

## INTRODUCTION

- South Africa is the most unequal country in the world by income.
- In more advanced economies, studies have shown that households that have richer neighbours are prone to higher debt and even bankruptcy. Thus, borrowing decisions are based not just on their absolute income level, but also their relative standing in the income distribution.
- How does this relationship between inequality and debt manifest in developing economies, and in South Africa more specifically?
- What is the role of informal debt in this context, where many households have limited access to formal lending services?
- As inequality within provinces changes over time, how do household debt levels change?

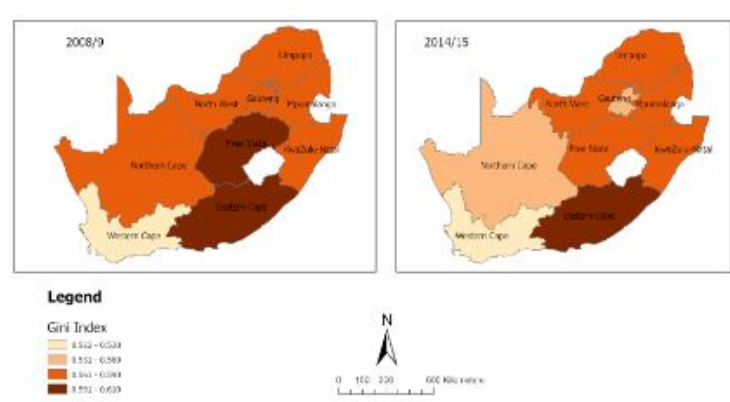


Figure 1: income inequality across provinces, 2008/9 and 2014/5

## OBJECTIVES

- Assess the relationship between household relative income and debt in a high inequality developing economy.
- Explicitly accounted for the role of informal debt, in line with the experiences of credit access for households at the lower end of the income distribution.

## METHODS

Income inequality is measured by a relative deprivation index— $RD_i$  which is estimated using a variation of the Yitzhaki (1979) relative income deprivation index. More specifically:

$$RD_{y_i, y_j} = \frac{\sum_j (y_j - y_i) \forall y_j > y_i}{N} \quad (1)$$

Each household is therefore compared with higher earning households within their provinces. The impact on household take-up of both formal and informal debt is then separately estimated by:

$$Debt_i = RD_i \gamma + GI_i \delta + X_i \beta + \epsilon_i \quad (2)$$

where  $GI_i$  is household gross income and  $X_i$  is a range of household demographics characteristics and other controls, including age, gender, and education level of the household head, household size, number of children and adults, and access to a formal savings account.

## RESULTS 1: RICHER NEIGHBOURS $\Rightarrow$ MORE DEBT & MORE INFORMAL DEBT

Table 1: LPM and OLS, probability, and level of overall and informal borrowing

	2008/9				2014/5			
	Borrow (1)	Inf. borrow (2)	Debt outs. (3)	Inf. debt outs. (% of total) (4)	Borrow (5)	Inf. borrow (6)	Debt outs. (7)	Inf. debt outs. (% of total) (8)
Gross income	0.130*** (0.003)	-0.037*** (0.004)	1.407*** (0.031)	-0.344*** (0.026)	0.109*** (0.003)	-0.103*** (0.007)	1.238*** (0.032)	-0.670*** (0.037)
Relative dep.	0.147*** (0.010)	0.045*** (0.011)	1.044*** (0.101)	0.433*** (0.061)	0.086*** (0.009)	0.085*** (0.014)	0.451*** (0.105)	0.409*** (0.067)

Table 2: ZIP, probability, and level of overall and informal borrowing

	2008/9				2014/5			
	Debt outs.	Debt (excl. mort and loan)	Inf. debt outs. (% of total)	Inf. debt to income	Debt outs.	Debt (excl. mort and loan)	Inf. debt outs. (% of total)	Inf. debt to income
Gross income	0.098*** (0.003)	0.072*** (0.003)	-0.123*** (0.005)		0.096*** (0.003)	0.068*** (0.003)	-0.099*** (0.007)	
Relative dep.	0.020*** (0.006)	0.052*** (0.007)	0.087*** (0.017)	2.586* (1.524)	0.008 (0.005)	0.040*** (0.007)	0.122*** (0.021)	1.337*** (0.159)

- Higher-income households have a greater propensity for borrowing but a lower propensity for informal borrowing given they choose to borrow.
- These propensities are reflected in the predicted levels of debt—higher-income households hold more overall debt but lower proportions of informal debt.
- When ranked against households within their respective provinces, households faced with higher relative deprivation have a higher propensity for overall borrowing and are also more likely to take up informal debt.
- These propensities are similarly reflected in the predicted level of overall and informal debt. That is, more relatively deprived households borrow more and also hold greater proportions of informal debt.

## RESULTS 2: KEEPING UP OR TUNNEL EFFECT?



Figure 2: Proportions of informal debt types by income decile

- The LCS surveys do not ask what households do with informal debt.
- Hence, I supplement data with qualitative literature to draw preliminary conclusions on the major uses of informal debt among South African households at different points of the income distribution.
- Lower-income households borrow predominantly to invest in small-scale business ventures, reflecting a tunnel effect of credit.
- Households positioned higher in the income distribution borrow both to keep up with their richer neighbours and to invest in the future financial stability of their families

## CONCLUSION

- The analysis provides evidence that higher-income households engage in higher borrowing but source lower percentages of debt from informal sources.
- Additionally, households with higher relative deprivation (or lower relative incomes) hold higher levels of outstanding debt, highlighting the importance of relative incomes in borrowing decisions for developing country households.
- While the available data do not allow for identification of the specific uses of informal household debt, a review of the qualitative literature suggests that both 'keeping up' and 'tunnel' effects are at play.