Risks *to* Poverty, Vulnerability, *and* Inequality *from* COVID-19

NEPAL LIGHT POVERTY ASSESSMENT

WORLD BANK GROUP

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Abbreviations

AHS	Annual Household Survey
CBS	Central Bureau of Statistics
DHS	Demographic and Health Survey
HCI	Human Capital Index
HRVS	Household Risk and Vulnerability Survey
LFS	Labor Force Survey
MICS	Multiple Indicator Cluster Survey
NLFS	Nepal Labor Force Survey
NLSS	Nepal Living Standards Survey
RDD	Random Digit Dialing

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Introduction

Nepal made significant progress in reducing poverty and increasing shared prosperity between 1996 and 2010, despite low domestic growth. Calculated at the national poverty line, the poverty headcount rate fell from 42.0 percent in 1995 to 31.0 percent in 2003 and 12.5 percent in 2010. Improved living standards—evident in large increases in mean per capita expenditure, as measured in the Nepal Living Standard Surveys—led to the revision of the national poverty line in 2010. The revised poverty line increased the real value of the poverty threshold by 35 percent, which increased the estimated poverty rate in 2010 to 25 percent.[1] Between 2004 and 2010, consumption among the bottom 40 percent grew almost twice as fast as consumption among the top 60 percent. But this period was also characterized by low GDP growth, of less than 4 percent a year, and a minimal increase in productivity, with consumption the dominant driver of demand (World Bank 2018a).

The main driver of these equitable improvements in welfare were remittances, which directly accounted for 27 percent of all poverty reduction from 1996 to 2011 and 23 percent of GDP in 2011—up from less than 1 percent in 1996 (World Bank 2016). High rates of migration also had indirect impacts on poverty and well-being, by tightening rural labor supply and increasing wages and by supporting investments in health and female education.

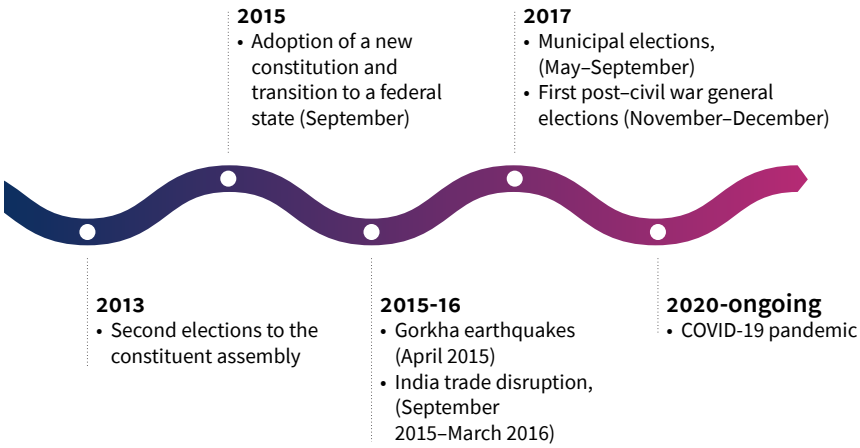
Inequalities in access to basic human opportunities remained high, however, despite sustained progress on key indicators of nonmonetary welfare, such as health and education. A child's gender, parents' wealth, education, and location accounted for 52–79 percent of the variation in access to basic human capital outcomes in Nepal in 2011 (World Bank 2016).

[1] At the international poverty line ($1.90/day in purchasing power parity), the poverty rate was 15 percent (World Bank 2018).

Because rates of vulnerability and exposure to a range of shocks are high, the risk of falling back into poverty is great in Nepal. The significant gains in poverty reduction in Nepal between 1995 and 2010 were fragile, with a little more than two in five Nepalis vulnerable to falling back into poverty (World Bank 2016). Nepal's continued reliance on agriculture and its exposure to natural disasters, which will increase with climate change, amplify the risks to falling into poverty. Health shocks and a slowdown in remittance growth could also push many people into poverty (World Bank 2016, 2018a).

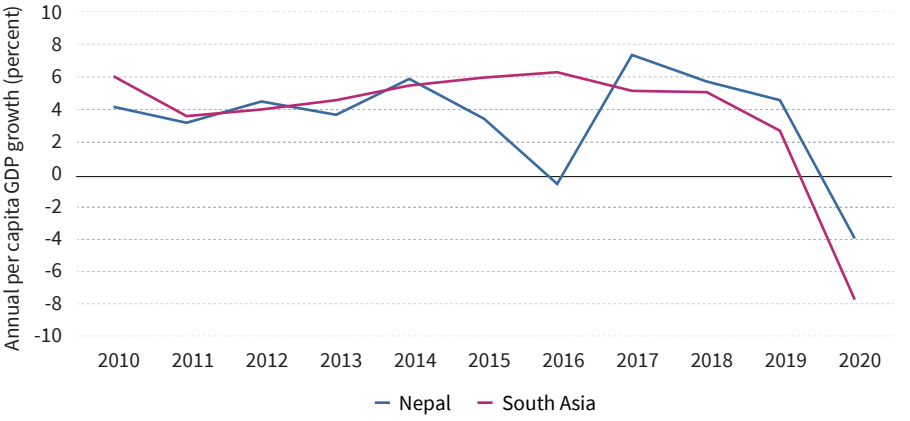
A series of economic shocks took place in 2010–20 against a background of a prolonged political transition toward federalism.[2] These shocks were correlated with declines in economic growth. The periodic risks to welfare in Nepal from both localized (weather) shocks and fluctuations in the global demand for labor were accompanied by a series of significant economic shocks (figure 1). These shocks—the 2015 Gorkha earthquakes and the six-month long trade disruption with India—caused GDP growth to falter (figure 2). The 2015 earthquakes led to the loss of thousands of lives, disrupted the economy, and caused large-scale infrastructure losses, estimated at $7 billion (World Bank 2015). They were followed by a long period of trade disruption with India, which created supply shortages (including in medicine and fuel) and hampered economic activity.

FIGURE 1 Key economic shocks and governance transitions, 2013–21



[2] Nepal undertook substantial governance reforms following the end of the civil war in 2006. Following the second set of elections to the constituent assembly, in 2013, it adopted a new constitution in 2015 and began the formal transition to a federal state. Municipal elections took place between May and September 2017; they were followed later that year by the first post–civil war general elections.

FIGURE 2 Annual per capita GDP growth in Nepal and South Asia, 2010–20



Source: World Development Indicators.

Lack of official data on poverty and core economic indicators have limited welfare monitoring in Nepal for almost a decade. After a long pause, official data on labor and firms were updated with the completion of the 2017–18 Nepal Labor Force Survey (LFS) and the first Economic Census, in 2018, respectively. The fourth Nepal Living Standards Survey (NLSS), which was launched after a year-long preparatory period, had to be recalled two weeks into its initiation in March 2020, because of the COVID-19 pandemic. The last official data on poverty and welfare in Nepal are therefore from the 2010 NLSS survey. The Annual Households Surveys (AHSs) that were implemented in 2012–17 were not officially used to update poverty estimates in Nepal.[3]

As a result, little is known about the evolution of poverty and living standards in the past decade, despite the persistence of two types of economic shocks to welfare over this time. The first type was health and weather shocks, the most common factors leading to a downward slide into poverty in South Asia in 2011 (World Bank 2016). The results of the Household Risk and Vulnerability Survey (HRVS)—a representative rural survey implemented by the World Bank's Social Protection Global Practice in 2016–18—reveal that almost half of all reported income shocks stemmed from a health shock to a (working) household member, with agricultural shocks (weather shocks or shocks related to pest and livestock diseases) accounting for the other half. Almost a third of all rural households reported at least one

[3] The AHS, which was designed to produce annual nationally representative statistics, was implemented by the Central Bureau of Statistics (in partnership with the United Nations Development Programme [UNDP] and the World Food Program [WFP]) between 2012 and 2017. It ended up being an experimental initiative that was not adopted by the government for official poverty estimates (see box 1.1).

shock over this three-year period, and more than two-thirds of those that did so reported multiple shocks (an average of two). These shocks were prevalent across the consumption distribution but had a higher incidence in the bottom two quintiles. With rural poverty rates (35 percent) almost three times urban rates (13 percent) and an additional 48 percent of the rural population vulnerable to falling back into poverty, these rural shocks are particularly relevant to welfare in Nepal. The second type of shock was changes in remittances and the demand for migrant labor. These risks were amplified by the concentration of migrants in India and four oil-dependent countries (Qatar, Saudi Arabia, the United Arab Emirates, and Kuwait) (World Bank 2018a), reliance on which left Nepal vulnerable to changes in oil prices, as seen during the oil price shock of 2014 (Barne 2016).

These shocks are likely to have wide-ranging welfare impacts in a country with limited access to safety nets, inequalities in access to opportunity, and ongoing structural transformation. Analyses conducted for recent assessments suggest that the key challenges to consolidating the gains made in reducing poverty in Nepal—decreasing vulnerability, equalizing opportunities, and boosting productivity—remain relevant today (Ruppert Bulmer, Shrestha, and Marshalian 2020; World Bank 2016, 2018a). When shocks do occur, households have few safety net or other mechanisms, such as insurance (public or private), that they can use to manage the impacts. Existing transfers are fragmented and small, poorly targeted to poor households (the same proportion of households in the bottom 40 percent and top 60 percent received government transfers in 2014), and difficult to scale in response to disasters. As a result, the impact of social protection programs on poverty or inequality is more limited than it could be with better design, scalability, and targeting (World Bank 2018a). Urgent investments are therefore required not just in updating core data but also in creating systems that can generate core economic data at regular and predictable intervals, in order to better target scarce resources to the areas and people in greatest need.

The COVID-19 crisis is expected to have severe economic impacts in countries with structural vulnerabilities and bring preexisting inequalities into sharper focus (Ray and Subramaniam 2020; Hill and Narayan 2020). In addition to preexisting inequities in human capital outcomes, Nepal's slow and still ongoing structural transformation defines important economic vulnerabilities. The labor market relies on domestic subsistence activities and external demand for migrants. Between 1998 and 2018, male employment increased in construction, manufacturing, commerce, and transportation—informal activities that faced high exposure to COVID-induced economic shocks—particularly in the Kathmandu Valley (Ruppert Bulmer, Shrestha, and Marshalian 2020).

Evidence from across the world reveals significant job and income losses that are correlated with the country-level stringency of COVID-19-related policies (Bundervoet, Davalos, and Garcia forthcoming). Such evidence is urgently needed in Nepal, which uses an outdated base to measure poverty and lacks actionable data on the ongoing crisis. The lack of a recent baseline—with a decade-long gap since the last NLSS—makes an immediate assessment of the scale and scope of the impacts of COVID-19 on welfare using micro-simulation based methods challenging. Postcrisis data are also essential to assess the risks to increased poverty and inequality. In many countries, including Nepal, national statistical systems were not equipped to quickly deploy telephone-based surveys as a follow-up to recent sample surveys, and few other representative panel surveys could be used as a baseline.

This light poverty assessment:

- **Highlights current data constraints to updating monetary welfare and updates key trends in nonmonetary welfare** based on recently completed Demographic Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS).
- **Uses new data from the SAR COVID-19 phone monitoring surveys in order to examine the impacts of COVID-19** on labor market outcomes, the impacts on the affordability of basic goods and services, and access to formal and informal coping mechanisms.
- **Sheds light on the impacts of the COVID-19 crisis on poverty and welfare in order to inform the policy dialogue on poverty and shared prosperity in Nepal,** by examining the impacts of COVID-19 given the fragile gains in reducing poverty and the spatial disparities in access to basic human capital outcomes.

The assessment is organized as follows: Section 1 describes the data challenges and highlights the evolution of measures of nonmonetary welfare pre-COVID. Section 2 provides an overview of the impacts of COVID-19 in Nepal. Section 3 highlights the role of preexisting vulnerabilities and structural issues in making the COVID-19 crisis more costly to welfare in the short run and potentially deepening inequalities in the longer run. Section 4 discusses future research and risks that need to be monitored.

This assessment is the first in a series of welfare updates. Subsequent updates will focus on (a) the evolution of the COVID crisis as well as the recovery process, based on a second round of phone monitoring surveys, and (b) analysis of data from the NLSS survey, which is designed to be representative at the provincial level at the end of the survey year and nationally representative every survey quarter (it is expected to be relaunched in early 2022, with a new sample frame based on the 2021 census).

SECTION 1

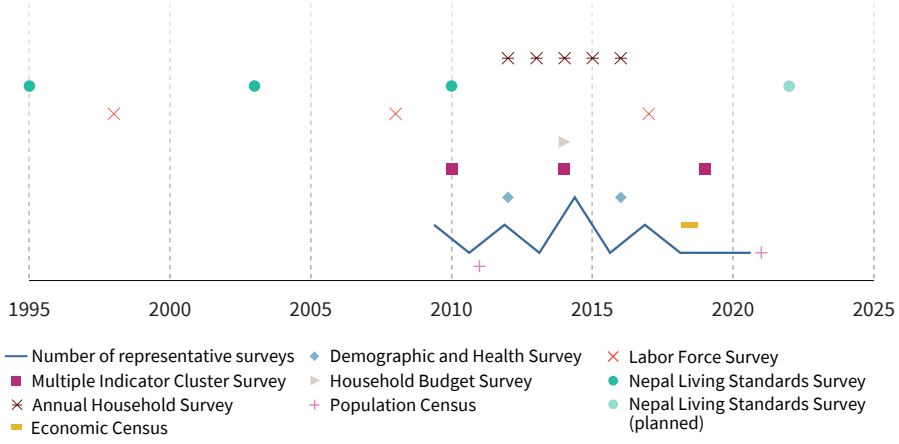
Trends *in* Welfare before COVID-19

This section describes the current data landscape in Nepal, identifies challenges to updating poverty trends in the pre-COVID period, and summarizes improvements and emerging challenges to human development outcomes in Nepal until the pandemic. It shows that various measures of welfare—including access to electricity and improved sources of drinking water, youth literacy, primary and secondary school enrollment, and infant and child mortality—improved. At the same time, significant challenges remain in increasing access to tertiary education, reducing child malnutrition, and expanding access to clean water and improved sanitation across the country.

