
Introduction and Overview

Purpose and Emphasis

- The purpose of this course is to introduce a systematic way of thinking about the problem of economic development.
- The emphasis is on economic *theory*
 - a selective sort of theory which has defined and shaped the conceptual landscape of development research in recent years.

Market Incompleteness and Informal Institutions: A Micro Perspective

- Outline and try to understand the variety of **market imperfections** pervasive in the developing world and the nature and effectiveness of **informal institutions** that arise to fill the resulting gaps.
- The literature has witnessed a remarkable explosion in the last three decades drawing on advances in
 - game theory and
 - the economics of information.
- The main contribution of this literature is
 - explain the source of distinctive institutional characteristics of the *informal economy* in developing countries extensively documented by
 - empirical economists, sociologists and anthropologists.

(a) Fragmented labor and credit markets:

- large variations in wages and interest rates within a narrow geographic region, despite the presence of competition.

(b) Persistent lack of market clearing despite absence of any regulations that prevent prices from adjusting flexibly:

- unemployment; credit rationing.

(c) Pervasiveness of long-term contracts between

- borrowers and lenders, employers and employees, farmers and traders.

(d) Coexistence of diverse contractual forms:

- tenancy contracts, some involve fixed rents and others sharecropping.

(e) Unequal treatment of observationally similar workers or borrowers.

- Dual labor markets where some workers enter into long-term contracts while others carry out similar tasks on a casual basis at substantially lower wages.

(f) Interlinked transactions and exclusive dealings between specific agent pairs across multiple markets:

- bundling of credit with tenancy, employment or marketing contracts.

(g) Importance of asset ownership in access to credit, tenancy or employment markets.

- Limited access of the poor
 - to credit owing to lack of collateral
 - to tenancy owing to higher risks of rent default
 - to employment owing to malnutrition and absence of human capital.

- (h) Higher yields achieved by small farms *vis-a-vis* large farms, despite superior access of the latter to credit and technology.

- (i) Thinness of certain markets such as the market for land sales;
 - Causes persistence of tenancy and unequal land ownership distributions despite the superior productivity of small family farms.

- (j) Importance of informal cooperatives and kinship networks in determining access to essential productive inputs such as
 - credit, insurance, technological information, water and common lands.

- These phenomena are difficult to explain within the traditional neoclassical theory of a complete set of Arrow-Debreu markets.
 - Neither are most of them consistent with textbook versions of monopoly or oligopoly.
- Accordingly many traditional scholars have inferred the irrelevance of neoclassical economics to the context of developing countries.
 - ⇒ Need for alternative paradigms.
- The new **economics of information** does provide a cogent explanation of many of these institutional characteristics
 - within the context of an analytical framework grounded on the same methodology as the traditional approach.
 - The theoretical models also serve as a useful basis for empirical testing and measurement.

Agrarian Organization

- Eswaran and Kotwal (1986) discuss the implications of imperfections in credit and labour markets for the nature of agrarian organization.
- Principal focus on emergence of different “classes” within a given agrarian economy,
 - as conventionally defined by sociologists or Marxist scholars in terms of ownership of assets such as land.
- This paper
 - highlights the importance of class structure for the performance of the economy;
 - explains some empirical regularities such as
 - the inverse farm size – productivity relationship,
 - why the poor may be restricted in their productive choices,
 - how inequality in landholding affects class structure and agricultural productivity.

Labour Market Imperfections: Malnutrition and Efficiency Wages

- The phenomenon of **involuntary unemployment** poses a challenge for conventional economic theory.
 - If wages are flexible in the downward direction, any excess supply ought to be eliminated by corresponding wage cuts.
 - What prevents such wage arbitrage?
- The *efficiency wage theory* provides one answer to this conundrum.
 - If the productive efficiency of the worker depends on the wage, a wage cut will be accompanied by a drop in the worker's efficiency.
 - ⇒ The wage arbitrage is not worthwhile to the employer.
- Dasgupta and Ray (1986, 1987) analyze the phenomenon of nutrition-based efficiency wages, and its resulting implications for the labour market.

