Living Standards Measurement Study – High Frequency Phone Surveys

An Overview

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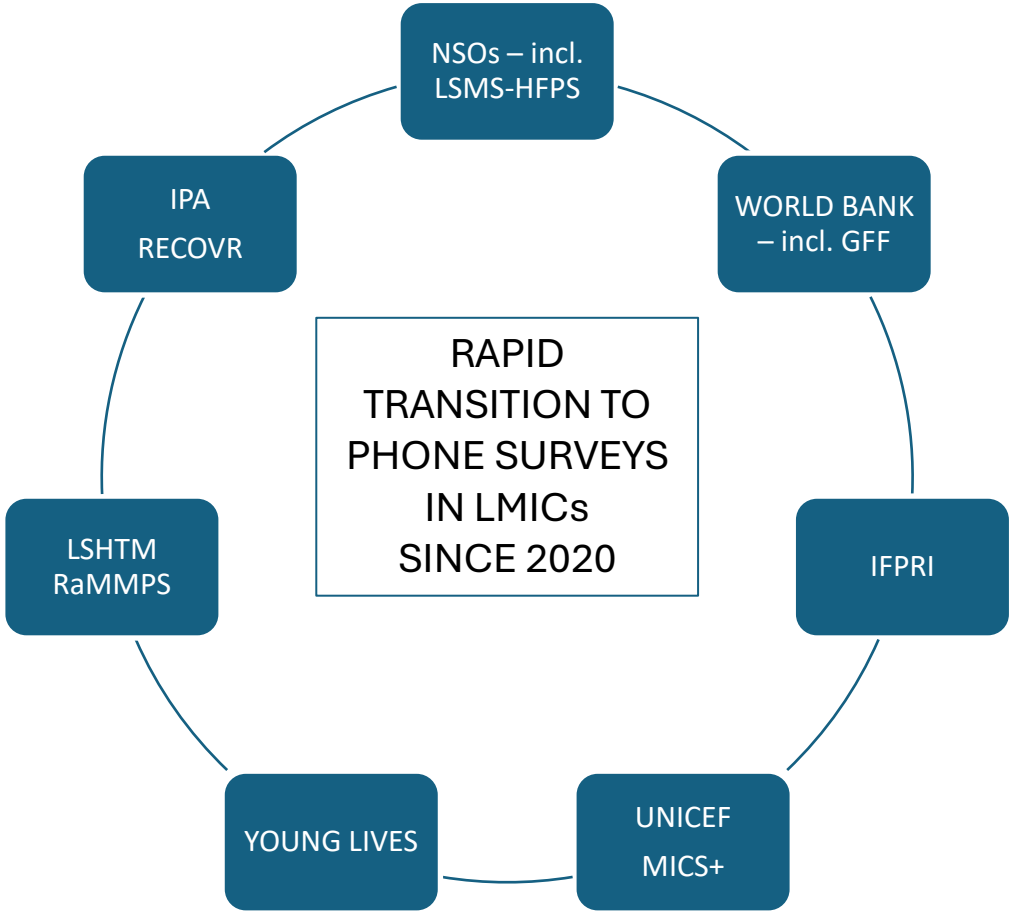
LSMS
Living Standards Measurement Study

