

OCTOBER 2023

Afghanistan Welfare Monitoring Survey

(AWMS)

ROUND 3



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Acknowledgements

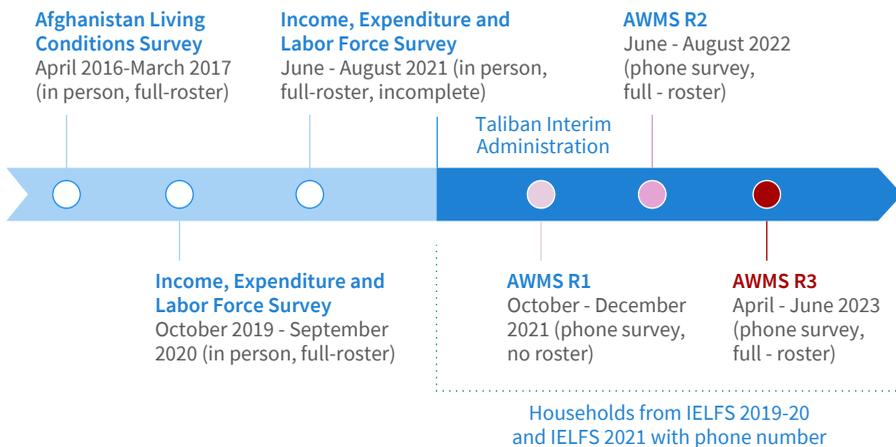
The Afghanistan Welfare Monitoring Survey (AWMS) report is prepared by the World Bank Afghanistan Poverty and Equity team. The technical team included Ghazala Mansuri, Cesar Cancho, Silvia Redaelli, Oscar Barriga-Cabanillas, Anais Dahmani-Scuitti, and Aibek Baibagys Uulu. The team thanks Nobuo Yoshida, David Newhouse, Gabriel Lara Ibarra, Muhammad Waheed, Tobias Haque, Nandini Krishnan, Olivier Lavinal, Mohammad Mahdi Frough, and Elena Maria Roseo for providing support and technical feedback. The report was created with the guidance of Melinda Good (Country Director for Afghanistan), Ximena Del Carpio (Practice Manager, South Asia Poverty and Equity team), and Mathew A. Verghis (Regional Director for Equitable Growth, Finance, and Institutions).

About the Survey

This brief provides the results of Round 3 (R3) of the Afghanistan Welfare Monitoring Survey (AWMS). The World Bank conducted the survey from April to June 2023 to assess changes in basic living conditions in Afghanistan as the country approaches the second-year mark since the Interim Taliban Administration takeover. Round 1 (R1) of the survey was conducted from November to December 2021; Round 2 (R2) of the survey was conducted from July to August 2022.¹

The AWMS survey uses a representative sample of Afghan households covering all regions of the country. Conducted by telephone, the AWMS reinterviewed households that were surveyed previously through Afghanistan’s primary multipurpose household survey: the Income, Expenditure, and Labor Force Survey (IELFS). Those surveys were conducted by the National Statistics Information Authority (NSIA) in 2019–20 and 2021. Figure 1 provides a summary and the timeline of relevant surveys. The details of AWMS survey methodology and modality are described in the annex.

FIGURE 1 Timeline of household surveys used in this report



AWMS R3 covers a wide range of welfare indicators. These include employment and labor earnings, food security and access to assistance, school attendance by boys and girls, and access to health services at the household and the individual level. This round further includes information on a limited set of consumption items and assets used to estimate monetary poverty.

¹ World Bank. 2022. [Afghanistan Welfare Monitoring Survey, Round 1](#). Washington, DC: World Bank; World Bank. 2022. [Afghanistan Welfare Monitoring Survey, Round 2](#). Washington, DC: World Bank.

Summary

Afghanistan is facing complex developmental challenges.

Despite conflict ceasing, one in two Afghans remains poor, and recent gains in welfare have come at the cost of possibly exhausting all coping strategies and household resources. The AWMS's three rounds indicate that Afghan households' welfare is better now compared to the months immediately following the dramatic events of August 15, 2021. Evidence in this respect is consistently emerging when looking at different indicators, such as self-reported welfare or food security. Monetary poverty projections further indicate that the current level of poverty is similar in magnitude to what was observed before the regime change, at a time in which the intensity of conflict in Afghanistan was at its all-time high. This means that half of all Afghans, or 20 million people, are currently poor (with consumption levels below the national poverty line) in a country where conflict has largely ceased, and households have already done their best to cope by mobilizing their labor assets. With poverty being the highest in urban areas and rural poverty outcomes subject to weather variability and the additional challenges of climate change, *the welfare situation of Afghan households remains one of high deprivation and extreme vulnerability.*

The scale of the challenge is best reflected when looking at the Afghan labor market. To make ends meet and cope with the economic contraction, Afghan households have mobilized extra labor, mainly among youth and women. However, with the constant pressure of sustained population growth (average fertility rate close to five), and the economy missing previous (external) drivers of growth, *the increase in labor supply has sizably outpaced a slacking demand, resulting in a doubling of unemployment and a one-quarter increase in underemployment,* as proxied by the share of workers employed for less than 40 hours per week. With close to one in three young males currently unemployed, the challenge is not only economic but can have ramifications in terms of social cohesion.

The analysis of education outcomes further adds to the development challenges ahead. *The dividend from improved security has materialized through an increase in primary school attendance and a narrowing of gender and rural-urban gaps.* In a country that still suffers from high levels of illiteracy, particularly among its female population, these developments further stress how much Afghan households value the education of their children, irrespective of gender. *Yet, with millions of primary school children still out of school, much more needs to be done to ensure*

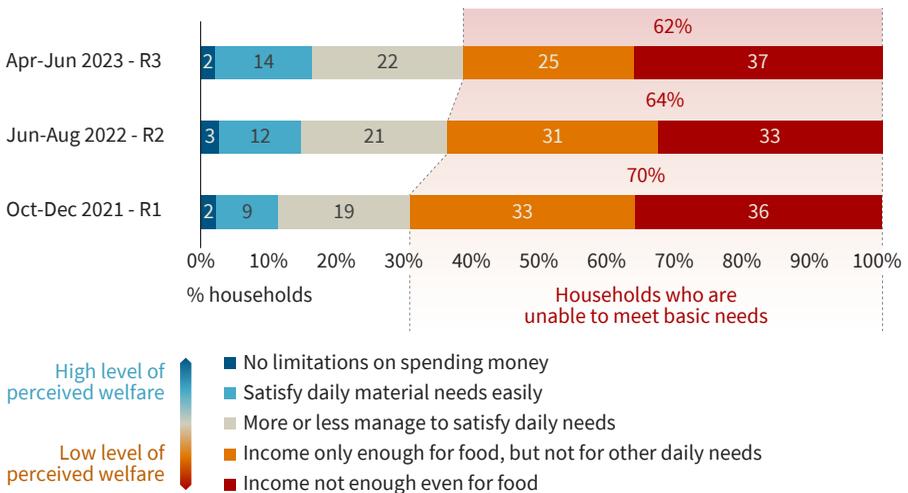
the supply of primary school education meets demand, both in terms of quality and availability. Moreover, the country's future growth potential hinges on improving human capital outcomes beyond primary education, and -regrettably - there is no indication of progress in this space. Lacking good quality jobs that fully employ the adult population, young boys are increasingly called into the labor market to support their households' livelihood. In contrast, young girls are prohibited from fully cultivating their potential through secondary education. *The ban on female secondary education is equivalent to depriving Afghanistan's growth potential from the productive contribution of half of its citizens.* This is even more paradoxical considering that – in the face of the economic crisis – Afghan households have increasingly called on women's work to support their livelihoods and that removing barriers to female education and employment would undoubtedly contribute to a future of shared prosperity for Afghanistan.

Main Results

Welfare and food security

Afghan households report a progressive improvement in self-reported welfare, although most face unmet basic needs. Analysis of R3 of AWMS reveals a progressive reduction in the share of households who report not having enough income to satisfy their basic needs over the last years. Between April and June 2023, the share of households in need stood at 62 percent, compared to 64 percent in R2 and 70 percent in R1 (Figure 2).² Albeit marginal, the improvement compared to R2 can be better appreciated considering that R3 data collection partly overlapped with the lean season, whereas R2 data were collected during the summer months when the availability of food and employment opportunities were at their highest. Interestingly, the gain in welfare between R2 and R3 comes from a significant reduction in the share of households able to satisfy food needs, but not other (non-food) daily needs. On the other hand, no significant change emerges in the share of households reporting inability to satisfy food needs, the more extreme form of deprivation. Overall, despite some signs of improvement, the level of deprivation among Afghan households remains high, with only 16 percent reporting being unhindered in meeting their needs.

FIGURE 2 Self-reported household capacity to cover food and non-food expenses



Source: AWMS 2021 (R1); AWMS 2022 (R2) and AWMS 2023 (R3).

² Households were asked: “Based on the household income coming from all possible sources and the food and other items produced by the household for your own consumption, how would you evaluate the economic state of your household in the last month?”

Increasing wages and recent deflationary dynamics likely drive the observed improvement in Afghan households' capacity to satisfy basic needs. As shown in Figure 3, during the first six months immediately following the Taliban takeover, nominal wages of both unskilled and skilled workers contracted significantly, with negative consequences on household welfare further compounded by inflationary pressure eroding their purchasing capacity. After this initial crisis phase, captured in R1 of AWMS, nominal wages have started to recover to their pre-crisis levels, with progress in real wages further accentuated by a decline in headline inflation in the summer of 2022. Data from R2 of the AWMS conducted in the summer of 2022, indicate that the total annual dollar value of international remittances reaching Afghan households doubled compared to 2019.³ In addition to remittances, the inflow of humanitarian aid, whose level in 2022 matched that of civilian development assistance recorded in 2019, is likely to have contributed to economic stabilization.⁴ These developments are reflected in the improvement in Afghan households' welfare captured in R2 of the AWMS, and by the increase in the share of households receiving assistance from 8 percent in R1 to 15 percent in R2. While the share of households receiving assistance has remained stable at 15 percent, a sustained negative inflation rate since April 2023 has increased the value of real wages for both skilled and unskilled workers above pre-crisis levels, supporting the further advancement in household welfare captured in R3 of the AWMS.

