

## Subjective Well-being, Risk Perceptions and Time Discounting: Evidence from a Large-Scale Cash Transfer Programme In Brief

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**Introduction.** Individuals' preferences and expectations play an important role in theoretical models of decision-making in various financial and non-financial domains. This paper responds to the increased interest in these measures by reporting on the experience of collecting data on preferences, expectations, risk and subjective well-being in a large scale field survey. These items were incorporated into the impact evaluation of the Kenya Cash Transfer for Orphans and Vulnerable Children (CT-OVC). The objectives of the paper are to first report on the feasibility of collecting such measures on a large-scale among low-income, mostly rural respondents in a developing country and second, to investigate whether receipt of the cash transfer had any effect on these items. These impacts are identified through the random assignment at baseline of households to treatment and delayed-entry control status.

**The Kenya CT-OVC.** This is the country's largest social protection programme with a coverage of over 150,000 households as of mid-2013. The objective is to provide regular cash transfers to ultra-poor families living with OVC<sup>1</sup> to encourage fostering and retention of children and promote their human capital development. Families receive a flat amount of \$25 per month, paid bi-monthly through the Post Office.

**Study Design.** Prior to expansion of the programme in 2007, an impact evaluation was commissioned by UNICEF to monitor its impact on a range of household welfare indicators including food security, child health, and schooling. The study entailed a cluster randomized longitudinal design, with a baseline household survey conducted in 2007 and a 24-month follow-up in 2009. Since not all households could be reached at once, Locations whose entry would occur later

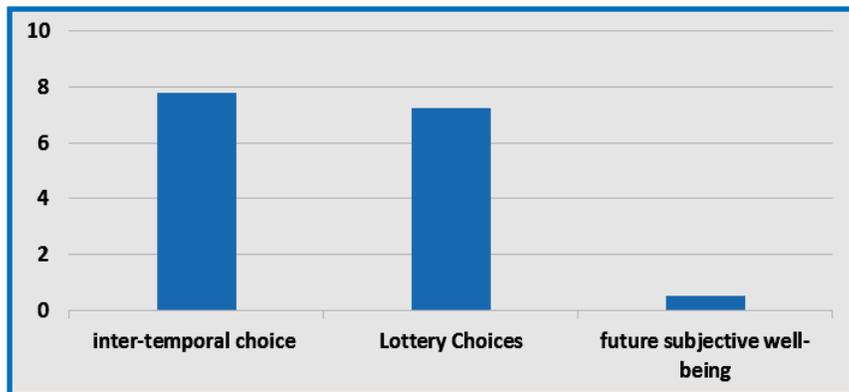
in the expansion cycle were used as control sites to measure impact, with assignment to study arm allocated randomly. In 2011, through funding from the National Institute of Health, we returned to the households in the original evaluation sample that had been re-interviewed in 2009 and administered the same household survey plus an additional module on preferences, risk, subjective well-being and future expectations.

**Measures.** To measure time preference, respondents were invited to make a choice between payment today and payment in one month. The immediate monetary reward was the same for each question (KES1500 today) but the delayed option payment varied from KES1250 to KES9000. Risk preference was measured by asking respondents to choose between a sum of money for certain (KES1500) or playing a series of lotteries that gave them a 50 per cent chance of winning and receiving a larger monetary reward or a 50 per cent chance of a smaller monetary reward. To measure the quality of life we asked respondents if they strongly agreed (5) or disagreed (1) with the following statements: I enjoy life; I experience positive feelings in my life; I feel positive about my future; I am satisfied with my health; and, I am satisfied with my life. Subjective future well-being was measured by asking respondents how they felt about their life in one, three and five years from now, while future risk assessment was measured by asking respondents to express the likelihood that an event (food shortage, need to seek financial assistance from someone, severe illness, etc.) would happen in the near future.