- They show that the supply curve of productive “tasks” is discontinuous at the *threshold piece rate* at which it is just feasible for the *landless* to enter the labour market.
 - Below this rate, the poor are excluded because
 - the incomes they would earn at any given level of productive effort would be insufficient to finance the nutritional intake required to sustain that level of effort.
- The nature and position of the supply curve depends on the landholding distribution;
 - the position of the demand curve depends on the total endowment of land, the product price and the nature of the technology.
- If the equilibrium involves a piece rate at or below the *threshold*, some or all of the landless cannot participate in the labour market,
 - though there are others very similar who do get employed.
- Hence, if the demand for labour is low, *involuntary unemployment* and *malnutrition* results, despite the operation of perfectly competitive markets.

Labour Market Imperfections: Incentive-based Efficiency Wages

- Eswaran and Kotwal (1985) analyzes an alternative source of efficiency wages, stemming from the problem of eliciting trustworthy behaviour from employees.
- Certain tasks require the application of effort which is difficult to monitor;
 - ploughing, planting seeds, weeding, different household needs.
- Certain other tasks are less subject to moral hazard since the product of the worker's effort is easily monitored;
 - fruits plucked, crop harvested.
- Piece rates may suffice for harvesting labour, but not for labour hired for the first category of tasks.
 - Wages will be independent of performance levels; *trust* plays a significant role.

- If hired hands are employed for these tasks, they have to be induced to behave in a trustworthy fashion.
 - Offer an implicit long-term contract which is renewed in future only if the employee's performance have been satisfactory.
 - To give the employee a stake in the continuation of the employment relationship, long-term workers have to be treated better than short-term workers hired for harvesting tasks.
- ⇒ Market for long-term contracts will be characterized by *involuntary unemployment*:
 - all workers will queue up for long-term contracts but employers employ a fraction of the labour force in long-term contracts,
 - the remaining workers being forced into the residual short-term sector.
- Unemployment will not be eliminated despite wage flexibility;
 - wage cuts will reduce the stake of long-term workers in subsequent continuation of the relationship.

Rural Land Markets

- In poor countries land plays a special role in the daily livelihood and the general social structure of the vast majority of people.
- But, compared with the massive influence of distribution of land on economic and social activities, the extent of actual transactions in the land market in a given year is relatively low.
 - The market *flow* is a trickle compared with the weighty *stock*.
 - The market is often more active in land-lease than in the buying and selling of land.
- Mookherjee (2001), in a complete contracting model with the presence of incentive-based informational rents,
 - provides an overview of reasons why there will be no scope for mutually profitable land sales from landlords to tenants or farm labourers.

- We discuss what determines the choice of land rental contracts in agriculture:
 - how the landlord chooses between a *fixed-rent* contract, a *sharecropping* contract, or a *wage* contract.
- **Sharecropping**, one of the ancient and yet current institutional arrangements in world agriculture,
 - provided the context of the application of one of the first principal-agent models in economics;
 - began the process of a whole group of development economists probing the micro-economic rationale of informal agrarian institutional arrangements
 - in poor countries in an environment of pervasive risks and information asymmetry.
- We discuss alternative theories of sharecropping with special emphasis on the roles of *risk-sharing*, *incentive provision*, *limited liability*, and *eviction and use rights*.

Fragmented Credit Markets

- Most of the institutional characteristics of credit markets in developing countries can be explained by problems of **asymmetric information** and **contract enforcement**.
- The information problems are typically either of two kinds:
 - **adverse selection**: borrowers are better informed about their default risks;
 - **moral hazard**: borrowers have to be induced to take precautions to avoid defaults.
- Adverse Selection:
 - Higher interest rates cause low-risk borrowers to drop out of the applicant pool.
 - Competitive equilibrium can then be consistent with credit rationing:
 - only a fraction of loan applicants actually receive loans;
 - lenders do not react to the excess demand for loans by raising interest rate because of the adverse selection effect.

- Moral Hazard:

- Because of *limited liability* on the part of the borrower, loan repayment may be conditional on the realization of particular outcomes such as
 - the success of the project,
 - the solvency of the borrower.
- The probability of occurrence of such outcomes may be influenced by borrower effort.
- This creates the well-known problem of *debt overhang*.