The progressive improvement in Afghan households' welfare is mirrored by a decline in the share of households reporting crisis levels of acute food insecurity. The AWMS survey captures the type and frequency of strategies used by Afghan households to cope with the lack of food.⁵ This information can be used to construct the reduced coping strategy index (rCSI) and to proxy acute food insecurity through the Food Security Phase Classification (IPC) scale.⁶ As shown in Figure 4, since the height of the crisis captured in R1 of AWMS, the share of households experiencing crisis levels of acute food insecurity (IPC phase 3 or above) has progressively

³ Unfortunately, no information on international remittances was included in R1 and R3 of the AWMS survey.

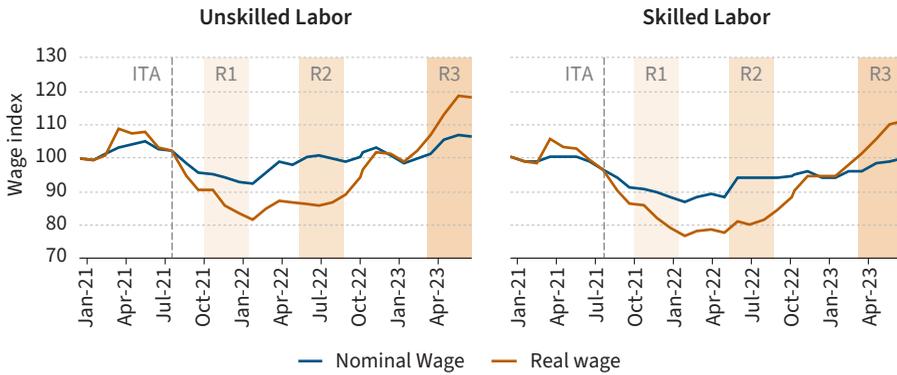
⁴ In 2019, the total aid envelope included approximately USD 4 billion civilian development assistance, equally split between on and off-budget support. In addition, grants worth USD 4.7 billion were spent for security. While the overall budget on civilian aid in 2022 is similar to what recorded in 2019 (USD 3.5-4 billion), all financial support is currently off-budget and 70 percent is being spent on humanitarian support.

⁵ Lack of food coping strategies include: reduce quality/purchase cheaper food, borrow food or money to buy food, limit the portion size, reduce the number of meals per day, reduce adult consumption so that children can eat.

⁶ The *reduced Coping Strategy Index (rCSI)* – which ranges from 0 to 56 – is constructed using information on the frequency of households' reliance on lack of food coping strategies in the last seven days, with each strategy weighted by its severity.

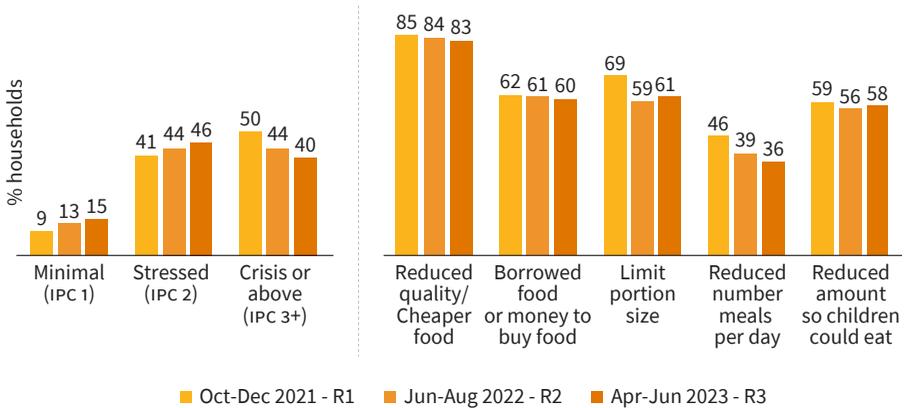
declined, particularly in rural areas.⁷ Still, the observed improvement in food security occurred in a context characterized by persistently high levels of vulnerability, with more than 80 percent of households still having to rely on at least one negative coping strategy to make ends meet.⁸

FIGURE 3 Trends in nominal and real wages, unskilled and skilled labor



Source: WB staff calculation based on WFP food monitoring data

FIGURE 4 Acute food insecurity and household reliance on negative coping strategies



Source: AWMS 2021 (R1); AWMS 2022 (R2) and AWMS 2023 (R3).

Note: IPC Phase 1 is associated to rCSI 0 to 3, IPC Phase 2 corresponds to rCSI 4-18, and IPC Phases 3-5 correspond to rCSI 19 and above.

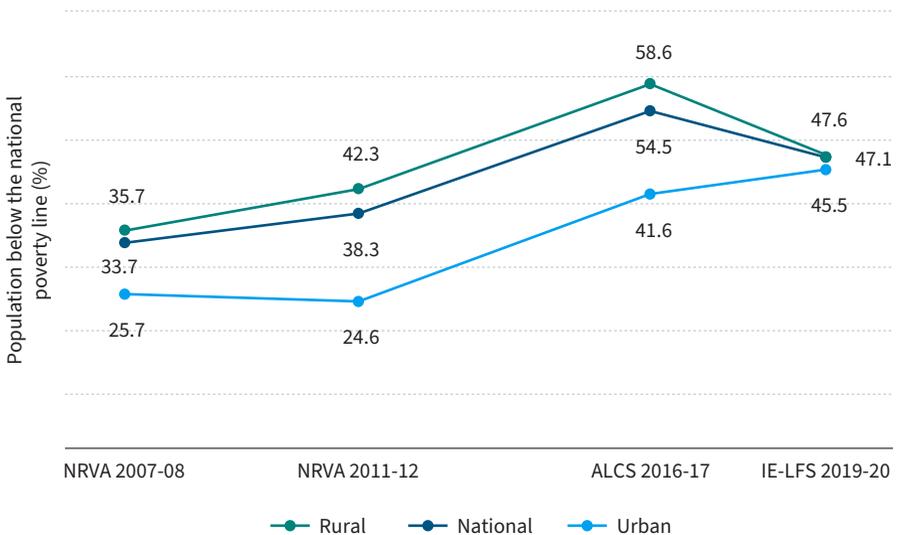
⁷ Emerging trends from AWMS analysis are aligned with results from data collected by the World Food Program. See WFP. 2023. [Afghanistan Food Security Update](#). July 5.

⁸ The improvement in food security level captured by the rCSI score is mostly driven by a decrease in the intensity (frequency of reliance on each coping strategy) and relative severity of the coping strategies adopted by households over the seven days prior to the interview.

Monetary poverty

Prior to the Taliban takeover, close to half of the population in Afghanistan was living below the national poverty line. The latest official estimates based on the Income, Expenditure and Labor Force Survey (IELFS), conducted by the National Statistics and Information Authority (NSIA) in 2019-20, placed the national poverty rate in Afghanistan at 47.1 percent, meaning that close to half of the country’s population was already living in poverty before the Taliban takeover.⁹ As shown in Figure 5, while the national poverty rate in 2019-20 was lower than the 55 percent estimated in 2016-17, poverty trends showed diverging patterns between urban and rural areas.¹⁰ In urban areas, the observed increase in poverty is the result of the compounding effect of the continued decline in aid as well as the onset of the COVID-19 crisis, while in rural areas, poverty was on a declining path spurred by strong agriculture production in the 2019 and 2020 seasons.

FIGURE 5 Poverty trends in Afghanistan, by urban rural areas. Official estimates.



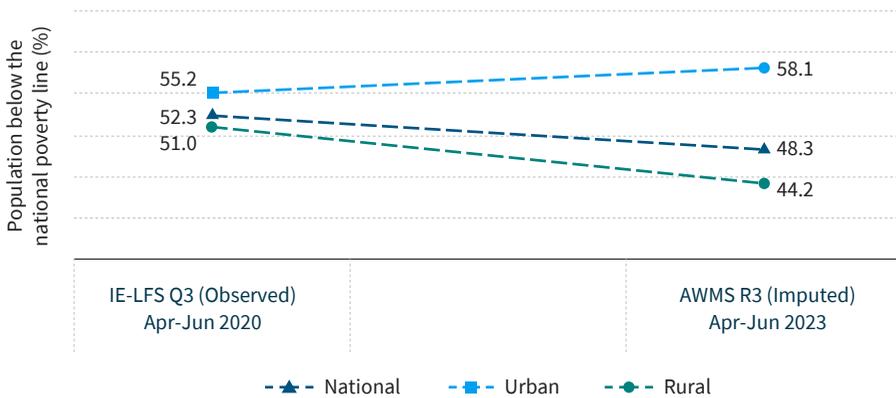
Source: National Statistics and Information Authority (NSIA) – formerly Central Statistical Organization (CSO), survey reports.

⁹ A new IE-LFS was started in April 2021 (IE-LFS 2021-22). However, due to the rapid deteriorating security situation, field work was suspended in June 2021. Poverty estimates based on first quarter data (spring season) of the IE-LFS 2021-22 showed that poverty for that period was 52 percent, very close to what was reported for the same period in 2020.

¹⁰ World Bank (2018) [Poverty in Afghanistan : Results based on ALCS 2016-17](#). Washington, D.C. : World Bank Group.

The lack of comparable household budget survey data has limited the possibility of directly estimating the evolution of monetary poverty since the Taliban takeover. To date, the NSIA has halted the regular collection of IE-LFS household survey data and, consequently, the reporting on key socio-economic indicators, including poverty. To fill this knowledge gap, the questionnaire of round 3 of the AWMS was expanded to estimate current monetary poverty levels through survey-to-survey imputation techniques. More specifically, to account for the seasonal and urban/rural dimensions of poverty in Afghanistan, two separate urban and rural poverty projection models were estimated using IE-LFS household survey data from the April to June period of 2020. The respective urban and rural models were then used to impute poverty in the corresponding period of 2023 using the levels of the independent variables as reported in R3 of the AWMS.¹¹

FIGURE 6 Poverty projections as of April-June 2023, by urban-rural areas



Source: IE-LFS 2019-20 and AWMS 2023 (R3).

Note: The probability of differences in poverty between April-June 2023 and April-June 2020 being different from zero is 95.4 percent at the national level, 99.6 percent at the rural level and less than 25 percent at the urban level.

