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Internal Displacement and the Measurement of Women's Empowerment

Evidence from a Test-Retest Survey Experiment

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Motivation

Women's empowerment includes the ability to participate in existing market activities, access and control the use of productive resources, obtain opportunities for decent work, control the use of time, and voice and participate in decision making within households and communities (United Nations 2018). Increasing women's economic empowerment is relevant to several sustainable development goals (i.e., to achieve gender equality, promoting full and productive employment and decent work for all, and reducing existing inequalities). Given all of this, accurately measuring women's empowerment systematically across a variety of settings is imperative. As such, studying innovations in measuring women's agency, empowerment, or decision-making power is an active area of research (Malapit et al. 2019; Donald et al. 2020; Laszlo et al. 2020; Buvinic et al. 2020; Quisumbing et al. 2023; Jayachandran et al. 2023).

Although some research conducts survey experiments to assess how small variations in survey design might influence measures of women's empowerment or decision making across a variety of settings (Peterman et al. 2021), there is little evidence on how existing measures hold up in fragile settings (i.e., where a meaningful share of the population has experienced internal displacement due to conflict or extreme weather events). Additionally, while practical guides on measuring women's empowerment exist (Glennester et al. 2018), these resources do not address how to design survey tools measuring women's empowerment within fragile settings. Similarly, while practical guides exist for implementing impact evaluations in fragile settings with high levels of displacement (Benrey and Kenny 2023), these resources do not discuss measuring women's empowerment. In this analysis, we aim to partially fill this gap.

Our work is related, but distinct, from that of Alvi et al. (2023), who develop a women’s empowerment in migration index (WEMI) specifically designed to be implemented among migrant women. The WEMI focuses on capturing specific elements of women’s empowerment that might be particularly relevant, or only relevant, to women’s experiences in the migration process. Our work here takes a step back and aims to investigate the performance of more generalized measures of women’s agency or empowerment, based at least partially on household decision-making power, within fragile settings where many households have experiences with internal migration and forced displacement.

Context

We present findings from a survey experiment included in both the baseline and endline surveys of a larger field experiment implemented in Gombe State, Nigeria. About 17 percent of households in our data are internally displaced due to exposure to nearby conflict and extreme weather events. This provides variation in internal displacement status, allowing us to observe differences in standard household decision making questions commonly used in surveys to measure women’s empowerment and ask an additional question to individuals living in displaced households about whether their decision-making power changed since experiencing displacement. Additionally, we implement the survey experiment twice—in both the baseline and endline survey—enabling us to replicate our experimental findings via a test-retest analysis.

Table 1: Respondent Decision Making by Internal Displacement Status

Respondent normally decides...	Internally Displaced (N=380)	Not Internally Displaced (N=1,920)	Difference
Whether to work to earn money	0.13 (0.33)	0.12 (0.33)	0.00
About children’s schooling	0.06 (0.23)	0.03 (0.18)	0.02*
About children’s health	0.09 (0.28)	0.05 (0.22)	0.03**
About own health	0.11 (0.31)	0.07 (0.25)	0.04**
About small daily food purchases	0.19 (0.40)	0.13 (0.34)	0.06***
About larger food purchases	0.06 (0.24)	0.03 (0.18)	0.03**
About small everyday household purchases	0.17 (0.37)	0.13 (0.34)	0.04*
About other large household purchases	0.11 (0.31)	0.10 (0.29)	0.01
Whether to use a family planning method	0.08 (0.27)	0.05 (0.22)	0.02*
About opening bank/savings accounts or take loans or insurance	0.04 (0.21)	0.04 (0.20)	0.00
About using loans, savings, or money received from insurance	0.05 (0.22)	0.04 (0.20)	0.01
About what crops to plan or when to sell	0.05 (0.22)	0.03 (0.16)	0.03**
About which assets to buy or sell	0.04 (0.20)	0.03 (0.17)	0.01
About where to go outside of the house	0.05 (0.21)	0.05 (0.21)	0.00
Standardized index	0.12 (1.13)	-0.02 (0.97)	0.14**

Notes: Authors’ calculations of baseline data. Total sample size = 2,300. This table reports averages and standard deviations in parentheses. The differences in the right-most column also includes indicators of statistical significance with *** p<0.01, ** p<0.05, * p<0.1.