Challenges to Measuring Monetary Welfare

Between 2004 and 2013, Nepal collected just a single data point on poverty—one of just 44 countries not to collect data more frequently (Serajuddin and others 2015). Key statistics on core indicators of welfare (such as poverty, labor, health, and other noneconomic measures of well-being) have been produced erratically in Nepal (figure 1.1). In a context in which welfare is highly vulnerable to both natural disasters and economic shocks, it is critical to regularly monitor data on poverty and key correlates of welfare.

FIGURE 1.1 Timeline of national surveys and censuses, 1995–2021



No new official data on poverty and economic welfare have been produced in Nepal since 2010, when the last official poverty estimates were made, based on the third round of the NLSS. The NLSS and the Labor Force Survey (LFS) were implemented only once each over the last decade. In contrast, nonmonetary indicators were tracked more systematically over this period, with the implementation of two rounds of the DHS and three rounds of the MICS. Nepal's Central Bureau of Statistics (CBS) does not implement the DHS surveys or use the AHSs, which were implemented in 2012–2017, to produce official poverty estimates (box 1.1).

The lack of a regular schedule for NLSS surveys and the higher priority accorded to implementation of other surveys over the last decade led to delays in the preparation and launch of the fourth NLSS, the first comprehensive living standards survey that is representative of Nepal's new provinces. NLSS IV was launched in March 2020, following a year-long preparatory period. It had to be recalled two weeks into its implementation because of COVID-19. It is now expected that this survey will be launched in early 2022, using an updated sample frame from the 2021 Census. As the NLSS is the only survey that has been used to produce official poverty estimates in Nepal, the next official poverty update is also expected after the NLSS IV is complete.

Box 1.1 Challenges of using Nepal's Annual Household Surveys

Nepal's Annual Household Surveys (AHSs) were designed to provide estimates of some major socioeconomic indicators, largely on employment and consumption expenditures, more often than would be possible with other core periodic surveys, such as the Nepal Labor Force Survey (NLFS) and the Nepal Living Standards Survey (NLSS)(CBS 2017).

The AHS was implemented annually from 2012 through 2017. As it complements the core periodic surveys, its design changed in years in which periodic surveys were implemented. For example, in years in which the LFS survey was implemented (including 2016–17), the AHS did not include a labor module.

The design of this series also changed after the first survey year. Although in principle this change made the survey somewhat more comparable with the NLSS, the four rounds of the AHS were used largely to document trends in consumption and employment. An early request for technical assistance from the World Bank on potentially using these data to estimate poverty did not translate into official use of this data for poverty monitoring.

Several comparability issues in the design of the AHS and the food and nonfood consumption modules make it difficult to construct comparable welfare aggregates using the official methodology for estimating poverty in the 2010 NLSS. First, the AHSs were not temporally stratified (as the NLSS was), and the duration of survey fieldwork was generally shorter than the NLSS's 12-months (AHS survey fieldwork duration varied over the four years, ranging from 7 months in 2013–14 to 11 months in 2016–17). Second, both food and nonfood consumption modules differed in terms of the number of items and the degree of detail in categorization. The recall period for all nonfood consumption was also different (12 months in the AHS, 30 days or 12 months. depending on the item. in the NLSS). Third, differences in sampling design preclude the replication of certain elements of the official poverty measurement methodology. They include, for instance, the methodology for estimating housing values and within-survey intertemporal adjustments. Fourth, the AHS series, which was designed as an experiment, ended in 2017. In addition, use of these data as part of core official statistics was hampered by the commitment to produce all official statistics at the provincial level with the transition to federalism in 2015.

Trends in Nonmonetary Welfare

Changes over time

Nonmonetary welfare increased in Nepal between 2011 and 2019, although progress on some key dimensions was slow. Data from multiple rounds of the DHS and MICS and key indicators tracked by the World Development Indicators show consistent progress in nonmonetary welfare indicators, particularly in access to improved sanitation and electricity, health, and education.[4] The pace of progress in some other areas, including improved child nutrition and spatially equitable access to improved drinking water, was slower. These trends can also be seen in the Multidimensional Poverty Index (MPI), a measure of multidimensional poverty that goes beyond traditional monetary poverty measures, incorporating deprivations in health, education, and living standards as well.

Nepal made tremendous progress in increasing literacy and narrowing the gender gap in education between 2011 and 2019. The literacy rate among youth (15–24) rose from 85 percent in 2011 to 93 percent in 2019. In 2018, overall literacy among women in Nepal was 60 percent, but the rate among young women (15–24) was 91 percent, and the gender gap between young men and young women was only 3 percentage points—significantly less than the almost 20 percentage-point gender literacy gap among all adults. The gender gap in educational attainment also narrowed, particularly among younger cohorts.

Secondary school enrolment rates increased, but tertiary education enrollment rates remain low, at less than 20 percent, and stagnant. Enrollment rates are slightly higher among girls than boys across primary, secondary, and tertiary education, although the gaps are small.

The quality of education remains a concern. The World Bank's Human Capital Index (HCI) measures the amount of human capital a child born today can expect to attain by age 18. The global average for this index is 56 percent, meaning that on average, a child born today would attain only 56 percent of what he or she could have achieved given access to a full set of health and education services.[5] Nepal's HCI, at 50 percent, is below the global average but above the average for the South Asia region (World Bank 2020a). Nepal places in the third quartile for

[4] This section draws on four nationally representative datasets: the DHS rounds 2011 and 2016 and the MICS rounds 2014 and 2019. Education data are from UNESCO.

[5] All estimates are pre-COVID.

expected years of schooling (12.3 years). It ranks lower on measures of education quality and learning effectiveness, however. Learning-adjusted years of schooling are much lower than expected, at 7.2 years, and Nepal ranks in the bottom quartile on learning effectiveness, as measured by harmonized test scores.

Longer-term markers of improved access to health care also show progress. Life expectancy increased by three years between 2010 and 2019, as child and infant mortality declined. In 2014, child mortality was still a significant component of multidimensional poverty: 14 percent of the population lived in households in which a child had died in the last five years. Mortality of under-five children decreased from 54 deaths per 1,000 live births in 2011 to 28 in 2019. Most under-five mortality is infant mortality, but infant mortality also declined, falling from 46 deaths per 1,000 live births in 2011 to 25 in 2019.[6] Child immunization rates have been steadily increasing since 2011. Most vaccinations are administered during the first 12 months or shortly thereafter. Among children 12- to 23-months old, the share that had been fully vaccinated rose from 87 percent in 2011 to 96 percent in 2019.[7]

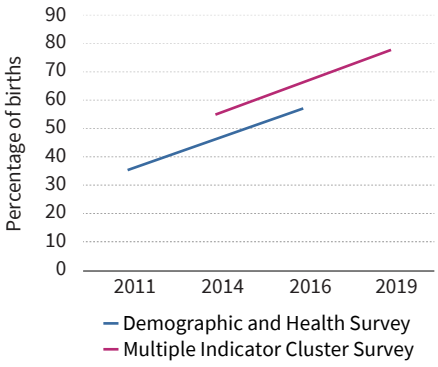
Access to and use of health facilities increased significantly between 2011 and 2019, with increases in the likelihood of being born in a health facility and treated by a health care provider when ill. The share of institutional deliveries increased substantially. In 2011, roughly a third of births were institutional deliveries; by 2019, more than three-fourths of births took place in a health facility. Visits to health facilities for the treatment of diarrhea and fever also increased among children under five. The DHS records almost a doubling in the share of under-five children treated at a health facility for diarrhea between 2011 and 2016. Children were more likely than not to be taken to a health facility for treatment in 2019, with significant improvement shown in both the DHS and MICS datasets (figure 1.2).

[6] Both data points represent data from the five years before the survey year, implying that survey-year specific rates may be even lower, given the decline.

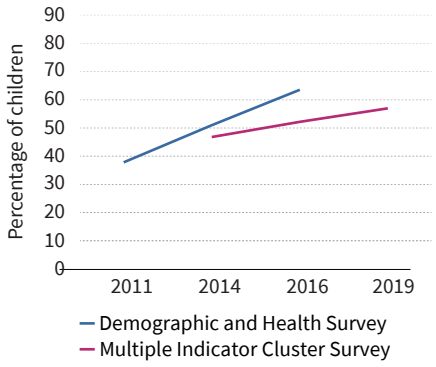
[7] Life expectancy data were retrieved from World Development Indicators in June 2021. Mortality and vaccination statistics are from DHS 2011 and 2016 and MICS 2014 and 2019.

FIGURE 1.2 Key health indicators, 2011–19

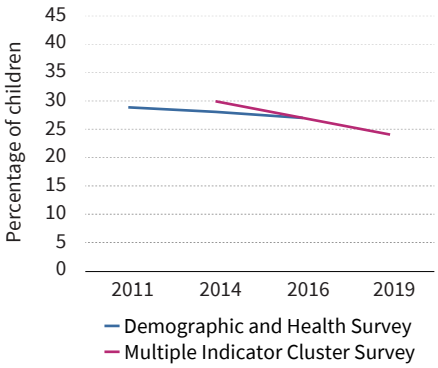
a. Institutional delivery



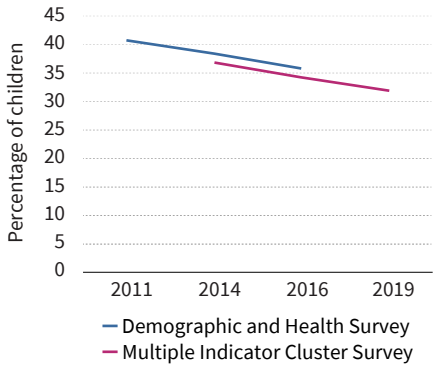
b. Treatment of diarrhea in health care facility among under-5 children



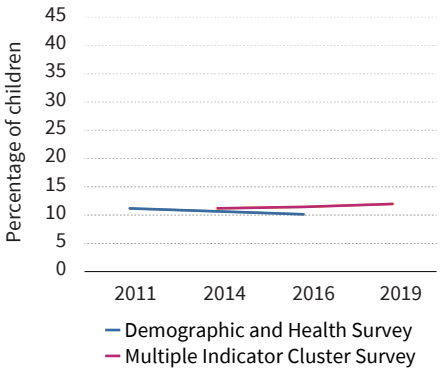
c. Underweight



d. Stunting



e. Wasting



Source: DHS 2011 and 2016; MICS 2014 and 2019.

Child malnutrition remains an enduring challenge. Despite improvement, a large fraction of under-five children were underweight or stunted (being too short for one's age) in 2019, and 12 percent were severely stunted. Improvements in food security; maternal education; and access to good sanitation, clean water, and basic health services resulted in the fastest recorded decline in stunting in the world from 2001 to 2011 (Headey and Hoddinott 2015). Core indicators of nutrition also improved. Despite these improvements, rates of stunting are very high, at 32 percent, according to MICS 2019, and severe stunting, an indicator of severe malnutrition associated with an increased risk of mortality, affects more than 10 percent of under-five children in Nepal. Almost a fifth of Nepalese children under five were underweight in 2019. Nutrition is also an important component of multidimensional poverty: 16 percent of the population lived in households in which at least one child was underweight in 2014 (Ballón and Robles 2018). The prevalence of wasting (underweight for height) hovered above 10 percent throughout the period, although the prevalence of severe wasting remains low.

Access to basic public services has improved since 2010, but in 2019 only a fifth of the population had a reliable water source in the household that was free of E. *coli* bacteria. The share of households with access to electricity rose from 76 percent in 2011 to 90 percent in 2019 . Access to an improved water source for drinking and improved sanitation also increased. In 2019, 97 percent of households had access to an improved water source, and 94 percent had access to an improved sanitation facility (private access or shared with other households).[8] These figures are up from 89 percent and 57 percent, respectively in 2011. These improvements in access mask water quality issues, however. Only 23 percent of households treated their drinking water appropriately in 2016. Poor water quality may be contributing to the low nutritional status of children (box 1.2).

[8] Improved sanitation facility here refers to flush/pour flush toilets, piped sewer systems, septic tanks, and pit latrines; ventilated improved pit (VIP) latrines; pit latrines with slabs; and composting toilets.

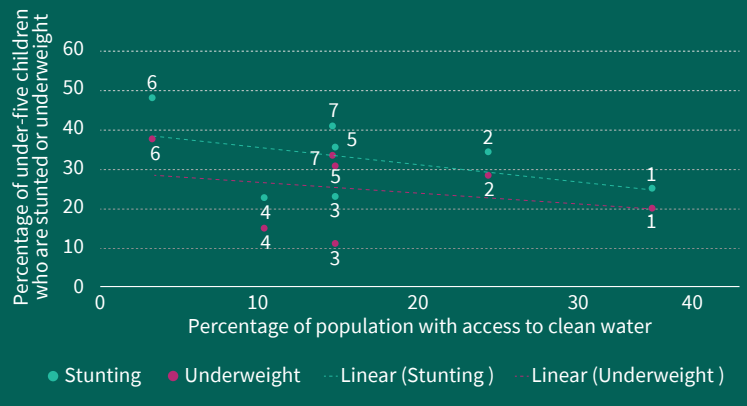
BOX 1.2 Are child malnutrition and water quality correlated?