Poverty projections based on R3 of the AWMS survey indicate that the current level of monetary poverty in Afghanistan is comparable in magnitude to the one observed in spring 2020. Overall, estimates suggest that 48.3 percent of the Afghan population was poor as of April-June 2023, a four-percentage point decline compared to poverty levels observed over the same months of 2020. As shown in Figure 6, diverging trends are emerging between urban and rural areas. In rural areas, monetary poverty is estimated to have declined from 51 to 44 percent, while poverty has stagnated in urban areas, with the increase from 55 to 58 percent lacking

¹¹ See Annex 2.

statistical significance. Although no data were collected in R1 and R2 of AWMS to directly assess the evolution of monetary poverty during the first two years of the Taliban administration, it seems reasonable to expect that poverty first increased in the immediate aftermath of the Taliban takeover to progressively decline afterward, in line with emerging trends in self-reported welfare and food security.

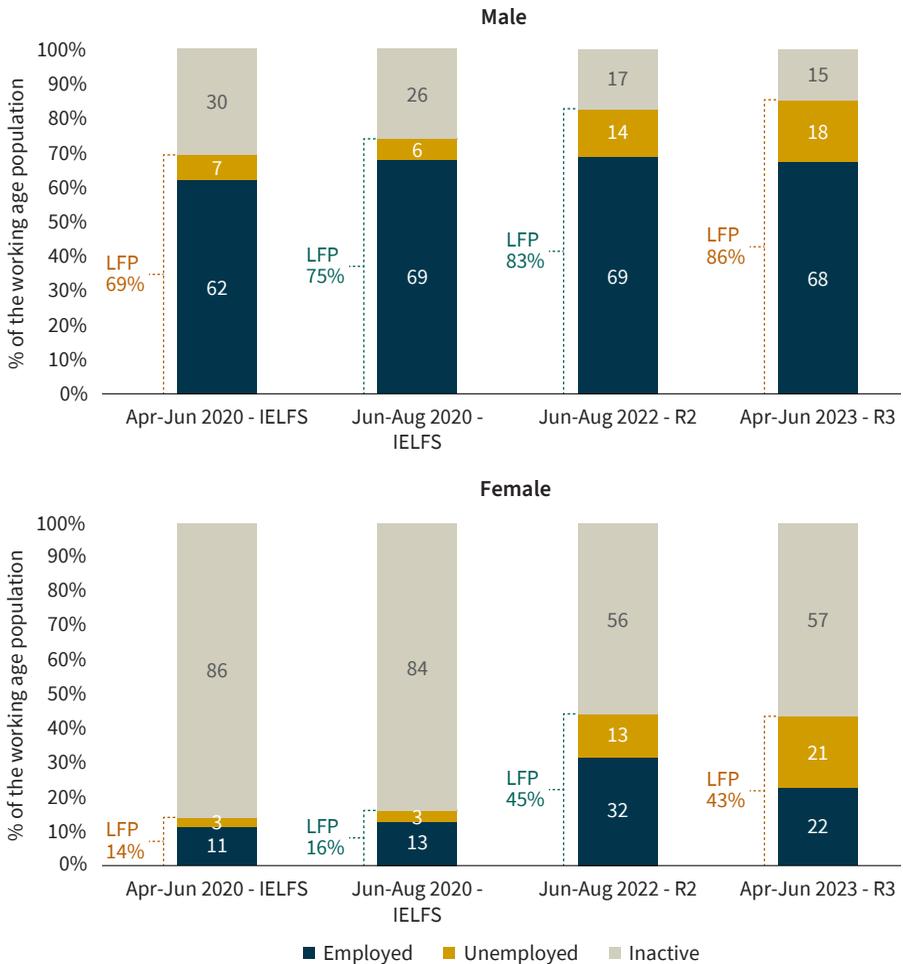
Labor Market

Afghan households responded to the crisis by leveraging the only asset abundantly at their disposal: their own labor. Increases were significant for both men and women. The collapse in aggregate demand that ensued from the Taliban takeover had significant implications for the Afghan labor market. Faced with worsening economic conditions, Afghan households responded by increasing the labor supply of members typically at the margin of the labor market, notably youth and women. Analysis of R2 and R3 of the AWMS reveals that economic (or labor force) participation has structurally increased compared to the period before the Taliban takeover (Figure 7).¹² Among working-age males, labor force participation increased from 69 percent in April-June 2020 to 86 percent during the same months of 2023, with the increase being particularly strong among young and elderly men. The expansion in economic activity was even more substantial among working-age women, with labor force participation increasing by a factor of three when compared to the corresponding period in 2020. In this case, however, no clear pattern emerges across different age groups. Irrespective of their age, a much higher share of women is now engaged in economic activities to support their households, making ends meet.

The Afghan economy and its labor market struggle to absorb the increased labor supply, and as a result, unemployment has more than doubled compared to the period prior to the Taliban takeover. With a young and fast-growing population, volatile growth, and persistent conflict and insecurity, labor demand has traditionally lagged behind supply. Estimates from the last decade indicate that approximately 400-500 thousand Afghans enter the labor market every year in search of jobs. The economic contraction ensuing from the political events of August 15 has further strained the absorption capacity of the Afghan labor market. Not surprisingly, the structural increase in labor force participation has gone hand in hand with an increase in joblessness, with unemployment doubling its rate compared to the period prior to the Taliban takeover.

¹² R1 of AWMS did not collect information on employment of all household members, but only of the household head.

FIGURE 7 Labor market status of working age population (age 15-65), by gender



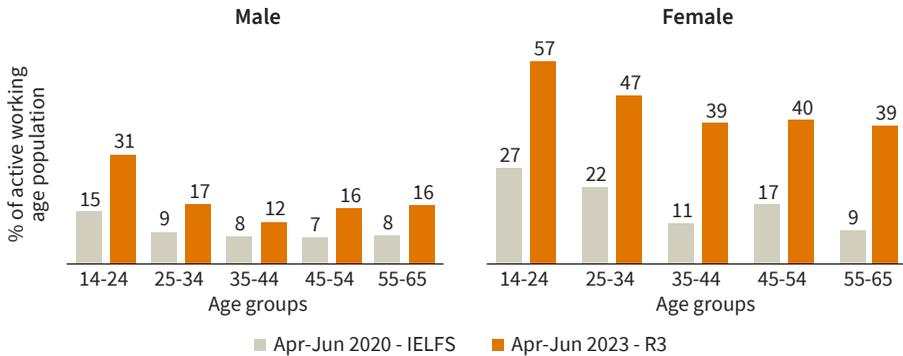
Source: IE-LFS 2019-20; AWMS 2022 (R2) and AWMS 2023 (R3).

Note: Due to strong seasonal patterns in employment, estimates from IE-LFS 2019-20 were computed over the months corresponding to AWMS R2 and R3 fieldwork.

The level of unemployment is worryingly high among youth and women. As shown in Figure 8, among young men looking for a job in the 14 to 24 age group, close to one in three is unemployed, while unemployment is almost twice as high among young women in the same age group. The gender gap in unemployment is more substantial among women in older age cohorts, reflecting the additional challenges that women face in the Afghan labor market. In fact, not only are Afghan women hindered by the constraints on their physical mobility and by the lack of familiarity with the labor market due to their traditional marginal economic role, but they are also disadvantaged by their lack of education and

basic literacy. Among women aged 25 and above, the literacy level is abysmally low at 25 percent – meaning that only one in four women is able to read and write, against 61 percent among men in the same age group.¹³

FIGURE 8 Unemployment rate (age 15-65), by age and gender



Source: IE-LFS 2019-20 and AWMS 2023 (R3).

Note: Due to strong seasonal patterns in employment, estimates from IE-LFS 2019-20 were computed over the months corresponding to R3 fieldwork.

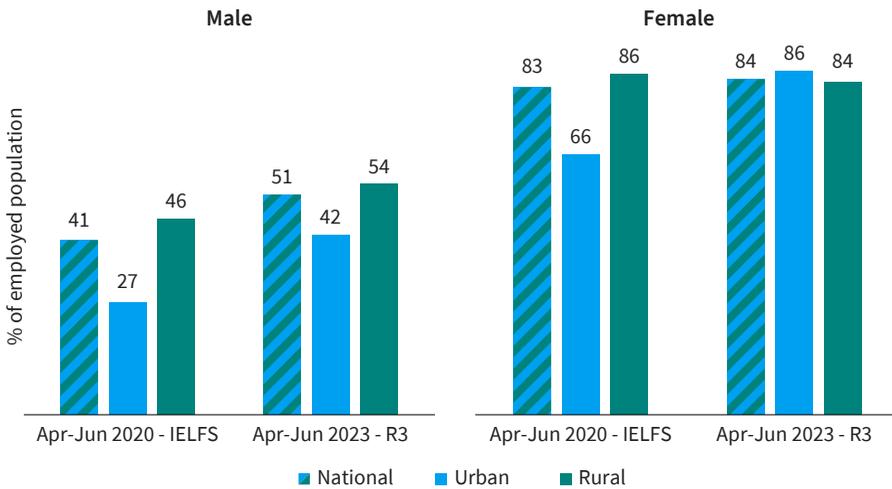
The increase in unemployment has gone hand in hand with a decrease in the number of hours worked by employed individuals, another symptom of the challenges affecting the Afghan labor market. The shortfall between labor demand and supply in the Afghan labor market manifests itself not only through the observed increase in unemployment but also through a reduction in the number of actual hours worked compared to the period prior to the Taliban takeover.¹⁴ Overall, the doubling of unemployment has gone hand in hand with a one-quarter increase in the share of individuals working for less than 40 hours per week, an indicator (proxying) for underemployment.¹⁵ Interesting dynamics emerge when disaggregating the analysis by gender and location (Figure 9). Compared to the period April-June 2020, the increase in the share of individuals working for less than 40 hours a week was the strongest in urban areas and among men. This finding, together with evidence on welfare and poverty presented so far, further underscores how the contraction in Afghanistan’s (mostly urban) aid-driven economy which followed the Taliban takeover has significantly reduced the availability of quality economic opportunities in the country.

¹³ Estimates based on AWMS R3.

¹⁴ For employed individuals, the labor market module developed for the R3 of AWMS includes questions on the number of days worked in the week prior to the interview, as well as on the number of hours worked in a day. No similar information was collected in previous AWMS rounds.

¹⁵ Unfortunately, no information was collected to assess the availability and willingness to work additional hours, so it is not possible to construct a precise measure of underemployment.