Using data from the baseline survey, Table 1 reports the share of female respondents indicating that they themselves normally make decisions along given domains, disaggregated by internal displacement status. These data come from responses to the following question: “When decisions are made regarding [domain], who is it that normally makes the decision?” Respondents could choose from the following response categories: (i) themselves, (ii) husband/partner, (iii) someone else, (iv) respondent and husband/partner jointly, (v) respondent and someone else jointly, (vi) decision not made/not applicable. From these responses we created a binary variable indicating if the respondent chose “themselves” from the response options.

Two details from Table 1 are worth a brief comment. First, and most generally, regardless of internal displacement status, we observe that the probability that a female respondent reports normally making a given decision, across all domains, is relatively infrequent. The domains with the highest probability include making decisions about small daily food purchases and small everyday household purchases, both at only between roughly 13 and 19 percent of respondents. Second, we observe notable differences in the probability a female respondent reports normally making decisions along several domains based on whether the respondent lives in an internally displaced household. These differences range from small, close to zero, and statistically insignificant to up to six percentage points and statistically significant. Moreover, when we construct a standardized index aggregating each of these decision-making domains, we find that female respondents from internally displaced households report decision-making power that is 0.14 standard deviations higher than female respondents from not internally displaced households.

Table 2: Changes in Decision Making After Internal Displacement

	Increased	Decreased	About the same	Not applicable
Whether to work to earn money	104 (0.49)	34 (0.16)	54 (0.25)	20 (0.09)
About children’s schooling	98 (0.46)	36 (0.16)	49 (0.23)	29 (0.13)
About children’s health	101 (0.47)	42 (0.19)	51 (0.24)	18 (0.08)
About own health	99 (0.46)	45 (0.21)	54 (0.25)	14 (0.06)
About small daily food purchases	108 (0.51)	41 (0.19)	49 (0.23)	14 (0.06)
About larger food purchases	92 (0.43)	46 (0.21)	53 (0.25)	21 (0.09)
About small everyday household purchases	100 (0.47)	43 (0.20)	50 (0.23)	19 (0.09)
About other large household purchases	93 (0.43)	41 (0.19)	39 (0.18)	39 (0.18)
Whether to use a family planning method	78 (0.36)	30 (0.14)	39 (0.18)	65 (0.30)
About opening bank/savings accounts or take loans or insurance	59 (0.28)	33 (0.16)	57 (0.27)	63 (0.29)
About using loans, savings, or money received from insurance	53 (0.25)	42 (0.19)	46 (0.22)	71 (0.33)
About what crops to plan or when to sell	100 (0.47)	36 (0.17)	51 (0.24)	25 (0.12)
About which assets to buy or sell	78 (0.37)	47 (0.22)	55 (0.26)	32 (0.15)
About where to go outside of the house	78 (0.36)	46 (0.21)	73 (0.34)	15 (0.07)

Notes: Authors’ calculations of baseline data. Total sample size = 212. This table reports the frequency and the share of the sample in parenthesis of respondents indicating if their personal decision making increased, decreased, or remained about the same after internal displacement along each of the given domains.