Multiple factors contribute to low height- and weight-for-age among children under five. Low dietary diversity and high occurrence of illnesses can lead to child malnutrition; low-quality drinking water can result in poor child health outcomes that, when accumulated over time, can lead to low height-for-age.

In Nepal, as well as in Pakistan, poverty reduction and increases in access to improved sanitation have been accompanied by high rates of stunting. Evidence from Pakistan (World Bank 2018b) suggests that the absence of adequate fecal waste management has led to a concentration of fecal waste near human settlements, leading to high levels of E. *coli* bacterial contamination of water sources. High levels of E. *coli* have sustained high levels of diarrhea, which have contributed to stunting. In Nepal, E. *coli* bacteria was found in the drinking water of 75 percent of the population that had access to an improved water source.

Box figure 1.2.1 illustrates the relationship between child malnutrition and access to a high-quality drinking water source, using data from the Nepal MICS 2019. A high-quality water source is defined as an improved source that is located on the premises, free of E. *coli* bacteria, and available when needed. On average, in provinces with better access to high-quality water sources, the rates of both stunting and underweight are lower than in provinces with lower-quality water. This negative relation is striking in Province 6, where the levels of stunting and wasting were the highest in Nepal and just 3.5 percent of the population had access to a high-quality water source. In two provinces (3 and 4), the shares of stunted and underweight children are not correlated with drinking water quality.

BOX FIGURE 1.2.1 Child nutritional status and water quality across provinces

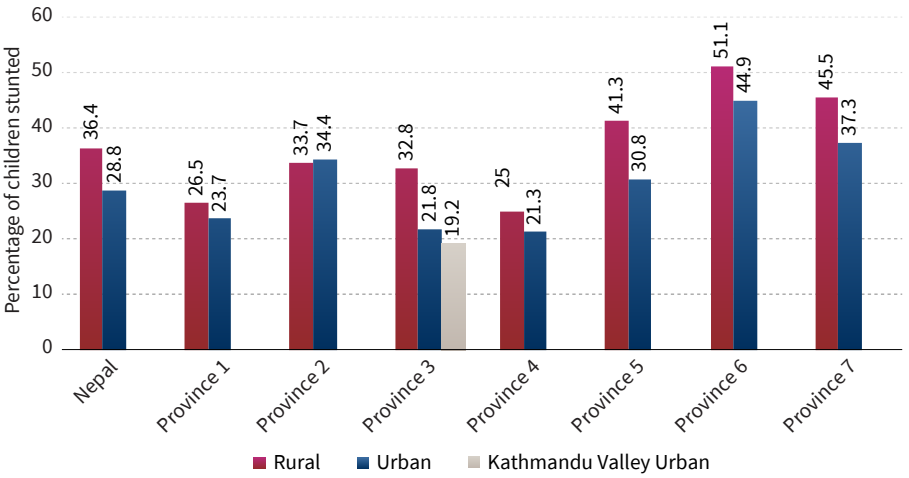


Source: Data from the 2019 Multiple Indicator Cluster Survey.

Changes across provinces and wealth groups

High levels of stunting at the national level mask significant differences between rural and urban areas and across provinces. Stunting is more prevalent in rural areas (36 percent of children) than in urban areas (29 percent). This gap exists in all provinces except Province 2 (figure 1.3), the most densely populated province in Nepal. Province 3 has the highest rural–urban disparities in stunting, with rural stunting rates averaging 10 percentage points above urban rates. The urban parts of Kathmandu Valley (part of Province 3) reported the lowest stunting rates (19 percent); the gap between rural and urban areas in the Kathmandu Valley is 13 percentage points. The highest stunting rates (51 percent) are in rural areas of Karnali, Province 6, the province with the lowest population density in the country.

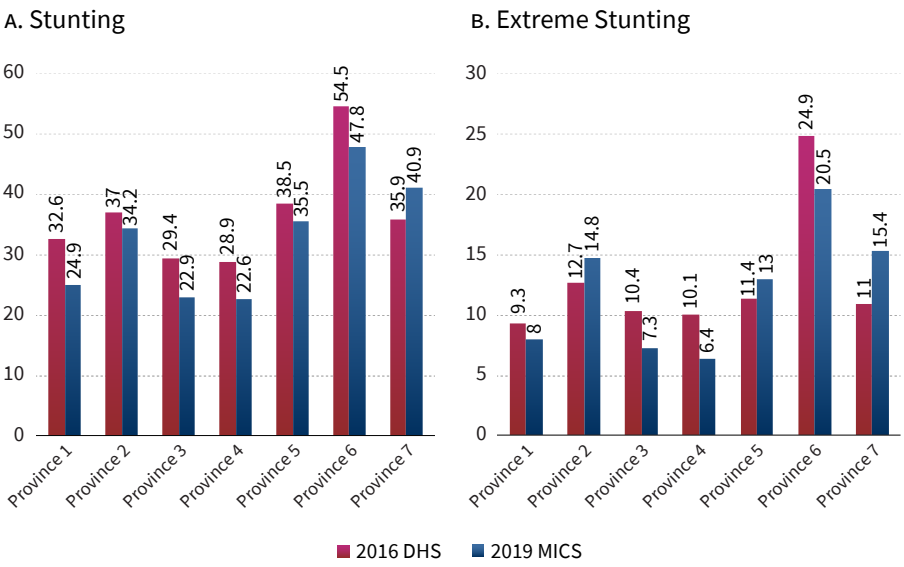
FIGURE 1.3 Stunting rates among children 0–5 in urban and rural areas, 2019



Source: Multiple Indicator Cluster Survey 2019.

In provinces 6 and 7, in western Nepal, high stunting rates are accompanied by high rates of underweight children. The highest levels of stunting are found in the mountainous Province 6, where about half of children were found to be stunted in both the DHS 2016 and the MICS 2019 and more than 30 percent of children were underweight (figure 1.4). Extreme stunting is particularly high in Province 6, where more than one-fifth of children are affected. Province 7 also had high rates of stunting and underweight children in 2019. Provinces 5, 2, and 1 fall closer to the national mean on this indicator.

FIGURE 1.4 Stunting and extreme stunting rates among children 0–5, by province, 2019

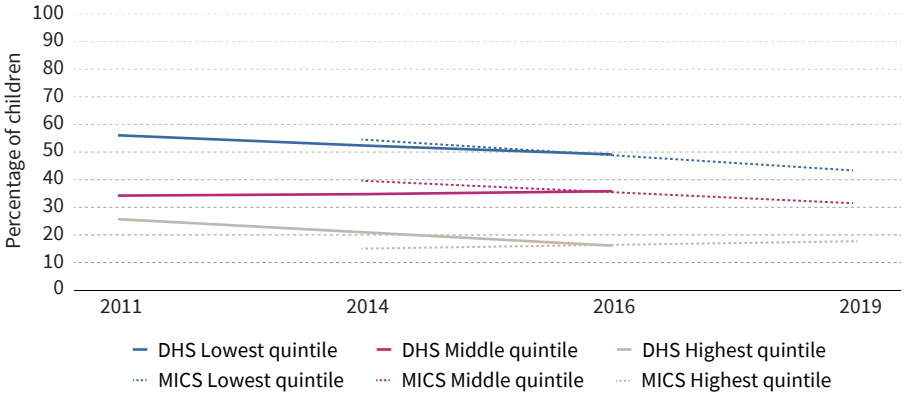


Source: Demographic Health Survey 2016 and Multiple Indicator Cluster Survey 2019.

Higher wealth quintiles are associated with lower rates of stunting but not wasting. Data on durable assets can be used to examine changes in stunting across wealth quintiles.[9] The gap between the share of stunted children in the lowest and highest quintile fell from 30 percentage points in 2011 to 26 percentage points in 2019 (figure 1.5). However, stunting is prevalent even in the highest wealth quintile, at 18 percent, and wasting (an indicator of short-term malnutrition) is distributed almost equally across households, regardless of wealth quintile (figure 1.6). These findings underscore the importance of investigating the relationship between environmental factors, such as source water contamination, and child malnutrition, as well as the role of wealth in mediating malnutrition.

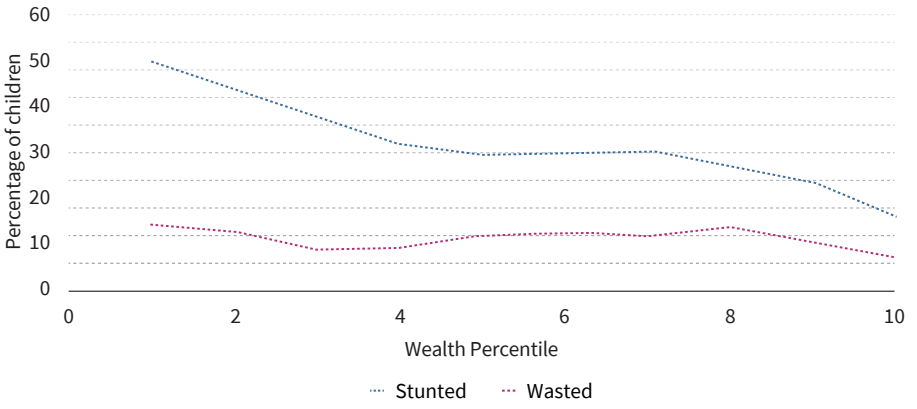
[9] Although the index itself is not comparable over time (it is constructed using factor analysis or principal component analysis, and asset information included may have small variations across surveys), it can be used for temporal comparisons of nonmonetary indicators across asset quintiles.

FIGURE 1.5 Stunting among children 0–5, by wealth quintile, 2011–19



Source: Authors' calculations using data from the Multiple Indicator Cluster Survey (2014, 2019) and the Demographic Health Survey (2011, 2016).

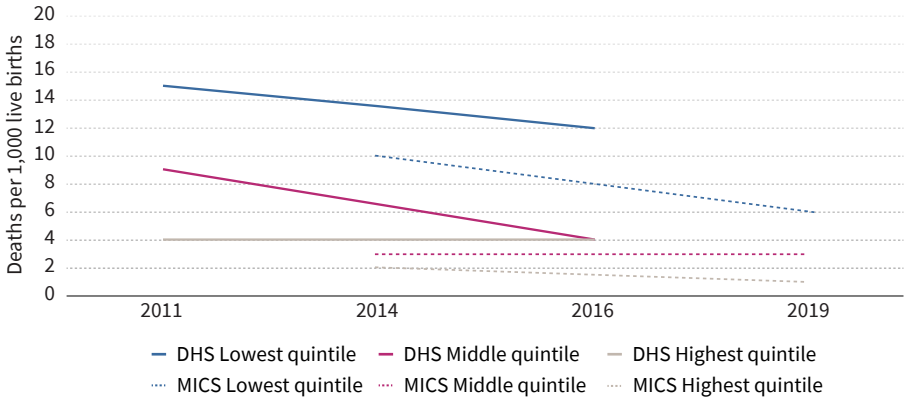
FIGURE 1.6 Relationship between wealth quintile and stunting among children 0–5



Source: Authors' calculations using data from the Multiple Indicator Cluster Survey 2019.
Note: Lines are Lowess (locally weighted scatterplot smoothing), which fit a smooth line through a scatterplot in order to ease visual interpretation of the relationship between variables. These curves were generated following the method in Brown, Ravallion, and van de Walle (2019).

Reductions in child mortality and increases in the share of institutional deliveries occurred between 2011 and 2019, particularly in the lowest wealth quintile. The MICS reports a decline from 10 deaths per 1,000 livebirths in 2014 to 6 in 2019 (figure 1.7) and a narrowing of the gap between the highest and the lowest quintiles.

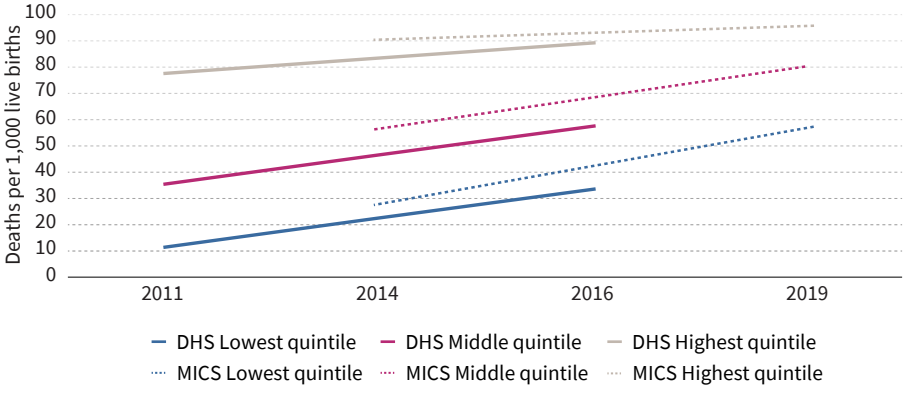
FIGURE 1.7 Child mortality, by wealth quintile, 2011–19



Note: DHS = Demographic Health Survey. MICS =Multiple Indicator Cluster Survey. Child mortality indicates the number of children who die between their first and their fifth birthdays per 1,000 livebirths. The DHS reports child mortality using births for the 10-year period preceding the survey. The MICS reports births in the previous five years. Both surveys use birth history data collected from women 15–49 at the time of the survey.