FIGURE 9 Share of employed individuals working for less than 40 hours in the past week, by gender and location



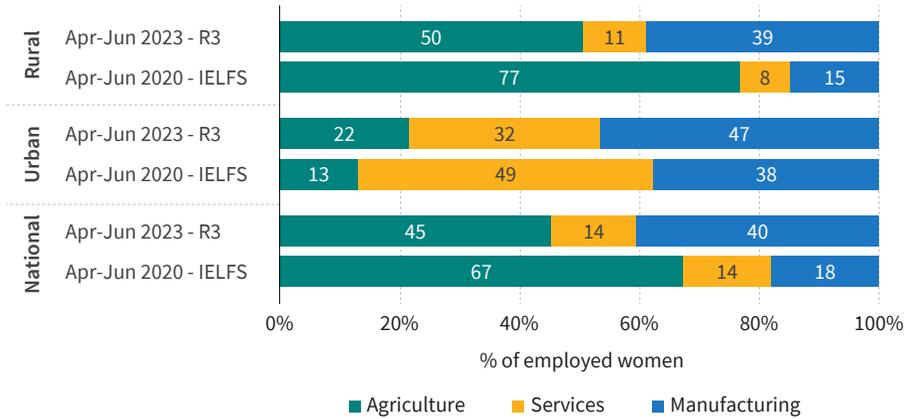
Source: IE-LFS 2019-20 and AWMS 2023 (R3).

Note: Due to strong seasonal patterns in employment, estimates from IE-LFS 2019-20 were computed over the months corresponding to AWMS R3 fieldwork.

The increase in economic activity among women is related to the expansion of home production, particularly small-scale and home-based manufacturing activities. Not surprisingly, given the slack in labor demand and the additional constraints on women’s economic activity imposed by the Taliban administration, the increase in female economic activity has mostly taken place within home boundaries. As shown in Figure 10, the sectoral composition of female employment has substantially changed compared to the period prior to the Taliban take-over, with an increasing number of women employed in the manufacturing sector, particularly in garment and food processing activities. The change is especially noticeable in rural areas, where the share of women employed in manufacturing (this includes home-based production) increased from 15 percent in the April to June period of 2020, to 39 percent in the corresponding months of 2023, at the expense of a decline in the share of employment in agriculture. Among women working in manufacturing, virtually all work out of their own house (home-based work represents 96 percent of total employment in manufacturing). By contrast, home-based work in the service sector only includes 24 percent of the total; the remaining 76 percent of women working in services do so outside the home.¹⁶

¹⁶ Unfortunately, no information on location of work is available in IE-LFS data to assess changes over time.

FIGURE 10 Sectoral distribution of female employment by area of residence



Source: IE-LFS 2019-20 and AWMS 2023 (R3).

Note: Due to strong seasonal patterns in employment, estimates from IE-LFS 2019-20 were computed over the months corresponding to AWMS R3 fieldwork.

Education

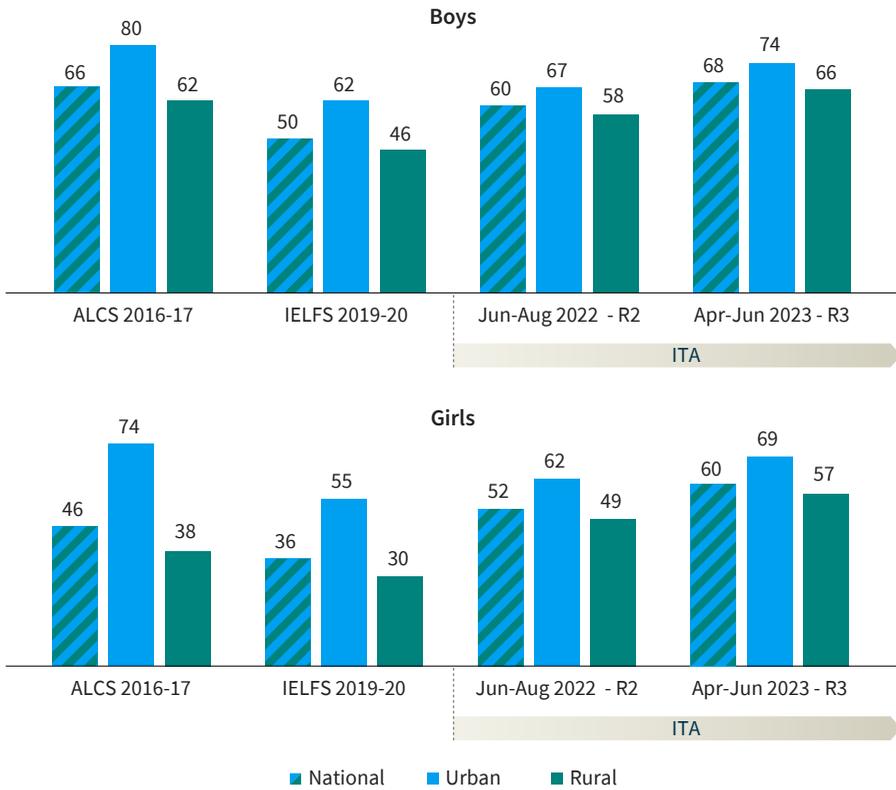
Despite some increase in primary school attendance, millions of children aged 7 to 12 remains out of school. Results of R3 of AWMS, which capture attendance at the beginning of the 1402 school year, indicate an increase in primary school attendance compared to the previous school year (AWMS R2).¹⁷ During the April to June months of 2023, primary school attendance reached 68 percent among boys and 60 percent among girls (Figure 11). While the increase in primary school attendance is a welcomed positive trend, a sizeable share of children aged 7 to 12 remains out of school. This is of particular concern when also considering the evidence emerging from the Afghanistan Multiple Indicator Cluster Survey (MICS) 2022 household survey, which indicates that, in 1401 school year, 60 percent of girls and 45 percent of boys in primary school age remained out of school.¹⁸

¹⁷ AWMS R3 collects information on current school attendance, defined as last 30 days prior to the survey (April-June 2023).

¹⁸ Findings from R2 of the AWMS indicate a higher level of attendance during June-August 2022 compared to the MICS 2022 face-to-face household survey. Estimates of net primary school attendance based on the MICS (i.e., share of children aged 7 to 12 attending primary school only) are 11 percentage points for boys and 14 percentage points lower for girls compared to estimates based on R2 of the AWMS. While differences in survey design and implementation prevent comparability between the two surveys, it is likely that better security conditions during the period of the MICS 2022 fieldwork implementation might have allowed coverage of formerly inaccessible areas of Afghanistan, hence not included in the IE-LFS 2019 and 2021 sample from which the AWMS phone survey is drawn. In this case,

The primary reason for non-attendance reported by respondents in both R2 and R3 of AWMS is lack of access (school being “too far”), whereas before the Taliban takeover respondents mostly mentioned “security concerns”. These findings highlight both the importance of improved security as a driver of primary school attendance, as well as the persistence of accessibility challenges, particularly in rural areas.

FIGURE 11 Primary school attendance (age 7-12), by gender and area of residence



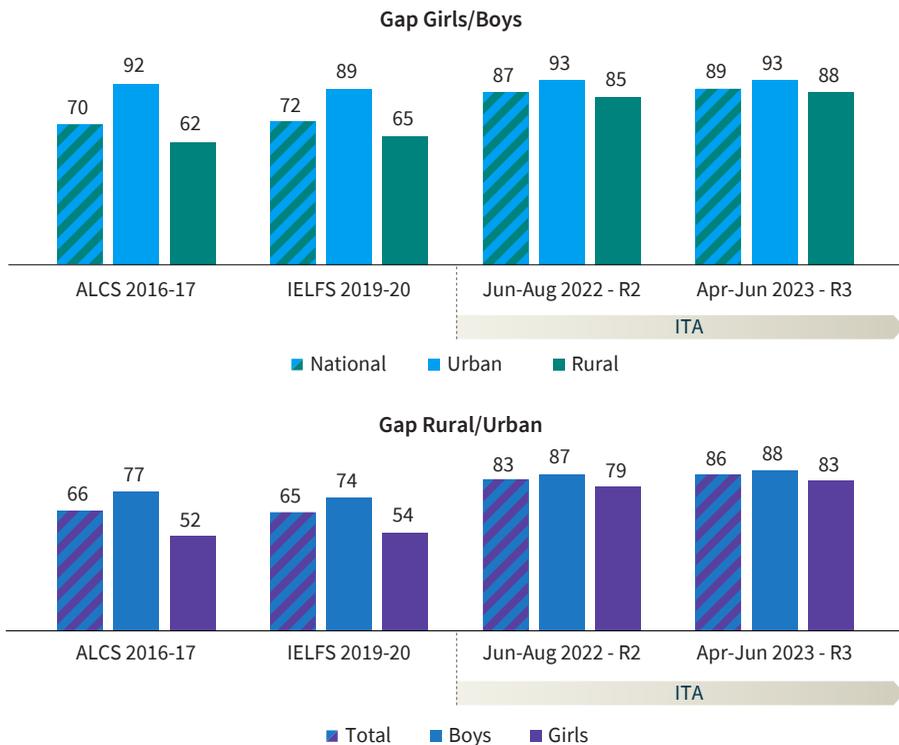
Source: ALCS 2016-17, IE-LFS 2019-20, AWMS 2022 (R2) and AWMS 2023 (R3).

The progress in primary school attendance has benefited girls and rural areas the most, leading to a decline in gender and urban-rural gaps. Primary school attendance in Afghanistan has traditionally been characterized by sizeable gender

lower school attendance rates recorded by the MICS 2022 survey could be explained by the fact that these formerly inaccessible areas of Afghanistan – not covered by previous nationally representative surveys conducted in the country – had lower levels of investments in service delivery during the pre-ITA period, and hence lower school attendance rates as of now.

and rural-to-urban gaps. Prior to the Taliban takeover, the gender gap in primary school attendance was around 70 percent; in contrast, the urban-rural gap was 65 percent. In other words, for every one hundred boys aged 7-12 attending primary school, there were only 70 girls attending, and for every one hundred kids attending primary school in urban areas, only 65 were doing the same in rural parts of Afghanistan (Figure 12). The expansion in primary school attendance benefited mostly girls, with the gender gap approaching 90 percent, and rural areas, with the rural-urban gap closing up to 86 percent.