Again using data from the baseline survey, Table 2 shows how female respondents describe changes in their decision-making power along given domains since internal displacement. These data come from responses to the following question: “Looking back do you think your personal decision-making power in [domain] has increased or decreased after you moved from another state (i.e., experienced displacement)?” This table reports the frequency of responses among each of four response categories: (i) increase, (ii) decrease, (iii) about the same, and (iv) not applicable. With only two exceptions, the most common response category is that decision-making power increased since displacement. The exceptions both relate to decisions about opening bank/savings accounts or taking/using loans or insurance, which are largely not applicable to the respondent, and indicates the lack of access to formal financial services among the households in our data. Nevertheless, in all but one domain, fewer than half of female respondents report that their decision-making power has increased since being internally displaced. Most female respondents report that their decision-making power did not increase (i.e., it either decreased, did not change, or the domain is not applicable).

Taken together, the summary statistics reported in Tables 1 and 2 reveal a basic descriptive result about our data. This is that female respondents tend to report higher levels of decision-making power if they live in a household that has experienced internal displacement. It is important to note that these results do not suggest that internal displacement increases female decision-making power and women’s empowerment. Indeed, it could also be true that households where female decision-making power is higher are more likely to be internally displaced. Additionally, it could be true that that displacement alters the composition of a household in ways that mechanically give women more decision-making power. Rather these descriptive findings illustrate that there are important challenges relating to the measurement of women’s empowerment within internally displaced households that we need to better understand. This motivates our survey experiment.

Survey Experiment

Our survey experiment randomized the order of the two questions discussed above. Thus, among the sub-sample of displaced households, half of the respondents were primed to reflect on how their decision-making power changed since displacement before answering the question about who normally makes decisions along given domains. The other half of the respondents first answered the question about who normally makes decisions along given domains and then were asked to reflect on how their decision-making power changed since displacement. This effectively primes half of our respondents to consider how displacement influenced their own decision-making power before answering questions about their own decision-making power within their household.

Our sample size for this survey experiment includes 212 respondents in the baseline survey and 356 respondents in the endline survey. This represents the intersection of female respondents who both live in an internally displaced household and consented to participate in decision-making module of our survey. The difference in the sample size for this survey experiment between the baseline and endline surveys represents differences in the number of female respondents who consented to participate in the decision-making module. Internal displacement status is measured in the baseline survey and is constant in both the baseline and endline surveys.

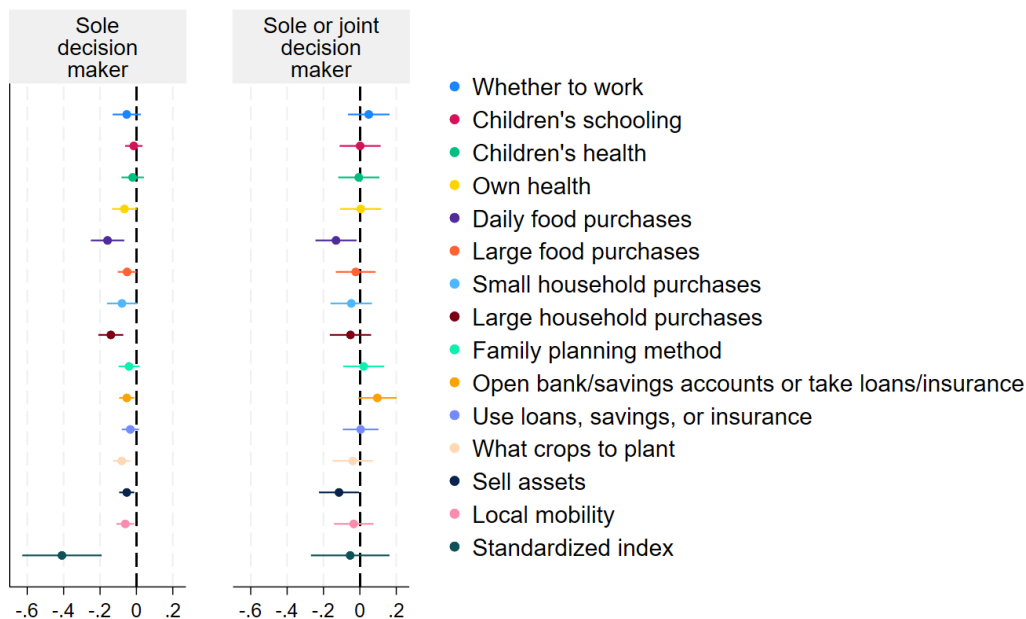
We estimate the effect of being primed to consider how displacement influences decision-making power with the following linear regression:

$$Y_i = \alpha + \beta Prime_i + \varepsilon_i$$

In this equation Y_i represents (i) domain-specific responses to a question about decision-making power within the respondent's household or (ii) a standardized index aggregating responses across all domains. The binary variable $Prime_i$ indicates whether the respondent was randomly assigned to the group where the respondent is first asked to reflect on how their decision-making power changed since displacement before answering the question about who normally makes decisions along given domains within their household. Thus, the "treatment" in this survey experiment can be thought of as subtly priming the respondent to reflect on how displacement influenced their own decision-making power before answering questions about their decision-making role within their household. We use heteroskedasticity-robust standard errors as the treatment was randomized at the individual level.

Figure 1 shows the effect of priming on how respondents report their own decision-making role, either as the sole decision maker or both sole and joint decision-making using data from the baseline survey. We report these effects for each domain separately and then in the form of a standardized index which aggregates each of these domains together into one measure of household decision-making power. Focusing on sole decision making, we find that respondents primed to consider displacement are less likely to report that they themselves usually make decisions across all domains. The effect of priming is statistically significant in the following six domains: daily food purchases, large household purchases, opening bank/savings accounts or taking loans/insurance, what crops to plant, which assets to buy or sell, and local mobility. Additionally, when we construct a standardized index that aggregates each of these domains, we find that priming leads to a 0.4 standard deviation reduction in the respondent's reported decision-making power.

Figure 1: The Effect of Priming on Respondent Decision Making Power (Baseline Survey)

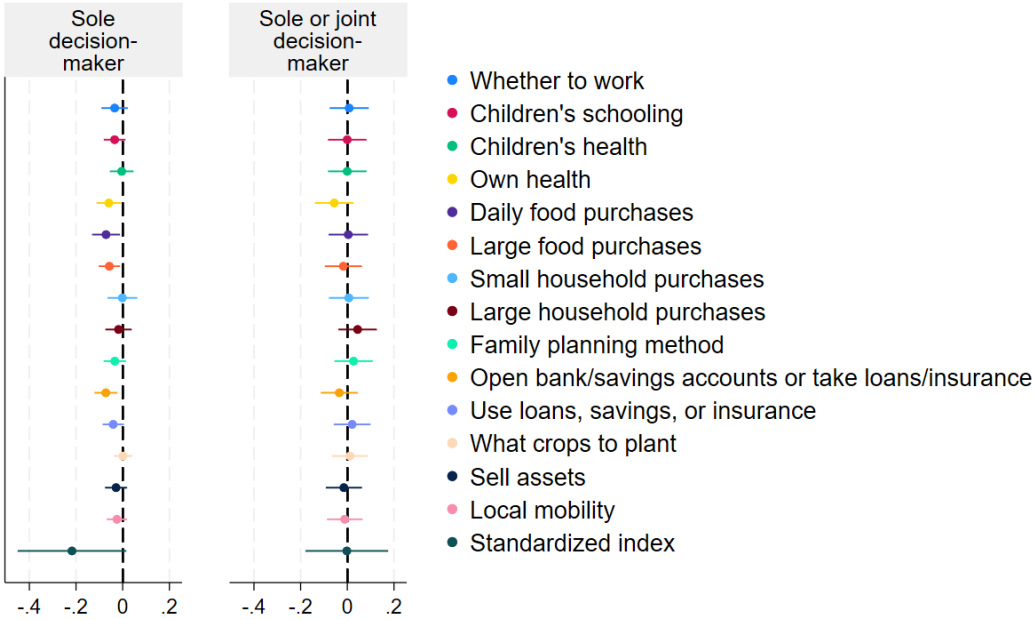


Notes: Authors' calculations of baseline data. Total sample size = 212. This figure reports the effect of question ordering on a binary variable indicating if the respondent normally makes decisions along each of the given domains, and a standardized index.