THE WORLD BANK'S FLAGSHIP HOUSEHOLD SURVEY PROGRAM

Background to today's talk

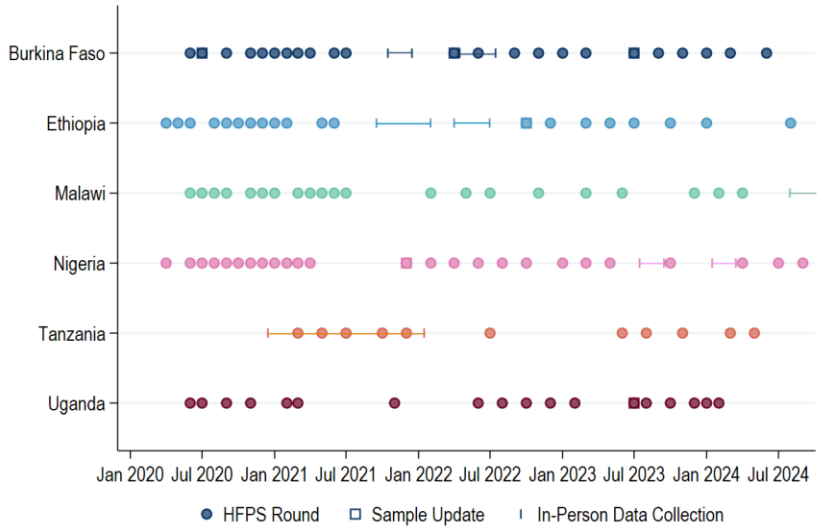
- "High-frequency" and "survey" seldom came together prior to the pandemic in LMICs
- COVID-19: "In the midst of every crisis, lies great opportunity."
- A rush to set-up phone surveys, enabling remote, high frequency data collection
- LSMS High-Frequency Phone Surveys (HFPS) launched in 6 countries in April '20
- Key partners and donors: World Bank Poverty, Health, Nutrition & Population Global Practices, USAID, GFF



LSMS-HFPS: Overview

- 118 rounds and ~236K interviews across Burkina Faso, Ethiopia, Malawi, Nigeria, Tanzania, Uganda (Ambel et al., forthcoming)
- Average Duration: 18.8 Mins, Range: 7.2-46.0
- Anonymized unit-record survey data are public on WB Microdata Library
- In-person LSMS surveys: Served as sampling frames; provided data for bias correction and expanded the scope of research; later resumed, juxtaposed with phone surveys

	Survey Period		Survey Rounds	Completed Interviews	Interview Duration (min/round)		
	First Round	Latest Round			Average	Maximum	Minutes
Burkina Faso	2020-Jun	2024-Jun	23	43,331	18.9	34.7	7.2
Ethiopia	2020-Apr	2024-Aug	20	49,580	18.3	46.0	8.2
Malawi	2020-Jun	2024-Apr	21	30,660	18.3	30.6	8.4
Nigeria	2020-Apr	2024-Sep	25	53,519	14.5	20.7	10.0
Tanzania	2021-Feb	2024-May	11	24,324	.	.	.
Uganda	2021-Mar	2024-Mar	18	34,467	25.6	42.1	13.4
Total			118	235,881	18.8	46.0	7.2



Insights from Ambel et al. (2025a)

LSMS-HFPS: Sampling

- LSMS-supported longitudinal (pre-COVID-19) face-to-face surveys (under the LSMS-ISA initiative) served as the sampling frames for the LSMS-HFPS
  - We can observe coverage and non-response biases and recalibrate sampling weights to improve representativeness of the phone survey data
  - Broad coverage: % of households with a phone # ranges from 73 (Malawi) to 99 (Nigeria)
  - Average response rate: 86% – ranges from 47 (Tanzania) to 99 (Burkina Faso)
- Periodic updates to the LSMS-HFPS samples to counteract biases
  - Boosting the sample from additional households from the longitudinal face-to-face survey used as a sample frame (Nigeria, Burkina Faso)
  - Updating phone numbers, adding new households after the new rounds of longitudinal face-to-face surveys (Ethiopia, Burkina Faso)
  - Bringing in additional households from other in-person survey samples (Uganda)

