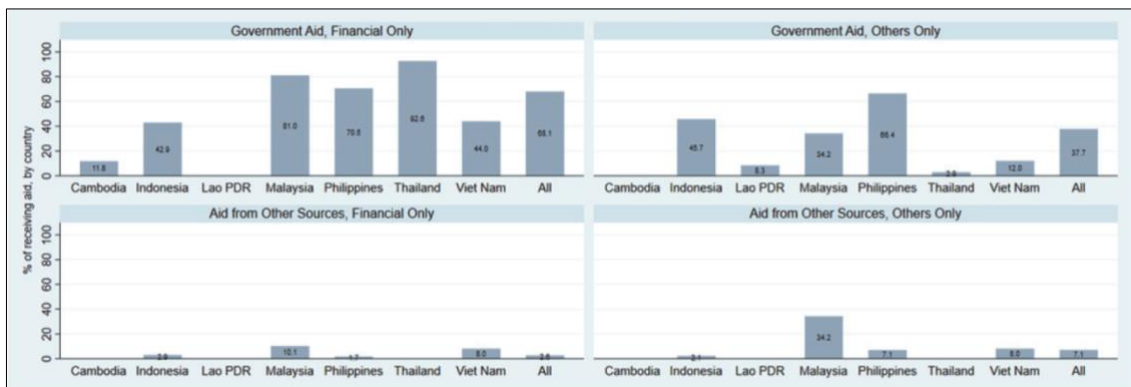
% by country



% by income quantile

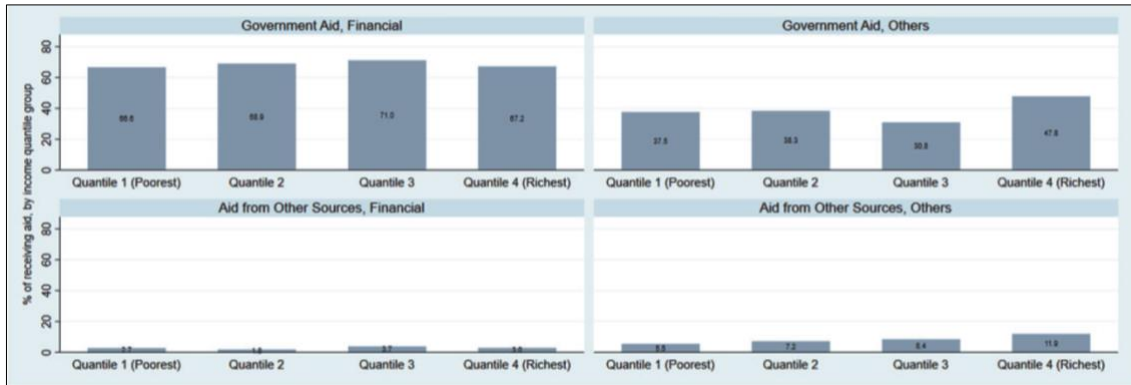


% by country, of those who applied for aid



Appendix B *table continued*

% by income quantile, of those who applied for aid



Source: Authors' calculation.

APPENDIX C. REGRESSION RESULTS USING POOLED SAMPLE (INCLUDING ALL RESPONDENTS IN WAVE 1 AND WAVE 2)

