

### ***Amendment: Additional treatments***

Reason for the Amendment: Since our ultimate goal in this project is to scientifically find out the most cost effective way to motivate informal sector workers with the most up to date research, we would like to add a new policy to the ones we have been testing, of which we have been informed after we finalized our initial design. Thus, to expand our knowledge on which policies motivate informal sector workers in the most cost effective way to save for their future, we would like to add new treatments to our experiment, which test behavioral interventions we haven't been investigating with our current design.

In these additional treatments, we would like to test the effect of offering a prize-linked savings account on savings behavior. With a prize linked savings account depositors periodically receive a chance to win a specified (and potentially large) prize that is a function of deposit amounts, in contrast to a fixed interest. In this account, deposits count as lottery tickets, with the only difference that the depositors never lose their deposit, even if they don't win the lottery. When they win the lottery, the amount they won is added to their savings account. A recent lab experiment in the US (Filiz-Ozbay et.al. 2013) suggests that this mechanism is promising to motivate people to save. We would like to test the effectiveness of this policy on informal sector workers with our study. Before incorporating the treatments to the M-bao pension plan, we would like to pre-test them with a small sample (200) of informal sector workers from Kibera and Viwandani, who are not necessarily MBAO pension plan members. Thus, the procedure we want to amend to our existing protocol only involves this small sample.

### ***The Procedure:***

Participants will be invited to the Behavioral Lab in Nairobi to participate in a research study. In the lab they will be given decision tasks, which will measure their time preferences, risk preferences and gambling tendency. (An early draft of decision tasks is included in the appendix) At the end of the session, they will be invited to join a savings program for a month (the length of the period might change to 15 days or any number of days between 15 and 30).

We will have three between-participant conditions and participants in each condition will be offered one of the products below:

**Interest:** Participants in this group will be offered commitment savings account with interest that accrues daily. They will be asked to deposit XX or more shillings per day. And the pre-specified interest will be added to their account at the end of each day.

**Lottery:** Those in the lottery group will participate in a "lucky numbers" lottery. Deposits in the lottery accounts do not earn interest; instead, deposits serve as "lottery tickets" that can earn a large lump-sum payoff each day. The lottery ticket will consist of 2 numbers 1-31 (inclusive) and will be sent in a txt message upon receipt of the necessary deposit. On the morning of the following day, the winning lottery numbers will be sent out in a text message. Winners will receive the prize as additional deposits to their

accounts. Note that those who do not win the lottery keep their account deposits; there is no risk of losing any deposits.

**Lottery + Regret:** The lottery + regret condition works similar to the lottery treatment. The only difference is that these participants will be sent their lottery ticket in the morning even if they didn't save that day. Then they will be instructed to deposit XX or more shillings over the day to "keep" the ticket. Those who have deposited the sufficient amount keep the ticket and are eligible to win the lottery, while those who have not, will not be able to get their prize even if they win that day.

Participants will be assigned to one of these conditions randomly before they start the lab decision tasks.

At the end of the saving period (between 15-30 days), we will conduct a phone survey with the participants asking questions on their overall savings behavior as well as how much they gambled during the research study period.

## ***2. Subject Selection***

Subjects will be recruited from the current subject pool the behavioral lab in Nairobi (Busara Center <http://www.busaracenter.org>) maintains. Their subject pool consists of mainly low-income inhabitants of a slum near Nairobi, called Kibera. The lab announces new experiments via a phone SMS message to the subject pool. We plan to employ about 200 subjects.

***3. Limitations, Expected Results, Risks and Benefits, Data Management, Data Analysis, Confidentiality will be the same as in our existing protocol. (With the only difference that in this small sample, the participants need not be Mbao Pension Plan Members)***

## ***4. Compensation***

Participants will be paid for the lab part of the study upon departure, either cash or via mobile transfer (MPESA).

At the end of the savings period (the end of the field part of the experiment) they will be given back their savings with interest (or the prizes they won) via mobile transfer (MPESA).

## ***5. The consent form for these treatments will be as follows:***

### ***CONSENT TO PARTICIPATE***

You are asked to participate in research project conducted by researchers at Duke University, Dan Ariely ([dan@danariely.com](mailto:dan@danariely.com)) and Seher Merve Akbas ([merve.akbas@duke.edu](mailto:merve.akbas@duke.edu)). The purpose of this project is (1) to understand how people

make decisions about money, (2) how people make risky decisions, (3) how people decide to save money.

During the study in the laboratory, you will be presented a number of decisions involving money. Your payment will depend on your decisions and specific rules about it will be explained to you before you start.

Your participation in this project is completely voluntary and you are free to withdraw from it at any time. During the project, all the information about you will be analyzed anonymously and reported by groups.

Do you have any questions that you would like to ask now?

For any future questions or concerns about the project, please contact the researcher Seher Merve Akbas via e-mail ([merve.akbas@duke.edu](mailto:merve.akbas@duke.edu)) or phone (+1919-328-0080) or Dan Ariely via e-mail ([dan@danariely.com](mailto:dan@danariely.com)) or the project associate, James Vancel (email: [jvancel@poverty-action.org](mailto:jvancel@poverty-action.org)) (Phone: +254725066428), or the project manager, Joseph Njoroge ([jmuiruri@poverty-action.org](mailto:jmuiruri@poverty-action.org)) (Phone: +254722900068). If you any questions about your rights as a research subject please contact [ors-info@duke.edu](mailto:ors-info@duke.edu).

I have read this information, and would like to participate

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### **7. Game instructions for Time and Risk preference tasks:**

Note: None of the economic games involve deception. All choices, probabilities and outcomes are made explicit and any payment promised is certain. As is typical in economic experiments with multiple interventions, we may employ probabilistic payouts. That is, subjects make decisions and earn money in multiple tasks, but the actual payout is probabilistically chosen from one of the tasks, or one of the rounds of the task. This is to prevent income effects and portfolio effects that may bias results. The probabilities of payout for each game will be made explicit to the subjects.

Risk 1: In this task subjects are endowed with an amount of money,  $M$ , that is theirs to keep. They may invest this money in an asset, which pays  $P$  times the amount invested with probability 0.5, and pays 0 with probability 0.5. In the example screenshots,  $M = 50\text{ksh}$ ,  $P = 4$ . Thus a subject who invests all of his endowment in the asset has a 50% chance of earning 200 ksh, and a 50% chance of earning 0 ksh.

Risk 2: In this task subjects must choose from a list of payouts the one that he/she prefers. The payouts are determined by a 'coin flip' (via computer) and both heads and tails have differing payouts for each choice. There are 6 possible choices, and the expected value

of the payoffs increase along with the variance. Subjects choose from the menu which payoff set they would like to have. Then the computer flips a coin and determines which payoff they have earned.

**Time Preference:** In this task subjects choose between a smaller amount of money in the near term vs. a larger amount of money in the far term. The amounts of money and terms will vary as subjects answer questions. This allows us to determine their degree of time preference. For example, we may ask a subject if they prefer 100 ksh today or 200 ksh in 1 month. If they choose the money today, we can ask them another question to understand their indifference point. We might ask them if they prefer 100 ksh today or 300 ksh in one month. Depending on their choices, they may be paid sometime in the future. This will be accommodated through the use of mobile money.