LSMS-HFPS: Attrition

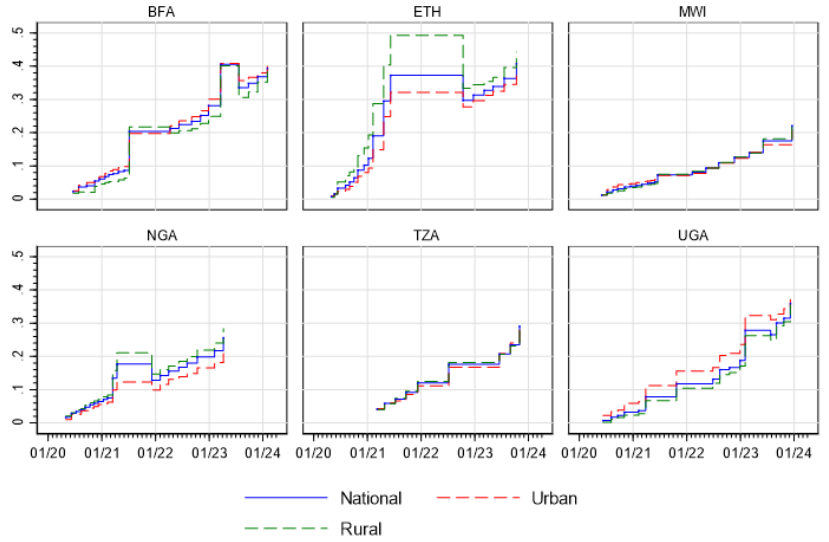
- Average round-to-round attrition rates range from 1.4% in Malawi to 5.2% in Ethiopia
- Cumulative attrition rates range from 22.1% in Malawi to 40.8% in Ethiopia, increasing as the surveys progress
- Less likely to drop out: Males, urban residents, employed individuals, cell phone owners, households headed by a married couple
- Longer interviews increase the likelihood of dropout: one-minute increase in the call length increases the risk of attrition by 1-2%.
- Time between interviews: the risk of attrition decreases with an additional week between interviews by about 1-5%

Insights from Ambel et al. (2025a)

Attrition rates in the LSMS-HFPS

	Attrition rates per round (%)				Cumulative Attrition Rate			
	Mean	Sd	Min	Max	(%)	#HHs "attrited"	Total HHs	# Rounds
Burkina Faso	0	4.24	0.31	17.30	39.38	1163	2953	22
Ethiopia	5.25	7.16	0.77	28.60	40.81	1769	4335	19
Malawi	1.40	1.49	0.22	5.70	22.09	382	1729	20
Nigeria	2.21	2.42	0.52	9.75	23.84	838	3267	21
Tanzania	4.00	2.14	1.50	7.73	29.10	797	2739	10
Uganda	3.31	3.08	0.52	11.78	35.94	984	2738	17

Cumulative attrition rates in LSMS-HFPS countries.
Step changes occur at each round, reflecting the cumulative increase in attrition up to that point.