Income Decline

Determinants of Having Income Decline Due to the COVID-19 Pandemic (Total Sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables	All Countries	KHM	IDN	LAO	MYS	PHL	THA	VNM
Period Jun–Dec 2020	–0.224*** (0.009)	–0.065*** (0.022)	–0.273*** (0.021)	–0.137*** (0.032)	–0.147*** (0.029)	–0.265*** (0.026)	–0.306*** (0.020)	–0.173*** (0.037)
SEC 2	–0.006 (0.011)	0.015 (0.026)	0.039 (0.027)	0.038 (0.028)	–0.066** (0.030)	–0.001 (0.026)	–0.085*** (0.027)	–0.006 (0.029)
SEC 3	–0.026** (0.011)	0.012 (0.028)	–0.017 (0.028)	–0.032 (0.033)	–0.049 (0.035)	0.041 (0.030)	–0.149*** (0.028)	–0.036 (0.033)
SEC 4 (richest)	–0.051*** (0.012)	0.023 (0.028)	–0.062* (0.032)	0.042 (0.030)	–0.083** (0.035)	–0.036 (0.031)	–0.245*** (0.032)	–0.073** (0.033)
Income source:								
Agriculture	–0.046*** (0.013)	–0.115*** (0.040)	0.035 (0.032)	–0.100*** (0.029)	–0.189*** (0.069)	0.049* (0.029)	–0.069* (0.038)	0.012 (0.038)
Income source:								
Business	0.097*** (0.012)	0.024 (0.037)	0.109*** (0.026)	0.063** (0.029)	0.085 (0.055)	0.078*** (0.028)	0.091** (0.036)	0.150*** (0.035)
Income source: Wage	–0.099*** (0.012)	–0.116*** (0.036)	–0.133*** (0.026)	–0.166*** (0.030)	–0.175*** (0.052)	–0.015 (0.029)	–0.105*** (0.035)	–0.018 (0.034)
Income source:								
Government	0.010 (0.014)	0.162*** (0.055)	–0.019 (0.032)	0.134*** (0.046)	–0.001 (0.052)	–0.002 (0.027)	–0.020 (0.035)	0.068* (0.039)
Income source: Others	–0.062*** (0.013)	–0.095** (0.042)	–0.011 (0.028)	–0.061* (0.031)	–0.124** (0.051)	–0.019 (0.026)	–0.103*** (0.040)	0.002 (0.036)
Multiple income sources	0.105*** (0.014)	0.246*** (0.040)	0.054* (0.032)	0.180*** (0.032)	0.194*** (0.061)	0.014 (0.032)	0.088** (0.040)	0.025 (0.039)
High school degree	–0.016 (0.010)	0.009 (0.023)	–0.046* (0.027)	0.009 (0.028)	–0.031 (0.031)	–0.038 (0.024)	–0.024 (0.031)	–0.018 (0.027)
More than high school degree	–0.084*** (0.011)	–0.107*** (0.032)	–0.129*** (0.030)	–0.085*** (0.029)	–0.131*** (0.029)	–0.038 (0.025)	–0.036 (0.027)	–0.068** (0.032)
HH head aged 30–39	0.008 (0.014)	–0.040 (0.030)	0.023 (0.039)	0.065** (0.031)	–0.051 (0.042)	0.023 (0.033)	0.053 (0.046)	0.008 (0.038)
HH head aged 40–49	0.001 (0.014)	–0.042 (0.031)	0.049 (0.038)	0.087** (0.034)	–0.019 (0.043)	0.002 (0.034)	0.014 (0.044)	–0.030 (0.040)
HH head aged 50–59	–0.023 (0.015)	–0.074** (0.033)	0.060 (0.042)	0.055 (0.037)	–0.077* (0.043)	0.009 (0.035)	–0.012 (0.044)	–0.072* (0.042)
HH head aged more than 60	–0.073*** (0.017)	–0.156*** (0.044)	–0.012 (0.053)	–0.046 (0.043)	–0.139*** (0.045)	–0.025 (0.042)	–0.061 (0.046)	–0.050 (0.046)
HH head being male	–0.027*** (0.009)	–0.060*** (0.022)	–0.036* (0.020)	–0.006 (0.024)	0.017 (0.032)	–0.007 (0.023)	–0.032 (0.022)	–0.052** (0.024)
HH in rural area	–0.004 (0.008)	0.035 (0.022)	–0.002 (0.020)	0.041 (0.026)	–0.008 (0.024)	–0.007 (0.021)	–0.023 (0.022)	–0.039 (0.025)
HH size	0.006*** (0.002)	0.007 (0.006)	0.007 (0.007)	–0.003 (0.005)	0.005 (0.005)	0.002 (0.005)	0.013** (0.006)	0.012 (0.008)
Experienced job loss	0.160*** (0.014)	0.197*** (0.041)	0.058 (0.042)	0.191*** (0.032)	0.176*** (0.040)	0.085*** (0.027)	0.216*** (0.046)	0.187*** (0.041)
Located in lockdown areas	0.033*** (0.009)	0.040 (0.067)	0.021 (0.020)	0.100*** (0.028)	–0.041* (0.022)		0.059** (0.023)	0.140*** (0.034)
Observations	13,568	1,918	2,080	1,808	1,921	1,995	1,981	1,863
Country FE	Yes							