FIGURE 12 Gender and urban/rural gaps in primary school attendance (age 7-12), difference in percentage points

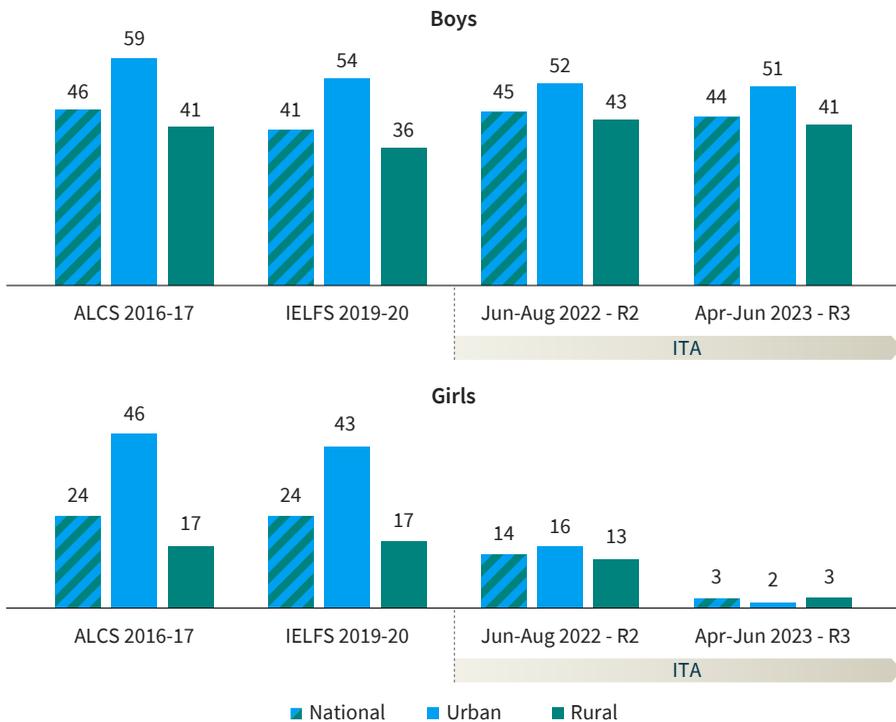


Source: ALCS 2016-17, IE-LFS 2019-20, AWMS 2022 (R2) and AWMS 2023 (R3).

The analysis of trends in secondary school attendance reveals a fast-deteriorating and concerning picture. Data from R3 of the AWMS show a dramatic situation for teen girls. The share of girls aged 13 to 18 attending secondary school had already declined dramatically in the summer of 2022 compared to the pre-Taliban levels, going from 24 to 14 percent between the IE-LFS 2019/20 and AWMS R2 surveys (Figure 13). One year later, due to the ban on female secondary school

attendance imposed by the Taliban, which came fully into effect with the start of the school year in March 2023, only 3 percent of girls are attending secondary school at the national level, with no sizeable difference in compliance with ITA’s dispositions between urban and rural areas. In parallel, a meager 44 percent of boys aged 13 to 18 is being educated at the secondary level, a result that combines a declining secondary school attendance trend for boys living in urban areas and stagnating levels for those living in rural parts of the country. These findings – aligned with evidence on the labor market – suggest that male youth are more likely to discontinue their education to pursue employment opportunities and support their families.

FIGURE 13 Secondary school attendance (age 13-18), by gender and area of residence

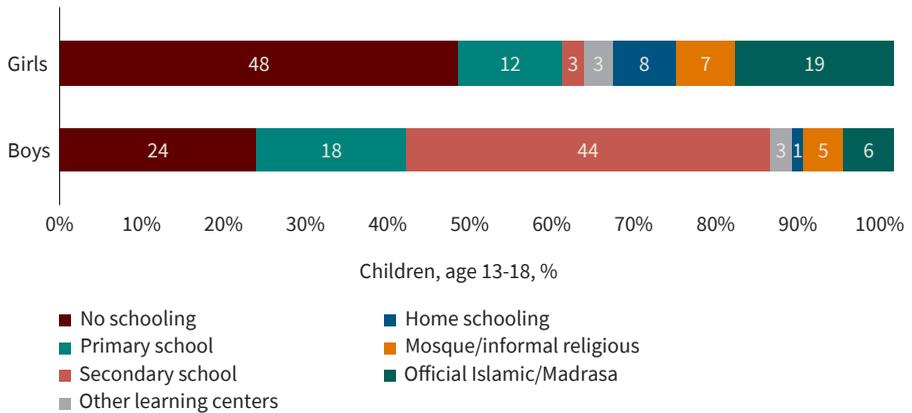


Source: ALCS 2016-17, IE-LFS 2019-20, AWMS 2022 (R2) and AWMS 2023 (R3).

Among children in the 13 to 18 age group, girls are twice as likely as boys to be excluded from any type of education. The questionnaire design for R3 of AWMS was improved to better capture the current relevance of religious and other informal schooling options. As shown in Figure 14, while only 3 percent of girls of secondary school age are attending secondary school, “only” 48 percent of them

are actually not receiving any schooling. In particular, 12 percent of girls aged 13-18 still attend primary school, possibly due to repetition, late enrollment in response to improved security, or continued primary-level education in response to the secondary school ban. Moreover, 37 percent of girls in this age group are attending other forms of schooling, with religious institutions – notably formal Islamic institutions/Madrasas - hosting the majority of them. Overall, the share of girls aged 13-18 not receiving any education is twice as high as the corresponding share among boys.

FIGURE 14 Schooling status of secondary school aged children (age 13-18), by gender



Source: AWMS 2023 (R3).

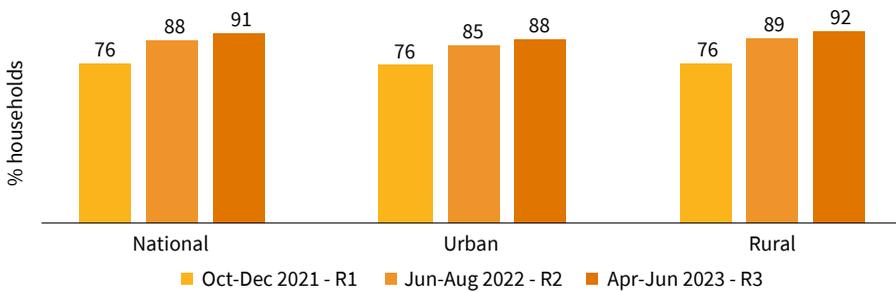
Note: Other learning centers include private learning centers, community centers and informal schools.

Health

Demand for health services is high and increasing, particularly in rural areas. In R3 of the AWMS, 91 percent of households report having had at least one household member requiring medical attention in the month prior to the survey, up from 76 percent and 88 percent in R1 and R2, respectively. As shown in Figure 15, the increase in demand for health services is particularly strong in rural areas, possibly reflecting the improvement in the security situation and in household welfare. While no information is available in R1 and R2 to analyze changes in morbidity over time, the most commonly reported reason for seeking medical attention in June – April 2023 was associated with symptoms/discomfort such as cough, nausea, headache, fever, and loss of appetite.

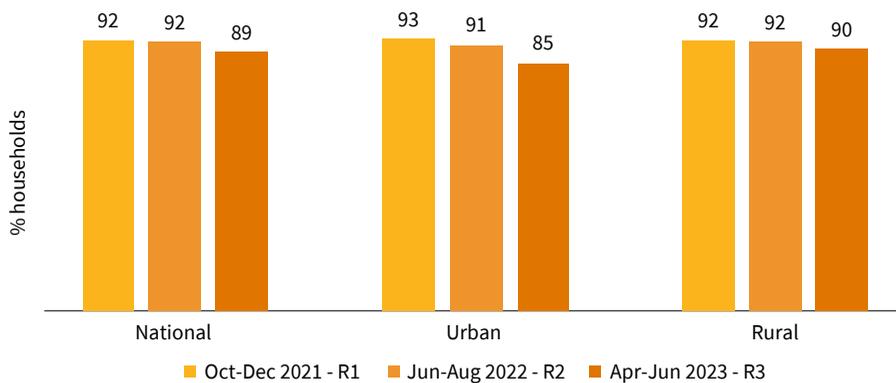
Notwithstanding the increase in demand, access to health services has remained substantially stable at high levels since the Taliban takeover. International financing has been instrumental in guaranteeing the resilience of the health sector and maintaining the delivery of essential health services countrywide. In fact, despite the increase in demand, access has remained substantially stable over time, as approximately 9 in 10 individuals who needed medical attention were able to access it. According to R3 of the AWMS, potential signs of stress in health access are currently emerging in urban areas where 85 percent of individuals needing care were able to access it, compared to 91 and 93 percent in R2 and R1, respectively (Figure 16).

FIGURE 15 Demand for health services in the last 30 days as a percentage of households having at least one member requiring medical attention, by area of residence



Source: AWMS 2021 (R1); AWMS 2022 (R2) and AWMS 2023 (R3).

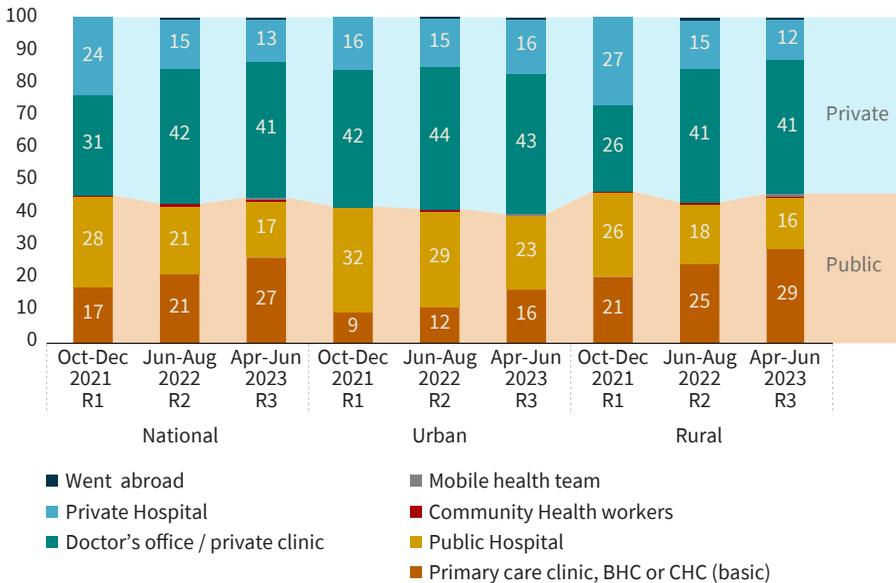
FIGURE 16 Access to health services in the last 30 days as a percentage of households with at least one member requiring medical attention, by area of residence



Source: AWMS 2021 (R1); AWMS 2022 (R2) and AWMS 2023 (R3).

