Lab-in-the-field: Income Hiding Game

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Women's say in household decision making is often used as a measure of women's empowerment (for example, Banerjee et al., 2015). It is commonly measured using the adapted Demographic and Health Survey (DHS) modules that ask women whether decisions such as major household purchases, children's education, women's visits to relative etc. are made by her, her partner, jointly, or by someone else. Asking people about how past decisions were made in a survey can lead to reporting bias (Glennerster et al., 2018) and there are concerns about how 'joint' decision making is understood, for example does it mean that she is just told about it or is she an equal partner in the decision.

An alternative approach to capture women's empowerment that is gaining popularity is to measure women's willingness to pay to 'hide' income from spouse or in other words, to gain control of resources in a lab setting. The version described below is a variant of the task used in Fiala (2017) and Almas et al. (2018) with multiple choices between whether the woman or her spouse receives set amounts of money the next day used in Riley (2019). This was implemented in rural Kenya with a low literacy rate sample in the study by Mahmud, Orkin and Riley (2019). Women had to make a series of 8 choices between receiving a fixed amount of money themselves (KSH 200) or having their spouse receive varying amounts of money between KSH 180 and KSH 900. Women were presented with the options in order, as shown in Table 1.

Table 1: Choice options in the income hiding game

Choice	Option 1	Option 2
Choice 1	KSH 200 to yourself tomorrow	KSH 180 to your spouse tomorrow
Choice 2	KSH 200 to yourself tomorrow	KSH 230 to your spouse tomorrow
Choice 3	KSH 200 to yourself tomorrow	KSH 300 to your spouse tomorrow
Choice 4	KSH 200 to yourself tomorrow	KSH 400 to your spouse tomorrow
Choice 5	KSH 200 to yourself tomorrow	KSH 500 to your spouse tomorrow
Choice 6	KSH 200 to yourself tomorrow	KSH 600 to your spouse tomorrow
Choice 7	KSH 200 to yourself tomorrow	KSH 800 to your spouse tomorrow
Choice 8	KSH 200 to yourself tomorrow	KSH 900 to your spouse tomorrow
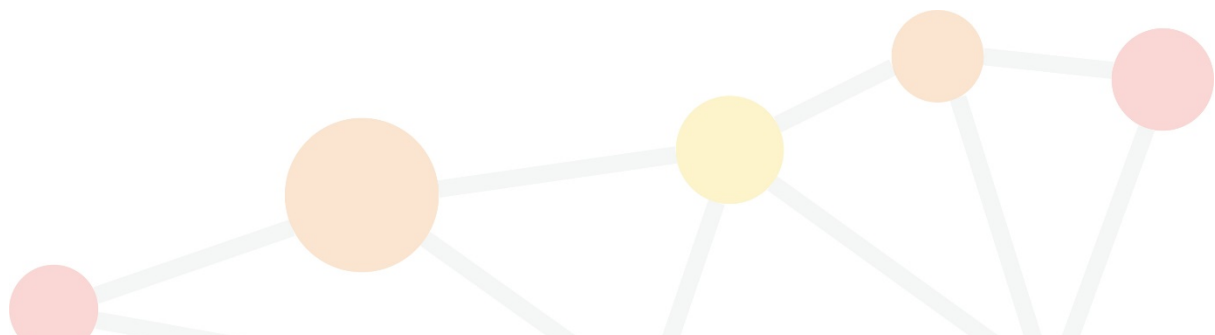
Incentivising the task: One strength of
this method is that the women are responding to 'real' incentives. The challenge is that the amounts used in the task need to be large enough that the respondents have an incentive to take it seriously but large amounts make the task costly to implement. One way to address this is to only pay a proportion of randomly chosen respondents for one of their choices. In our study, one in four respondents was randomly chosen to be paid one of her choices from this game to either herself or her spouse tomorrow. The other important consideration is when to make the payments. We chose tomorrow to be the payment date to remove the effects of strong present bias and to allow the field team time to contact and find the spouse if necessary.

Stopping the task: Almas et al. (2018) use an algorithm to decide the amounts offered depending on the decision of the respondent and a specific rule to stop the experiment. This is much more complex to implement but may be suitable depending on context the task being used in especially if implemented using tablets. A simpler alternative that can be used with our example task with ascending amounts is to stop as soon as the woman switches to the partner/spouse receiving the amount.

Measures to use for analysis: Women's responses in the task can be analysed in a number of ways. Two possible outcomes are:
1. Never cooperates: A dummy equal to 1 if the respondent never switches to giving money to the spouse, and 0 otherwise.
2. Switching point: An outcome equal to a number ranging from 1 to 8, where 1 means that the woman switched to giving the money to her spouse on the first question and 8 means that she never switched to giving the money to her spouse. This can also be analysed as the amount of money she is willing to switch at.

References
Almas, I., Armand, A., Attanasio, O., and Carneiro, P. (2018). Measuring and changing control: Women's empowerment and targeted transfers. *The Economic Journal*, 128(612):F609-F639.

Fiala, N. (2017). Business is tough, but family is worse: Household bargaining and investment in microenterprises in Uganda. *University of Connecticut Working Paper*, No 2017-05:1-56.

Glennerster, R., Walsh, C., and Diaz-Martin, L. (2018). A practical guide to measuring women's and girls' empowerment in impact evaluations. *JPAL Research Resource.*

Mahmud, M., Orkin, K., and Riley, E. (2019). Economic and Psychological Constraints to Women's Empowerment. *Working Paper, University of Oxford.*

Riley, E. (2019). Resisting sharing pressure in the household using mobile money: Experimental evidence on microenterprise investment in Uganda. *Working Paper, University of Oxford.*