Notes: Standard errors are in brackets. *, **, and *** denote statistically significant at 10%, 5%, and 1% confidence levels, respectively. We control for each country in the pooled sample (column 1). “Located in lockdown areas” for the Philippines was dropped due to multicollinearity as the variable only had two observations of “No,” one for each of the first-wave survey and second-wave survey.

Source: Authors’ estimation using ADBI database.

**Determinants of Having Income Decline Due to the COVID-19 Pandemic
(Four Degrees and Five Degrees Using Respondents
that Answered Both Periods – Two-Period Respondents)**

Variables	(1) Increase	(2) No Change	(3) Decrease by 50%	(4) Decrease by More Than 50%
Period Jun–Dec 2020	0.094*** (0.005)	0.155*** (0.006)	−0.091*** (0.005)	−0.158*** (0.006)
SEC 2	0.018*** (0.005)	0.028*** (0.008)	−0.014*** (0.004)	−0.032*** (0.009)
SEC 3	0.030*** (0.006)	0.045*** (0.008)	−0.024*** (0.005)	−0.050*** (0.009)
SEC 4 (richest)	0.033*** (0.006)	0.048*** (0.008)	−0.027*** (0.005)	−0.054*** (0.009)
Income source: Agriculture	0.006 (0.007)	0.008 (0.010)	−0.005 (0.006)	−0.009 (0.011)
Income source: Business	−0.045*** (0.007)	−0.065*** (0.010)	0.037*** (0.006)	0.072*** (0.011)
Income source: Wage	0.013* (0.007)	0.019* (0.010)	−0.011* (0.006)	−0.021* (0.011)
Income source: Government	0.025*** (0.008)	0.037*** (0.011)	−0.021*** (0.006)	−0.041*** (0.012)
Income source: Others	−0.001 (0.007)	−0.002 (0.010)	0.001 (0.006)	0.002 (0.011)
Multiple income sources	0.005 (0.008)	0.008 (0.011)	−0.004 (0.006)	−0.009 (0.012)
High school degree	0.004 (0.005)	0.006 (0.007)	−0.003 (0.004)	−0.007 (0.008)
More than high school degree	0.021*** (0.005)	0.029*** (0.008)	−0.018*** (0.005)	−0.032*** (0.008)
HH head aged 30–39	−0.011 (0.007)	−0.016* (0.010)	0.010 (0.006)	0.018* (0.011)
HH head aged 40–49	−0.010 (0.007)	−0.014 (0.010)	0.008 (0.006)	0.015 (0.011)
HH head aged 50–59	−0.006 (0.008)	−0.008 (0.010)	0.005 (0.007)	0.009 (0.011)
HH head aged more than 60	−0.004 (0.009)	−0.005 (0.012)	0.003 (0.008)	0.006 (0.013)
HH head being male	0.012*** (0.004)	0.017*** (0.006)	−0.010*** (0.003)	−0.019*** (0.007)
HH in rural area	−0.004 (0.004)	−0.006 (0.006)	0.003 (0.004)	0.007 (0.007)
HH size	−0.003** (0.001)	−0.004** (0.002)	0.002** (0.001)	0.004** (0.002)
Experienced job loss	−0.071*** (0.007)	−0.102*** (0.009)	0.059*** (0.006)	0.113*** (0.010)
Located in lockdown areas	−0.002 (0.005)	−0.002 (0.007)	0.001 (0.004)	0.003 (0.008)
Observations	6,605	6,605	6,605	6,605
Country FE	Yes	Yes	Yes	Yes

