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# The Impact of COVID-19 on the welfare of households with children

An overview based on High Frequency Phone Surveys



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# KEY HIGHLIGHTS

This analysis focuses on the socioeconomic impacts of the Covid-19 in 35 developing countries on three types of households: Those with many (3 or more) children, those with few (1 or 2) children, and those with no children.

## INITIAL IMPACT

At the onset of the pandemic, households with many children were more likely than households with no children to:

- Suffer from **income loss**, with 76% of households with many children reported experiencing total income loss, versus 55% of households with no children.
- Suffer from food insecurity. 24% for households with many children reported an adult member who went without eating for the whole day due to lack of money or other resources, versus 14% of households with no children.
- Receive **social assistance**. 26% of households with many children reported receiving government assistance, versus 12% of households with no children.
- Not use **technology for education**. Only 4% of households with many children reported accessing mobile learning applications, compared with 11% of households with few children (one or two).
- Overall, participation in **educational** activities since school closure due to Covid-19 was low. Among households with children who attended school before school closure, less than 60% of households reported children participating in any educational activities after the school closure due to the Covid-19 outbreak

## EVOLUTION OF IMPACT

Exploring the evolution of impact shows that households with many children are:

- Experiencing higher rates of **income loss** than households with no children, although the differences between groups are not statistically significant.
- Experiencing higher rates of **food insecurity** than households with no children, although both moderate and severe food security indicators show decreasing trends for all households.
- Are more likely to receive **government assistance**, as the share of households receiving government assistance increased for all households 6 to 9 months after the peak stringency of the government response.

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# Contents

<b>Introduction</b>	<b>5</b>
<b>Data</b>	<b>7</b>
<b>Initial Impact of COVID-19 on Children’s Welfare</b>	<b>9</b>
Initial Impact of COVID-19 on Food Insecurity	11
Social Protection at the Onset of the Pandemic	12
Education at the onset of the crisis	13
<b>Evolution of the Impact of the Pandemic on Children’s Welfare</b>	<b>17</b>
Evolution of Impact on Income Loss and Job Loss	18
Evolution of Food Insecurity	18
Evolution of Receipt of Social Protection	19
<b>Conclusion</b>	<b>20</b>
<b>Appendix 1. List of Available Indicators</b>	<b>21</b>
<b>Appendix 2. List of Indicator Topics Available in the COVID-19 Monitoring Dashboard</b>	<b>22</b>
<b>Appendix 3. List of Available Survey Included in the Analysis</b>	<b>23</b>
<b>Appendix 4. Summary Statistics for Key Indicators in Section 1 (unconditional results)</b>	<b>24</b>
<b>Appendix 5. Predicted Margins for Section 1 Robustness Check (controlling for education of the respondent, urban/rural, and state/province, standard errors in parentheses)</b>	<b>25</b>
<b>References</b>	<b>26</b>





## Introduction

Children are disproportionately affected by poverty, whether measured in monetary or multidimensional terms. Prior to COVID-19, 1 in 6 children, or 356 million children in total, lived in extreme poverty, struggling to survive on less than PPP \$1.90 per day. Meanwhile, nearly 1 billion children in multidimensional poverty in developing countries, suffering from at least one severe deprivation in education, health, education, housing, nutrition sanitation and water.<sup>1 2</sup> When looking at a slightly higher poverty threshold of PPP USD 3.20 per day per person, a staggering 841 million or 41.5 percent of children worldwide live in households with income/ consumption levels equivalent to moderate poverty, compared with 23.5 percent of adults aged 18 and over.

Furthermore, households with young children are the most affected by extreme poverty (PPP \$1.90/day), 19.7 percent of children aged 0-4 years were in extreme poverty before the pandemic, compared to 12.9 percent of children aged 15 to 17 and 7.9 percent of adults ages 18 years and above. At the same time the vast majority of children have no effective social protection coverage, three out of four children globally are not covered by any type of social protection.<sup>3</sup>

The effects of the Covid-19 pandemic have been widespread and disproportionately affected vulnerable segments of the population, already in poverty or vulnerable to falling into poverty, including children and their families. The modest progress made in reducing child poverty has been reversed in all parts of the world by COVID-19.<sup>4</sup> The pandemic is projected to have pushed an additional 150 million children into multidimensional poverty at the height of the pandemic by end of 2020.<sup>5</sup> Various studies have highlighted this impact of the crisis on children and child poverty, both monetary and multidimensional. These studies typically rely on household surveys conducted prior to the crisis and use these surveys for various projections and simulations, based on multiple assumptions of the duration and severity of the crisis.

- <sup>1</sup> Silwal, Ani Rudra; Engilbertsdottir, Solrun; Cuesta Leiva, Jose Antonio; Newhouse, David Locke; Stewart, David. Global Estimate of Children in Monetary Poverty : An Update (English). Poverty and Equity discussion paper Washington, D.C.: World Bank Group. (2020, October).
- <sup>2</sup> Impact of COVID-19 on multidimensional child poverty. UNICEF. (2020, September). Retrieved January 23, 2022, from <https://data.unicef.org/resources/impact-of-covid-19-on-multidimensional-child-poverty/>
- <sup>3</sup> International Labour Office. World Social Protection Report 2020–22: Social Protection at the Crossroads – in Pursuit of a Better Future. Geneva: ILO, 2021.
- <sup>4</sup> Richardson, Dominic, Carraro, Alessandro, Cebotari, Victor, Gromada, Anna, and Rees, Gwyther. Supporting Families and Children Beyond COVID-19: Social protection in high-income countries. Innocenti, Florence: UNICEF Office of Research, 2020.
- <sup>5</sup> Impact of COVID-19 on multidimensional child poverty. UNICEF. (2020, September). Retrieved January 23, 2022, from <https://data.unicef.org/resources/impact-of-covid-19-on-multidimensional-child-poverty/>





The High Frequency Phone Surveys (HFPS) coordinated by the World Bank, however, offer an opportunity to analyze the actual impact of the crisis on the welfare of households with children, providing real-time information to inform and guide policies and programs to address the socio-economic impacts of the crisis. The HFPS database is being used to explore the impact of the pandemic across a range of issues, for example how the pandemic initially had major impacts on labor markets (Khamis et al, 2021), has impacted different types of workers in developing countries – showing that larger shares of female, young, less educated and urban workers stopped working (Kugler et al. 2021)<sup>6</sup>; and these groups (women, youth and lower-educated workers) which were already disadvantaged in the labor market before the COVID-19 shock—were significantly more likely to lose their jobs and experience decreased incomes (Bundervoet et al. 2021)<sup>7</sup>. At the same time the gendered effects of the crisis were less pronounced in some countries, in particular those with extremely stringent lockdown measures, for example in Colombia analysis shows that women fared similarly to men in terms of the share of occupied workers affected (Cuesta et al. 2020).<sup>8</sup>

This paper contributes to this growing literature on the impacts of the COVID-19 shock by focusing solely on the impact of the crisis on children, drawing on information from a set of High Frequency Phone Surveys from 35 countries<sup>9</sup>. We analyze the initial impact of the crisis (with survey data collected during the period April to September 2020) as well as the subsequent evolution of the impact of the crisis (with survey data collected during the period October 2020 to May 2021. Based on data availability, we focus on the following harmonized key indicators of children’s welfare covering both their individual conditions as well as those of the household they live : (i) Income loss and job loss; (ii) Food insecurity (households reporting an adult member didn’t eat for a whole day or skipped a meal due to lack of money/resource)<sup>10</sup>; (iii) Social protection programs<sup>11</sup> (whether households have received any government assistance since the beginning of the pandemic); and (iv) Education (participation in educational activities following closures due to COVID-19). These measures are compared between households without children, households with one or two children, and households with three or more children. Finally, we explore whether there are differences in the pace of the recovery between households with and without children.

# Data

To analyze the impact of the crisis on children’s welfare, in particular children in poverty, we used data from the High Frequency Phone Survey supported by the World Bank since the beginning of the Covid-19 pandemic. The field work of these data typically took 1-2 months and occurred between April to September 2020. Since each country adopted country-specific questionnaires (adjusted from the core questionnaire), the collected data are harmonized by the World Bank and included in the Covid-19 Household Monitoring Dashboard, which as of December 2021 included 143 harmonized indicators on 16 topics for 72 countries.