- Contract Enforcement:

- The contract itself may not be honoured;
 - the borrower may default irrespective of his ability to repay.

Risk and Insurance

- People who live in the rural areas of poor countries often must cope with extremely variable incomes.
 - Weather variation, variations in the price of outputs, incidence of disease, pests, fire, and a host of other factors cause farming yields to fluctuate unpredictably.
- Fluctuations in income can present an acute threat to people's livelihoods;
 - occasional famines,
 - bad harvest → inability to afford school fees for children,
 - illness of the wage-earner → inability to provide a healthy diet.
- We discuss the Pareto-efficient allocation of risk within a community.
 - Risk-pooling within a community could be achieved through a variety of informal transfer mechanisms.

- Fully efficient risk-pooling is rare for a number of reasons.
 - We examine intertemporal consumption-smoothing through savings and credit markets as a substitute for full risk-pooling.
- If *ex post* mechanisms such as insurance, savings and credit transactions fail to smooth consumption, households take alternative actions to secure a more stable income.
 - Households might farm a diversified portfolio of land, adopt technologies (intercropping, drought-resistant crops) and contractual arrangements (sharecropping) that reduce the variance of income.
 - Households might diversify their activities through migration or local non-agricultural employment.
- Any of these *ex ante* actions might be costly;
 - households would be sacrificing income, on average, to assure a less risky stream of income.

Interlinkage of Transactions

- Another institution commonly observed in developing countries is the *interlinking* of *credit transactions* with *tenancy*, *employment* or *marketing* contracts.
 - Poor farmers (resp. workers) are frequently observed to borrow exclusively from their landlords (resp. employers).
 - Conversely, tenancy contracts are bundled with credit:
 - the landlord leases land, provides credit to cover working capital and consumption needs in the lean season, contributes to certain farm inputs, and
 - receives a share of the resulting farm output in lieu of rent, besides repayment of loans.
 - Landlord may also act as marketing agent for the farmer's share of the crop.

- With the farmers dependent on the same landlord for so many diverse transactions, many scholars viewed these patterns of interlinkage as symptomatic of *semi-feudalism* or implicit bondage.
- Braverman and Stiglitz (1982) provide a canonical example of the interlinked-contract literature.
 - They study sharecropping tenancy and demonstrate why such contracts may be linked to credit relationships.
 - Interlinkage arises as a way of internalizing the externalities between the credit contract and the tenancy contract.
 - The landlord can provide the tenant with subsidized credit,
 - encouraging the tenant to borrow more,
 - subsequently work harder to make the larger repayments.

Cooperatives and Informal Institutions

- The formal sector may leave large gaps in the efficiency of resource allocation.
 - It is natural to expect that the local informal sector will step in to fill these gaps.
 - Particularly true when the failure of the formal sector stems from
 - its paucity of information about the characteristics and activities of local agents,
 - its inability to enforce contractual agreements.
- In contrast, civil society and its rich web of social networks is frequently better informed and more able to enforce obligations through *social sanctions*.
 - Local villagers have access to a large amount of information regarding each other.
 - This information base may be “soft” and “unverifiable”, sometimes unreliable;
 - but typically far richer than can be represented by the statistics and formal documentation to which external agents in the formal sector have access.

- Local villagers also interact frequently on a variety of social and economic dimensions,
 - allowing deviant behaviour to be punished via social sanctions of diverse forms and degree.
- Individual behaviour can be influenced by community pressure in traditional societies in extreme ways;
 - going as far as inducing deviants to the point of suicide and self-immolation.
- Repayments on even small informal loans and leases will be scrupulously observed by the very same people that routinely default on larger payments due to the government or commercial banks.
- Thus, the informal economy is better placed to discipline opportunistic behaviour,
 - especially in credit and insurance transactions where problems of trust play an important role.

References

- This note is based on
 1. Mookherjee, Dilip and Debraj Ray (2001), Section 3 of Introduction to *Readings in the Theory of Economic Development*, London: Blackwell,
and
 2. Bardhan, Pranab and Christopher Udry (1999), *Development Microeconomics*, Oxford University Press, Chapters 4, 6, 7, 8 and 9.