Similarly, no major changes are emerging in public sector coverage, with public health facilities serving around 45 percent of individuals accessing health services. Health service provision in Afghanistan is almost equally split between the public and the private sector, with the latter playing a relatively larger role in urban areas. Interestingly, while the share of public sector coverage has remained substantially stable since the Taliban takeover, the analysis reveals an increase in the utilization of public primary health facilities compared to public hospitals in both rural and urban areas (Figure 17). Among private sector providers, a similar reduction in the share of services provided by private hospitals is evident in rural areas. More research would be required to corroborate and better understand these findings. In particular, it will be important to understand if the reduction in the share of tertiary care is due to a genuine increase in demand for primary care, or to a reduction in the supply or access to tertiary care facilities.¹⁹

FIGURE 17 Health provider visited by individuals needing medical attention in the last 30 days



Source: AWMS 2021 (R1); AWMS 2022 (R2) and AWMS 2023 (R3).

¹⁹ One possible hypothesis is that the improvement in both the security situation and household welfare could have brought more people to use health services, including those with less severe symptoms/ailments manageable through primary care. This possible explanation is consistent with observed increase in demand for health services since the Taliban takeover, described in Figure 15.

Knowledge gaps and areas for future analysis

In every country, but even more so in highly volatile, fragile, and conflict-affected countries, having good quality and timely data is of paramount importance to inform decision-making.

Prior to the Taliban takeover, Afghanistan had a relatively well-established system to monitor welfare. Between 2007 and 2021, the National Statistics and Information Authority (NSIA) - with support from development partners – successfully conducted six rounds of face-to-face nationally representative household budget surveys that allowed in-depth poverty and welfare analytics. Due to the deteriorating security situation, official data collection on budget surveys ceased a few months prior to the events of August 15, 2021, and it has not resumed since.

The Afghanistan Welfare Monitoring Survey (AWMS) is a rapid-response phone survey that was explicitly designed to fill knowledge gaps on the welfare status of Afghan households and their access to basic services under the new administration. Compared to other phone surveys, which typically rely on random digit dialing, the AWMS sample has the advantage of being anchored to that of nationally representative surveys conducted prior to the Taliban takeover, which allows to deploy the most advanced statistical techniques to address the selection biases inherent to phone surveys.²⁰ In round 3 of the AWMS, further efforts have been made to deploy innovative survey-to-survey techniques to address questions related to monetary poverty dynamics.

While the joint analysis of comparable pre-ITA baseline and three rounds of AWMS provides important insights into the most recent socio-economic developments, there are several knowledge gaps and questions that remain unanswered due to data limitations.

First, it is important to validate and better understand the drivers of poverty reduction in rural areas and to further investigate possible challenges for its sustainability moving forward. From analytics conducted over the last 15 years, we know that rural poverty dynamics are highly volatile, with rural households' welfare being affected by weather variability and the additional challenges of climate change. Given this

²⁰ See Annex 1.

context, more analysis leveraging different types of data is required to understand whether the improved security situation might be contributing to any changes in the functioning of the rural economy and rural households' vulnerability to shocks. Similarly, more analysis is required to understand the current and long-term impact of the ban on opium poppy cultivation and to understand its distributional impact on household welfare. Additional analysis leveraging different types of data is also required to understand current patterns of internal labor and population mobility (whether from rural to urban areas or vice-versa) and their impact on the diverging welfare dynamics observed between urban and rural areas.

Second, it is important to better quantify, monitor, and investigate the impact of international remittances on household welfare and, more broadly, on the Afghan economy. International evidence has documented the countercyclical nature of remittance flows to home countries and how they can contribute to smoothing consumption of receiving households in the wake of economic shocks. Analysis based on round 2 of the AWMS, conducted in the summer of 2022, indicates that – while only 10 percent of households could rely on the income support of international remittances – the total annual dollar value of international remittances reaching Afghanistan has doubled compared to 2019. Unfortunately, no questions on remittances were included in round 3 of the AWMS. In moving forward, more consistent monitoring of international remittances will be required to fully understand the role they play in both supporting the Afghan economy as well as the welfare and livelihood strategies of Afghan households.

Third, it is important to better understand the challenges and opportunities presented by the observed increase in female economic activity. One of the more interesting and unexpected findings of the analysis based on the AWMS survey is the threefold increase in economic participation of Afghan women compared to the period antecedent to the Taliban takeover. With an increasing number of women being engaged in economic activities – primarily in home production in manufacturing (garment, textile, and food processing activities) – it will be important to further investigate their profile and functioning in order to best support women's productive contribution to the livelihoods of their households and, more broadly, to the development of the country.

Fourth, more data and analysis will be required to monitor the evolution of education outcomes well beyond attendance. Overcoming Afghanistan's poverty, labor market, and growth challenges hinges on the improvement of human capital outcomes for its people, men and women alike. Specifically on education, the findings of this report highlight some positive improvements in primary school

attendance, notably the reduction in gender and rural-urban gaps. Still, the AWMS does not provide any information on other critical metrics related to the quality of schooling or the overall learning environment. Moreover, with the dramatic impact of the Taliban’s ban on female secondary education, more analysis is required to understand whether it will translate into an increase in demand for religious or other types of informal schooling institutions.

Lastly, it is of paramount importance to support Afghanistan’s national statistical system, starting from foundational data. During the last two decades, significant efforts went into building NSIA’s capacity to produce economic and social statistics. The scale of the economic changes over the last two years and the challenges ahead require concerted and coordinated efforts aimed at supporting the production of timely, quality, and independent statistics. In this space, besides the urgent need to improve (and rebase) national accounts and to implement a new round of household budget and labor force survey, it is to be reminded that the last (incomplete) census for the country dates back to 1979. First and foremost, a better understanding of the demographic, geographical, and economic profile of Afghanistan’s population is required to tackle effectively its current and future challenges.

ANNEX 1:

AWMS Methodology

Sample

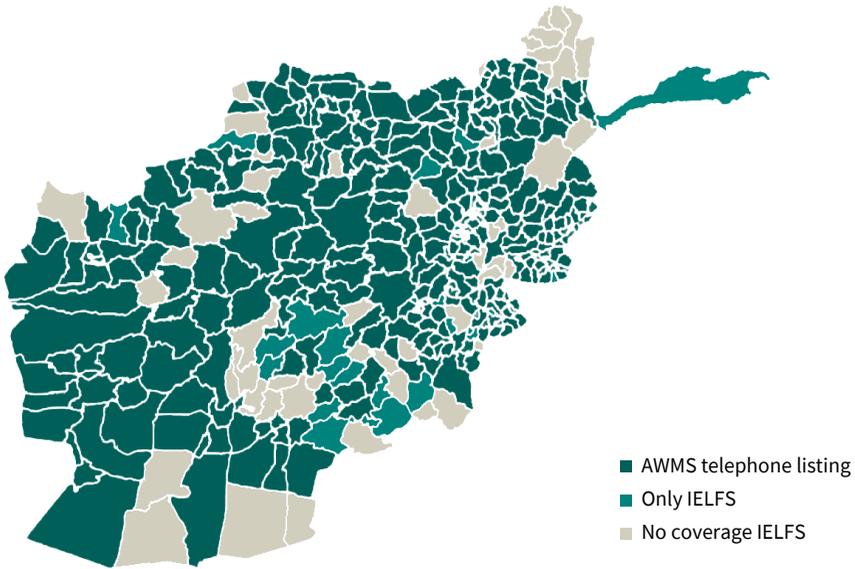
The AWMS relies on a sample of households interviewed during the two previous waves of the Income, Expenditure and Labor Force Survey (IELFS). The IELFS, administered by the NSIA, was Afghanistan’s flagship nationally representative household survey. The first wave was administered in person from October 2019 to September 2020, and the second wave took place between April and June 2021, also in person. This second wave was planned for an entire year, but field-work was halted one-quarter of the way through due to insecurity and a lack of resources. Still, the sample collected in this quarter was nationally representative. The IELFS questionnaire included information on the telephone numbers of the households interviewed, which were used for the AWMS. The sampling frame and the selection method used to select the sample for both waves of the IELFS were the same. This allowed the telephone numbers collected in each wave to be merged into a single listing without losing their connection to the original sampling frame. As a result, the sampling weights of the households with telephone numbers could be adjusted to preserve representativeness at the national level. The total sample of telephone numbers collected included 12,811 unique numbers (Table A1.1), covering 318 districts out of 339 visited by the two IELFS rounds throughout all provinces of the country (Figure A1.1).

TABLE A1.1 IELFS 2019–20 and 2021 samples and telephone numbers collected

	IELFS 2019–20	IELFS 2021	Total
Households with complete interviews	18,139	4,900	23,039
Households with telephone numbers collected	9,857	2,954	12,811

Source: Elaboration based on IELFS 2019–20 and 2021.

FIGURE A1.1 Distribution across districts of the consolidated listing of telephone numbers from IELFS 2019–20 and IELFS 2021



Source: Elaboration based on IELFS 2019–20 and IELFS 2021.

The first AWMS (AWMS R1) tested the potential of phone surveys to assess welfare in Afghanistan after the regime change. The survey focused on collecting information on household heads. Close to half of the attempted interviews were completed, with the main reason for non-response being that the telephone number was not active. AWMS R1 data collection lasted six weeks, between October and December 2021. For contractual reasons, only 10,130 telephone numbers were randomly dialed, resulting in 4,937 complete telephone interviews. The protocol for contacting the phone numbers required that enumerators attempt seven calls before classifying an interview as non-response or non-complete. Among the completed interviews, 65 percent were completed at the first attempt, 21 percent at the second, and 14 percent at the third or further attempts (Table A1.2). Among unsuccessful calls, the most common reason was that the number was not working or not active, followed by the respondent not picking up the phone, declining the interview (9 percent) or abandoning the interview while still incomplete (1 percent).

The second round of the AWMS (AWMS R2) was collected between June and August 2022, with a response rate (45 percent) only slightly lower than that of the first round. R2 data collection started six months after R1 and lasted for six weeks. The full listing of 12,811 telephone numbers was contacted, regardless of the R1 interview result. The same protocol was followed for contacting phone numbers and the share of successfully completed interviews reached 45 percent of the full telephone listing, equivalent to 5,800 interviews (Table A1.2). Similar reasons for interviews not to be completed remained numbers not working or inactive (46 percent).