The High Frequency Phone Surveys were implemented by making phone calls to respondents, who answer on behalf of the household for indicators measured at the household level, and on behalf of themselves for indicators measured at the individual level (adult level, not child level except for education related questions). Two types of sampling methods were adopted: Taking samples from previous nationally representative surveys and random digit dialing, with the latter typically employed in the Latin America and the Caribbean region. The weights in the High Frequency Phone Survey were adjusted so that the weighted results of household indicators are nationally representative of households, but the sampling method is still subject to two major limitations in terms of data representativeness. First, the survey by design excludes the portion of the population that does not have access to phones and a stable phone network. Secondly, for countries that used an existing nationally representative surveys as a survey frame, the respondents tend to be household heads and are therefore more likely to be male and older in general. As a result, indicators measured at individual level are likely to be

biased and differ from other nationally representative surveys.<sup>12</sup> Across the full set of phone surveys with information on the respondent’s relation to head, 69% of the respondents were the household head, 16% of the respondents were the spouse of household head, 10% were children of the household head, and 5% were other relatives or non-relatives of the household head. The average age of respondents in existing surveys is approximately 45 years old.

Out of the 72 countries for which surveys were fielded, 35 contain information on the number of children in a household necessary for this analysis. Of the 35 countries, 20 are from Sub-Saharan Africa, 6 from Europe and Central Asia, 6 from East Asia and Pacific, 2 countries from Middle East and North Africa, and one country from Latin America. For this analysis the focus is on these 35 countries with information on the number of children in a household, which account for a combined population of approximately 1.21 billion people. Among the 35 countries, 13 are low-income countries, 13 are lower middle-income countries, 5 are upper middle-income countries, and 4 are high income countries.

To explore the impact of the crisis on children’s welfare, the analysis compares households according to how many children they have and various welfare proxies. Comparing households with no children versus households with many children is also a proxy for poverty status, because households with many children tend to be poorer than households with no or few children. For the analysis on the evolution of the impact, a total of 132 waves of surveys from 32 countries were used, and were organized as four quarters after peak month of Covid-19 based on the Oxford Covid-19 Stringency Index.

6 Kugler, Maurice; Viollaz, Mariana; Duque, Daniel; Gaddis, Isis; Newhouse, David; Palacios-Lopez, Amparo; Weber, Michael. 2021. How Did the COVID-19 Crisis Affect Different Types of Workers in the Developing World?. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/35823> License: CC BY 3.0 IGO.

7 Bundervoet, Tom; Davalos, Maria E.; Garcia, Natalia. 2021. The Short-Term Impacts of COVID-19 on Households in Developing Countries: An Overview Based on a Harmonized Data Set of High-Frequency Surveys. Policy Research Working Paper; No. 9582. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/35290> License: CC BY 3.0 IGO.

8 Cuesta, Jose, and Pico, Julieth. The Gendered Poverty Effects of the COVID-19 Pandemic in Colombia. Eur J Dev Res 32, 1558–1591 (2020). <https://doi.org/10.1057/s41287-020-00328-2>

9 High frequency phone surveys are available for a total of 83 countries. However, we were limited to using surveys which included information on households with and without children, including the number of children, as well as surveys with harmonized indicators on the topics and time period explored in this analysis. The 35 countries included in this analysis met these requirements.

10 The HFPS data does not include information on food intake at level of child, nor allows disaggregation by gender

11 This does not include comprehensive overview of social protection, but various questions related to social assistance, for example whether received any form of government assistance since start of the pandemic, and/or after losing a job and/or after reducing food consumption.

12 Bundervoet, Tom; Davalos, Maria E.; Garcia, Natalia. 2021. The Short-Term Impacts of COVID-19 on Households in Developing Countries: An Overview Based on a Harmonized Data Set of High-Frequency Surveys. Policy Research Working Paper; No. 9582. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/35290> License: CC BY 3.0 IGO.





## Initial Impact of COVID-19 on Children's Welfare

In this section, we analyze the initial impact of Covid-19 on children by conducting summary statistics on key indicators of interest using the first round of data collected in 35 countries with available data on number of children in the household. To check the robustness of the results, we also estimate a logit regression model to try to better distinguish the effect of households with children after controlling for predetermined proxies of welfare. These proxies include the level of education of the respondent, urban/rural location, and state/province. We use the regression results to examine the average predicted value of different outcomes according to the number of children in the household (see appendix 4).

The main finding from this analysis on the initial impact of the crisis is that total income declines were more prevalent among households with many children during the early onset of the pandemic.

### INITIAL IMPACT OF COVID-19 ON INCOME LOSS AND JOB LOSS

The analysis on the initial impact on income and job loss shows that households with few children or households with many children were more likely than households with no children to suffer from total income loss since the onset of the pandemic. When asked how total household income changed since the start of the Covid-19 outbreak, the average share of households experiencing total income loss is 55% among households with no children, 68% among households with few children, and 76% among households with many children. The share of households reporting total income loss is significantly higher in households with children, compared to households with no children<sup>13</sup>. When controlling for welfare proxies including level of education of the respondent, urban/rural location and state/province, the predicted margins indicate that the share of households reporting total income loss is 5 to 7 percentage points higher among households with children compared to households with no children. However, the difference between households with few children and many children is only about 2 percentage points and is not statistically significant.

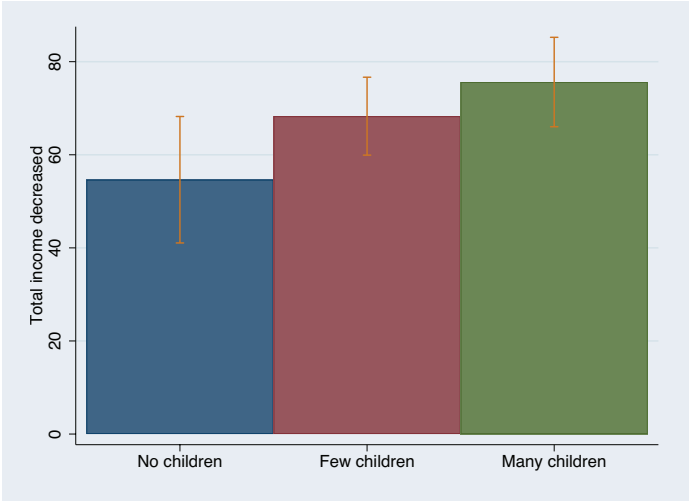
<sup>13</sup> The standard error used to estimate the significance of the difference is grouped by country. This is the case for all the subsequent statements regarding the significance of the difference between groups in this note.



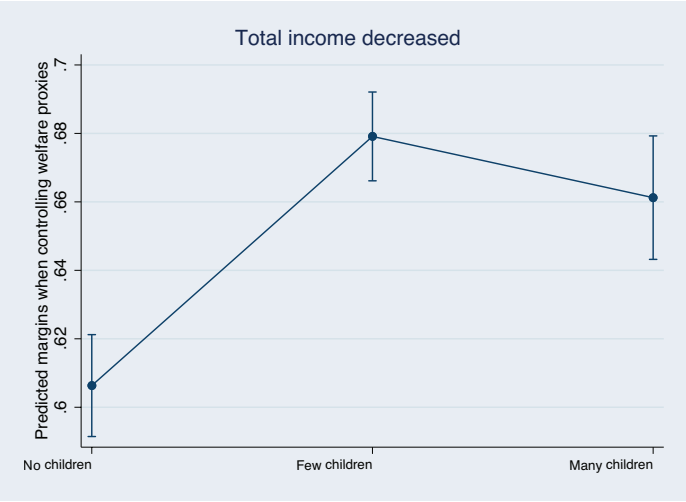
Photo: World Bank / Heritsoa Rafalia



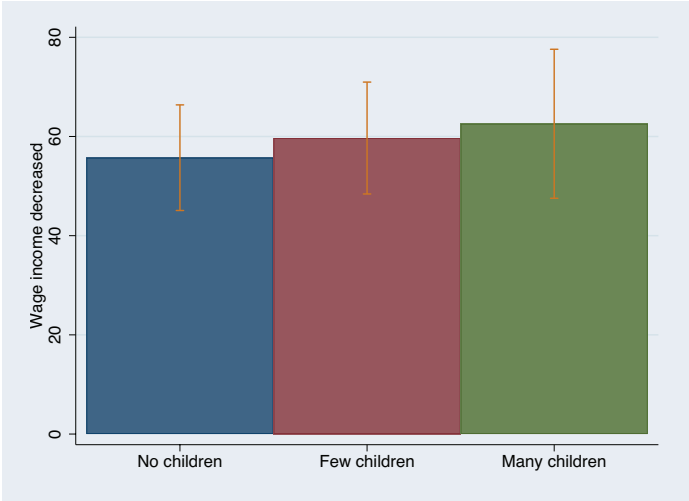
**Graph 1** Share of households reporting total income loss