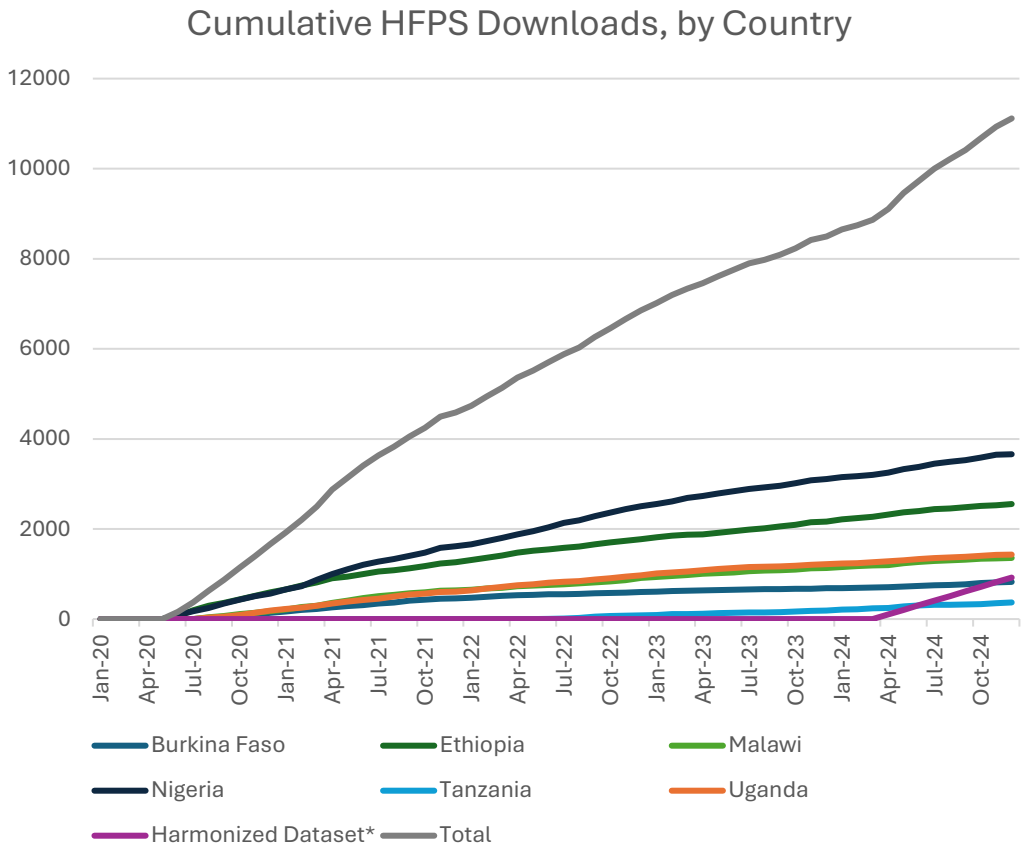


LSMS-HFPS: Topical Coverage

- In the early rounds in 2020 and 2021, topical focus on providing rapid insights into the evolving socioeconomic and public health situation on the ground
    - Disruptions to service delivery, access to essential goods like medicines, food; food security, employment, household enterprises, shocks and coping strategies
- In collaboration with GFF and HNP, health service utilization, forgone care and OOP expenditure module fielded in 36 rounds across 6 countries
- Topical coverage adapted over time in response to new crises and large-scale events (Inflation, Ebola, Yellow Fever, Locust Invasion), strengthened harmonization; and maintained a sustained focus on health, food security, employment and shocks

LSMS-HFPS: Data Use and Research

- HFPS data downloads: 11,000+
- Harmonized processed dataset spanning all rounds available on the LSMS GitHub Repository
- HFPS data informed numerous survey reports, policy briefs, working papers and journal articles: Nature Human Behaviour, JDE, BMJ Open, World Development, Food Policy, PLOS One
- Phone survey methods and tools:
  - Guidelines on Sampling
  - Online Course on Design and Implementation of Phone Surveys
  - Survey Management Tools



Insights from Ambel et al. (2025a)

WB Projects Informed by LSMS-HFPS

Social Sustainability
Nigeria for Women Program Scale-Up Project
Ethiopia: Response - Recovery - Resilience for Conflict-Affected Communities
Uganda: Growth Opportunities & Productivity for Women Enterprises
Ethiopia: Development Response to Displacement Impacts

Agriculture
Uganda: Climate Smart Agricultural Transformation

Digital Development
Ethiopia: Digital ID for Inclusion and Services & Uganda: Digital Acceleration

