Markets in Agriculture

Lecture 8/2 - 2/2013

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How important of markets?

- Well-functioning markets ensure that macro-level economic policies change the incentives and constraints by micro-level decision-makers.
- On the other hand, well-functioning markets support important opportunities for welfare improvements at micro-level that aggregate into sustainable macro-level growth.
- The efficiency of the marketing system affects both producer income and consumer cost-of-living
- Imperfect markets are contagious: when there is a market failure in come sector, it can lead to problems in other markets, particulary when these markets are interrelated.
- Problems of information asymmetrics, risk, and contract enforcement are main reasons of incompleteness or imperfection of markets. These cause high transaction costs for the market prices.

Information, incentives, and enforcement

- Information: Unobserved actions
  - Landlord cannot observe tenant's effort as many factors, such as rains and pests, also determine output.
  - The incomplete market here is from lack of observability. The problems of unobserved action lead to '*moral hazard*' and a need to study theory of contracts.
- Information: Unobserved types
  - E.g. lending problem: we cannot identify who are intrinsically bad risks, potentially default. Two main solutions are to charge an interest-rate premium on the loan or to require collateral.
  - High interest rates will discourage good borrower, and will not prevent bad borrowers from defaulting
  - Lending to a group, cutting off loans if any one member of the group defaults, might help when within a group they know each other better, hence they will self-select into safe groups.

Information, incentives, and enforcement

- Incentives: Conflict with insurance
  - To solve moral hazard from limited information, contracts have to be designed to provide appropriate incentives.
  - For example, if a large employer hires labor labor and is unable to monitor laborer's activities, he might offer a contract with attractive wage and with explicit punishment (if shirking, then fired)
  - However, how can we find 'evidence' that directly say it's a laborer's failure, not from weather
  - Contracts based on indirect evidence create uncertainty for economic agents who dislike uncertainty, and this lack of insurance constitute efficiency

Information, incentives, and enforcement

- Incentives: Short-term contracts
  - Employees can legally terminate a contract. Employers still cannot ensure benefits from their investment in the form of adequate nutrition or on-the-job training.
  - In poor societies, this can lead to undernourished population and overall economic inefficiency.
- Enforcement: Limited liability
  - Limited liability constraint: when the borrower is poor and cannot pay out of his wealth because he has little or none.
  - Implication: borrowers may want to overinvest in risky projects since the lender is the one who bear the downside risk.
  - Outcome: credit rationing - you don't raise loan levels because you are afraid of losing more if the project collapse, yet you are afraid to raise interest rates because you will attract more risky borrowers.

Information, incentives, and enforcement

- Enforcement: Breaking agreements
  - Mutual insurance scheme: farmer A may transfer money to farmer B when A has a good harvest and B does not and vise versa.
  - How is this scheme to be enforced when it comes to B's turn to pay, but he does not?
  - Informal insurance must rest on an implicit nexus of social agreement, sanction and discipling of deviators from the agreement, which we need the flow of information to make this mechanism works.

Land and labor markets

- With difference in the distribution of labor endowments and the distribution of land holdings, there will be markets of for inputs. Either individuals with excess labor will seek employment with large landowners, or land will be leased (or sold) to small holders, or both.
- The labor market will typically function with large farmers who hire the labor of those with little or no land for a wage. The agricultural market clears by allocating labor from those who have little land to those who have a lot.
- The land (rental) market typically works with tracts of land leased from landlords to tenants in exchange for rent or a share of the crop. The market clears by distributing rental lands to many tenants.
- If market is complete and with constant returns to scale, why do we need both market when it seems that one is a perfect substitute for the other?

Land and labor markets

- It does not work that way because market is usually incomplete, there is a presence of uncertainty and increasing returns to scale.
- When there is some increasing returns to scale, land will be rented in large chunks and the labor market willl be needed to allocate labor to the farmers of these large tracts of land.
- In the presence of uncertainty, the operation of a single market may not be able to distribute the realization of random shocks in some efficient way over the population of landowners and laborers
  - For example, if the outputs were certainty, landlord could raise the rent until output - rent = next best alternative of tenant
  - But, when it's uncertain, plus the tanent is poor and risk-averse, this uncertainty has a cost in addition to the opportunity cost of the tenant.
  - This is a source of transaction cost and the presence of incentive constraints in writing contract with the tenant.

Land and labor markets

An incentive problem in labor markets

- For labor market, labor is available at its opportunity cost: wage rate in the village/region
- If labor can be costlessly supervised, then there are no additional transaction costs and the labor contract is efficient.
- Most of the time, supervision is costly if you do it yourself. So, either you hire supervisors to adequately monitor labor, or you provide laborers with an incentive to work.
- Transaction costs = wages paid to supervisor(s), extra income premium paid to workers as an incentive.
- High transaction costs in labor market may rise the inequality in land holdings. How?

Capital and credit

- A perfect credit market will make the necessary funds available.
- If the credit market fails, the other markets will have to adjust accordingly.
- Without access to working capital (to purchase inputs/fertilizer), a farmer may be constrained to lease out part or all of his land and his labor.
  - The lack of a capital market might create a situation that land and labor flow from those who have no access to capital to those who do.
- More flexible markets will attempt to adjust for the failings of the less flexible markets, brining the flexible inputs to work with the inflexible ones.