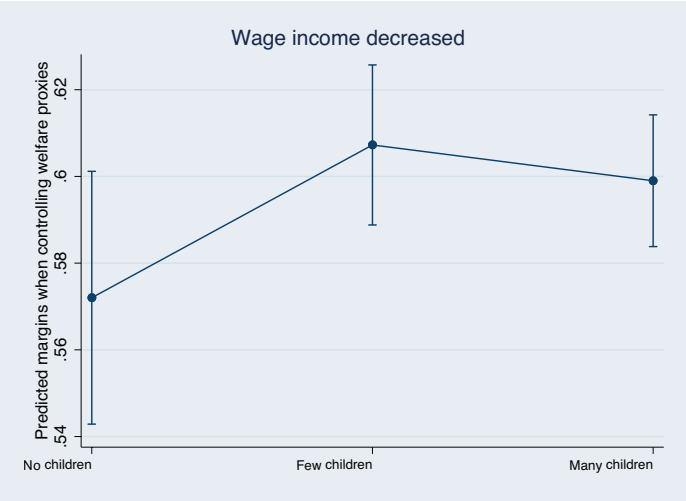
**Graph 2** Predicted margins for total income loss



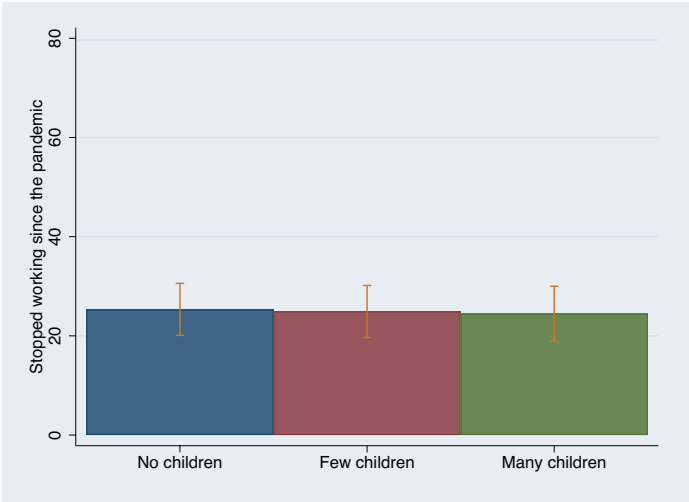
**Graph 3** Share of households reporting wage income loss



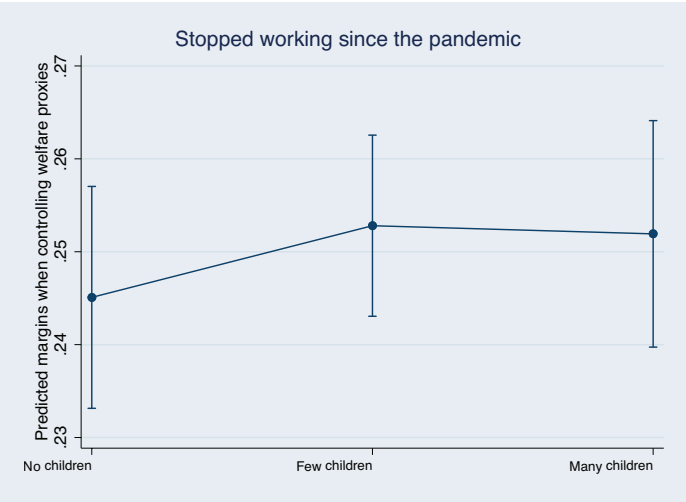
**Graph 4** Predicted margins for wage income loss



**Graph 5** Share of respondents reporting labor stoppage



**Graph 6** Predicted margins for labor stoppage



Similarly, the average share of households experiencing wage income loss is 56% for households with no children, 60% for households with few children, and 63% for households with many children. The difference, however, is not statistically significant, both unconditionally and after controlling for predetermined welfare proxies.

Shifting to work stoppage (whether the respondent to the phone survey stopped working after the pandemic), there is no significant difference between the three groups: 25% of respondents from households with no children and households with few children reported stopped working since

the beginning of the pandemic, while the number is 24% for households with many children. When controlling for welfare proxies, the difference is still not statistically significant.

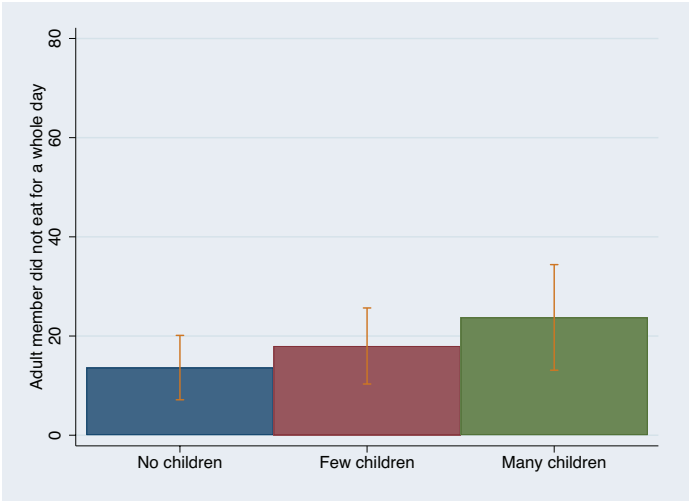
In sum, during the initial phase of the crisis, households with children were more likely to report total income declines compared to households with no children. There is also no statistically significant difference in terms of wage income loss and labor stoppage among the three groups. Finally, differences in the rate of work stoppage of the respondent are similar for households with no and many children.

## INITIAL IMPACT OF COVID-19 ON FOOD INSECURITY

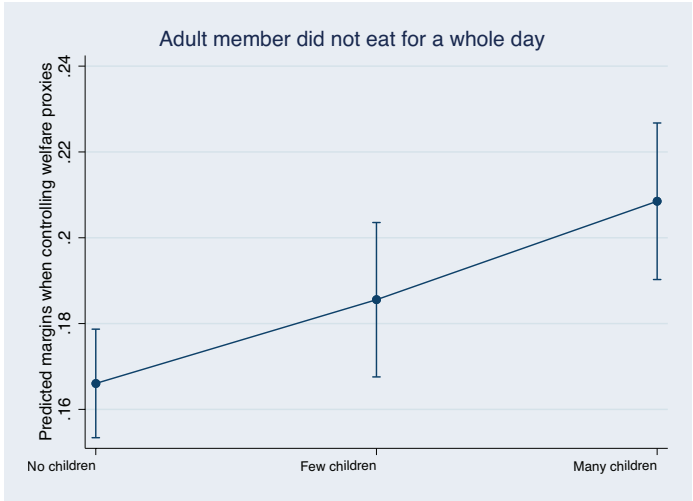
To monitor food insecurity, the High Frequency Phone Survey questionnaire uses FAO’s Food Insecurity Experience Scale survey module, which asks respondents 8 questions regarding food security during the past 30 days prior to the interview.<sup>14</sup> The results indicate that households with children are more likely to suffer from food insecurity. On average, 14% of households with no children reported an adult member who went without eating for the whole day due to lack of money or other resources, but this rises to 18% for households with few children, and 24% for households with many children, which is significantly higher compared to households with no children. When controlling for predetermined welfare proxies, the differences between the three groups are smaller. Nonetheless, the difference

between households with many children and no children is approximately 4 percentage points and is statistically significant. When asked whether an adult member in the household skipped a meal due to lack of money or other resources, The percentage of households that responded “yes” is 41% for households with no children, 47% for households with few children, and 50% for households with many children. The difference between groups, however, is not statistically significant. When controlling for welfare proxies, the results are similar and the differences are statistically significant, except for the difference between households with few and many children. This is consistent with the fact that households with more children are more likely to be poor and are more likely to report food insecurity.