**Results.** The rate of inconsistency was low for both lottery choices and the risk attitude questions. For the inter-temporal choice task, 8 per cent of responses were inconsistent in that the respondent would wait for less money and then would not wait for more money. Some respondents agreed to wait for less money, but this

choice may be related to the inability to store money in a safe place. The inconsistency rate for the risk attitude questions was also about 8 per cent, in that respondents chose a lottery with a lower expected value and then later rejected one with a higher expected value. However about half of these cases coincided with lotteries with lower losses, evidence that among this population loss aversion, rather than expected utility, may be driving attitudes towards risk.

Figure 1. Percentage of inconsistent responses



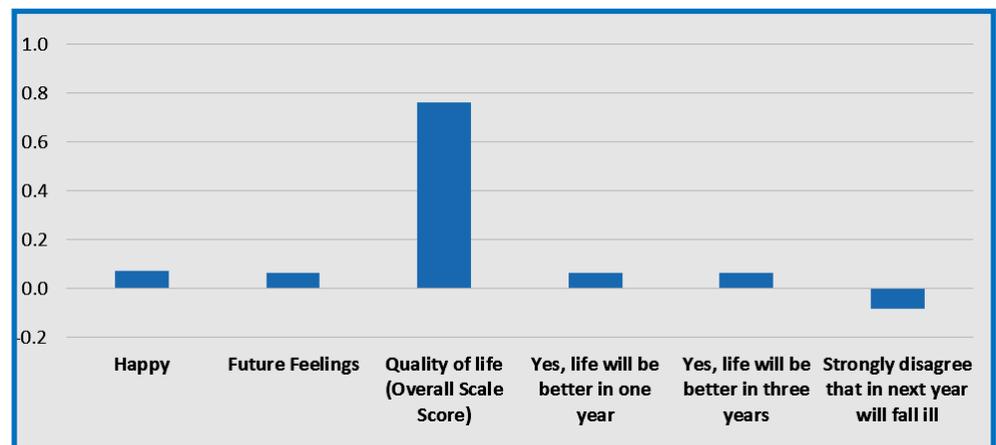
With respect to future subjective well-being, only 9 people report an inconsistent response (less than 1 per cent of the overall sample). Lastly, there is good internal consistency among these groups of indicators as measured by a high Cronbach's Alpha value.

We estimate the effect of the CT-OVC on the preference measures controlling for individual and household characteristics measured at baseline. To strengthen the internal validity of the estimates we employ inverse probability weights, calculated as the probability of being in the treatment group conditional on a set of individual and household characteristics, and weight the regression using these weights. Impacts of the cash transfers on the preference parameters is somewhat mixed. We uncovered no impacts of the programme on time discounting nor on risk aversion (as measured by lottery choices). This may be because the value of the transfer was quite low at the time of our survey, only 14 per cent of mean consumption. On the other hand it could be that these characteristics are more permanent and cannot be changed in the

short or medium term through small increases in income. However, a similar study of a national cash transfer programme in Zambia did find effects on a similar inter-temporal choice task, though the value of the transfer in that case was almost twice as large as a share of beneficiary consumption.

We also do not observe treatment effects on future perceptions of risk of different events in the food/financial spheres, but do for own illness, where treatment individuals are less likely to feel certain they will fall ill. On the other hand, we find strong and positive effects on current subjective well-being and perceptions about future well-being. Thus respondents living in households that are in the programme are more likely to believe their life will be better in one and three years' time. These respondents are also more likely to feel happy and positive about the future. These impacts are not only important outcomes in their own right, but also for their potential in influencing decisions in other domains. For example, optimism about the future is likely to be important in the investment decision-making process.

Figure 2. Treatment effects on selected indicators



**Conclusions.** We provide evidence that questions on preferences, risk, and expectations can be implemented in large scale field surveys to poor, rural populations in Africa. The questions we used here do not take much time to implement, and perform well in reliability and consistency. We do not find impacts of cash transfers on time discounting or attitudes towards risk, but do find impacts on current subjective well-being and future risk assessment.

<sup>1</sup> An OVC is defined as a household resident between 0 to 17 years old with at least one deceased parent, or who is chronically ill, or whose main caregiver is chronically ill.