continued on next page

Table continued

Variables	(1)	(2)	(3)	(4)	(5)
	Increase	No Change	Decrease by 25%	Decrease by 50%	Decrease by More Than 50%
Period Jun–Dec 2020	0.095*** (0.005)	0.159*** (0.006)	0.005*** (0.002)	−0.099*** (0.005)	−0.160*** (0.006)
SEC 2	0.017*** (0.005)	0.028*** (0.007)	0.002*** (0.001)	−0.015*** (0.004)	−0.032*** (0.008)
SEC 3	0.031*** (0.005)	0.047*** (0.008)	0.002*** (0.001)	−0.028*** (0.005)	−0.053*** (0.009)
SEC 4 (richest)	0.034*** (0.006)	0.050*** (0.008)	0.002** (0.001)	−0.030*** (0.005)	−0.056*** (0.009)
Income source: Agriculture	0.007 (0.007)	0.010 (0.009)	0.000 (0.000)	−0.006 (0.006)	−0.011 (0.010)
Income source: Business	−0.045*** (0.006)	−0.064*** (0.009)	−0.002** (0.001)	0.039*** (0.006)	0.072*** (0.010)
Income source: Wage	0.015** (0.006)	0.021** (0.009)	0.001* (0.000)	−0.013** (0.006)	−0.024** (0.010)
Income source: Government	0.024*** (0.007)	0.035*** (0.011)	0.001** (0.000)	−0.021*** (0.007)	−0.039*** (0.012)
Income source: Others	0.001 (0.007)	0.001 (0.010)	0.000 (0.000)	−0.001 (0.006)	−0.002 (0.011)
Multiple income sources	0.005 (0.007)	0.008 (0.011)	0.000 (0.000)	−0.005 (0.006)	−0.009 (0.012)
High school degree	0.001 (0.005)	0.001 (0.007)	0.000 (0.000)	−0.001 (0.004)	−0.001 (0.008)
More than high school degree	0.018*** (0.005)	0.025*** (0.007)	0.000 (0.000)	−0.016*** (0.005)	−0.028*** (0.008)
HH head aged 30–39	−0.011 (0.007)	−0.015 (0.010)	−0.000 (0.000)	0.010 (0.006)	0.017 (0.011)
HH head aged 40–49	−0.012 (0.007)	−0.016* (0.010)	−0.000 (0.000)	0.010 (0.006)	0.018* (0.011)
HH head aged 50–59	−0.008 (0.008)	−0.011 (0.010)	−0.000 (0.000)	0.007 (0.007)	0.012 (0.011)
HH head aged more than 60	−0.006 (0.009)	−0.007 (0.012)	−0.000 (0.000)	0.005 (0.008)	0.008 (0.013)
HH head being male	0.012*** (0.004)	0.018*** (0.006)	0.001** (0.000)	−0.011*** (0.004)	−0.021*** (0.007)
HH in rural area	−0.005 (0.004)	−0.007 (0.006)	−0.000 (0.000)	0.004 (0.004)	0.007 (0.007)
HH size	−0.003*** (0.001)	−0.004*** (0.002)	−0.000* (0.000)	0.002*** (0.001)	0.005*** (0.002)
Experienced job loss	−0.070*** (0.006)	−0.101*** (0.009)	−0.003*** (0.001)	0.061*** (0.006)	0.113*** (0.010)
Located in lockdown areas	−0.005 (0.005)	−0.007 (0.007)	−0.000 (0.000)	0.004 (0.004)	0.008 (0.008)
Observations	6,605	6,605	6,605	6,605	6,605
Country FE	Yes	Yes	Yes	Yes	Yes

Notes: Standard errors are in brackets. *, **, and *** denote statistically significant at 10%, 5%, and 1% confidence levels, respectively. We control for each country in the pooled sample (column 1). "Located in lockdown areas" for the Philippines was dropped due to multicollinearity as the variable only had two observations of "No," one for each of the first-wave survey and second-wave survey.