**Graph 7** Share of households with adult member who did not eat for a whole day

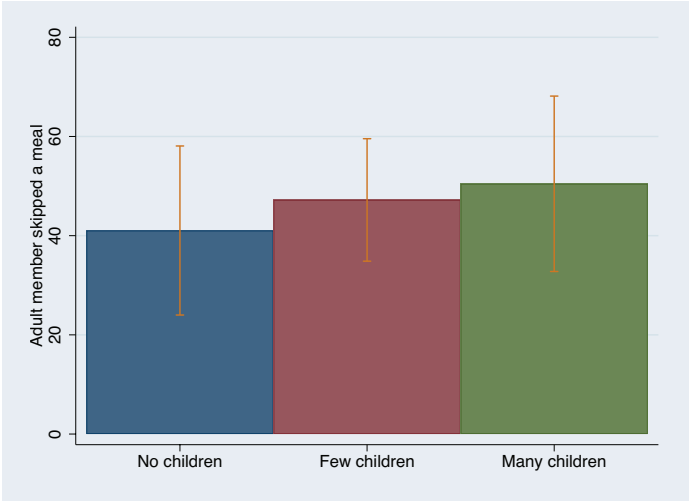


**Graph 8** Predicted margin for households with adult member who did not eat for a whole day, controlling welfare proxies



14 These questions were only asked for adult members of households, not children

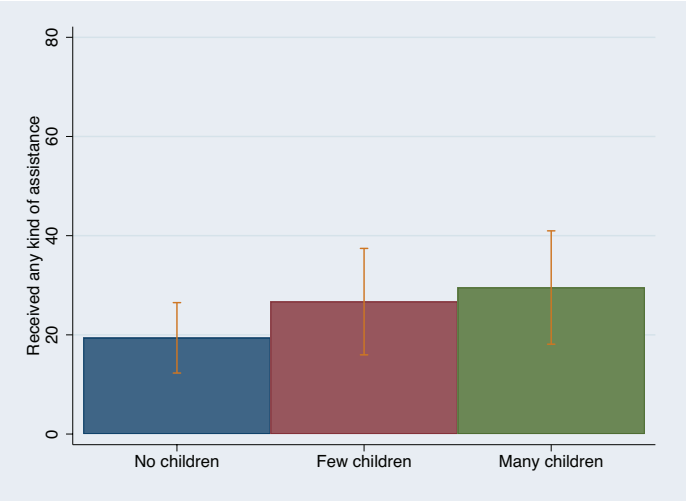
**Graph 9** Share of households with adult member who skipped a meal



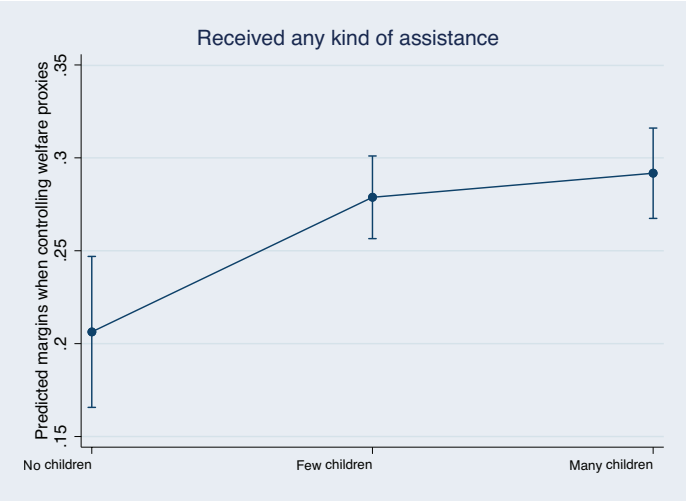
**Graph 10** Predicted margins for share of households with adult member who skipped a meal



**Graph 13** Share of households received any assistance



**Graph 14** Predicted margins for receiving any assistance

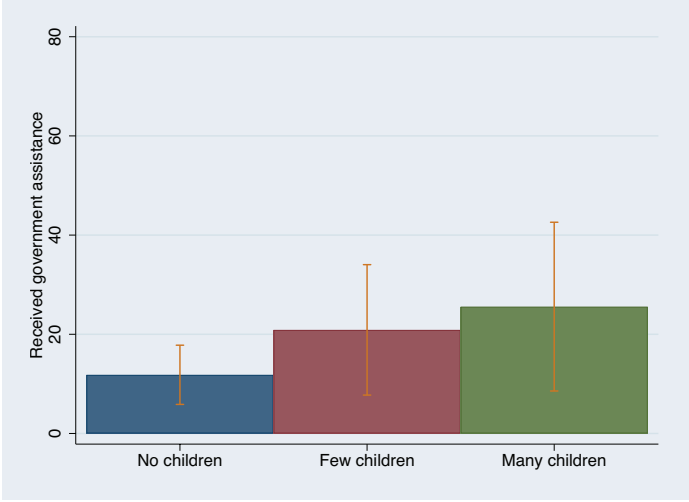


SOCIAL PROTECTION AT THE ONSET OF THE PANDEMIC

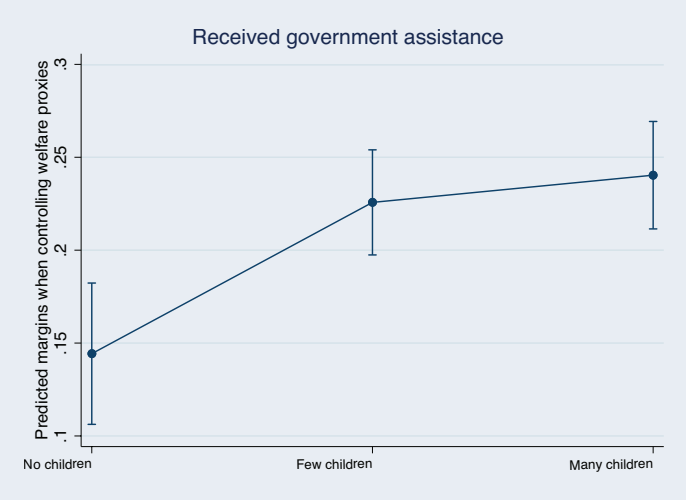
The High Frequency Phone Surveys include multiple indicators related to social assistance, including whether households have received government assistance or any source of assistance since the onset of the pandemic<sup>15</sup>. Households with many children were more likely to receive government assistance: The percentage of households reporting receiving government assistance since the beginning of the pandemic is 26% for households with many children, 21% for households with few children, and 12% for households with no children. Similarly, the percentage of households receiving any kind of

assistance is 30% for households with many children, 27% for households with few children, and 19% for households with no children. In both cases, after controlling the predetermined welfare proxies, households with children are about 7 to 9 percentage points more likely to report having received any social assistances, compared to households with no children (Graph 14). In addition, there is no discernable difference in the share of households receiving government and social assistance between households with few children and households with many children.

**Graph 11** Share of households received government assistance



**Graph 12** Predicted margins for government assistance



EDUCATION AT THE ONSET OF THE CRISIS

The phone survey includes a range of questions to analyze the impact of the pandemic on education. For the education-related analysis, we cannot compare households without children versus households with children, as education indicators only pertain to households with children. We therefore explore the difference between households with few children versus households with many children.

In general, participation in any educational activities since school closure due to Covid-19 is low, for both households with few and many children. Among households with children who attended school before school closure, around 53% of households reported children participating in any educational activities after the school closure due to the Covid-19 outbreak. The activities include completing school assignments, listening to educational radio, watching educational TV programs, using mobile application for learning, meeting with tutors or teachers, and other educational activities. Because the data is compiled at the household level, it overestimates the average participation rate across all children, especially for children who come from households with many children.

