STUDY SUMMARY

Effect of Income Timing and Structure on Consumption and Savings Behavior in Malawi

With limited income and many demands on their financial resources, it is especially important for poor households in developing countries to allocate their money deliberately across various expenditures. In Malawi, researchers investigated how paying workers in weekly installments versus as a monthly lump sum affected their spending on temptation goods, and if the timing of wage payments changed the impact of the payment structures. The study found that workers who received their income monthly in a lump sum had more cash left the week after payday and were 9.5 percentage points more likely to invest in a risk-free short-term "bond" than workers who received their pay in weekly disbursements. Moreover, when workers received their pay on market day they did not increase wasteful spending relative to those who received it the day before.

Policy Issue

In general, people in developing countries have difficulty saving cash or other liquid assets, limiting their ability to buy desired goods or to take advantage of potentially profitable opportunities for investment. Saving may be especially hard in this setting because poor households face a range of "costs" to saving, such as risk of theft, high transaction costs, and social pressure to share earned income or wealth.[1] In addition, people might be "present-biased," prioritizing current desires over those they have for the future. People in developing countries invest considerable money and effort into receiving income in larger chunks in order to make costlier investments.[2] As a result, combining small, frequent income payments into larger, less frequent lump sum payments may help the poor save for these larger purchases. However, in some cases converting regular income payments into a larger sum may lead to increased consumption of temptation goods. This effect of "money burning a hole in your pocket" has been raised in the microfinance industry, where there is concern access to loans may induce temptation spending. This study examined the role of income timing for spending and savings decisions and its interaction with issues of self-control.

RESEARCHERS
Lasse Brune, Jason Kerwin, Dean Yang

COUNTRY
Malawi

PARTNER
Mulanje Mountain Conservation Trust (MMCT)

PROGRAM AREAS
Financial Inclusion, Financial Services for the Poor

TOPICS
Behavioral Design, Savings

TIMELINE
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Evaluation Context

In 2008, more than half of the adult population in Malawi did not have access to any type of financial service, formal or informal. Of those who had access to a financial service, only 19 percent used a formal bank. The key reasons people reported keeping their money in bank accounts were to keep their money safe from theft (62 percent) or to prevent themselves from spending it (33 percent).[3] Without access to formal financial services, the majority of people saved their money in the form of cash.

This study has particular policy relevance in Malawi as many institutions, including the Ministry of Education, are moving to direct deposit-based payment schemes on an infrequent schedule. These payment schemes bring their employees to major cities on focal dates, potentially triggering temptation issues.

Details of the Intervention

The researchers evaluated whether paying workers on a weekly basis or in one lump sum affected their spending on temptation goods, and how the timing of wage payments changed the impact of both payment structures. The study was conducted in partnership with the Mulanje Mountain Conservation Trust (MMCT), an NGO based in Malawi's Mulanje District that is focused on environmental protection and sustainability promotion.

Researchers partnered with MMCT to temporarily hire a pool of workers as part of their Sustainable Livelihoods program. Three-hundred sixty-three workers were hired over the course of three months. Each worker was randomly assigned to one of two payment schedule groups: the "weekly" group or the "monthly" group. Each group received the same total amount in wages (about MK3000, equivalent to US$7.50). Those in the weekly group received their wages on a weekly basis, while those in the monthly group received their wages all at once after four weeks. In addition, individuals were randomly assigned to receive their pay either on a "tempting" date (market day) or a non-temping date (the day before market day), thus creating four treatment groups in total.

Researchers selected market days as temptation days because people in the area had reported these days offered the opportunity to overspend. The non-tempting dates were deliberately timed near the tempting dates to keep them as comparable as possible. The day before, rather than the day after, was chosen to ensure that the delay between the non-tempting date and any future savings opportunity is longer than that for the tempting date. This ruled out the possibility that the tempting date could depress savings simply because people have to wait slightly longer before the savings opportunity arises. All payments, on both tempting dates and non-tempting dates, were issued at an office located at the site of the market. In order to isolate the effect on spending of having a larger sum of money on the day of the market from the effect of solely being present at the market to receive the payment, all workers were paid a small incentive to show up at the office on market days even if they were assigned to receive their pay-check on a non-market day.

In a baseline and endline survey, surveyors collected information on savings and consumption behavior, in particular on spending on "temptation goods." In interviews with participants shortly after each payday, the research team asked them to report spending over the previous few days so that researchers could isolate the impact of receiving the money.

Finally, the research team offered a high-return, risk-free "investment opportunity" to participating workers right after the follow-up interview. Workers were able to buy either one or two "shares" from the project that had a risk-free return of 33 percent and were repaid after exactly two weeks. This investment opportunity was offered to test whether the timing of payments affects respondents' ability to take up profitable investment opportunities that cannot be purchased in small parts.

Results and Policy Lessons

Overall, results showed that workers were better able to benefit from high-return investment opportunities when they received their wages in a lump sum versus receiving them in smaller, weekly disbursements, and that the "lump sum" workers had more cash left the week after the last payday than the "weekly" workers. Contrary to the researchers' hypothesis, however, workers who received their pay on market day (and at the location of the market) did not spend significantly more on temptation goods compared to workers who received their payment the day before.

Monthly vs. weekly payment: Those in the monthly group spent on average MK 940 less of their total pay at the market (on the day that they received their pay) than those in the weekly group. They also spent a significantly smaller share of their pay on the day they received their pay—24 percentage points less than the weekly-group mean of 63 percent. Wasteful spending was not significantly different for the monthly group, however, suggesting that at least in this context the receipt of cash in one chunk does not lead recipients to overspend on goods they later regret.

Friday vs. Saturday payment: Being paid at the site of the local market on Saturday compared to Friday did not significantly increase expenditure levels or temptation spending.

In short, the findings suggest that it is better for organizations to offer to pay part of wages or cash transfers in lump sums. Likewise, projects designed to generate income for people in developing countries should allow beneficiaries to receive income in strategically-timed lump sums if they want to, in order to maximize benefits to recipients.

Sources

1. e.g. Jakiela, Pamela, and Owen W. Ozier. "Does africa need a rotten kin theorem? experimental evidence from village economies." Experimental Evidence from Village Economies (June 1, 2012). World Bank Policy Research Working Paper6085 (2012).

2. Collins, Daryl, Jonathan Morduch, Stuart Rutherford, and Orlanda Ruthven. Portfolios of the poor: how the world's poor live on $2 a day. Princeton University Press, 2009.

3. FinScope Malawi. 2008. "Demand Side Study of Financial Inclusion in Malawi."

GLOBAL HEADQUARTERS
101 Whitney Avenue
New Haven, CT 06510 USA
+1 203.772.2216 | contact@poverty-action.org