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Since the initial appearance of the Ebola Virus Disease (EVD) in rural Guinea in December 2013, the virus has caused more than 10,000 deaths with over 25,000 cases in the region.¹

To monitor the socioeconomic impacts of the EVD crisis, the Government of Serra Leone is conducting a series of cell phone surveys. The first two surveys were conducted by Statistics Serra Leone from November 12 to November 25, 2014, and from January 22 to February 4, 2015, with a third round expected in April 2015. This report provides results from the second of these surveys. Funding was provided by the World Bank and technical assistance from Innovations for Poverty Action.

The survey followed household heads for whom cell phone numbers were recorded during the nationallyrepresentative Labor Force Survey (LFS) conducted in July and August 2014. Overall, 66 percent (2,764) of LFS households had cellphones although this coverage was uneven across the country, with higher levels in urban areas (82 percent) than rural areas (43 percent)

Substantial churning in the labor market is observed, particularly among workers in non-farm household enterprises. For those household heads who responded to the LFS and both cell phone survey rounds, it is possible to track flows into and out of employment. Across all sectors ten percent of those in employment during the LFS returned to work and eight percent left work between rounds 1 and 2. Figure 6 shows labor market churning by main sector of employment (wage work, non-wage agricultural activities, non-farm household enterprises) and unpaid work. There is significant instability in all sectors of employment across survey periods; however, churning is highest among those whose main activity is self-employment in the non-farm household enterprise. Among the non-farm self-employed, twelve percent restarted work while nine percent stopped working, for an overall employment rate of 83 percent in round 2 (insignificantly different from round 1). It is not possible to judge how unusual this level of churning is in the labor market as there was no nationally representative survey on labor market outcomes in almost 30 years prior to the LFS in 2014.

Figure 3: Inflows and outflows from employment by sector

Source: Cell phone surveys round 1 (November 2014) and round 2 (Januaryis defined by their sector of employment in the LFS

Districts with declining EVD rates did not see more people re-entering the workforce. Regression analysis suggests that neither the level of EVD nor the change in the level of EVD was a significant predictor of the number of people starting work between rounds 1 and 2 of the cell phone survey (see

The frequency of Ebola being cited as the main reason for work absence is decreas 8 m (€) (€) Tm (€) (2 (€) ETBT1 0 0 1 408

times the pre-EVD level. This figure was at 22 percent in round 2, up from 13 percent in round 1, and 5 percent in the LFS (8 and 17 percentage point increases, respectively).⁴ However, compared to round 1, fewer people directly cited Ebola as the reason for dosure (9 percent versus 33 percent). There was also an increase between round 1 and round 2 in seasonal dosures; while it is difficult to know if this is typical, the recall period includes the Christmas holiday season. On the other hand, lack of customers potentially due to the Ebola outbreak and capital are becoming more prevalent reasons for dosure. Lack of labor was less of a constraint (5 percent versus 31 percent). This shift reflects the evolution of the crisis, as emergency conditions associated with high disease transmission become less severe and visible (e.g., prevalence of roadblocks) while the indirect economic effects persist. The higher capital constraint may signal that the extended duration of the slowdown has meant household enterprises have been forced to use working capital for consumption or

in Freetown. Historical data from WFP VAM and International Growth Center indicate the prices generally begin to rise from post-harvest lows beginning in January, but subsequent rounds will continue to monitory these trends.⁷

The percent of households receiving remittances remained unchanged although the value of these remittances rose. In the month prior to the round 2 survey, nine perae2 0 0 1 103irae2 0 0 1 103irae2 0 0 1 103174 543.4(o)-5(n)14(th)-22(p)3(rior)9()-23(444raai)-23(44sTBT 543)) Overall, one-third of this migration was to Freetown, which had both the highest numbers of infections and

Figure 10: Percentage of households receiving social assistance in the last 6 months

Source: Cell phone survey round 2 (January-February 2015).