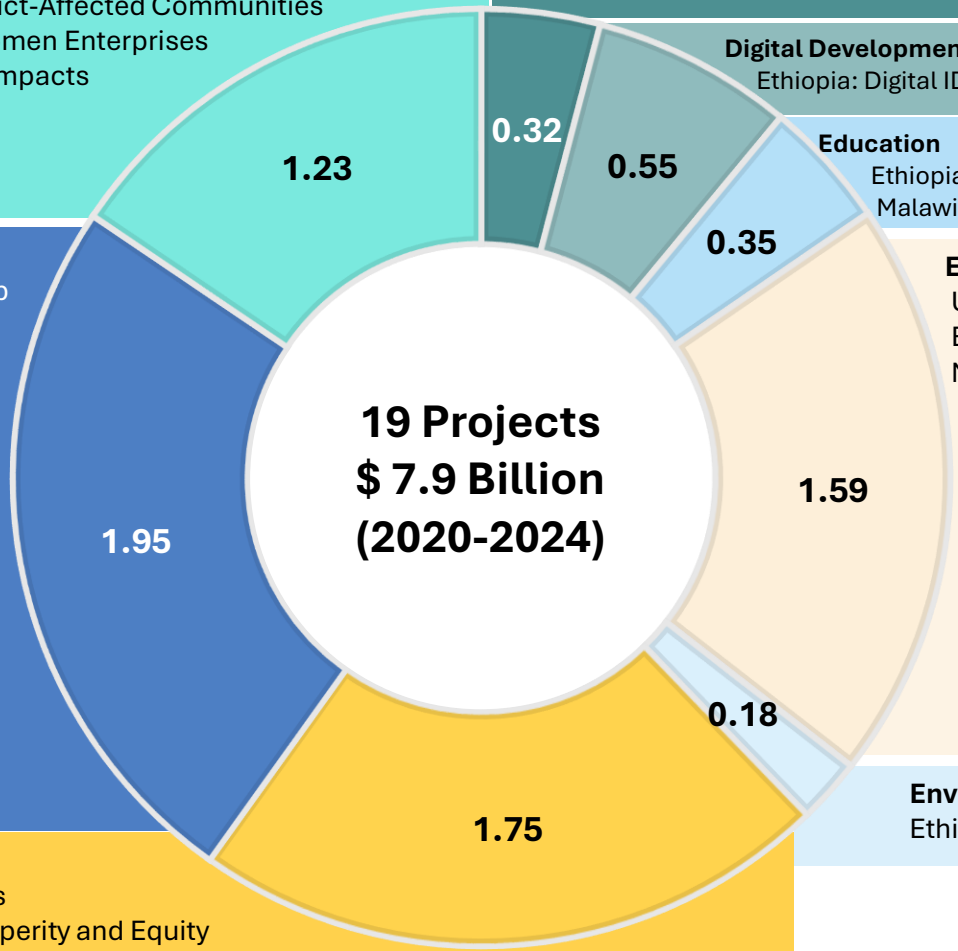
Education
Ethiopia: Education and Skills for Employability
Malawi: Education Reform Program

Energy
Uganda: Electricity Access Scale-up
Ethiopia: Access to Distributed Electricity and Lighting
Nigeria: Distribution Sector Recovery Program

Environment
Ethiopia: Resilient Landscapes and Livelihoods

Governance
Nigeria: Accelerating Resource Mobilization Reforms
Nigeria: PforR Human Capital Opportunities for Prosperity and Equity
Nigeria: Governance Sustainable Power and Irrigation

Social Protection
Nigeria: National Social Safety Net Program Scale Up
Nigeria: COVID-19 Action Recovery and Economic Stimulus Program
Ethiopia: Urban Productive Safety Net and Jobs



LSMS-HFPS: Overview of Methods Research

- Leading an active research agenda to develop and validate methods for phone survey data collection in LMICs, with a focus on improving data quality and interoperability
- Key topics of research:
  - Household sample selection + reducing bias in phone surveys (Ambel et al., 2020)
  - Attrition (Ambel et al., 2025a - Forthcoming)
  - Respondent selection + proxy reporting (Ambel et al., 2025b - Forthcoming; Brubaker et al., 2021; Markhof et al. 2025)
  - Questionnaire design (Ambel et al., 2025b)
  - Mode effects (Palacios Lopez et al., 2025 - Forthcoming)

What we learned re: respondent selection

- **Interviewing one main respondent** does not yield data representative of adults - women, poorer individuals, youth are under-represented (Brubaker et al., 2021)
- **Ex-post adjustments of survey weights** to compensate for the limited representation
  - Model the probability of response of an adult given individual, household and community attributes; derive the inverse predicted probability of response; apply it to sampling weights to address the bias
- **Mixed results** for individual-level estimates for a range of outcomes - improves representativeness of individual level estimates while increasing variance and failing to fully overcome selection biases (Brubaker et al., 2021)