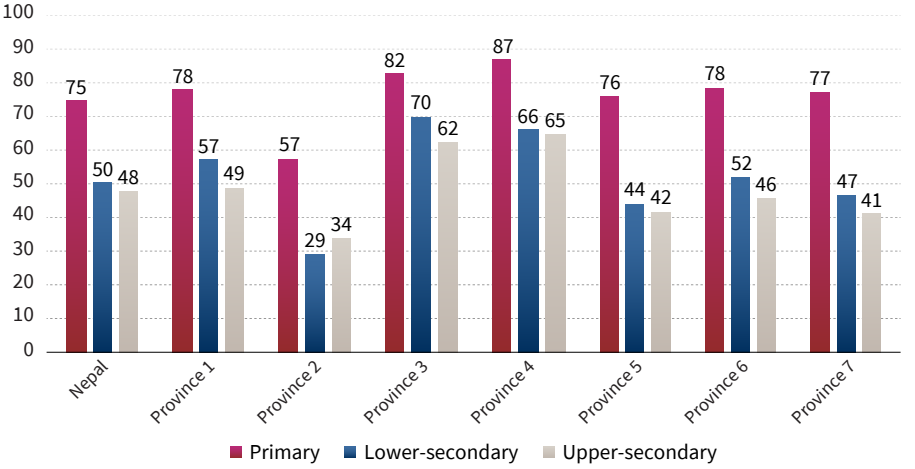
Institutional deliveries became more common across all wealth quintiles. As increases were greatest among the lowest income quintile, the gap between the highest and lowest quintile narrowed. A large rural–urban gap persists, however. The share of women giving birth in a health facility in 2019 was 96 percent among women in the wealthiest quintile and 57 percent among women in the lowest quintile (Figure 1.8). About 84 percent of urban women and just 66 percent of rural delivered a child in a health facility.

FIGURE 1.8 Institutional deliveries, by wealth quintile, 2011–19



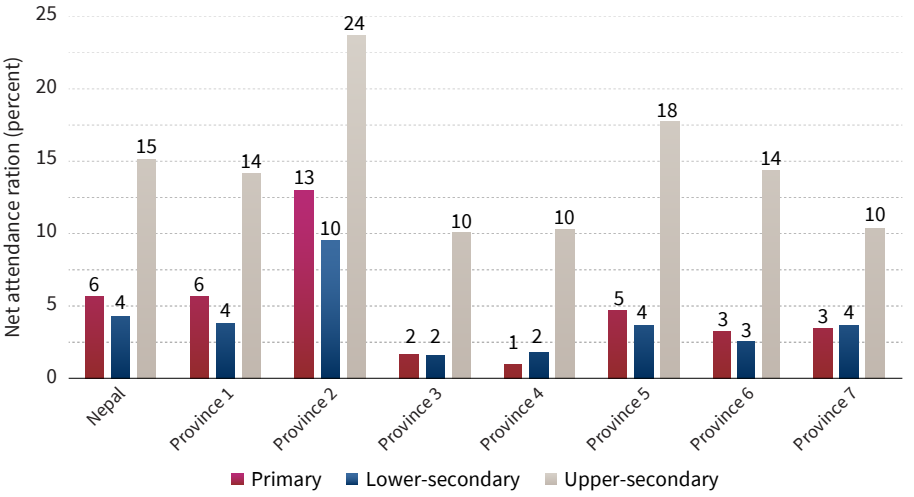
Note: DHS = Demographic Health Survey. MICS =Multiple Indicator Cluster Survey.

FIGURE 1.9 Net school attendance ratios, by province, 2019



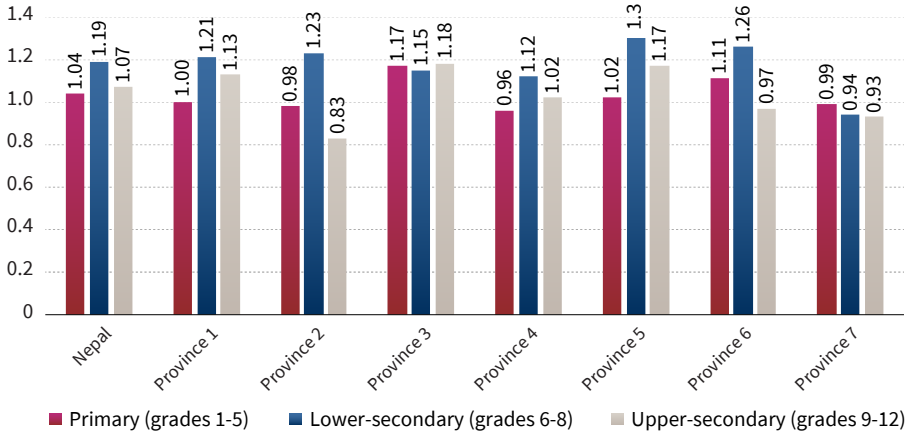
Source: Multiple Indicator Cluster Survey 2019.
Note: Net attendance ratios indicate (a) the share of children of primary school (grades 1–5) age attending primary or secondary school, (b) the share of children of lower-secondary (grades 6–8) school age attending lower-secondary school or higher, and (c) the share of children of upper-secondary school (grades 9–12) age attending upper-secondary school or higher.

FIGURE 1.10 Out-of-school rates, by province, 2019



Source: Multiple Indicator Cluster Survey 2019.
Note: Out-of-school rates indicate (a) the share of children of primary school (grades 1–5) age not attending early childhood education, primary, or lower-secondary school; (b) the share of children of lower-secondary (grades 6–8) school age not attending primary school, lower, or upper-secondary school or higher; and (c) the share of children of upper-secondary (grade 9–12) school age not attending primary school, lower-secondary school, upper-secondary school, or higher.

FIGURE 1.11 Ratio of girls' net attendance ratio to boys' net attendance among children 7–14, by province, 2019



Source: Multiple Indicator Cluster Survey 2019.
Note: Data cover children 7–14.

Deprivations in child education also vary across provinces. They are most pronounced in Province 2, in southeastern Nepal. Cross-province patterns are similar for school attendance (figure 1.9) and out-of-school children (figure 1.10).[10] At all education levels, Province 2, has the highest rates of out-of-school children and the lowest attendance rates, with net attendance of just 57 percent for primary school, 28 percent for lower-secondary school, and 34 percent for upper-secondary school. Provinces 3 and 4, where Kathmandu and Pokhara are located, have the highest rates of school attendance and the lowest rates of out-of-school children. Primary net attendance exceeds 80 percent in both provinces (in all provinces except Province 2 the primary net attendance is over 70 percent). Lower- and upper-secondary school net attendance rates are above 60 percent in provinces 3 and 4—the only provinces in which this is the case.

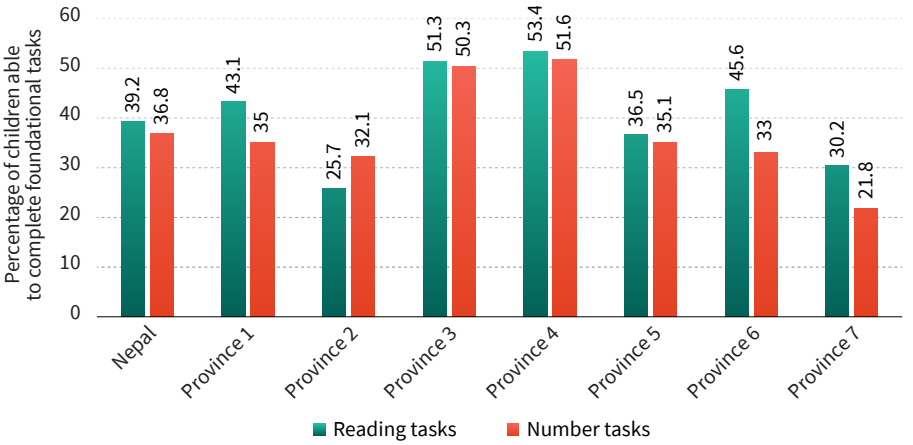
On average, girls' net attendance is higher than boys' in both primary and secondary education in Nepal as a whole and in three provinces (figure 1.11). In other provinces, the picture varies across education levels. Only in Province 7 is boys' net attendance higher than girls', and even there the ratio is 0.99. In Province 6, gender parity shifts from higher girls' attendance in primary and lower-secondary

[10] The net attendance ratio includes only children attending the age-appropriate grade level (or higher). The out-of-school ratio takes into account any education level. Both measures omit children who are attending a grade level lower than that appropriate for their age.

school to higher attendance among boys in upper-secondary school. In provinces 5 and 1, the ratio is higher for secondary school than primary school.

Differences in learning outcomes among children 7–14 are particularly pronounced in Provinces 2 and 7. Although learning outcomes are weak throughout Nepal, these provinces significantly lag the rest of the country. In the provinces with best learning outcomes (Provinces 3 and 4), just over half of children could perform both reading and number tasks in 2019 (figure 1.12). Children in Province 2 scored lowest in reading tasks (with a success rate of 26 percent). Children in Province 7, one of the provinces with the highest levels of stunting, scored lowest in number tasks (with a success rate of 22 percent).

FIGURE 1.12 Share of 7- to 14-year-olds able to complete foundational reading and number tasks, by province, 2019

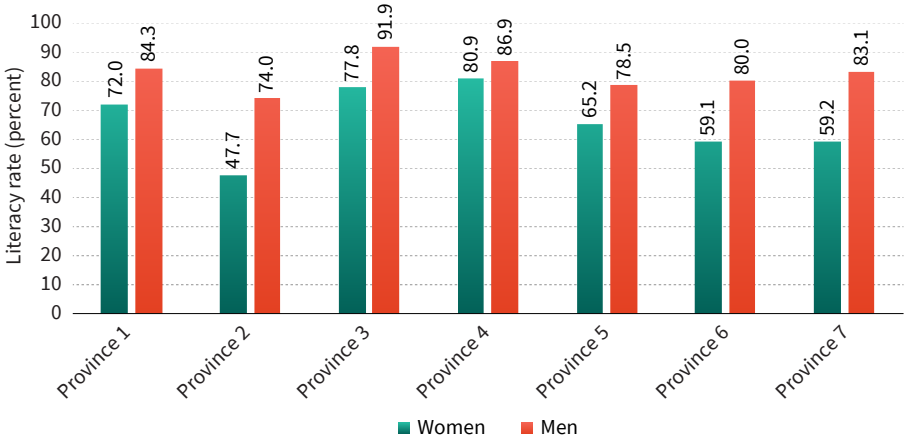


Source: Multiple Indicator Cluster Survey 2019.
Note: Tests include three foundational reading tasks and four foundational number tasks.

Cross-province differences in literacy rates among adults 15–49 are wide, particularly among women. Province 2 has the lowest rate in the country. Men's literacy rates are higher than women's in all provinces (ranging from 74 percent in Province 2 to 92 percent in Province 3); women's literacy rates range from 48 percent in Province 2 to 81 percent in Province 4 (figure 1.13). Literacy rates are higher for both men and women in urban areas; the rural–urban literacy gap is slightly higher among women.[11]

[11] Literacy rates among women are 71 percent in urban areas and 57 percent in rural areas. For men, the rates are 87 percent in urban areas and 75 percent in rural areas. Both gaps are substantial, but they are slightly larger for women.

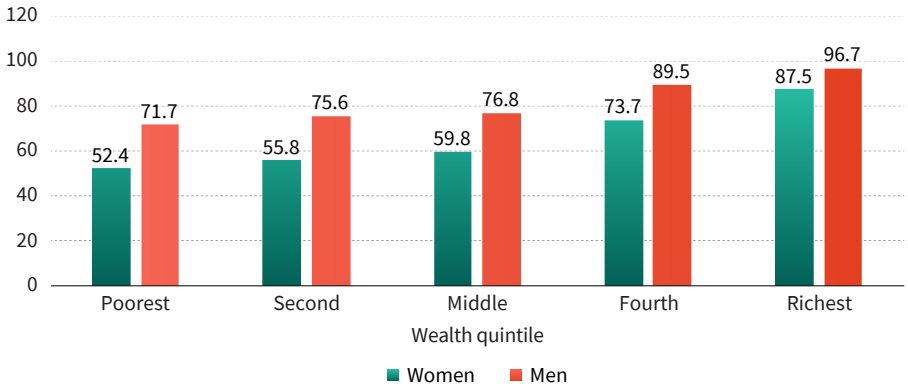
FIGURE 1.13 Literacy rates among 15- to 49-year-men and women, by province, 2019



Source: Multiple Indicator Cluster Survey 2019.

Both adult literacy and the gender gap in adult literacy fall with wealth. Literacy rates are 72 percent among men in the lowest wealth quintile and 97 percent in the highest quintile (figure 1.14). Among women, the rates are 52 percent in the lowest quintile and 88 percent in the highest quintile. The gap between men's and women's literacy is widest in the bottom two quintiles (just under 20 percentage points in both) and narrowest in the top quintile (9 percentage points).