Source: Authors' estimation using ADBI database.

Determinants of Getting into Financial Difficulty (Total Sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables	All Countries	KHM	IDN	LAO	MYS	PHL	THA	VNM
Period Jun–Dec 2020	0.178*** (0.008)	0.449 (28.023)	−0.089*** (0.018)	0.012 (0.032)	0.328*** (0.025)	0.158*** (0.017)	0.198*** (0.016)	0.172*** (0.034)
SEC 2	−0.084*** (0.009)	−0.108 (6.238)	−0.050** (0.020)	−0.106*** (0.030)	−0.137*** (0.028)	0.001 (0.014)	−0.025 (0.018)	−0.187*** (0.030)
SEC 3	−0.120*** (0.010)	−0.117 (6.794)	−0.149*** (0.022)	−0.073** (0.037)	−0.196*** (0.034)	−0.022 (0.015)	−0.083*** (0.021)	−0.198*** (0.033)
SEC 4 (richest)	−0.203*** (0.011)	−0.189 (11.355)	−0.244*** (0.029)	−0.065** (0.032)	−0.318*** (0.032)	−0.113*** (0.021)	−0.165*** (0.026)	−0.349*** (0.032)
Income source: Agriculture	−0.026** (0.013)	−0.030 (1.781)	0.043 (0.031)	0.050 (0.032)	−0.107* (0.063)	−0.008 (0.019)	−0.064** (0.029)	−0.028 (0.038)
Income source: Business	0.039*** (0.012)	−0.011 (0.641)	0.084*** (0.024)	−0.009 (0.032)	0.063 (0.048)	−0.010 (0.019)	−0.007 (0.028)	0.056 (0.036)
Income source: Wage	−0.012 (0.012)	−0.047 (2.834)	0.005 (0.025)	0.056* (0.033)	−0.071 (0.047)	−0.041** (0.018)	−0.062** (0.029)	−0.008 (0.036)
Income source: Government	−0.017 (0.013)	−0.032 (1.924)	0.018 (0.030)	0.036 (0.048)	−0.059 (0.047)	−0.010 (0.018)	−0.060** (0.028)	−0.039 (0.040)
Income source: Others	0.000 (0.012)	−0.043 (2.627)	0.023 (0.026)	0.067** (0.033)	−0.000 (0.044)	−0.036** (0.017)	−0.048 (0.030)	0.041 (0.038)
Multiple income sources	0.007 (0.013)	0.030 (1.817)	0.021 (0.030)	−0.048 (0.037)	0.004 (0.054)	0.000 (0.019)	0.072** (0.032)	−0.023 (0.041)
High school degree	−0.009 (0.009)	0.023 (1.341)	−0.047* (0.025)	0.022 (0.031)	−0.080*** (0.030)	−0.011 (0.013)	−0.021 (0.024)	0.004 (0.029)
More than high school degree	−0.077*** (0.010)	−0.048 (2.914)	−0.082*** (0.026)	0.003 (0.031)	−0.118*** (0.027)	−0.059*** (0.015)	−0.044** (0.020)	−0.093*** (0.033)
HH head aged 30–39	−0.017 (0.012)	−0.004 (0.184)	−0.007 (0.034)	0.018 (0.034)	−0.071* (0.038)	−0.016 (0.018)	−0.022 (0.031)	0.049 (0.043)
HH head aged 40–49	−0.025** (0.013)	−0.060 (3.644)	0.021 (0.033)	0.031 (0.037)	−0.066* (0.039)	−0.012 (0.018)	0.000 (0.029)	0.006 (0.044)
HH head aged 50–59	−0.050*** (0.013)	−0.083 (5.142)	0.020 (0.037)	0.068 (0.042)	−0.127*** (0.039)	−0.021 (0.019)	−0.030 (0.030)	−0.047 (0.046)
HH head aged more than 60	−0.101*** (0.015)	−0.102 (6.343)	−0.079 (0.048)	−0.107** (0.045)	−0.096** (0.041)	−0.089*** (0.028)	−0.081** (0.033)	−0.090* (0.049)
HH head being male	−0.030*** (0.008)	−0.053 (3.223)	0.003 (0.017)	−0.071*** (0.026)	0.014 (0.030)	−0.007 (0.014)	−0.008 (0.017)	−0.086*** (0.025)
HH in rural area	−0.009 (0.008)	0.045 (2.756)	−0.014 (0.017)	−0.024 (0.028)	−0.044* (0.023)	−0.024* (0.013)	0.028* (0.017)	−0.059** (0.026)
HH size	0.015*** (0.002)	0.021 (1.209)	0.024*** (0.006)	0.004 (0.006)	0.018*** (0.006)	0.004 (0.003)	0.028*** (0.005)	0.022*** (0.007)
Experienced job loss	0.133*** (0.013)	0.240 (14.742)	0.081* (0.045)	0.188*** (0.033)	0.164*** (0.038)	0.037** (0.015)	0.097*** (0.032)	0.083** (0.040)
Located in lockdown areas	0.079*** (0.009)	0.153 (9.365)	0.047*** (0.018)	0.051* (0.030)	0.030 (0.020)		0.076*** (0.020)	0.025 (0.035)
Observations	13,555	1,917	2,077	1,808	1,916	1,993	1,981	1,861
Country FE	Yes							