The third round of the AWMS (AWMS R3) was collected between April and June 2023. Its response rate was 40 percent, which constitutes a positive result considering the sample of phone numbers was collected more than two years ago. Given the relatively longer questionnaire implemented in R3, respondents were given the opportunity to answer the survey in two different calls.²¹ An extended pilot was conducted in order to assess the viability of changes in data collection methodology. A total of 5,175 interviews were successfully collected. A total of 3,513 answered the full battery of questions in a single call, while 1,662 opted for answering in two different interview sessions.²² As in previous surveys, the most prevalent reason for interviews not to be completed was that the number was not working or not active (42 percent). In line with the trend from previous surveys, completing interviews requires more attempts to be successfully conducted. For instance, in the AWMS R3 only 47 percent of respondents picked up the phone on the first attempt call, while this same number was 65 percent in the first rounds of the AWMS (Table A1.2).

TABLE A1.2 Results from attempted calls AWMS rounds

	AWMS Round 1		AWMS Round 2		AWMS Round 3	
Telephone numbers contacted	10,130	100%	12,811	100%	11,737	100%
Result of list dialing						
Number not working or not active	4,153	41%	5,946	46%	4,901	42%
Did not pick up or declined	911	9%	932	7%	1,413	12%

²¹ See Questionnaire section for details.

²² There were only 86 cases whereby households opted to split the survey into two parts but could not be contacted for the second part of the questionnaire; in these cases, their partial responses were discarded.

	AWMS Round 1		AWMS Round 2		AWMS Round 3	
Incomplete	101	1%	133	1%	248	2%
Completed interviews	4,937	49%	5,800	45%	5,175	44%
Attempts needed to complete interviews						
Completed interviews	4,937	100%	5,800	100%	5,175	100%
Interviews answered in a single session	NA	NA	NA	NA	3,513	67%
Number of contact attempts for completed interviews						
1 attempt	3,212	65%	3,273	56%	2,425	47%
2 attempts	1,025	21%	1,324	23%	1,103	21%
3+ attempts	700	14%	1,203	21%	1,647	32%

Source: Elaboration based on AWMS rounds.

Matching respondent households with the original IE-LFS surveys is key to producing a nationally representative sample. An additional robustness check was conducted by cross-checking whether respondent households were the same as the ones that participated in the IE-ELFS 2019/20 and IE-LFS 2021 surveys. For the IE-ELFS 2019/20, the matching of information was done directly using the name of the household head. In the case of the IE-LFS 2021, no information on the names of previous respondents was available. Instead, for each round of the AWMS, information on the household head including age, gender, location, and number of members was used to assess if the respondent household was the same that participated in the IE-LFS 2021. This model was validated using the panel between the IE-LFS 2019/20 and the AWMS R2, showing that about 80 percent of households were properly classified in their respective panel/non-panel categories. This matching is key to validating households with respect to the original sampling frame and constructing survey weights that account for selection due to phone ownership, probability of participating in the AWMS, and change of ownership of the cellphone number.

In the AWMS R3, about 82 percent of the interviewed households participated in the original IELFS 2019/20 and IELFS 2021 surveys. In the AWMS R3 the percentage of households properly matched to the IE-LFS original respondents is 82 percent, which represents an increase with respect to previous rounds, where it was close to 71 percent. The main reason for this increase is that phone

numbers that have changed owners were used for the piloting. Still, despite the reduction in the potential number of numbers to dial, a total sample size similar to the AWMS R2 was achieved.

TABLE A. Source of sampled households across AWMS rounds

Source	Panel status	AWMS R1	AWMS R2	AWMS R3
	Panel	2,750	3,467	3,691
IE-LFS 2019/20	New household	596	941	329
	Sub total	3,346	4,408	4,021
	Panel	811	656	568
IE-LFS 2021	New household	780	736	587
	Sub total	1,591	1,392	1,154
Total sample		4,937	5,800	5,175

Source: Elaboration based on AWMS rounds.

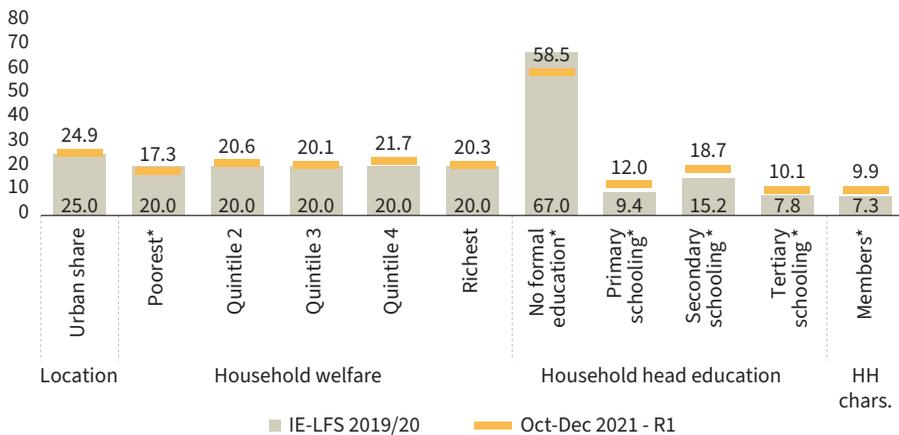
The sampling weights in each round were adjusted to preserve national representativeness.²³ As expected from a phone survey, the sample of phone owners includes some expected biases, given that: (i) not all of the households from IELFS provided telephone numbers, and (ii) not all of the available numbers could be interviewed successfully. In order to correct for these possible sources of selection bias and to preserve the national representativeness of the sample of completed interviews, a four-step process of weights adjustment was implemented. First, the sampling weights for all households interviewed in the two IELFS rounds were harmonized, so that the consolidated sample could match the population size and distribution coming from the original sampling frame. Second, the new sampling weights for the households that provided a telephone number in the IELFS rounds were adjusted, so that this sub-sample could be used to calculate nationally representative estimates. This adjustment was based on the probabilities of each household having provided a telephone number in the IELFS rounds, as predicted by their socioeconomic characteristics

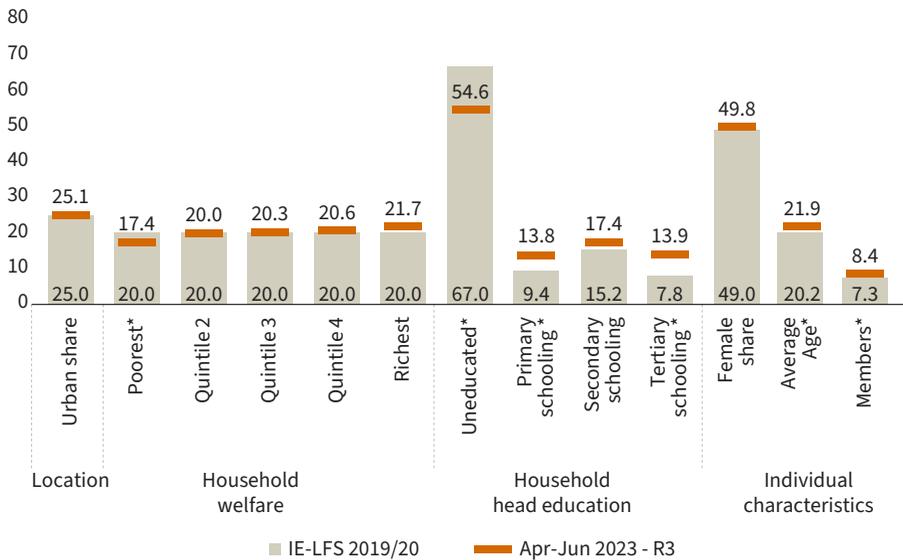
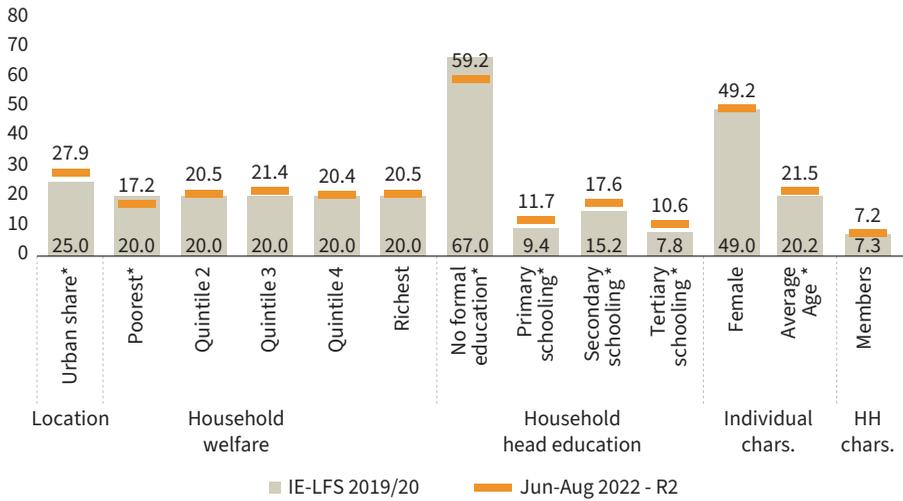
²³ Detailed technical documentation on the re-weighting procedure is available upon request.

(such as region, urban/rural, access to electricity, and household assets). Next, as a third step, a readjustment was conducted on the sample of households with completed interviews accounting for the panel status of the household and the probabilities of completing the interview (again, as predicted by sociodemographic characteristics). Finally, a post-stratification of the sampling weights by regions was conducted, and excessively large weights were trimmed to reduce their impact on estimate standard errors.

The adjustment of sampling weights reduced the biases, although the final sample is slightly wealthier and more educated, on average, than the sample coming from the IELFS 2019–20. Similar to what was observed in R1 and R2 of the AWMS, some differences remain after the re-weighting (Figure A1.2). In particular, the education levels of household heads are higher, with a reduction of those who report having no education. Additionally, similar to previous AWMS rounds, household size is relatively larger, possibly reflecting internal migration dynamics and/or household consolidation. Overall, the differences in welfare and education levels are not large enough to introduce gross biases to the results, and every category considered has a substantial representation.

FIGURE A1.2 Contrast of IELFS 2019–20 and AWMS sociodemographic variables, various rounds





Source: Elaboration based on IELFS 2019–20 and AWMS R1, R2 and R3.