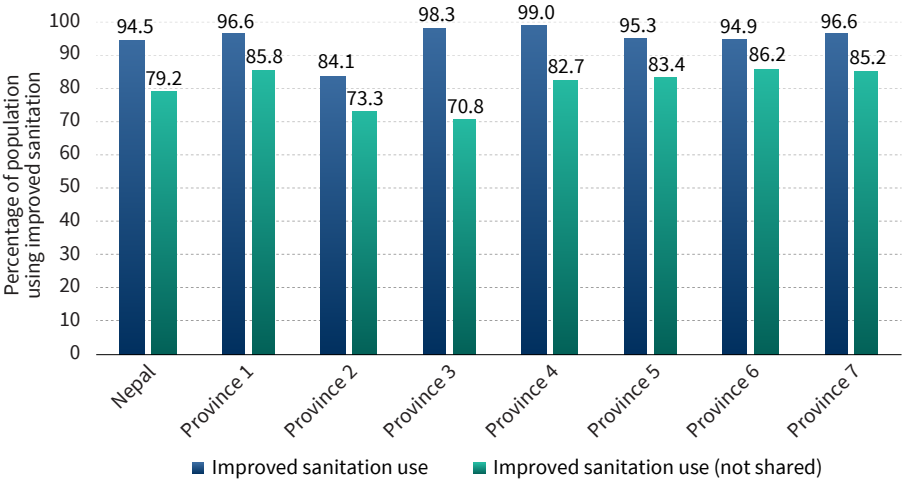
FIGURE 1.14 Literacy rates among 15- to 49-year-men and women, by wealth quintile, 2019



Source: Multiple Indicator Cluster Survey 2019.

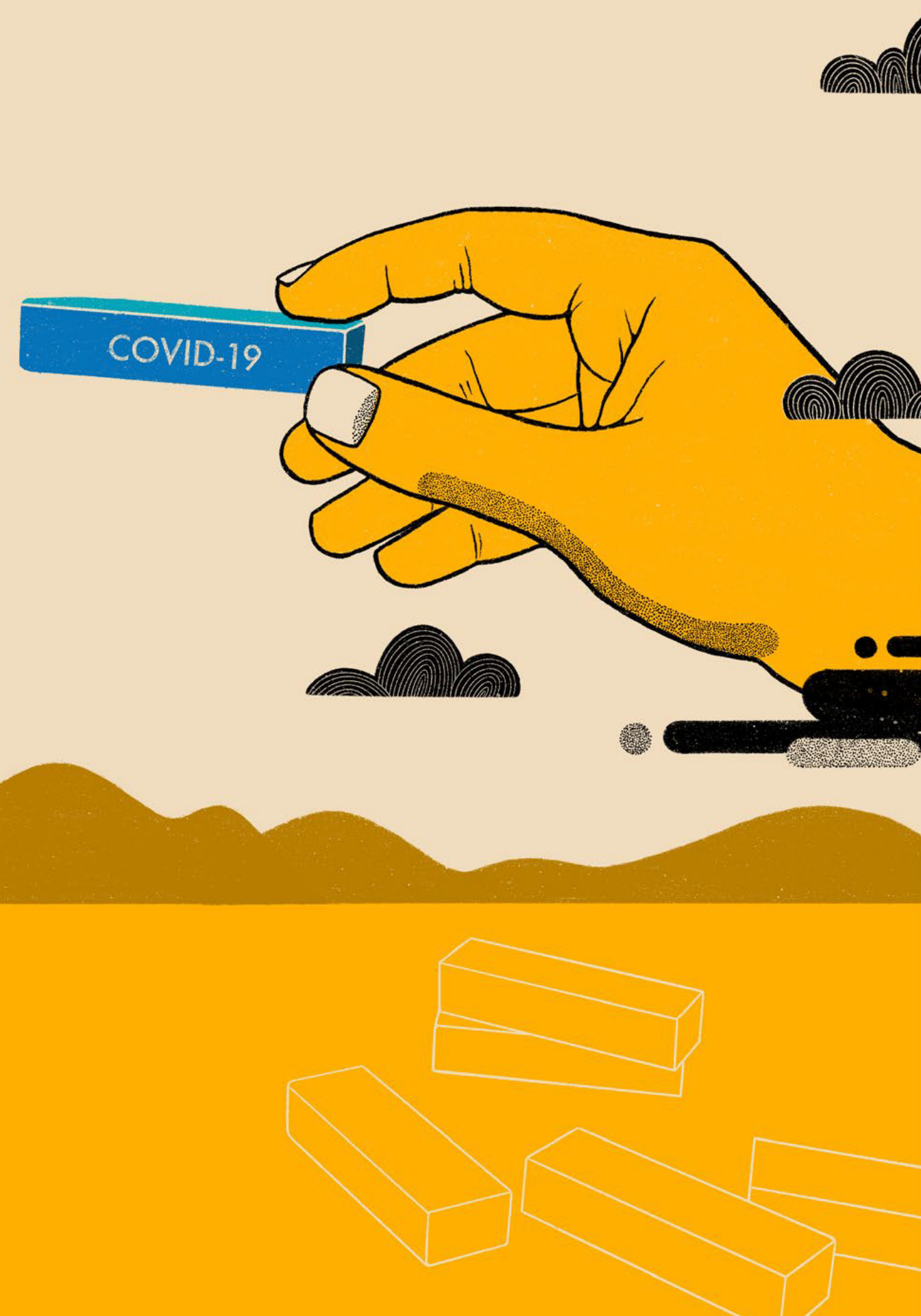
Access to improved sanitation is nearly universal in Nepal. It is lower in Province 2 (84 percent) than elsewhere (at least 90 percent). Not all improved sanitation facilities are used by just one household, however. The more people who share a facility, the less hygienic it becomes. Province 3 has the lowest rate of improved sanitation use that is not shared (71 percent of population), perhaps because of its large urban population. Province 2 is close, with just 73 percent of population having access to an improved facility that is not shared.

FIGURE 1.15 Share of population using improved sanitation, by province, 2019



Source: Multiple Indicator Cluster Survey 2019.

In summary, steady and equitable progress was made on basic indicators of nonmonetary welfare, but it was uneven across provinces and rural and urban areas, and indicators for child malnutrition and education quality remain weak. Going forward, it will therefore be important to (a) go beyond community-led and basic service provision to address more complex service delivery challenges and (b) identify policy investments that can address the spatial and socioeconomic disparities in nonmonetary outcomes. Previous analyses suggest that 52–79 percent of the observed disparities in health and education investments are explained by a child's gender, location, and parental characteristics (World Bank 2016). Multiple challenges—including the difficulty of providing services in remote geographies and a reliance on private financing for health and education services—underpin these disparities (World Bank 2018a). More evidence on the types of policies and interventions that can help mitigate these disparities will be key in helping prioritize investments, especially as part of the ongoing move toward federalism.

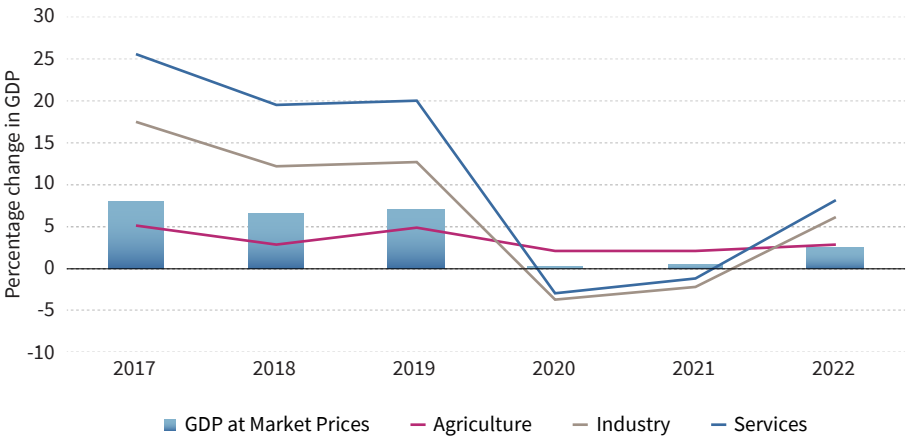

COVID-19

SECTION 2

Impacts *of* COVID-19 *on* Labor Markets *and* Household Welfare

Until recently, Nepal had no data that could be used to assess the effect of COVID-19 on labor market and related welfare impacts. As a result of COVID-19, GDP is estimated to have increased by just 0.4 percent in 2020—down from an average annual growth rate of 6.0 percent in 2017–19—and the manufacturing and services sectors contracted (figure 2.1). These economic shocks are likely to have reduced welfare and living standards in Nepal. This section uses new data from the SAR-COVID-19 phone monitoring survey to document the key labor market impacts of the crisis, assess the impact on the affordability of basic goods and services, and examine the role of formal and informal coping mechanisms in Nepal.

FIGURE 2.1 Actual and projected GDP growth, by sector, 2017–22



Source: Macro Poverty Outlook for South Asia (https://www.worldbank.org/en/publication/macro-poverty-outlook/mpo_sar), accessed February 28, 2021. Estimates for 2020–22 are projected.
Note: Gross domestic product at market prices is the sum of the gross values added of all resident producers at market prices plus taxes less subsidies on imports.

The SAR COVID-19 Phone Monitoring Survey covered 43,000 individuals in eight countries in South Asia, including 6,389 individuals in Nepal. It was designed to assess the short-run impacts of COVID-19 on the labor market, the impacts of income shocks on the ability to meet basic needs, and the coping strategies available to households. Roughly half the Nepal sample was generated through a random digit dialing (RDD) survey conducted between August and October 2020[12]; the other half come from a follow-up to the Household Risk and Vulnerability Survey (HRVS), implemented in roughly equal waves in September–October 2020 and January 2021.[13]

Nepal experienced one of the longest and most severe lockdowns in South Asia, lasting from March 2020 through December 2020.[14] National and local lockdowns were continuously in place for six months, until mid-September, with a gradual easing of restrictions between October and December 2020.[15] Google mobility trend reports reveal the impacts of this prolonged lockdown. Figure 2.2 shows a sharp disruption in mobility in four countries in South Asia, all of which imposed lockdowns in late March/early April 2020. In contrast to all other countries in the region, day-to-day mobility in Nepal remained consistently below the pre-COVID levels for an extended period (of about six months). On all four dimensions of economic activity measured by these trends, mobility did not return to pre-COVID levels until mid-October in Nepal. In contrast, mobility in the other countries returned to pre-COVID levels as early as June and as late as early August, at least for some types of (essential) services.

[12] This survey covered 3,267 individuals. It was implemented in August, September, and October 2020, with roughly a third of the sample interviewed each month.

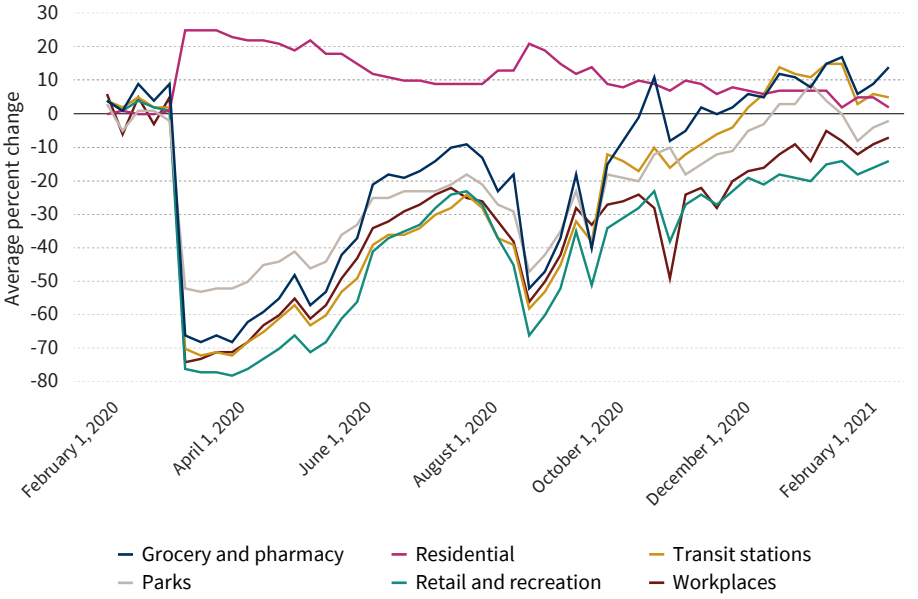
[13] The background note on the impacts of COVID-19 associated with this light poverty assessment provides details on these surveys and their sampling (World Bank 2021b).

[14] At the time of writing, Kathmandu was under a lockdown imposed to combat the surge in cases from the second wave of COVID-19.

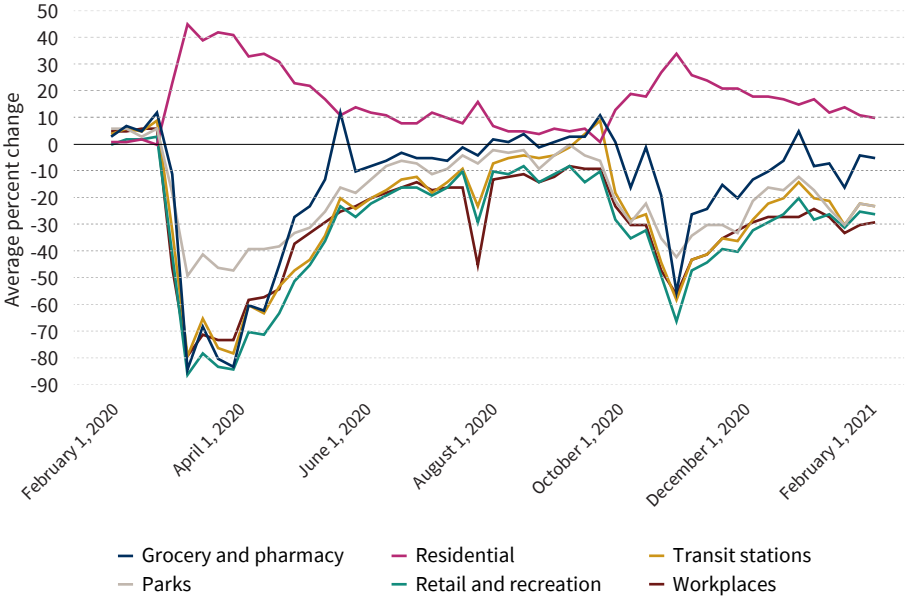
[15] Measures included restricted hours for essential service, such as grocery shopping and delivery; the closure of all establishments except those catering to essential needs, such as food and medicine; and restrictions on cross-border and internal travel. Restrictions on international and domestic flights and tourism gradually began to be lifted in October. In December 2020, establishments other than cinemas and large-scale gatherings were allowed to reopen.