Food distribution since the outbreak intensified was mostly carried out by non-governmental organizations. Of households receiving food assistance, 73 percent reported that the food was distributed by an NGO, one percent reported it was distributed by district officials, 20 percent said it was from other government officials, and six percent reported it was from other sources. Other sources include faith- and community-

The poor are less likely to receive assistance than the non-poor in other urban areas. Among households with below the median level wealth index, the percentage receiving social assistance in the form of food or cash transfers in the six months prior to the round 2 survey was nine percent, statistically indistinguishable from the percentage receiving assistance among those with above the median wealth index (9.5 percent). However, in other urban areas, the non-poor were more likely to receive social assistance than the poor. One important caveat to this is that many of the poorest households in rural areas are not included in the sample because only 43 percent of rural households have cell phones. As mentioned above, this is to a certain extent expected given the emergency context and emphasis on ensuring households in ETUs, quarantine and other high EVD intensity zones had access to basic necessities. However, these data also highlight the need to ensure that social assistance reaches the poorest as the country moves into the recovery phase.

There have been significant increases in utilization of health clinics for maternal care since November. The percentage of women who had given birth in a clinic in the last two months increased from 28 percent in the first round in November to 64 percent in the second round in January.⁹ This is similar to the 71 percent found among households owning a cell phone in the 2013 Demographic and Health Survey (DHS). This jump may reflect a supply as well as a demand response. Between round 1 and round 2, many hospitals and birthing clinics took steps to provide protective equipment and training to health workers involved in d

who received at least one prenatal visit increased from 56 percent in round 1 to 71 percent in round 2,

compared to 84 percent in the DHS The percentage of women receiving postnatal visits was not statistically different between round 1 and round 2 of the cell phone survey, but there was a large increase within Freetown. Direct comparisons with the DHS also likely underreport the frequency of health facility utilization prior to the outbreak of EVD as maternal care has been increasing with the Free Healthcare Initiative, as demonstrated by the low percentage of women seeking no care in the cell phone surveys.





Source: Households with cell phones only, DHS (2013) and cell phone surveys round 1 (November 2014) and round 2 (January-February 2015).

⁹ Unlike the round 1 report, only DHS households with cell phones are included as this sample is more comparable.

Radio

The high frequency socio-economic impact of Ebola survey was conducted jointly by Innovations for

Social Protection Global Practices and close collaboration with researchers at Massachusetts Institute of Technology (MIT), to estimate the impact on well-being of the Ebola Virus Disease (EVD) crisis. The first round was conducted from November 12 to November 25, 2014 and the second round from January 22 to February 4, 2015. This note describes changes in the survey methodology since round 1 and any comparability concerns between the baseline and subsequent rounds.

Knowledge of Ebola These questions were dropped as the round 1 analysis indicated widespread knowledge of the disease.

Earnings Questions on earnings were revised to match the Labor Force Survey questions more closely, in particular to account for earnings that were expressed in time unit other than months.

Migration The vast majority of questions were identical in their wording to the previous round of the questionnaire, but a few changes were made. The section on information about EVD was dropped. As the round 1 analysis found inconsistencies in the migration reporting, the related questions were redesigned. The method of calculating migration is therefore different in this report than that used in the round 1 report. In the round 1 report a household head was considered to have migrated if they reported living in a different district than they lived in during the LFS. However, if respondents are unclear about which district they live in, this methodology could inflate the level of migration. An examination of the data suggests this may well be the case. For example, while seven percent of respondents gave as their current district in round 1 a different district from that in which they lived in LFS, only two percent reported having moved since the LFS when asked specifically if they had moved. In round 2, the survey was pre-loaded with the district that respondents lived in during the LFS and then pr5

Round contacted 1878 (67.9 percent) of the 2764 households which provided cell phone numbers in the LFS and 44.7 percent of the total LFS households. Of these 1530 households appeared in both rounds. Of the households reached, 96 percent were household heads in round 1 and 99.7 were household heads in round 2. If the respondent was not an original household member, the call was ended and an incorrect number was recorded. Table A2 shows a breakdown of the call outcomes for round 2 including unanswered calls, phone being switched off, rescheduled but never completed, refusal, bad

Employment Definition Given the high frequency nature of the three surveys used and the nature of the EVD crisis, a slightly modified definition of employment was used in the analysis. Households heads were categorized as in the labor force in any given round of the surveys if they were working, looking for work or expected to return to work. For the round 1 report, if a household head was in the labor force in either the LFS or round 1 of the cell phone survey, he was categorized as in the labor force in both rounds. This was done because both rounds of the survey were conducted within three months or less of the previous round and it is unlikely that someone who was working in the LFS suddenly decided to exit the labor force rather than become unemployed due to EVD. Such high frequency labor force surveys are contrary to most other employment surveys and thus necessitate different definitions of labor force participation. I

of the high frequency nature of these employment surveys, a household head was categorized as in the labor force in all three rounds of surveys if they were in the labor force in any one round. As a result, none of the changes observed in employment rates are due to changes in the composition of the labor force.