Of the households with few children, 14% reported that children completed a teacher-provided assignment, while for households with many children, the number drops to 10%. A higher percentage (11%) of households with many children

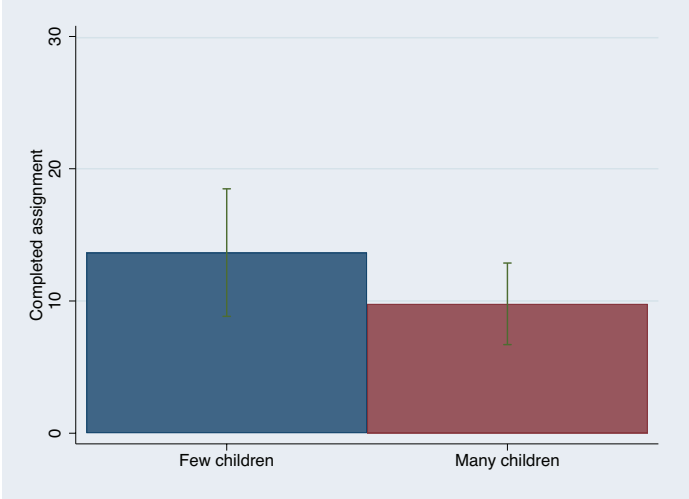
reported children listening to educational radio compared to households with few children (8%). However, children from households with few children have more access to alternative educational activities that require high technology, including educational TV program (20% for households with few children and 18% for households with many children) and mobile learning application (11% for households with few children and 4% for households with many children). Overall, from the unconditional results, children in households with many children were more likely to listen to educational radio, less likely to complete assignments, and much less likely to use a mobile app for learning.

Many of these differences disappear, however, after controlling for predetermined welfare proxies including education level of the respondent, urban/rural and state/province. There is less than half a percentage point difference in the share of households with many and few children completing an assignment given by the teacher. In no case is the difference greater than 2 percentage point, and only for listening to radio is the difference close to being statistically significant. Although families with more children are less likely to be engaged in educational activities than households with few children overall, these differences are mainly due to differences in the location of residence and education of these two groups, rather than the number of children in the household per se.

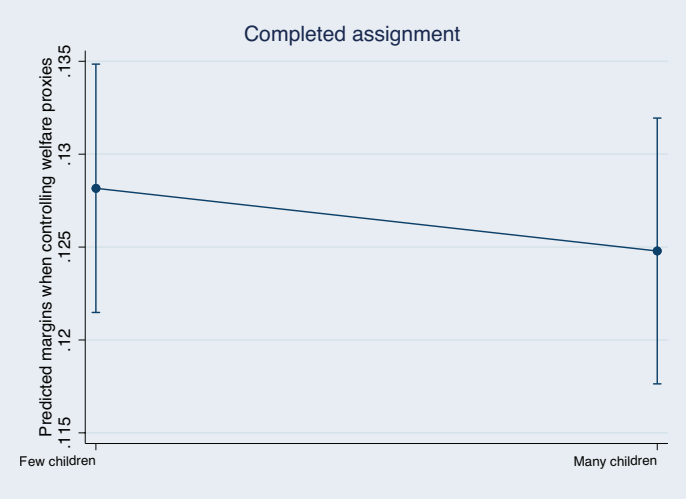
15 The indicators on social assistances do not differentiate existing programs and new programs but only reflect whether households received assistances since the reference period. The reference period in the first wave is “since the beginning of the pandemic”, and “since last round of interview” in subsequent waves.



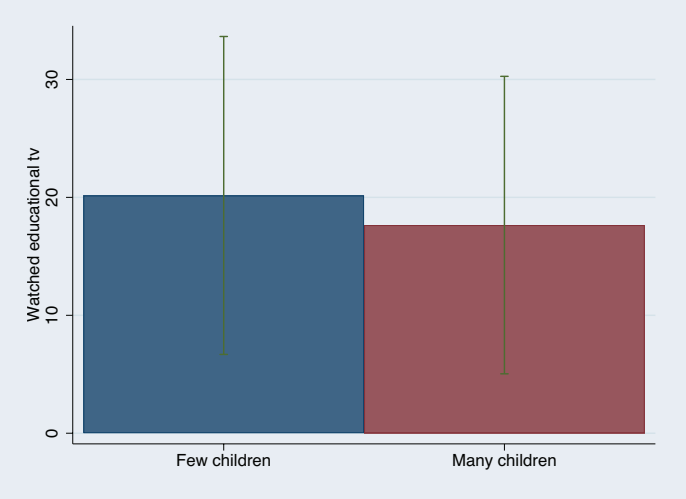
**Graph 15** Share of households with children who completed assignment after school closure



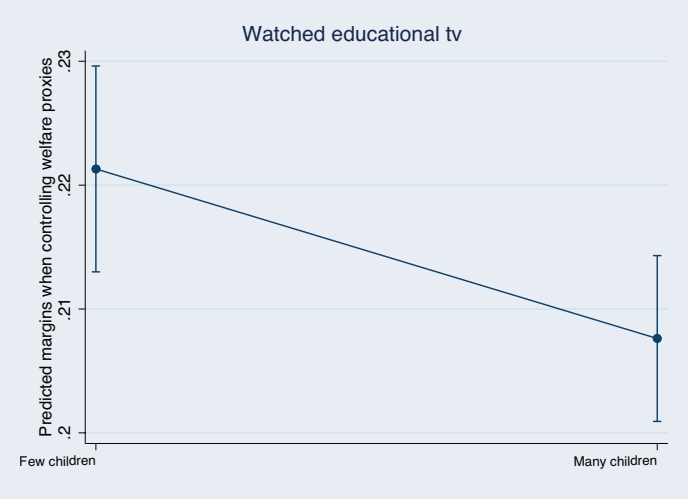
**Graph 16** Predicted margins for share of households with children who completed assignments after school closure



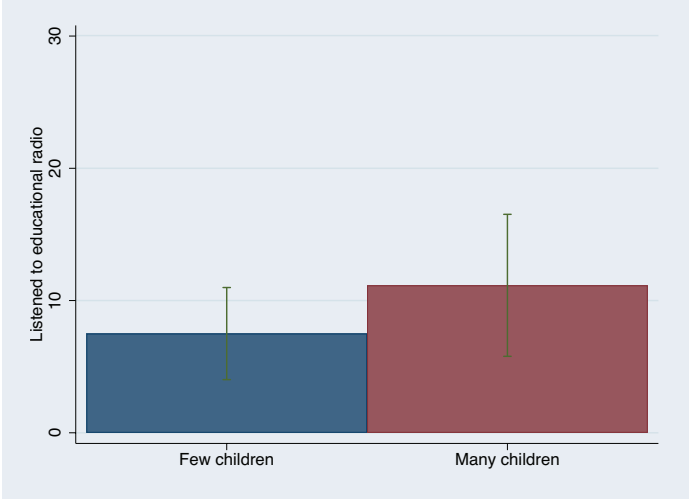
**Graph 19** Share of households with children who watched educational TV after school closure



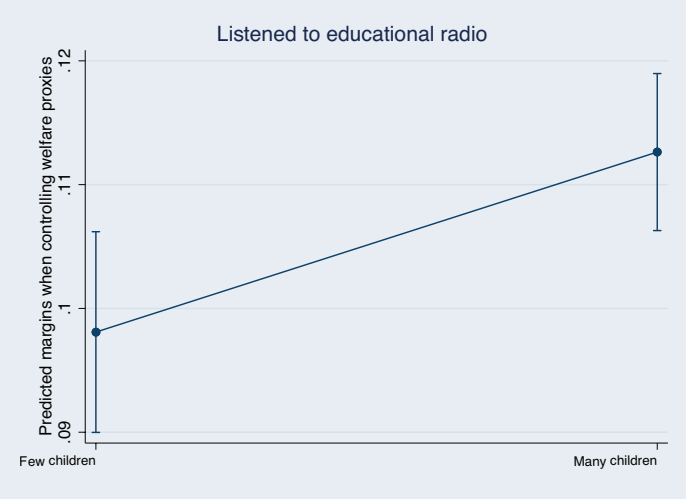
**Graph 20** Predicted margins for share of households with children who watched educational TV after school closure



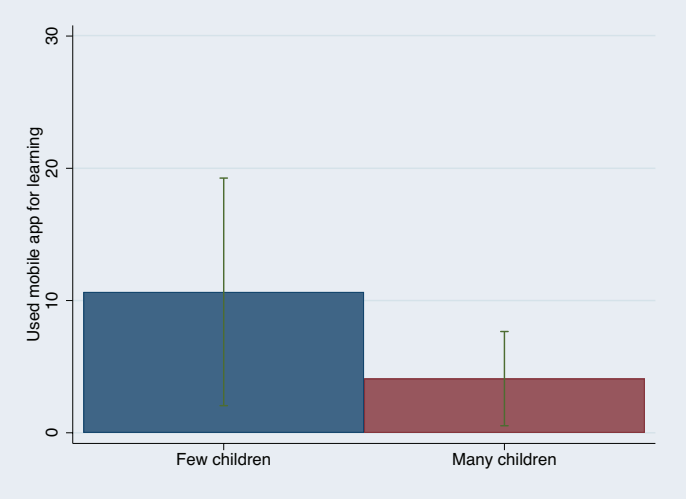
**Graph 17** Share of households with children who listened to educational radio after school closure