FIGURE 2.2 Google mobility trends in Bangladesh, India, Nepal, and Sri Lanka, January 2020–February 2021.

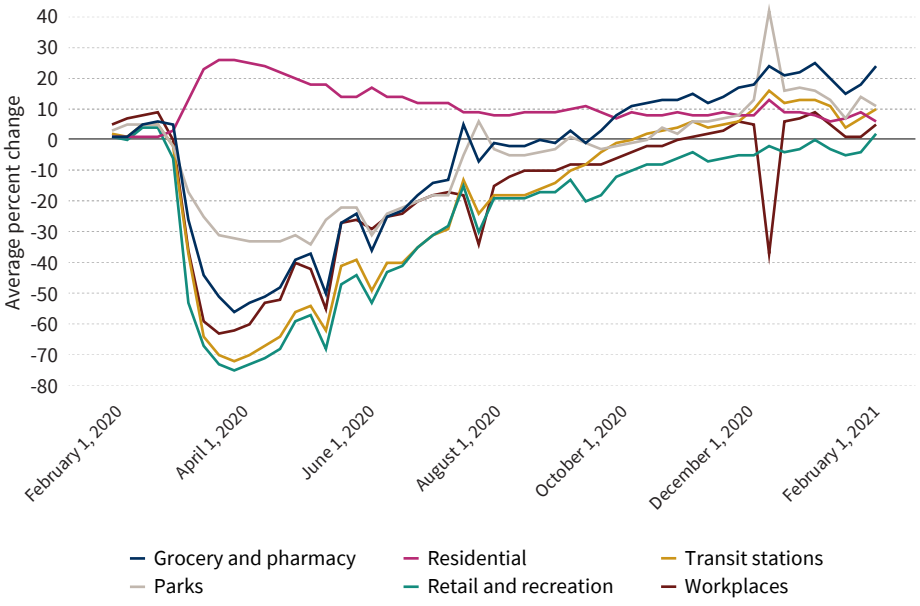
Nepal



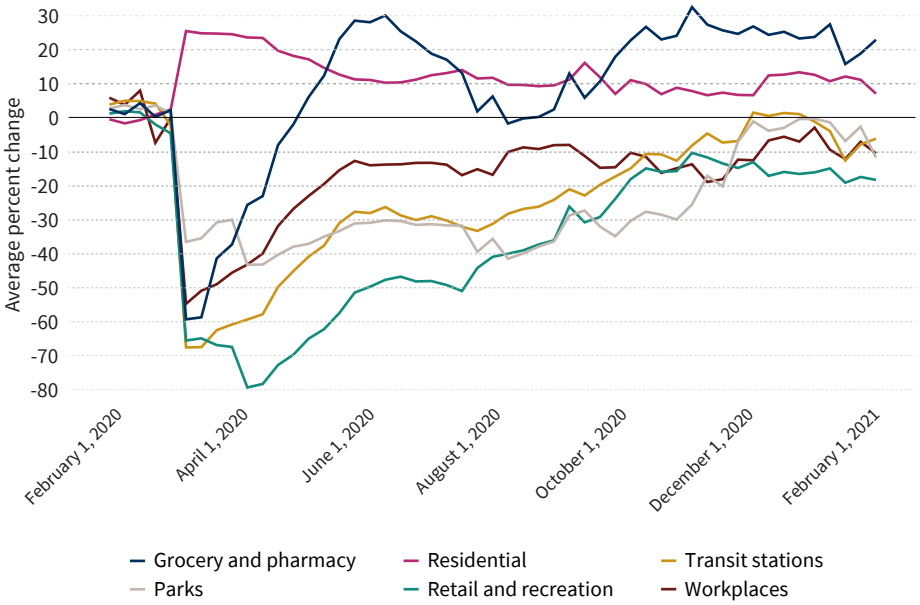
Sri Lanka



Bangladesh



India



Source: Google Mobility Report (https://www.google.com/covid19/mobility/), last updated March 3, 2021.

These data suggest that the stringent lockdowns and associated contractions in economic activity produced a significant shock to labor income in Nepal. In the analysis that follows, the nationwide RDD sample is used to document exposure to the COVID-19-induced economic shocks, identify key characteristics of affected groups, and assess the impacts of these shocks to labor incomes on the ability to meet basic needs and coping strategies in Nepal. The HRVS rural sample is used to better understand the rural population and pre-COVID characteristics that may increase the vulnerability of certain (poorer and more shock-prone) rural groups to the labor income shocks induced by COVID and to adopt riskier coping strategies.

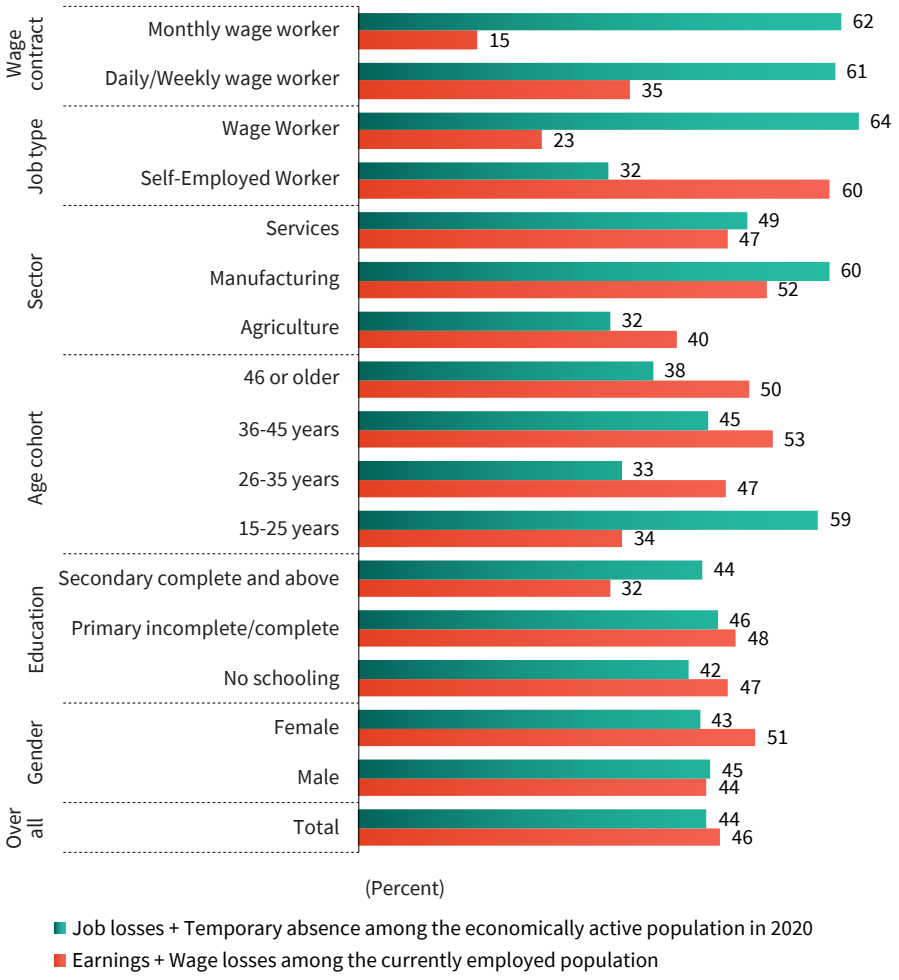
Impacts on the Labor Market

Labor market exposures to the COVID crisis in Nepal were wide and deep. More than two in every five economically active workers reported job loss or a prolonged work absence *(henceforth called effective employment loss)* in 2020, and 46 percent of employed workers reported earnings losses. A quarter of all jobs lost had not been recovered by late 2020.In addition, 19 percent of survey respondents continued to report a prolonged work absence, with an average absence of 4.4 months and a gap of 4.0 months since they were last paid.[16] Although men and women experienced similar losses on this measure of exposure, more women reported permanently losing a job (30 percent versus 23 percent for male workers). Younger workers, especially new entrants to the labor force 15–25, suffered the largest job losses of any age group, with 35 percent of workers in this cohort reporting permanent losses, compared with only 19 percent among people 26–35. With these young workers making up 30 percent of the overall work force, this concentration represents a significant loss. Among this youngest age cohort, job losses were primarily concentrated among the less educated (66 percent for people with no education versus 44 percent for people with secondary or higher education).

Effective employment losses also varied significantly by sector, type of employment, and extent to which a sector was affected by lockdowns (figure 2.3). Effective job losses were significant across sectors (60 percent in services, 50 percent in manufacturing, and 32 percent in agriculture). These job losses were accompanied by a change in the sectoral composition of employment relative to January 2020, with a 7 percentage point shift toward agriculture by late 2020. Across sectors, wage workers were twice as likely as the self-employed (64 percent versus 32 percent) to have suffered a permanent or temporary loss in work.

[16] The duration of temporary absences was 4.9 months in services, 3.3 months in manufacturing, and 2.7 months in agriculture.

FIGURE 2.3 Changes in effective employment and wages/earnings in 2020, by labor market characteristic



Source: SAR COVID-19 Phone Monitoring Surveys, Round 1.

Job and earnings losses among the self-employed could result in a loss of entrepreneurial capital. In January 2020, 43 percent of employed workers worked in the services sector, with more than 80 percent of them reporting running or working in enterprises or being employers. Two-thirds of these enterprises are small, employing just two to three workers. The rate of job loss among the self-employed was highest in the services sector (20 percent), followed by agriculture (13 percent) and manufacturing (12 percent). Self-employed workers were far more likely than wage workers to report high income losses in 2020 (60 percent versus 23

percent) (see figure 2.3).[17] Among the self-employed who were working, 82 percent in the manufacturing sector and 66 percent in the services sector reported a loss of earnings, suggesting that further exits may be likely unless the economy returns to normal quickly.

The effects of COVID-induced labor income shocks fell hardest on women, young people, the less educated, and small and microenterprises—as they have in past economic crises (Hill and Narayan 2020). Future closures would result in a loss of entrepreneurial capital and could have distributional impacts on youth, particularly low-skilled youth. Combined with high discouragement rates, the low rates of recovery seen by November 2020, six months after the first lockdowns, suggests that these sustained income losses can be expected to have important welfare and distributional implications in the immediate to longer term.[18]

Across the board, reported losses were lower in the rural HRVS sample than in the nationwide RDD sample.[19] Losses were lowest in agriculture (12.4 percent), followed by services (15.1 percent) and manufacturing (33.1 percent). The share of respondents reporting temporary absence or effective job losses was lower across all three sectors in this rural sample than in the national RDD sample. Job losses were also lower among women (22 percent) than men (32 percent). This pattern is driven by the concentration of women in agricultural self-employment in rural areas before January 2020. Agricultural self-employment accounted for 42 percent of all jobs by women in the HRVS sample; this sector-job type category was the least hard-hit by the COVID-19 crisis.

The HRVS sample reveals that although agriculture was better protected than other sectors, wage workers in the sector still lost jobs in large numbers. One in five workers in the sector reported an effective job loss, and these losses were overwhelmingly among wage workers. Table 2.1 presents these estimated effects for the HRVS sample across various subgroups. It also presents the difference between the HRVS and the RDD estimates for effective employment losses by

[17] This finding is consistent with the finding that 60 percent of the self-employed reported a decrease in business operations relative to January and February.

[18] The share of the sample reporting recovery was small, limiting analysis. With this caveat, the overall recovery rate was 3 percent overall—6 percent for men and 3 percent for women.

[19] The HRVS follow-up was implemented in two phases, covering a total of 3,122 respondents, with 1,893 people interviewed in September and October 2020 and an additional 1,229 respondents interviewed in January 2021. This follow-up, which attempted to reach all respondents by phone, reached 3,145 out of the 6,091 households interviewed in 2018.

subgroup. For earnings or wage losses among the currently employed, there are no significant differences across the RDD and HRVS samples at the overall or subgroup levels.

