

# Mental Accounting and Remittances: A Study of Malawian Households

Simon Davies, PhD Candidate,  
University of Bath, UK  
26<sup>th</sup> October 2006

1

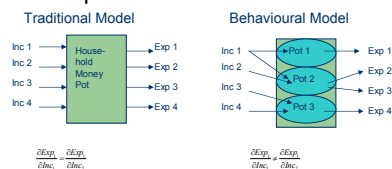
## Definitions

- Remittances
  - “Transfers of money by foreign workers to their home countries.” (Wikipedia) More generally, transfers may be urban-rural/rural-urban as well as international and in-kind as well as cash. More specifically, a geographically-split household which shares income from different sources.
- Mental Accounting
  - A dollar is not a dollar → \$1 of remittance income is not spent in an identical way to \$1 of wage income.

2

## Mental Accounting: An example and Schematic Representation

- You earn \$200 extra in a month from overtime. You receive \$200 as an unexpected gift. You do not spend the \$200 in the same way, despite nothing else changing. The money goes into different “pots”.



3

## Key Results from Literature – Mental Accounting

- Differently liquid wealth used for different purposes out of choice (Levin, 1998)
- Other key results:
  - Source of income influences “pot”.
  - Lump sums more likely to be saved than smaller increments adding to the same total income gain.
  - Liquidity of income influences “pot” but equally liquid income may be placed in different pots.
  - Money is not transferred between pots (there is a psychological cost).
- Consequence: marginal utilities from the consumption of different equally-priced goods may not be equal.

4

## Key Results from Literature - Remittances

- Remittances more likely to be saved (Adams, 2002)
- Impact on poverty and inequality (ambiguous).
- Used as insurance (income-sharing).
- Have an impact on behaviour:
  - Income Pooling
  - Moral Hazard
- Spent in different manner to other income:
  - Education
  - Investment (esp. housing and land)
  - Businesses

5

## Key Contributions: Linking Mental Accounting and Remittances

- Mental Accounting is in operation in Malawi – even for equally liquid wealth.
- How Remittances are used in Malawi:
  - Saved.
  - Invested in education.
  - Used for day-to-day necessities (e.g. food).
  - May be a substitute for credit.
  - Help consumption-smoothing.

6

## The Data

- Malawian 1998 Integrated Household Survey (cross-sectional)
  - Over 10,000 representative households.
  - Income and expenditure recorded in great detail and all usual (control) characteristics recorded.
  - Over 20% of households receive remittances.
  - Remittances make up an average of 40% of non-business income for households that receive them.

7

## Measuring Marginal Propensities to Consume

$$\ln(Y_g) = \beta_1 \ln(X_1) + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

- Dependent Variable: logs of expenditure on different categories of good,  $g$  (real terms, PAE).
- $X_1$  income from different sources.
- $X_2$  set of household characteristics such as age and education of household head.
- $X_3$  regional dummies.
- Since model in log-log form, OLS coefficients on income variables are (constant) elasticities and MPC:

$$\frac{\partial \ln Y_g}{\partial \ln x_j} = \frac{\partial Y_g}{\partial x_j} \cdot \frac{x_j}{Y_g} = \beta_j$$

8

## Results (1) [Table 2]

- Different MPC out of each source of (equally liquid) income.
- Households do consume out of fixed assets (might consume more if there are some liquidity constraints).
- Loan dummy positive → credit raises spending c.p. (we expect loans to be spent).
- Remittance dummy negative → households that receive remittance have lower autonomous expenditure.
- Interaction model (reg.6) → receipt of remittances also lowers MPC but coefficient not significant.

9

## Results (2) [Table 3]

- Income from different sources assigned to particular purposes
  - Remittances spent on food, fuel, general household expenditure.
  - Fixed assets used for farm expenditure.
  - High MPC health out of liquid assets.
  - Acres of land owned not significant for farm expenditure: large proportion of farm expenditure sunk costs?

10

## Results (3) [Table 4]

- The two groups do not exhibit the same expenditure preferences.
  - Most similarity for essentials (food, general household exp.).
- People spend loans. In particular those that do not receive remittances use loans to purchase food whilst those that do, do not.
  - Credit and Remittances=substitutes?
- Zero constant (autonomous expenditure) on non-essentials (education, investment, farm).

11

## Results (4) [Tables 5]

- Both receipt of remittances and income-level matter.
- Remittance-receiving households exhibit higher Marginal Propensity to Save.
- Loan Dummy:
  - Positive and significant for food and general household expenditure for low-income households which do not receive remittances → Low income households which do not receive remittances need to access credit to pay for essentials.
  - Positive and significant for investment for high-income group → Two groups accessing credit.
- Both credit and remittances used for consumption-smoothing.

12

## Results (4) continued [Tables 5]

- Fixed assets: low income HH which receive remittances are less likely to consume out of fixed assets. Low-income non-remittance-receiving HH do consume out of fixed assets (borrowing against them).
- All groups consume out of liquid assets.
- MPC(Education) for low-income households which receive remittances >1.

13

## A Note on Liquidity Constraints

- Similar MPC for those that did and did not access credit, instead.
- Households choose to use different income for different purposes.
- 17% HH had accessed credit over previous 12 months.
- Low income households which do not receive remittances consume out of fixed assets (raising credit against them).

14

## General Conclusions

- Mental Accounting used in Malawi.
  - Remittances more likely to be saved than wage income or used for day-to-day expenses.
- Receipt of remittances can be behaviour-changing.
  - More likely to favour education.
- Substitutability between credit and remittances.
  - Both used for consumption-smoothing.
- Income influences expenditure pattern.
- Liquidity constraints not in play.

15

## Policy Implications

- Expenditure habits can be influenced through policies which change composition of income.
- Improving access to credit cannot alone encourage people to borrow against their assets. Their psychology (mental accounting systems) must also change.
- Banks trying to encourage savings can target specific forms of income.

16