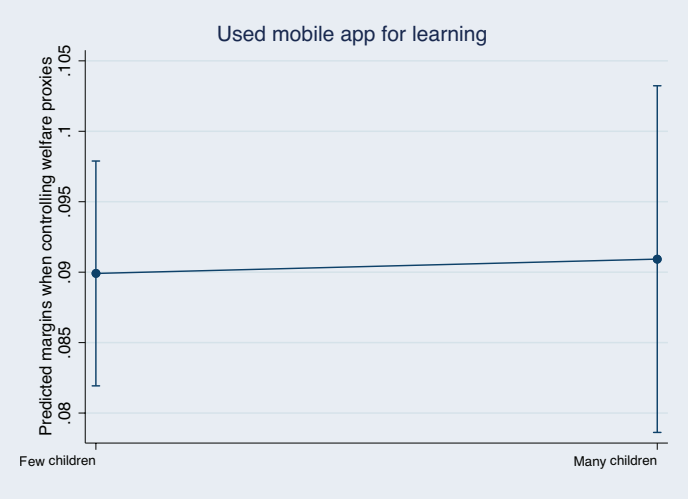
**Graph 18** Predicted margins for share of households with children who listened to educational radio after school closure



**Graph 21** Share of households with children who used mobile app for learning after school closure



**Graph 22** Predicted margins for share of households with children who used mobile app for learning after school closure







## Evolution of the Impact of the Pandemic on Children's Welfare

The above analysis has focused on the cross-sectional analysis of the initial impact of the pandemic using the first wave of the survey for each country. To analyze the evolution of the impact of Covid-19, we used 132 surveys from the 32<sup>16</sup> countries with information on the number of children in the households. The goal of the analysis is to investigate trends in income loss, employment, food insecurity, and social protection as the pandemic evolved. To examine the trends, we estimate the following model:

$$y_{hct} = \alpha f(t) + \beta f(t) * Children_h + \theta_c + \varepsilon_{ct}$$

$Y_{h(c)t}$  is the outcome of interest observed in household  $h$ , country  $c$ , and period  $t$ , and in this case is one of six indicators: “share of households receiving decreased total income”, “share of respondents currently employed”, “share of households with adult member skipped a meal due to lack of money or other resources”, “share of households with adult member who did not eat for a whole day”, “share of households receiving government assistance” and “share of households receiving any source of assistance”.

On the right-hand side of the equation,  $\alpha f(t)$  captures the time after the peak month of the pandemic, ranging from quarter 1 to 4. To account for the different time frame in terms of data collection and the evolution of pandemic in each country, we used the Oxford COVID-19 Government Response Stringency Index to determine the peak month of Covid-19 pandemic in 2020 and organize waves of available surveys according to quarters after the peak month<sup>17</sup>. The Stringency Index shows the aggregated scores of policy stringency based on the Oxford COVID-19 Government Response Tracker, which collected information on policy measure taken by governments in response to the COVID-19 pandemic.<sup>18</sup> For example, if a country collected two surveys in June and October 2020, and the Oxford Stringency Index of that country peaked in May 2020, the survey collected in June would be assigned as  $T=1$  because it was collected within the first three months after the peak month. Similarly, the survey collected in October would be assigned  $T=2$  because it was collected in the second quarter after the peak month. The second term  $f(\cdot)$

<sup>16</sup> Three countries (Saint Lucia, Gabon, Lebanon) were included in section 1, but were excluded in section 2. For Saint Lucia, the Oxford Stringency Index used to benchmark quarters after the peak month was not available. For Gabon and Lebanon, the peak months of COVID-19 came after the data collection date.

<sup>17</sup> Since data collection started in 2020 for most countries, peak months in this analysis were determined based on the Oxford Stringency Index in 2020.

<sup>18</sup> Thomas Hale, Noam Angrist, Rafael Goldszmidt, Beatriz Kira, Anna Petherick, Toby Phillips, Samuel Webster, Emily Cameron-Blake, Laura Hallas, Saptarshi Majumdar, and Helen Tatlow. (2021). “A global panel database of pandemic policies (Oxford COVID-19 Government Response Tracker).” *Nature Human Behaviour*. <https://doi.org/10.1038/s41562-021-01079-8>



Photo: World Bank / Henitsoa Rafailia



is the cubic polynomial of time (in quarter) interacted with the number of children in the household. The term for number of children is organized as three categories: households with no children, households with few children, and households with many children. The term  $\theta_c$  captures the country fixed effect, with each country defined as a binary variable. Thus, the  $af(t)$  term captures the evolution of the outcome of interest

EVOLUTION OF IMPACT ON INCOME LOSS AND JOB LOSS

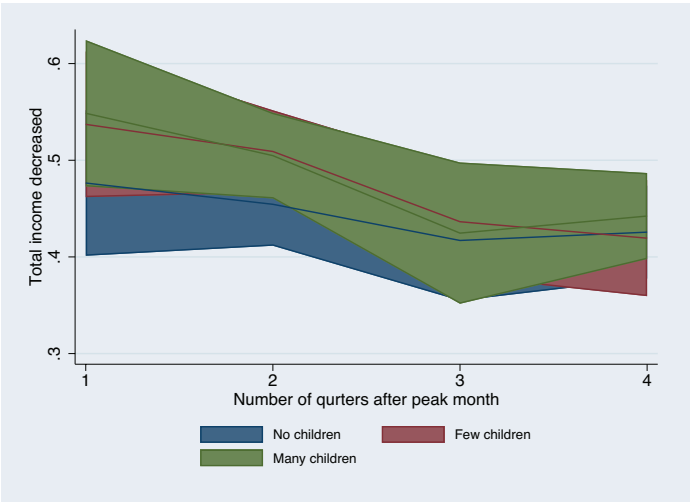
Over time, the percentage of households reporting total income loss shows a decreasing trend, which signals a partial recovery from the crisis. However, there is no statistically discernable difference in terms of recovery speed or pattern between groups.

In terms of employment, the estimated share of employed respondents is the highest among households with many

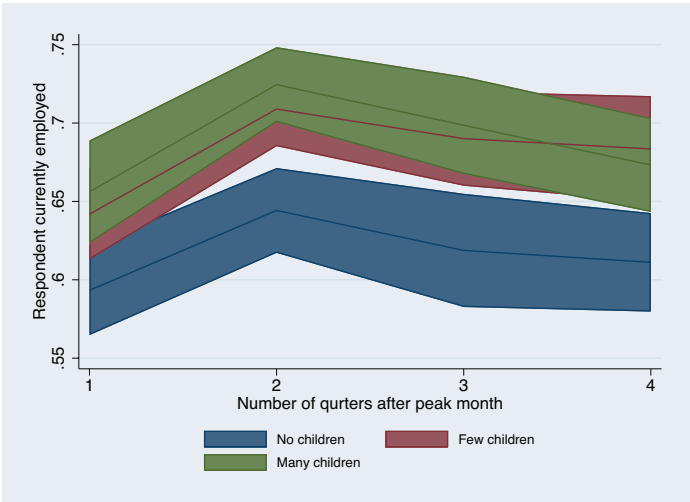
for households with no children relative to the baseline period. The  $af(t)+\beta f(t)*Children_{hr(c)}$  term captures the same information for households with few and many children. Finally,  $\varepsilon_{ct}$  is the error term, clustered at the country level. Using this model, we can examine the average predicted margins of the coefficients for households with different number of children, across quarters after the peak month.

children, and the lowest among households with no children in the first three quarters. Although the differences between households with few children and households with many children are not statistically significant, the differences between households with children and households with no children are statistically significant in all four quarters. In general, the employment rate increased from quarter 1 to quarter 2, but then started to show a decreasing trend afterwards.