What we learned re: respondent selection (2)

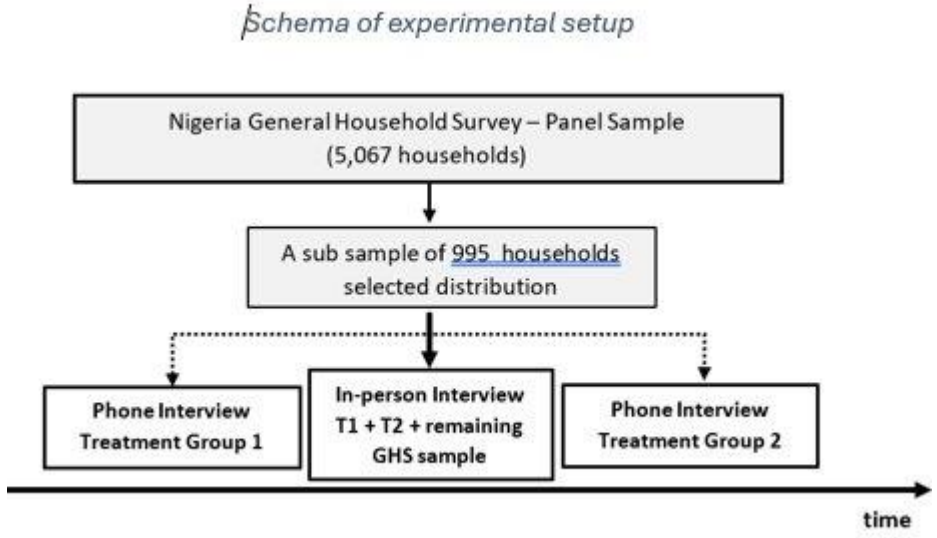
- How does proxy-reporting of one respondent for all other household members affect accuracy of estimates – in the context of COVID-19 vaccine acceptance and uptake
  - Compare self-reported and proxy-reported information about the same individual (randomly selected adult) in Burkina Faso, Ethiopia, Malawi, Uganda (Markhof et al. 2025)
- Proxy reports on COVID-19 vaccination coincide with self-reports in 94% of cases in Burkina Faso, 81% of cases in Malawi, and 93% of cases in Uganda
- In pooled analysis, proxy reporting **underestimates vaccine uptake by 5.5 ppt** - relative to the incidence of 23.6% among self-reporting individuals
  - Main respondents do not perfectly know the vaccination status of other household members
  - Female respondents were 4.3 percentage points more likely to provide accurate proxy reports, especially for female household members
- For more difficult, less observable variables (e.g., # of vaccine shots received and vaccine acceptance): decline in accuracy of proxy reporting
  - For vaccine acceptance: 53% agreement in Burkina Faso, 56% in Malawi, 54% in Uganda

What we learned re: respondent selection (3)

- **Survey experiments** conducted in Burkina Faso, Ethiopia, Malawi, Uganda (Ambel et al., 2025b): test reliability of measurement health service need, foregone care, OOP health expenditure with different respondent selection and questionnaire designs
- **Respondent selection**: Select respondent randomly, compare with main respondent and data collected for all respondents by proxy (Ambel et al., 2025b)
  - Main respondent reporting overlooks the needs of women and younger people
  - Proxy reporting **underestimates service need by 3.7 ppt** relative to 38% among main respondents, 49% among randomly selected adults
  - Main respondent has higher OOP expenditures than the average adult
- **Bonus insights on questionnaire design**: asking about service needs at the household- vs. individual-level
  - Asking questions at the household level **underestimates the service need and the number of services by 11 and 14% ppt, respectively** relative to asking these questions separately for each individual

What we learned re: survey mode effects?

