

Consumption Smoothing, Saving, Credit and Insurance

Lecture 9/2: Rural Credit Market

2/2013

Chayanee Chawanote

Overview

- ▶ Limits to credit and insurance
- ▶ Sources of demand for credit
- ▶ Who provides rural credit
- ▶ Characteristics of rural credit markets

The limits to credit and insurance

- ▶ Two features of problematic credit markets
- ▶ Involuntary default
 - ▶ It is difficult to monitor what a loan has been used. A loan may be used for other needs (consumption) or may be put into a risky productive activity
 - ▶ It creates the problem of inability to repay, or “involuntary default”, at which a lender is less likely to get a money back
- ▶ Voluntary default (or strategic default)
 - ▶ The borrow can repay the loan, but simply does not find it in his interest to do so, especially when the legal system of enforcement is weak

Sources of demand for credit

- ▶ Market for fixed capital: credit is used for purchasing fixed inputs, or capital is required for new startups or expansion of existing business
- ▶ Market for working capital: credit is required for ongoing production activity when there is a substantial lag between payment for production and sales receipts
- ▶ Demand for consumption credit
 - ▶ also underlying demand for insurance when there is a sudden crop failure or illness that hinder incoming earnings for household
 - ▶ Credit is required to smooth consumption to cover household's needs in periods of low income by borrowing against higher expected earnings during good periods

Who provides rural credit?

- ▶ Formal or institutional lenders: government banks, commercial banks, credit bureaus, etc.
 - ▶ Don't have personal knowledge regarding characteristics and activities of their clients
 - ▶ Think about expected return from lender's and borrower's point of view: the borrower tends to invest in risky project that the bank does not want
 - ▶ With limited liability and possible risky project investment, institutional lenders often insist on collateral before advancing a loan
 - ▶ The collateral needs to be acceptable and low transaction cost of selling if needed

Who provides rural credit?

- ▶ Informal lenders: landlords, shopkeepers, traders, etc.
 - ▶ Possible reach out to the poor for some (exotic) forms of collateral, e.g. small land next to landlord's land, labor as collateral, or crop outputs
 - ▶ Have much better information regarding activities and characteristics of their clients
- ▶ Microfinance

Characteristics of rural credit markets

- ▶ Informational constraints
 - ▶ Lack of information regarding the use of a loan
 - ▶ Lack of information regarding the repayment decision
- ▶ Segmentation
 - ▶ Repeat lending to individuals whom moneylender has lent before or has close interactions with, but reluctant to lend outside this group of people
- ▶ Interlinkage: interlinked credit transactions
 - ▶ Lending occurs within occupational lines: landlords give credits to their tenants, traders favor lending to their clients
 - ▶ Production relationship facilitate credit relationship, and hence segmentation

Characteristics of rural credit markets

- ▶ Interest rate variation
 - ▶ Segmentation → interest rates vary by geographical location, the source of funds, and the characteristics of the borrower
 - ▶ Siamwalla et al. (1993) report informal sector interest rate varies between 5-7% per month (higher than 12% per annum charged by formal sector banks)
 - ▶ Udry (1994) finds that interest rates on loans among families in Nigeria were low
 - ▶ For traders or landlords, interest rates might be in the form of other transactions, e.g. the price at which a trader buys output from the farmer, or the implicit wage that a laborer is required to work off an interest-free loan

Characteristics of rural credit markets

- ▶ Rationing
 - ▶ At the going rate of interest, the borrower would like to borrow more but cannot
 - ▶ Normally, if the borrower want to borrow more, there is some surplus that the money lender can grab by simply raising interest rate a bit more. But, it turns out that the lender does not do so as he does not want to attract more risk borrowers.
 - ▶ Rationing includes the complete exclusion of some potential borrowers from credit transactions
- ▶ Exclusivity
 - ▶ Moneylenders prefer their clients borrow only from them, not from many sources.

A simple model of credit

- ▶ r : cost of capital to the lender (gross rate)
 - ▶ i.e., the lender has a risk-free investment opportunity, such that if he invests 1 unit, he gets back r with certainty
- ▶ L : total loan size
- ▶ i : gross interest rate
- ▶ p : fraction of loans that will be repaid
 - ▶ Alternatively, we can think of the default rate as $1-p$
- ▶ The expected profits to the lender are given by:

$$\begin{aligned} & p[L \cdot i - L \cdot r] + (1 - p)[-r \cdot L] \\ & = L[p \cdot i - r] \end{aligned}$$

A simple model of credit

- ▶ Under perfect competition, the profits of lenders are zero:
$$L[p \cdot i - r] = 0 \rightarrow i = \frac{r}{p}$$
- ▶ The interest rate is increasing in the lender's cost of capital r and decreasing in the repayment rate p
- ▶ This model implies that even under competition, interest rates are very sensitive to default rates, and that means high risk of default
- ▶ However, from the data, the actual rates of default in rural credit markets are very low although formal-sector default rates are about 1/4 of loans given.
- ▶ This implies that informal lenders can manage to devise contracts and create incentive to circumvent the problem