Graph 23 Evolution of estimated margin for total income loss



Graph 24 Evolution of estimated margin for current employment of respondent

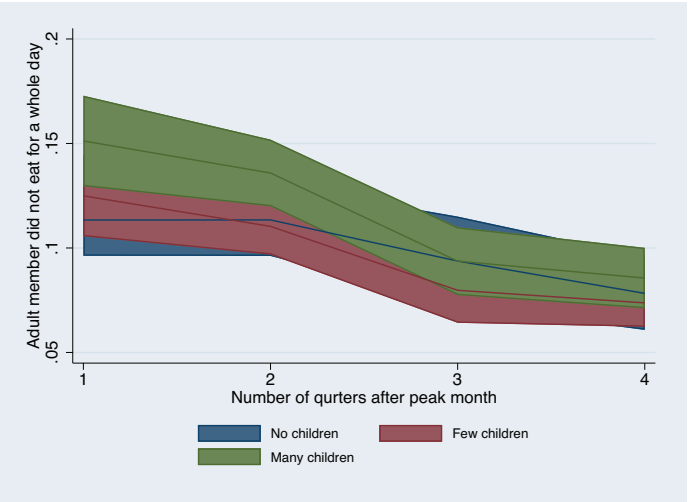


EVOLUTION OF FOOD INSECURITY

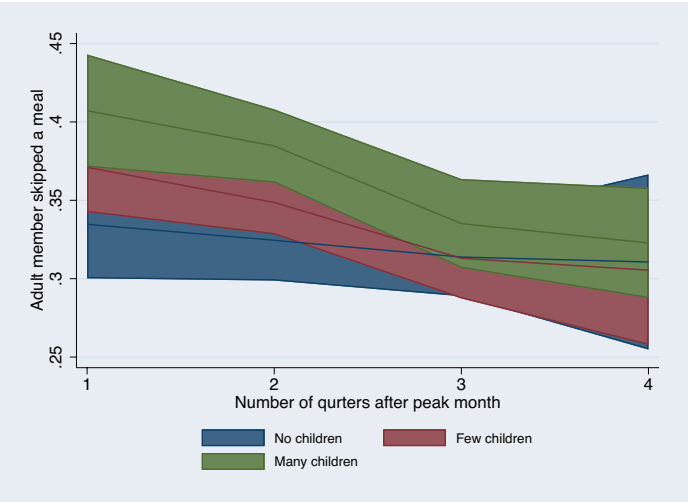
Households with many children were hit the hardest in terms of food insecurity at the onset of the pandemic. Overall, both severe food insecurity indicator like “adult member did not eat for a whole day” and the more moderate food insecurity indicator “adult member skipped a meal” show a decreasing

trend until quarter 3. However, there is no discernable difference between groups.

Graph 25 Evolution of estimated margin for adult member did not eat for a whole day



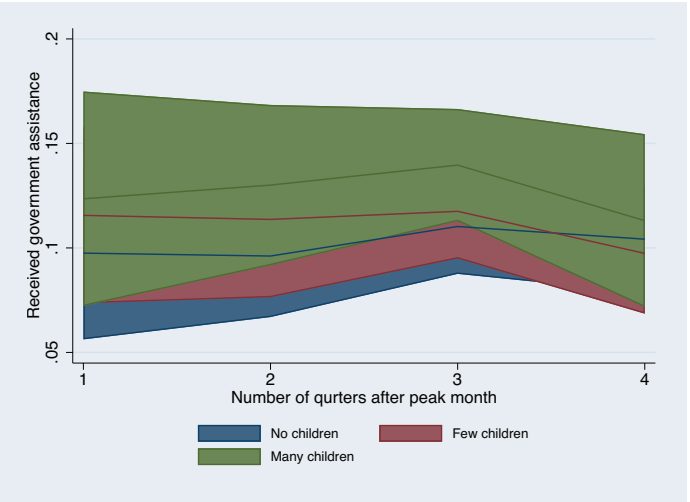
Graph 26 Evolution of estimated margin for adult member skipped a meal



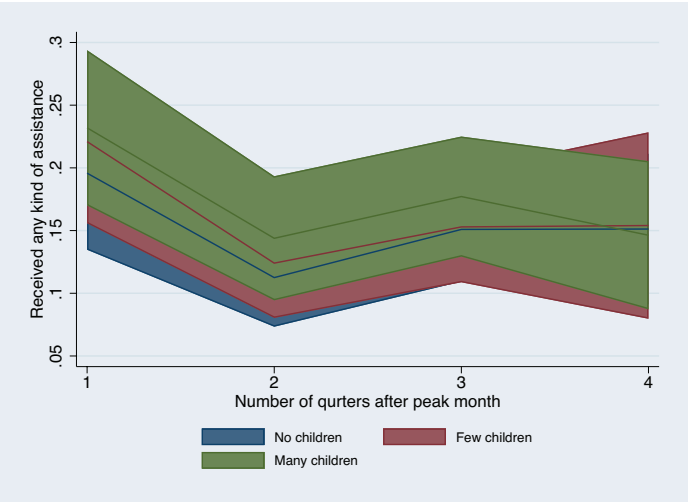
EVOLUTION OF RECEIPT OF SOCIAL PROTECTION

As mentioned in the previous section, households with many children are more likely to report receiving government assistance. In general, there was a slight increase in the percentage of households receiving government assistance from quarter 2 to quarter 3, a reflection of the delay in expanding social protection programs following the pandemic, with no significant differences between households with many, few, or no children. When looking at any type of assistance, the graph shows similar trend as government assistance from quarter 2 to quarter 4 but there is a decreasing trend from quarter 1 to quarter 2.

Graph 27 Evolution of estimated margin for receiving government assistance



Graph 28 Evolution of estimated margin for receiving any kind of assistance



To test the robustness of the results, we estimated the following model with four additional control variables, including strictness of lockdown measured by the Oxford Stringency Index, regional fixed effect measured by a series of binary variables indicating state/ province the household resides in, urban-rural location, and education level of the respondent.

y\_{hr(c)t} = af(t) + \beta f(t)\*Children\_{hr(c)} + Stringency\_{ct} + \theta\_{r(c)} + Urban + Education + \varepsilon\_{r(c)t}

The trends and key conclusions do not change after controlling for the additional variables.





## Conclusion

The primary objective of this analysis was to identify the impact of the crisis on households without and with (few or many) children, focusing both on the initial impact in 2020 as well as the subsequent evolution of this impact. The analysis is based on only 35 countries, with the majority of these countries in the Sub-Saharan Africa region. Therefore, the conclusions need to be interpreted with caution. Nonetheless, the results provide a clear indication that across these indicators, households with many children fared worse during the initial onslaught of the pandemic (April to September 2020). At the initial onset of the crisis, households with many children were substantially more likely than households with no children to report a decline in total income (76% versus 55%) and more likely to report an adult who did not eat for a full day (24% versus 14%). Both of these results are robust to controlling for residence and respondent education. After the initial impact, trends appear to be broadly similar for households with many and few children, after controlling for region of residence and education. There is insufficient data, however, to estimate these trends precisely.

On the positive side, the analysis also highlights that households with many children were more likely to receive some type of social assistance. The percentage of households reporting receiving government assistance since the beginning of the pandemic was 26% of households with many children, 21% of households with few children, and 12% for households with no children. These patterns also held when controlling for residence and education. These government assistance programs undoubtedly mitigated the adverse impact of the crisis on households with many children. This further reinforces UNICEF and World Bank's emphasis on sustaining these government programs for an equitable and sustainable recovery.

The analysis further reinforces UNICEF and other partners' call to action to ensure that schools are opened.<sup>19</sup> Both households with few and many children had low participation in any education activities since school closure due to COVID-19, with only 11% of households with few children and 4% of households with many children had access to mobile learning applications.

The data are insufficiently comprehensive to detect major differences in trends for households with many children and those with fewer and no children in the quarters following the initial crisis. Respondents in households with many children were more likely to report being employed, but also more likely to report skipping a meal. Positively, there was an increase in the percentage of all households, with and without children, receiving government assistance from quarter 2 to quarter 3. Future analysis utilizing the HFPS data can shed light on the continued evolution of these indicators (income/job loss, food security, education and social protection), and utilized to help ensure that children and their families are prioritized in the recovery, including in the scaling up of social protection programs.