Notes: Standard errors are in brackets. *, **, and *** denote statistically significant at 10%, 5%, and 1% confidence levels, respectively. We control for each country in the pooled sample (column 1). "Located in lockdown areas" for the Philippines was dropped due to multicollinearity as the variable only had two observations of "No," one for each of the first-wave survey and second-wave survey.

Source: Authors' estimation using ADBI database.

Factors Determining the Intensity of Online Course Taking (Total Sample)

	(1) Not Take	(3) Take Some	(4) Take All
Period Jun–Dec 2020	–0.109*** (0.006)	–0.211*** (0.012)	0.320*** (0.013)
SEC 2	0.004 (0.006)	0.005 (0.008)	–0.009 (0.014)
SEC 3	0.003 (0.006)	0.005 (0.009)	–0.008 (0.015)
SEC 4 (richest)	–0.005 (0.006)	–0.007 (0.009)	0.012 (0.016)
Income source: Agriculture	0.016* (0.009)	0.022* (0.012)	–0.039* (0.021)
Income source: Business	–0.000 (0.008)	–0.001 (0.011)	0.001 (0.018)
Income source: Wage	–0.016** (0.007)	–0.022** (0.010)	0.038** (0.018)
Income source: Government	–0.015* (0.008)	–0.021* (0.011)	0.035* (0.019)
Income source: Others	–0.006 (0.008)	–0.008 (0.011)	0.013 (0.019)
Multiple income sources	0.000 (0.008)	0.000 (0.011)	–0.000 (0.019)
High school degree	–0.017*** (0.006)	–0.024*** (0.008)	0.041*** (0.013)
More than high school degree	–0.017*** (0.005)	–0.024*** (0.008)	0.042*** (0.013)
HH head aged 30–39	–0.007 (0.011)	–0.008 (0.013)	0.015 (0.024)
HH head aged 40–49	–0.015 (0.011)	–0.020 (0.013)	0.035 (0.024)
HH head aged 50–59	–0.021** (0.011)	–0.029** (0.014)	0.050** (0.024)
HH head aged more than 60	–0.033*** (0.012)	–0.048*** (0.017)	0.080*** (0.028)
HH head being male	–0.003 (0.005)	–0.004 (0.007)	0.008 (0.012)
HH in rural area	0.005 (0.004)	0.007 (0.006)	–0.012 (0.011)
HH size	0.001 (0.001)	0.001 (0.002)	–0.002 (0.003)
Experienced job loss	0.004 (0.007)	0.006 (0.009)	–0.010 (0.016)
Located in lockdown areas	–0.025*** (0.006)	–0.035*** (0.008)	0.060*** (0.014)
Financial Difficulty	0.023*** (0.005)	0.033*** (0.008)	–0.056*** (0.013)
Country FE	Yes	Yes	Yes
Number of observations	4,640	4,640	4,640

Notes: Standard errors are in brackets. *, **, and *** denote significance level at 10%, 5%, and 1%, respectively. We control for country dummies.