Calculation for monthly wage earnings Most wage workers (83 percent) reporting earnings in monthly terms, and therefore results associated with wage earnings are reported this way. For respondents who report wage income in other time units, the analysis translates their wages into monthly terms under the assumption they work at a standard capacity, i.e., 8 hours a day, 22 days or 4.3 weeks a month, and 12 months a year. The earnings data was not collected in round 1 in a way that allowed direct comparison to the LFS, which is the reason only LFS and round 2 are compared. Since earnings data tend to be noisy and a few large outliers can have a big impact on average wages, the figures reported here exclude earnings for the highest 5 percent. As a robustness check, median earnings were also analyzed and the same trends held.

Correction of outliers in household enterprise revenues Business revenues are noisy so the main results in the report have the top percentile of revenues trimmed. As LFS has the highest revenues a large fraction of the outliers are from LFS. An alternative approach is to drop the top 1 percent of revenues in each round which gives the following results: LFS2,700,000 Leones, round 1 830,000 Leones, and round 2, 780,000 Leones (round 1 and round 2 are not significantly different from each other with this trim).

Pregnancy definitions in the DHS - In the DHS each woman in the household was interviewed individually whereas in the cell phone were

The employment section includes a descriptive discussion of regression results that use the panel sample across the three rounds (LFS and rounds 1 and 2 of the cell phone survey) to better understand the types of household heads who were able to retain their jobs or the types of household heads that were unable to do so. The following five regressions were run (see the results in Table A4):

- (i) Among those not working in round 1 and have round 2 observations: Regression of the probability a household head entered work in round 2 as a function of age, male, urban, married, education, young children in household, working age adults in household, urban/rural, level of total Ebola cases and change since round 1 in Ebola cases
- (ii) Among those working in round 1 and have round 2 observations: Regression of the probability a household head is still working in round 2 as a function of age, male, urban, married, education, young children in household, working age adults in household, urban/rural, level of total Ebola cases and change since round 1 in Ebola cases
- (iii) Among those not working in LFS and have both round 1 and round 2 observations: Regression of the probability a household head worked in both rounds 1 and 2 as a function of age, male, urban, married, education, young children in household, working age adults in household, urban/rural, level of total Ebola cases and change since round 1 in Ebola cases

(iv)

	Labor Fo	orce Survey	% of LFS Found	% of LFS Found in	
	Freq.	Percent	in Nov 2014	Jan-Feb 2015	
Kailahun	210	5	17.62	19.05	
Kenema	420	10	50.95	49.76	
Kono	420	10	58.10	55.95	
Bombali	330	7.86	47.58	47.27	
Kambia	181	4.31	32.60	37.57	
Koinadugu	180	4.29	31.11	29.44	
Port Loko	179	4.26	27.37		

Table A1: Geographical Distribution of LFS and Sample

	Employment Status in LFS		Employment	Employment
			Status in Nov	Status in Jan-
			2014	Feb 2015
	Freq.	Percent	Percent	Percent
Employee regular	535	17.1	22.7	22.4
Employee, casual or seasonal	119	3.8	7.8	7.2
Self-employed, without regular employee	2,165	69.4	58.7	53.2
Self-employed, with regular employees	98	3.1	5.3	5.4
Member of producer's cooperative	7	0.2	0.1	0.1
Help without pay in own or another house	29	0.9	1.2	3.1
Help without pay in own or another house	137	4.4	2.5	6.3
Paid apprenticeship	30	1.0	0.7	1.2
Unpaid apprenticeship	2	0.1	1.4	1.0
Total	3,122	100	100	100

Table A3: Employment Status Distribution of LFS and Sample