TABLE 2.1 **Effective employment losses reported in the Household Risk and Vulnerability Survey (HRVS) and the random digit dialing (RDD) survey**

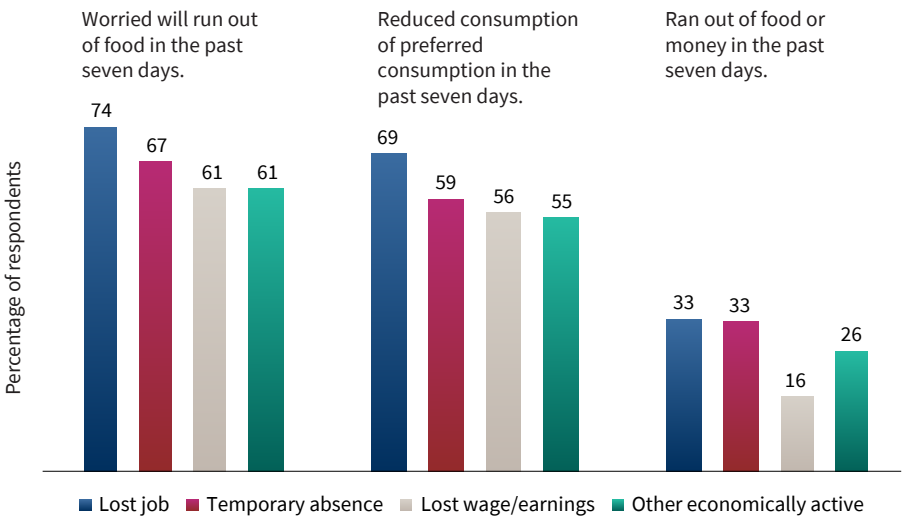
	Percentage of economically active population		
Characteristic	**HRVS**	**RDD**	**Mean difference**
Overall	29.4	44.4	–15.0***
Gender			
Male	31.7	44.9	–21.6***
Female	21.9	43.5	–13.1***
Sector			
Agriculture	19.0	32.0	–13.0***
Manufacturing	55.3	59.9	–4.6
Services	27.3	49.5	–22.2***
Job type			
Self-employed worker	17.1	31.8	–14.7***
Wage worker	48.9	63.7	–14.8***
Wage contract			
Daily/weekly	65.4	60.7	4.7
Monthly	35.9	61.5	–25.6***

Note: Means reported in the HRVS column pool the HRVS and RDD samples. Results are robust to including only the HRVS sample.
Levels of significance reported at *10% ** 5%, and ***1%.

Impacts on Ability to Meet Basic Needs

Labor income shocks have affected the ability of Nepalis to meet their basic needs, with workers who suffered job losses most likely to report economic distress (figure 2.4). The affordability of basic goods and services is assessed based on three self-reported measures: reduction in consumption of preferred foods, running out of food and the money to purchase it, and increased worry about running out of food in the seven days before the survey. Sixty-nine percent of people who lost a job report having reduced consumption of preferred foods in the seven days before the survey, compared with roughly half of those in the other three groups (temporarily absent, lost earnings, and no shocks). Similar patterns are evident among households that report running out of food and money to purchase it, with a third of people who lost a job and a third of people who faced a prolonged absence reporting high distress. The share of households running out of food in the seven days before the survey was also largest among households that had experienced job loss (74 percent) or temporary absence (67 percent); among the rest of the sample, the share was 60 percent.

FIGURE 2.4 Effect of labor market shocks on ability to meet basic needs



Source: SAR COVID-19 Phone Monitoring Surveys, Round 1.

People who faced job losses used risky and high-cost strategies to cope with these shocks: 12.0 percent mortgaged or sold productive assets, and 16.3 percent reported having no options, suggesting that they had already exhausted

other options (reduced savings, decreased food consumption, or borrowed).[20] Respondents who reported earnings losses were most likely to report borrowing from formal (14.6 percent) or informal (11.4 percent) sources. Respondents who were economically active at any point in 2020 reported using the least risky strategies of relying on their own savings (13.1 percent) and borrowing from family and friends (52.7 percent).

Coping with Shocks and Implications for Vulnerability

Policy interventions (such as unemployment benefits and aid to small businesses) are unlikely to be large in developing countries, because of fiscal and capacity constraints and the challenges of reaching informal workers, including the self-employed (Hill and Narayan 2020). By September 2020, advanced economies had spent 7.4 percent of GDP on budgetary fiscal support to people and firms on average. In contrast, low-income developing countries spent just 2.4 percent of GDP and emerging markets spent just 3.8 percent (Bundervoet, Davalos, and Garcia forthcoming).

Across the eight countries covered by the SAR-COVID 19 surveys in South Asia, countries with preexisting and large-scale delivery mechanisms for social and other assistance were able to deliver more assistance in response to the COVID-19 shock than countries in which preexisting programs and delivery mechanisms could not be activated quickly.[21] Nepal reported the smallest increase in access to any new formal assistance or programs received since March 2020 (figure 2.6), and all of the additional assistance came from programs that target categories of recipients, such as single women and senior citizens.

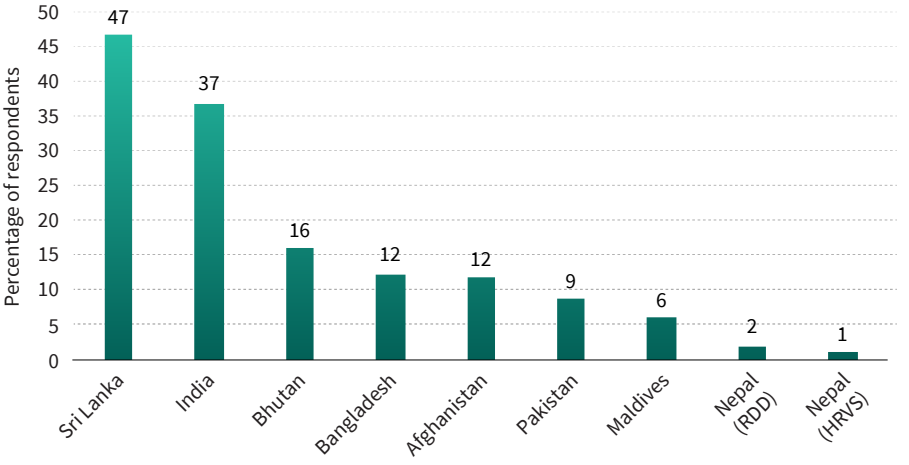
Existing assistance programs reached few of the rural poor in Nepal. Roughly half of households in the bottom 40 percent of the HRVS welfare distribution before COVID faced permanent job loss or a prolonged absence from work. In contrast, the top quintile was affected primarily through a decline in labor earnings. This larger incidence of job losses among poorer households is also reflected in a larger share of poorer households reporting running out of food or reducing food consumption. Social protection programs have thus not been very effective in protecting the poor. Indeed, application of analysis by the World Bank (2016)

[20] The survey question was "Suppose that you have an emergency expense that costs NPR 70,000. Based on your current financial situation, how would you pay for the expense?"

[21] Assistance included social assistance transfers in Sri Lanka and the public food distribution system and financial inclusion programs focused on expanding access to formal banking services in India.

reveals that the poverty headcount would have increased by a mere 0.5 percentage points (from 25.2 percent to 25.7 percent) in the absence of all currently administered social assistance programs.[22] Studies of welfare, shocks and coping in Nepal have highlighted the need for diverse types of assistance to reach vulnerable groups, such as the rural poor—through, for example, subsidized rainfall insurance, public works employment guarantees (such as India's National Rural Employment Guarantee scheme), and similar social protection policies (Jacoby and Walker 2019).

FIGURE 2.5 Percentage of respondents receiving new or additional social assistance since March 2020, by country



Source: SAR COVID-19 Phone Monitoring Surveys, Round 1.

Analysis of the differential effects of income shocks on welfare by household characteristics can shed light on the role these mechanisms play in mediating welfare and provide insights into the distributional effects of the COVID-19 crisis. In both the RDD and HRVS samples, effective job loss is positively correlated with reports of economic distress, and traditional drivers of poverty reduction seem to moderate the welfare impacts of COVID-19. In the nationwide RDD sample, the correlation between effective job loss and economic distress is weaker among households with a migrant member and with a larger number of income sources. For the first two measures (reduced preferred food and ran out of money to purchase food), having a migrant member reduces the negative impact of the income shock by almost half. Having one additional income source in the household

[22] The impact of these programs is weak because they are not very generous, they rely on categorical targeting rather than being explicitly targeted to the poor, and they are fragmented.

reduces the negative effect of job loss by about 20 percent for both measures. Findings from the HRVS sample validate the RDD results on the effectiveness of the two coping mechanisms. Among households without a migrant member in 2018, effective job loss is positively correlated with economic distress; for households with a migrant worker, the correlation between labor income shock and economic distress is weak (and close to zero for some measures). The effect of labor shocks on affordability/economic distress measures is also weaker among households with a lower dependency ratio in 2018 (pre-COVID) (see appendix A for regression results). Although these results provide some suggestive evidence, the conditional correlation result on the moderating effect of having a migrant member has low statistical power and is not robust to all regression specifications, suggesting that confounding factors could be biasing the magnitude of the reported effects. The results should therefore be interpreted with caution.

Subsistence activities in agriculture may have served as an informal safety net of last recourse during the COVID-19 crisis. The production of goods for own use or consumption is an important source of livelihoods in Nepal,[23] with 49.5 percent of the nationwide RDD sample and 60.5 percent of the rural HRVS samples engaged in some form of subsistence work in agriculture in the seven days before the survey. More women than men were engaged in subsistence agriculture. The share of engagement in subsistence agriculture increased during the crisis, with 22 percent of people engaged in such work in the RDD sample and 11 percent in the HRVS samples reporting not doing so at the same time in 2019. The prevalence of subsistence agriculture is greater among the economically inactive population (people who did not work at all in 2020 and were not seeking work), with 65 percent of the HRVS sample and 58 percent of the RDD sample engaged in subsistence work.

[23] The 2017/18 NLFS estimated that 59 percent of individuals above the age of 15 were engaged in at least one such subsistence activity over the 30 days before the NLFS interview. Food production, processing, and storage accounted for the bulk of this type of work, with 55 percent of Nepalis engaged in such activity.

SECTION 3

Structural *and* Emerging Risks *to* Welfare

Investments in improving productivity in agriculture and better leveraging the agglomeration potential of cities will be vital to building resilience. Infrastructural investments that improve connectivity increase returns to rural agriculture (Jacoby 2000; Shrestha 2020) and market specialization (Fafchamps and Shilpi 2005). Nepal's urbanization has not been accompanied by economic growth rates that have accompanied urbanization elsewhere in South Asia (World Bank 2019). Enhancing the connectivity of remote regions and public investments in infrastructure and services will be required to increase sectoral returns and benefits to market specialization and urbanization. To the extent that improving returns to economic activities also relies on Nepal's natural resource base as a source of livelihoods, ensuring the environmental sustainability of new investments (public and private) will be critical, especially given the rising risks to climate change in Nepal and the high incidence of these risks among the rural poor.

The scale and distribution of the COVID-19 induced shocks can be expected to increase poverty and inequality, especially given structural vulnerabilities and preexisting inequalities in opportunity, for three reasons. First, agricultural wage workers and workers with limited or no educational attainment faced significant job and labor income losses because of this crisis. As wage workers in agriculture have typically been the poorest demographic group in Nepal (World Bank 2016), this is a serious policy concern. Second, the scale of the shock has been wide, with

few protected from it, particularly in the nonagricultural economy. Given the high rates of vulnerability, the share of the population at risk of falling into poverty is likely to have increased. Third, shocks have been concentrated on labor incomes, a key driver of poverty reduction in the past, and on vulnerable subpopulations (women, younger age cohorts, and less educated youth). These risks to rising poverty and inequality are amplified by high inequality in opportunity (with education and health outcomes determined largely by one's place of birth and the characteristics of one's parents) and an atypical and incomplete process of structural transformation, characterized by high reliance on subsistence agriculture and informal activities and the concentration of firms and better jobs in a few places.

COVID-related shocks are also likely to pose risks to gains in nonmonetary welfare and to contribute to rising inequality over the longer term. Poorer households are more likely than wealthier ones to have to reduce human capital investments in response to these economic shocks, widening opportunity gaps for children (Hill and Narayan 2020). Learning Adjusted Years of Schooling (LAYS), a measure of learning losses, are estimated to have declined by 0.5 years during the pandemic, from 6.9 years. The present value of lifetime earnings for all students is expected to decrease by $14 billion (in 2011 purchasing power parity)—three times the current annual education expenditure in Nepal (World Bank 2018a). Ensuring that at-risk groups are identified early and targeted for support will be critical to ensuring equity and inclusion while building back from COVID-19.

The lack of scalable mechanisms for the delivery of assistance has compounded the welfare risks posed by the crisis. Unemployment benefits and aid to small businesses—key components of the COVID-19 response in the developed world—are unlikely to be large in developing countries, because of fiscal constraints and the challenges of reaching informal workers, including the self-employed, who make up a large share of the workforce (Hill and Narayan 2020). Countries in the region that had large-scale delivery mechanisms for public assistance in place before the crisis were able to deliver more support in response to the COVID-19 shock than countries, such as Nepal, that did not. Indeed, of the eight countries in the South Asia region, Nepal reported the smallest increase in access to any new formal assistance or programs received since March 2020, with only 2 percent of respondents reporting any additional assistance from government programs between March and November 2020. The extremely limited expansion of public assistance for COVID relief is perhaps not surprising, given that the main component of social assistance in Nepal—social pensions—is not readily amenable to the delivery of assistance in times of crisis. In 2016, Nepal spent 2.1 percent of GDP on social assistance—a larger share than Sri Lanka and India (World Bank's ASPIRE

database).[24] However, social pensions, which accounted for 1.8 percent of GDP in 2016 in Nepal, cannot be flexibly reoriented toward emergency aid, and they had limited reach among the poor, reaching just 17.2 percent of the poorest quintile in rural areas and 9.2 percent in urban areas (World Bank ASPIRE database). In contrast, the largest components of public assistance in India and Sri Lanka were in-kind and cash transfers, respectively, which reached much larger shares of the poor in both rural and urban areas.[25]

Policy measures will need to support an economic recovery process that is inclusive, by broadening the reach of social protection systems and operationalizing social protection mechanisms that can be scaled up as quickly as possible. The COVID-19 crisis is likely to widen spatial disparities in education, health, infrastructure services, and access to opportunities. In the context of an ongoing policy shift toward deepening fiscal federalism, spatial disparities that underly unequal opportunities can be addressed by incorporating spatial equity considerations into formulae that determine resource transfers from the federal to provincial governments and incentivizing better performance and improved accountability for equalizing such outcomes at all levels of government (World Bank 2016, 2018a).