Source: Authors' estimation using ADBI data.

Reasons for Not Fully Attending Online Classes

	(1) Household Chores/Working with the Family	(2) Not Having a Computer/iPad/ Tablet	(3) Not Having an Internet Connection	(4) Unstable Internet Connection
Period Jun–Dec 2020	−0.052*** (0.006)	−0.110*** (0.009)	−0.127*** (0.008)	−0.145*** (0.009)
SEC 2	−0.000 (0.008)	−0.014 (0.012)	−0.017 (0.011)	−0.007 (0.011)
SEC 3	−0.003 (0.008)	−0.018 (0.012)	−0.003 (0.011)	−0.014 (0.011)
SEC 4 (richest)	−0.008 (0.008)	−0.042*** (0.012)	−0.036*** (0.011)	−0.022* (0.012)
Income source: Agriculture	−0.001 (0.009)	0.024* (0.015)	0.015 (0.013)	−0.004 (0.012)
Income source: Business	−0.005 (0.008)	−0.013 (0.012)	−0.016 (0.011)	0.005 (0.011)
Income source: Wage	−0.018** (0.007)	−0.014 (0.012)	−0.018 (0.011)	−0.011 (0.011)
Income source: Government	−0.005 (0.009)	−0.001 (0.015)	−0.007 (0.014)	−0.006 (0.013)
Income source: Others	0.005 (0.008)	0.002 (0.012)	−0.006 (0.011)	0.011 (0.011)
Multiple income sources	0.012 (0.010)	−0.007 (0.015)	0.002 (0.014)	0.016 (0.014)
High school degree	0.005 (0.007)	−0.020* (0.011)	−0.034*** (0.010)	−0.019* (0.010)
More than high school degree	−0.006 (0.007)	−0.031*** (0.010)	−0.036*** (0.010)	−0.015 (0.011)
HH head aged 30–39	−0.039** (0.017)	0.000 (0.020)	0.001 (0.017)	−0.029 (0.020)
HH head aged 40–49	−0.039** (0.017)	0.003 (0.019)	0.002 (0.017)	−0.029 (0.020)
HH head aged 50–59	−0.050*** (0.017)	−0.013 (0.020)	−0.007 (0.018)	−0.027 (0.021)
HH head aged more than 60	−0.053*** (0.019)	−0.038* (0.023)	−0.033* (0.020)	−0.038 (0.024)
HH head being male	0.001 (0.005)	−0.004 (0.008)	−0.008 (0.008)	−0.000 (0.008)
HH in rural area	−0.000 (0.005)	0.013* (0.008)	0.008 (0.007)	0.019** (0.008)
HH size	0.003* (0.002)	0.006** (0.003)	−0.001 (0.003)	0.002 (0.003)
Experienced job loss	−0.014 (0.010)	0.057*** (0.018)	0.052*** (0.016)	−0.021 (0.015)
Located in lockdown areas	−0.000 (0.006)	−0.003 (0.008)	−0.018*** (0.007)	−0.003 (0.008)
Financial Difficulty	0.003 (0.007)	0.023** (0.010)	0.015* (0.009)	−0.002 (0.010)
Country FE	Yes	Yes	Yes	Yes
Number of observations	4,640	4,640	4,640	4,640

Notes: Standard errors are in brackets. *, **, and *** denote significance level at 10%, 5%, and 1%, respectively. We control for country dummies.

Source: Authors' estimation using ADBI data.

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