These results indicate that the effect of priming can lead to an effect with a meaningful magnitude on measures of decision-making power. The statistically significant effects, reported in Figure 1, range between 5 and 15 percentage point reductions in the probability of a respondent reporting that they themselves normally make decisions along given domains. Relative to the mean in the non-primed group, these effects translate into percent changes ranging from 52 percent (about daily food purchases) to 89 percent (about what crops to plant). Therefore, although the “treatment” in this experiment is subtle—representing simply changing the order of two questions on our survey—we estimate priming effects with meaningful magnitudes.

We also report results that consider joint decision making (i.e., with husband/partner or someone else within the household) along with sole decision making as the outcome variable. We find much more muted results, although we still observe statistically significant effects of priming in the daily food purchases and selling assets domains. Taken together, these results are consistent with the idea that changes in household composition associated with internal displacement likely play an important role in influencing how respondents report their intra-household decision making role.

Figure 2: The Effect of Priming on Respondent Decision Making Power (Endline Survey)



Notes: Authors’ calculations of endline data. Total sample size = 356. This figure reports the effect of question ordering on a binary variable indicating if the respondent normally makes decisions along each of the given domains, and a standardized index.

So far, we have only reported results using data from the baseline survey, implemented only once. Thus, these results might be driven by spurious variation due to unobservable heterogeneity and may not truly reflect bias in the measurement of women’s decision-making power. To address this limitation, we implement the same survey experiment again in the endline survey, collected just over a year after the endline survey data were collected. Random assignment to the two groups in the endline survey is independent of the random assignment in this survey experiment in the baseline survey.

Figure 2 mirrors Figure 1 by showing the effect of priming on how respondents report their own decision-making role using data from the endline survey. We again report estimated effects for each domain separately and then in the form of a standardized index which aggregates each of these domains together into one measure of household decision-making power. Focusing on sole decision making, we again find that respondents primed to consider displacement are less likely to report that they themselves usually make decisions across all domains. The effect of priming is notably attenuated, however, perhaps reflecting that respondents are all a year further removed from their own internal displacement experience. Similarly, when we construct a standardized index that aggregates each of these domains, we find that priming leads to an over 0.2 standard deviation reduction in the respondent's reported decision-making power; an effect estimate that is nearly half of that estimated using baseline data. Considering joint decision making, we again find much more muted results using endline data similar to these results we find using baseline data.

Discussion and Conclusion

We present three core results. Two sets of descriptive findings and one set of results from our survey experiment. Our first descriptive finding shows that female respondents who live in households that have been internally displaced report higher levels of decision-making power than female respondents who live in households that have not been internally displaced. Our second descriptive finding shows that, among female respondents who live in households that have been internally displaced, most female respondents indicate that their decision-making power within their household does not increase. Finally, our survey experiment reveals that priming respondents to consider how their decision-making power has changed since internal displacement influences how female respondents report their own decision-making role within their household, by reducing the probability that they themselves report usually making decisions. Importantly, buffering against the possibility that these experimental results are driven by spurious variation, these experimental results persist in two independent survey experiments implemented roughly a year apart from each other among the same sample of respondents.

These results demonstrate that existing survey tools designed to measure women's agency or empowerment, especially those that include household decision-making components, need to be thoughtfully applied in fragile settings where a meaningful share of households might have experienced internal displacement in the recent past. Our findings highlight the possibility of priming effects that might bias responses to questions within a decision-making module due to the placement of other modules that might measure, among other things, the household's experience with migration. This potential non-classical measurement error represents important implications for empirical research and policy conclusions that consider women's economic empowerment within fragile settings.

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