Note: An asterisk (*) indicates that differences in means are significant at 1%. AWMS R2 only collected information on the household head.

Questionnaire

The questionnaire for AWMS R1 was designed to obtain information on the employment status of the household head, as well as additional indicators related to welfare and access to services at the household level. The R1 questionnaire was designed to be answered by the household head, who would provide

information about himself/herself on employment, and for the overall household on other topics. In cases where the household head did not respond to the call or was not available at the moment of the call, the household member responding to the phone call was interviewed; this occurred in 17 percent of completed R1 interviews. In addition to the introductory and concluding sections, the questionnaire included nine short modules covering the following topics: displacement, employment, agriculture, household income, household welfare, basic needs and assistance, market access, education, and health. The employment module was designed to collect information from the household head on his or her employment activities, following verbatim the same battery of questions used in the IELFS 2019–20 to ensure comparability. The other modules collected household-level information on other topics, following closely the wording and structure of questions used in the IELFS 2019–20, when available. Overall, the average length of completed interviews was 22.5 minutes.

The R2 questionnaire was expanded to collect information on employment, access to health, and education for every household member. The R2 questionnaire preserved, to a large extent, the same structure as that was used in R1 but included several extensions. First, it introduced a household roster module, through which basic information on each household member could be obtained from the household head. Second, the sections on employment, education, and health were expanded so that individual information could be collected about every household member that qualified for each section (14+ years old for employment, 6–18 years old for education, and all ages for health). Finally, it included a new module on COVID-19, focusing mainly on collecting information on vaccination. These changes made the survey longer, as completed interviews lasted for 39.5 minutes, on average.

The R3 questionnaire maintains the collection of information on every household member and expands on labor market information, education, health, and a SWIFT-plus module to impute poverty. The R3 continues with collecting information for every household member but expands the scope of the questions to better understand self-employment conditions, educational enrollment, conditions on access to health services, and a module to estimate poverty. As an innovation with respect to previous rounds, the latest AWMS includes a SWIFT-plus module to predict household expenditures.²⁴ The survey required, on average, 56 minutes to complete when performed on a single interview while when split into two sessions the average time increased to 68 minutes.

²⁴ See Annex 2.

In all rounds, the survey was administered in Dari and Pashto, using a computer-assisted telephone interview (CATI) questionnaire based on an Open Data Kit (OPK) app. All enumerators were female, working remotely from their homes. Households were informed of the reason for their selection and the purpose of the survey, and verbal consent was obtained before proceeding with the interview. The questionnaire follows World Bank data privacy corporate policies. All completed interviews were compensated with a phone credit worth AFN 150 (about USD 1.7) upon completion of the survey.

ANNEX 2:

SWIFT-plus methodology for poverty estimation

Over the past decade, significant advances have been made in the research on survey-to-survey imputation techniques. The lack of household survey data during or after a crisis is a challenge not unique to Afghanistan. Not surprisingly, the research on how to fill knowledge gaps on welfare has been expanding considerably over the past decade, as a response to a growing need of real-time welfare monitoring data, as well as the necessity to address the challenges of standard household budget surveys, such as cost and lengthy implementation duration. The Survey of Well-Being via Instant and Frequent Tracking ([SWIFT](#)) methodology has been developed to make the estimation of poverty at the country level cheaper and faster. SWIFT uses data from a past household survey that contains information on household expenditure and poverty correlates in order to train a model. It collects data on identified poverty correlates from a new survey (typically a short phone-based survey), and then uses the trained model to impute household expenditures for the new survey from the poverty correlates. To date, the SWIFT methodology has been applied in more than 75 countries.

Most recent efforts have focused on validating and improving SWIFT performance and to the development of the SWIFT-plus methodology. The SWIFT methodology has been tested extensively, not only via *within-sample tests* – i.e., testing how well poverty is predicted using the same data on which the model is trained – but also via *between-sample tests* – using two rounds of comparable household surveys with full consumption data and using one round for model training and another round for model testing. Building on this work, the SWIFT approach has been further refined to try to address two major methodological challenges: model stability over time and model capacity to capture shocks. In particular, the SWIFT-plus approach integrates Machine Learning (ML) and Cross-Validation (CV) steps to improve the stability of the estimated model and expand the list of variables for poverty modeling/data collection to include dummies on consumption of key items.²⁵ Among other countries, in its development stage, the SWIFT-plus methodology was tested using data from Afghanistan. In particular,

²⁵ See Yoshida et al (2022). [The Concept and Empirical Evidence of SWIFT Methodology](#). World Bank.

the performance of the SWIFT-plus methodology was tested over a period showing a dramatic increase in poverty, from 38.3 percent in 2011-12 to 54.5 percent in 2016-17. The SWIFT-plus model, trained on NRVA 2011-12 data delivered a prediction of 53.5 percent in 2016-17.

The SWIFT-plus model used to predict poverty in AWMS R3 was trained using data from the spring quarter of the IE-LFS 2019-20 and validated using the spring quarter of IE-LFS 2021. The IE-LFS 2019-20 is the last full-year survey household survey conducted by the NSIA. It was conducted between October 2019 and September 2020, matching the year’s four seasons, and being representative at the quarterly and urban/rural levels. Considering the strong seasonal dimension of poverty in Afghanistan and that the AWMS R3 took place between April and June 2023, the model was trained using the quarter-representative sample of the IE-LFS 2019-20 corresponding to the same months of 2020. Moreover, in line with previous SWIFT-plus tests done on Afghanistan, separate models were trained for the urban and rural samples. Model results together with the mean of model regressors in IE-LFS and AWMS are shown in Table A2.1.

Validation results indicate good model performance in both in-sample tests and between-samples tests (Table A2.2). The model in-sample performance is assessed after using five-fold cross-validation to determine the subset of variables that best perform across folds.²⁶ In-sample performance tests show that both urban and rural models display a high R-square, low Mean Square Error (MSE) and are able to predict welfare ranking relatively well (Spearman rank correlation). Overall, in-sample tests show very small differences between observed and predicted poverty levels (between 1.6 and 2 percent in urban and rural models, respectively). The urban and rural models were further tested for out-of-sample performance using the spring quarter of IE-LFS 2021-22 survey.²⁷ While more demanding, this test further confirms the relative precision of model-based estimates, being only 3.3 and 4 percent different compared to the poverty levels directly measured in Spring 2021.

²⁶ Cross-validation (CV) is a common empirical test in machine learning literature to avoid over-fitting. In our exercise, the Q3 urban and rural samples of the IE-LFS 2019-10 are randomly split into 5 subsamples each, then the model is estimated on 4 folds (training dataset) and evaluated on the remaining one (testing dataset). Since the remaining fold is not included when the model is trained, all performance indicators in the remaining fold are not subject to the over-fitting problem. This exercise is repeated iteratively for different levels of statistical significance to maximize model performance.

²⁷ Data collection of the IE-LFS 2021-21 started in March 2021 and continued till the end of June, before being suspended due to the collapsing security situation in the country.

TABLE A2.1 SWIFT-Plus model estimates in urban and rural samples.

Panel a. Urban model

Variables	Coefficients	AWMS	
		IELFS Q3 Mean	R3 Mean
Household Characteristics			
Log Household Size	-0.500	0.83	0.88
Ratio of household members (<15 & >65) over working age males	-0.020	2.3	2.1
Region 1	-0.103	63.8	55.9
Household Head Education			
Lower Secondary	0.127	25.5	23.4
Upper Secondary or Above	0.158	16.8	16.9
Asset Ownership			
Car	0.224	12.6	8.3
Refrigerator	0.066	44.4	39.9
TV	0.062	71.9	68.7
Vacuum Cleaner	0.109	25	19
Washing Machine	0.158	40.1	36.8
Small Livestock	0.127	6.5	29
Consumption in the last 7 days			
Apples	0.156	10.3	13.9
Chocolate	0.172	64.4	74.5
Meat	0.194	57.3	60.1
Milk	0.117	25.7	34.6
Fuel for Car	0.075	14.2	20.2
Dwelling Characteristics			
Wall material is Concrete	0.100	53.7	33.5
Performance metrics			
R-squared		0.669	
Constant		8.575	
Observations		988	

Panel a. Rural model

Variables	Coefficients	AWMS	
		IELFS Q3 Mean	R3 Mean
Household Characteristics			
Log Household Size	-0.410	0.86	0.93
Ratio of household members (<15 & >65) over working age males	-0.022	2.7	2.5
Region 2	0.141	14.3	13.7
Region 5	0.192	11.3	7.1
Region 6	-0.173	15.6	17.8
Region 7	-0.136	9.1	6.2
Region 8	-0.210	8.5	11.4
Household Head Education			
Literate	0.063	31.3	55.9
Primary	-0.079	7.9	12.2
Household Head age			
Age 46-55	0.040	16.2	19.5
Labor Market Participation (household head)			
Multiple Jobs	-0.105	23.6	8.7
Agricultural Sector			
Asset Ownership			
Bicycle	0.117	8.8	19.3
Car	0.329	7.9	6.9
Motorcycle	0.058	26.4	25.8
TV	0.088	25.6	32.1
Consumption in the last 7 days			
Apples	0.131	4.6	12
Eggs	0.112	32	60
Beans/Pulses	0.122	72.4	77.3
Chocolate	0.129	51.7	73.3
Meat	0.228	48.1	61.5
Milk	0.095	42.6	49.8
Fuel for Car	0.104	30.1	30.6
Dwelling Characteristics			
Wall material is Concrete	0.115	10	12.7
No Toilet	-0.055	16	3.9
Performance metrics			
R-squared		0.582	
Constant		8.091	
Observations		2,986	

Source: World Bank estimations using 2019/20 IE-LFS and AWMS R3 surveys.

TABLE A2.2 SWIFT-Plus model validation tests

		R2	mean MSE	Spearman correlation	In-sample prediction IE-LFS 2019/20			Out-of-sample prediction IE-LFS 2021		
					Observed poverty	Predicted Poverty	Difference (%)	Observed poverty	Predicted Poverty	Difference (%)
IE-LFS 2020/19 Quarter 3	Urban	66.9	0.083	84.2	55	54.1	1.6%	51.1	52.8	3.3%
	Rural	58.2	0.083	72.4	51	52.0	2.0%	52.3	54.4	4.0%

Source: IE-LFS 2019/20, IE-LFS 2021 and AWMS R3 surveys.