<sup>19</sup> Retrieved January 23, 2022, from <https://www.unicef.org/coronavirus/reopen-schools>

## Appendix 1. List of Available Indicators

INDICATOR	NUMBER OF COUNTRIES	LIST OF COUNTRIES
<b>Total income decreased</b>	18	Bulgaria, Ethiopia, Gabon, Ghana, Guinea, Gambia, Cambodia, Lao PDR, St. Lucia, Mozambique, Mauritius, Malawi, Nigeria, Poland, Romania, Senegal, Tajikistan, Uzbekistan
<b>Wage income decreased</b>	21	Ethiopia, Gabon, Ghana, Guinea, Gambia, Cambodia, Lao PDR, St. Lucia, Madagascar, Mali, Mongolia, Mozambique, Mauritius, Malawi, Nigeria, Rwanda, Senegal, Sierra Leone, Uganda, Uzbekistan, Zimbabwe
<b>Stopped working since the beginning of the pandemic</b>	32	Burkina Faso, Bulgaria, Congo, Dem. Rep., Congo, Rep., Djibouti, Ghana, Guinea, Gambia, Croatia, Indonesia, Kenya, Cambodia, Lao PDR, Lebanon, St. Lucia, Madagascar, Mali, Myanmar, Mongolia, Mozambique, Mauritius, Malawi, Nigeria, Poland, Romania, Rwanda, Senegal, Solomon Islands, Sierra Leone, Uganda, Uzbekistan, Zimbabwe
<b>Did not eat for a day</b>	16	Congo, Dem. Rep., Ethiopia, Ghana, Kenya, St. Lucia, Madagascar, Mali, Myanmar, Mongolia, Mozambique, Malawi, Nigeria, Solomon Islands, Sierra Leone, Uganda, Zimbabwe
<b>Adult member skipped a meal</b>	13	Congo, Dem. Rep., Gabon, Ghana, Lebanon, Madagascar, Mali, Mongolia, Mozambique, Malawi, Nigeria, Sierra Leone, Uganda, Zimbabwe
<b>Received government assistance</b>	25	Bulgaria, Congo, Dem. Rep., Congo, Rep., Djibouti, Ethiopia, Gabon, Ghana, Guinea, Gambia, Croatia, Indonesia, Kenya, Cambodia, Lebanon, St. Lucia, Madagascar, Mongolia, Malawi, Nigeria, Poland, Romania, Rwanda, Sierra Leone, Uganda, Zimbabwe
<b>Received any source of assistance</b>	29	Burkina Faso, Bulgaria, Congo, Dem. Rep., Congo, Rep., Djibouti, Ethiopia, Gabon, Ghana, Guinea, Gambia, Croatia, Indonesia, Kenya, Cambodia, Lao PDR, Lebanon, St. Lucia, Madagascar, Mali, Myanmar, Mongolia, Mauritius, Malawi, Nigeria, Rwanda, Solomon Islands, Sierra Leone, Uganda, Zimbabwe
<b>Children completed assignments</b>	19	Burkina Faso, Congo, Dem. Rep., Congo, Rep., Djibouti, Ethiopia, Ghana, Gambia, Indonesia, Kenya, Cambodia, Lao PDR, Madagascar, Mali, Mongolia, Malawi, Nigeria, Senegal, Uganda, Zimbabwe
<b>Children listened to educational radio</b>	17	Burkina Faso, Congo, Dem. Rep., Congo, Rep., Djibouti, Ethiopia, Ghana, Gambia, Indonesia, Kenya, Cambodia, Madagascar, Mongolia, Malawi, Nigeria, Sierra Leone, Uganda, Zimbabwe
<b>Children watched educational TV program</b>	17	Burkina Faso, Congo, Dem. Rep., Congo, Rep., Djibouti, Ethiopia, Ghana, Gambia, Indonesia, Kenya, Cambodia, Madagascar, Mali, Mongolia, Malawi, Nigeria, Senegal, Uganda, Zimbabwe
<b>Children used mobile app for learning</b>	20	Burkina Faso, Bulgaria, Congo, Dem. Rep., Congo, Rep., Djibouti, Ethiopia, Ghana, Gambia, Croatia, Indonesia, Kenya, Cambodia, Lao PDR, Madagascar, Mali, Mongolia, Malawi, Nigeria, Senegal, Uganda, Zimbabwe



## Appendix 2. List of Indicator Topics Available in the COVID-19 Monitoring Dashboard

Indicator Topics	Number of Indicators
Assets & Services	4
Coping	3
Demographic	8
Education	8
Financial	4
Food Security	14
Health	11
Housing	4
Income	24
Safety Nets	14
Knowledge	10
Labor	14
Preventive behaviors	8
Subjective Wellbeing	4
Vaccination	11
Vaccination (social media)	1

## Appendix 3. List of Available Survey Included in the Analysis

Country	Wave
Burkina Faso	WAVE1-8
Bulgaria	WAVE1-3
Congo, Dem. Rep.	WAVE1,3,5
Congo, Rep.	WAVE1,2,4,5,6
Djibouti	WAVE1-2
Ethiopia	WAVE4-11
Gabon	WAVE1 (section 1 only)
Ghana	WAVE1
Guinea	WAVE1-3
Gambia, The	WAVE1-4
Croatia	WAVE1-3
Indonesia	WAVE1-5
Kenya	WAVE1-4
Cambodia	WAVE1-5
Lao PDR	WAVE1
Lebanon	WAVE1 (section 1 only)
St. Lucia	WAVE1 (section 1 only)
Madagascar	WAVE1

Country	Wave
Mali	WAVE1-5
Myanmar	WAVE1-4
Mongolia	WAVE3-4
Mozambique	WAVE2-5
Mauritius	WAVE1-3
Malawi	WAVE3-9,11
Nigeria	WAVE2-11
Poland	WAVE1
Romania	WAVE1
Rwanda	WAVE1-2
Senegal	WAVE1
Solomon Islands	WAVE1
Sierra Leone	WAVE1-2
Tajikistan	WAVE3-14
Uganda	WAVE1-6
Uzbekistan	WAVE1-12
Zimbabwe	WAVE1-2

Appendix 4. Summary Statistics for Key Indicators in Section 1 (unconditional results)

INDICATOR	NO CHILDREN	FEW CHILDREN	MANY CHILDREN
Total income decreased	0.546 (0.064)	0.683 (0.040)	0.756 (0.046)
Wage income decreased	0.557 (0.051)	0.597 (0.054)	0.626 (0.072)
Stopped working since the beginning of the pandemic	0.253 (0.026)	0.249 (0.026)	0.245 (0.027)
Did not eat for a day	0.136 (0.030)	0.180 (0.036)	0.238 (0.050)
Adult member skipped a meal	0.410 (0.078)	0.472 (0.057)	0.505 (0.081)
Received government assistance	0.118 (0.029)	0.209 (0.064)	0.256 (0.082)
Received any source of assistance	0.194 (0.035)	0.267 (0.052)	0.295 (0.056)
Children completed assignments		0.137 (0.023)	0.098 (0.015)
Children listened to educational radio		0.075 (0.016)	0.112 (0.025)
Children watched educational TV program		0.202 (0.063)	0.177 (0.059)
Children used mobile app for learning		0.107 (0.041)	0.041 (0.017)

Appendix 5. Predicted Margins for Section 1 Robustness Check (controlling for education of the respondent, urban/rural, and state/province, standard errors in parentheses)

INDICATOR	NO CHILDREN	FEW CHILDREN	MANY CHILDREN
Total income decreased	0.606 (0.008)	0.679 (0.007)	0.661 (0.009)
Wage income decreased	0.572 (0.015)	0.607 (0.009)	0.599 (0.008)
Stopped working since the beginning of the pandemic	0.245 (0.006)	0.253 (0.005)	0.252 (0.006)
Did not eat for a day	0.166 (0.006)	0.186 (0.009)	0.209 (0.009)
Adult member skipped a meal	0.397 (0.027)	0.483 (0.012)	0.507 (0.014)
Received government assistance	0.144 (0.019)	0.226 (0.014)	0.240 (0.015)
Received any source of assistance	0.206 (0.021)	0.279 (0.011)	0.292 (0.012)
Children completed assignments		0.128 (0.003)	0.125 (0.004)
Children listened to educational radio		0.098 (0.004)	0.113 (0.003)
Children watched educational TV program		0.221 (0.004)	0.208 (0.003)
Children used mobile app for learning		0.090 (0.004)	0.091 (0.006)



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