- **Survey experiment in Nigeria**, taking advantage of LSMS-supported in-person General Household Survey (GHS)
  - Early results suggest mode effects matter
  - If elicited by phone...
    - Health episodes 10 ppt. more likely - relative to the in-person incidence of 40%
    - Health service utilization 23 ppt. more likely – relative to the in-person incidence of 23%
    - Health expenditure more likely and ~1.4SD higher
- **Additional survey experiments planned** in Bangladesh, Nepal. On-going work in Cambodia in collaboration with WB HNP.



Study allows capturing the mode effects:

- Comparing the outcomes reported by Treatment Group 1 over the phone to Treatment Group 2 in-person (and modes vice versa)
- Comparing the outcomes reported by the same respondents over the phone and in-person

Looking to the Future

The Vision

- A new, harmonized longitudinal survey platform, meeting the data and knowledge needs of the polycrisis era - in partnership with NSOs and Development Partners

- Provide the data for designing and targeting policies in multiple sectors to strengthen **resilience** of vulnerable populations

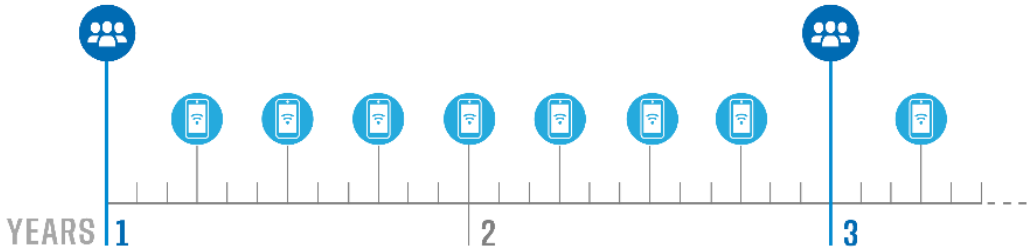
  - Health
  - Water
  - Nutrition
  - Energy
  - Environment
  - Climate
  - Jobs
  - Education

Resilient Futures: Overview

DATA

Reconceptualize (8) existing LSMS-supported longitudinal surveys in Africa + expand to 7 new countries at start

Longitudinal	National	Education	Health	WASH
Mixed Mode	Multi-Topic	Nutrition	Food Security	Consumption
Multi-Level	Harmonized	Jobs	Energy	Digital Technology
Interoperable	Climate-Sensitive	Social Protection	Agriculture	Climate Adaptation



KNOWLEDGE

- Enable high-frequency monitoring of health, consumption and nutrition needs and outcomes
- Increase availability and quality of data on service coverage, forgone care, out-of-pocket health expenditures
- Provide representative insights on impacts of shocks and responsive policies on human development, wellbeing and livelihoods, focusing on women, children and youth
- Identify key resilience capacities that help vulnerable populations anticipate, absorb and recover from future crises
- Deploy in-situ tech and integrate with third-party geospatial data to permit localized estimates of human development and resilience

IMPACTS

- Open and timely data and knowledge
- Lasting country statistical capacity
- Increased country, World Bank and development partner capacity to respond to shocks more quickly and effectively
- Enhanced development impacts, through better targeted and proactive interventions

Conclusions

- The LSMS-HPS experience shows the transformative potential of rapid, adaptive, longitudinal data systems in crisis contexts
- Phone surveys represent a key component of a modern data ecosystem that can support policymakers as they respond to and prepare for an increasingly volatile world
- In-person surveys are critical for successful phone surveys
- Significant scope for future methodological research on phone surveys
  - Survey mode effects
  - Respondent incentives & effects on data quality
  - Integration of phone surveys with alternative data sources (e.g., facility surveys, geospatial data)
  - High-frequency welfare measurement, combined with imputation
- Institutionalizing high-frequency, longitudinal surveys within national statistical systems, including through initiatives such as Resilient Futures, can enhance resilience and responsiveness to future shocks

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