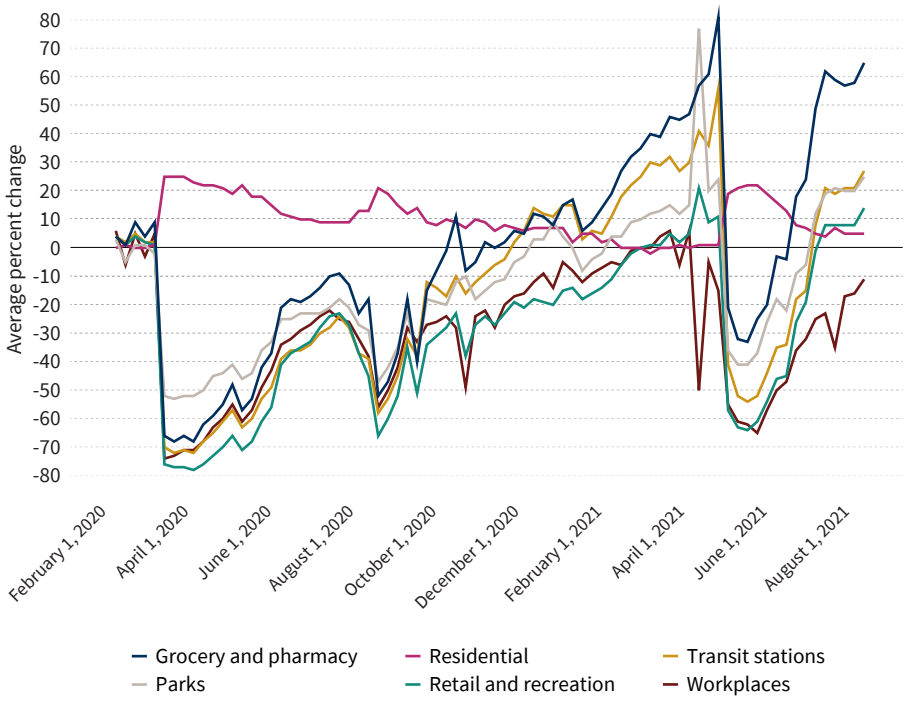
The second wave of COVID-19, which began in May 2021, will slow and complicate the recovery. A slow recovery rate in mobility and related economic activity (figure 3.1) is likely to increase poverty.

In the short run, there is an urgent need to identify and implement new mechanisms that can deliver relief and contribute to a more inclusive recovery process in Nepal. The high penetration of mobile phones (96 percent), access to banking services (68 percent), and use of mobile money (16 percent) can provide entry points to innovative delivery mechanisms, especially if investments in digital infrastructure increase. Satellite imagery and other sources of big geospatial data and household survey data have been used to identify the locations of the poor in Nigeria at the ward level; and experimental digital solutions are being tested to identify vulnerable households within communities in various countries (Blumenstock and others 2021) can also be tested in Nepal.

[24] India spent 1.5 percent and Sri Lanka 0.5 percent of GDP on public social assistance. (World Bank ASPIRE database).

[25] These programs reached more than 92 percent of the poorest rural and urban quintiles in India and a third of the poorest quintiles in Sri Lanka.

FIGURE 3.1 Changes in mobility, measured using Google mobility trends, January 2020–August 2021



Source: Google Mobility Report (https://www.google.com/covid19/mobility/), last updated April 6, 2021.
Note: Baseline is January 3–February 6, 2020.

Data that can support the frequent monitoring of welfare of at-risk groups will be required to support inclusion. Monitoring will also be essential to assess and inform the transitions between the relief, restructuring, and resilience phases of the COVID-19 response. The risks of expanding inequality need to be monitored during the relief and recovery phase. Ideally, such tracking should be implemented by the national statistical system and used to inform policy actions. The COVID-19 crisis can provide the impetus for modernizing how official statistics are produced, disseminated, and used. Piloting and then adopting new phone-based survey technologies to monitor the crisis would serve as a first step toward developing more agile crisis monitoring systems.

Reducing economic vulnerabilities will also require tracking the evolution of labor market trajectories and their implications for welfare. Most jobs in Nepal remain informal and in low-productivity sectors, implying a weak wage growth trajectory (Ruppert Bulmer, Shrestha, and Marshalian 2020; McKenzie 2017). In

such a structurally weak labor market, a significant share of the nonpoor face a high risk of falling into poverty, especially when exposed to prolonged shocks (World Bank 2018a). It is therefore important to track rehiring and wage adjustments (or the lack thereof). Potential structural realignments in the hiring process can also have long-term impacts on the labor market and compound the recovery process.

Improving the economic returns to migration will also be critical to support the recovery. A decrease in global demand for labor—a real possibility, given the scale of the pandemic—could reduce domestic wages. Matching returning migrants with capital and other resources could facilitate recovery of the domestic labor market (Sapkota, Shrestha, and Shrestha 2020). Improving both migration and the reassimilation processes could increase economic returns. Although global demographic pressures are likely to continue to fuel future demand for migrant workers (Kremer and Watt 2009), COVID-19 has brought the potential vulnerabilities of reliance on largely low-skilled jobs on the global labor market into sharp focus. Improving efficiencies in the migration process and investing in a (higher) skill profile of new migrants while leveraging the skills of returnees to support domestic economic growth (see, for example, McKenzie and Yang 2014) will be key elements of the long-term agenda for creating better and more inclusive jobs in Nepal.

SECTION 4

Next Steps

This light poverty assessment is the first in a series of welfare notes. More analysis is planned using existing and new data to understand the evolving effects of the COVID-19 crisis on welfare and inequality and to provide timely input to support the implementation of a Green Resilient and Inclusive Development (GRID) policy framework.[26] The new data will include continued tracking of the trajectories of recovery by individuals and enterprises in Nepal. They will capture delayed markers of critical human capital investments, particularly in early childhood.

Given the uncertain outlook for broad-based access to vaccines, Nepal's recovery is likely to be slow. Risks that need to tracked risks include the following:

- The wage trajectory, given a low-productivity, surplus labor scenario, which could be exacerbated by permanent closures of establishments, losses of entrepreneurial activities, and volatility in global demand for Nepali migrants workers.
- Prolonged absences from the labor market, which could negatively affect human capital because of the loss in opportunities to invest in new skills and learn on the job. These absences could reduce the long-term labor market trajectories of youth and reduce the economic incentives for older workers to re-enter the labor market after layoffs, undermining long-term growth.
- Structural shifts during the recovery that make it unequal and lead to fewer domestic job opportunities.

[26] GRID provides a longer-term framework for building back from COVID. It proposes an integrated approach to promoting a strong and durable recovery and growth through green, resilient, and inclusive development (World Bank 2021a).

Subsequent welfare notes will draw on the second round of the SAR COVID-19 Regional Surveys (planned for October 2021) and quarterly updates to the NLSS IV survey. Focused on adult labor market trajectories and child health and education outcomes, these data will help track the effects of the crisis on multiple dimensions of monetary and nonmonetary welfare. The ongoing crisis also highlights the need for more systematic and scaled-up testing, to track and manage the co-dependent health and economic risks. The second round of the phone surveys will therefore include questions about access to testing, vaccines, and COVID-related out-of-pocket expenditures.

The NLSS IV is expected to be relaunched as early as feasible in 2022, with a new sample frame from the 2021 Nepal Census. For the first time, it will collect data on poverty at the provincial level.[27] Provincial estimates will be available at the end of the 12-month survey period; the sample will also be designed to be nationally representative every quarter. Elements of the survey design—including updating the sample frame and discussions about retaining the panel component—are part of the survey preparation process. The questionnaire design will also be revisited to include questions on health and COVID-19.[28]

Completion of the NLSS IV will yield the first post-COVID-19 estimates of poverty in Nepal and provide an evidence base for the evolving policy framework that will be required to support recovery. It will define a post-crisis welfare baseline that can serve as the basis for tracking welfare-related outcomes. The survey sample, which will be aligned with the new federal structure, will also be vital to informing core activities at the national and provincial levels, including policy development and program targeting. It will also serve as an anchor for the design and targeting of policies that seek to increase inclusion and productivity and build resilience to shocks.

The timing of a return to in-person interview-based surveys remains uncertain. Data from the SAR COVID-19 phone surveys may therefore be critical to support the tracking of key welfare indicators beyond the planned second round and build a data infrastructure for continued monitoring of key programs and policies, should the need arise.

[27] Support for technical assistance and survey implementation of the NLSS IV is provided by a World Bank–executed trust fund that is financed by the Evidence for Development Program of the Foreign, Commonwealth & Development Office (FCDO).

[28] The NLSS IV dropped the panel survey component and excluded the health questions that were similar to those included in the 2019 MICS, given potentially overlapping implementation periods.

ANNEX A

Regression Results

TABLE A.1 Effects of labor shocks on ability to meet basics needs, by household characteristics: Results of the random digit dialing sample

Item	Household reduced purchase/consumption of preferred food because of budget		Household ran out of food and money to buy more over the last seven days		Household worried it would run out of food over the last seven days	
Lost job/temporary absence	0.104*	0.0943	0.105*	0.144	−0.00743	0.129
	(0.0580)	(0.0599)	(0.0566)	(0.117)	(0.114)	(0.114)
Lost wages/earnings	0.0400	−0.117**	0.0314	−0.0107	−0.115	−0.0273
	(0.0591)	(0.0530)	(0.0557)	(0.125)	(0.117)	(0.118)
Household has migrant	0.0134		−0.0485		−0.0151	
	(0.0673)		(0.0599)		(0.0653)	
Lost job/temporary absence x household has migrant	0.0105		−0.0334		0.00972	
	(0.0877)		(0.0861)		(0.0839)	
Lost wage/earning x household has migrant	−0.0846		0.108		−0.111	
	(0.105)		(0.0977)		(0.103)	
Number of income sources		−0.0298		−0.0753*		−0.0536
		(0.0442)		(0.0436)		(0.0424)
Lost job/temporary absence x number of income sources		−0.0320		0.0657		−0.0214
		(0.0659)		(0.0653)		(0.0640)
Lost wage/earning x number of income sources		0.0214		0.0175		0.0251
		(0.0702)		(0.0660)		(0.0664)
Observations	1,994	1,994	1,994	1,994	1,995	1,995
R–squared	0.038	0.068	0.070	0.039	0.045	0.048

Note: All columns are ordinary least squares regressions that include self-reported location (rural) and province fixed effects, robust standard errors, and adjustments for sample weights. Results are similar if probit or a logit specification is used and are robust to inclusion of gender and sector of employment.
Levels of significance reported at *10%, ** 5%, and ***1%.

TABLE A.2 Effects of labor shocks on ability to meet basics needs, by household characteristics: Results of the Household Risk and Vulnerability Survey

Item	Household reduced purchase/consumption of preferred food because of budget			Household ran out of food and money to buy more over the last seven days			Household worried it would run out of food over the last seven days		
Lost job/ temporary absence	0.0485	0.131***	0.157***	0.0431	0.0757	0.0539	0.0702	0.0914**	0.129***
	(0.0586)	(0.0468)	(0.0509)	(0.0567)	(0.0460)	(0.0472)	(0.0556)	(0.0444)	(0.0491)
Lost wages/ earnings	0.00232	0.0524	0.0831*	0.0576	0.0322	0.0480	–0.00863	–0.00443	0.0310
	(0.0555)	(0.0460)	(0.0497)	(0.0513)	(0.0425)	(0.0441)	(0.0536)	(0.0447)	(0.0489)
Dependency ratio	–0.00699			0.0628			0.0610		
	(0.0452)			(0.0408)			(0.0398)		
Lost job/ temporary absence x dependency ratio	0.106*			0.0279			0.0214		
	(0.0602)			(0.0676)			(0.0529)		
Lost wage/ earning x dependency ratio	0.106*			–0.0117			0.0374		
	(0.0606)			(0.0628)			(0.0561)		
Household has migrant		–0.00391			–0.0102			0.00569	
		(0.0709)			(0.0583)			(0.0691)	
Lost job/ temporary absence x household has migrant		–0.0550			–0.0794			–0.0287	
		(0.111)			(0.0953)			(0.109)	
Lost wage/ earning x household has migrant		0.0991			0.0904			0.100	
		(0.105)			(0.110)			(0.101)	
Household experienced any shock			0.130**			0.0993*			0.144***
			(0.0577)			(0.0558)			(0.0524)
Lost job/ temporary absence x any shock			–0.124			0.0373			–0.156*
			(0.0943)			(0.0922)			(0.0899)
Lost wage/ earnings x any shock			–0.0304			0.0188			–0.0485
			(0.0878)			(0.0901)			(0.0834)
Observations	1,102	1,109	1,109	1,102	1,109	1,109	1,102	1,109	1,109
R–squared	0.042	0.034	0.039	0.038	0.032	0.040	0.035	0.025	0.033

Note: All columns are ordinary least squares regressions that include self-reported location (rural) and province fixed effects, robust standard errors, and adjustments for sample weights. Results are similar if probit or a logit specification is used and are robust to inclusion of gender and sector of employment.
Levels of significance reported at *10%, ** 5%, and ***1%.

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