SHARECROPPING

I. APPROACHES

- Marshallian

- Landowner model (Cheung)

- Imperfect information model $\Leftrightarrow$ New institutional economics

- Marxian (exploitation) model

II. PERENNIAL PUZZLE

- A priori, sharecropping appears to be **inefficient** and less amenable to innovation/technical efficiency-enhancing technology adoption

- Sharecropping is a **persistent** production arrangement that **coexists** with other forms of tenancy (cash rents, plantations, smallholding)

- Shares are often determined by **custom** rather than standard optimizing criteria.

III. PRACTICAL DETAILS – ANALYTICAL WRINKLES

- Sharecropping links **multiple markets** (land & labor at least, but frequently others (e.g., credit, consumption, inputs)

- Not always a clear-cut landless/landowner distinction; often smallholders sharecrop other small parcels too.

IV. MARSHALLIAN (TENANT) MODEL

Assumptions
(1) Tenant receives exogenously determined share "S" (e.g., 50-50)
(2) Tenant pays for, decides upon variable inputs
(3) Tenant maximizes profits
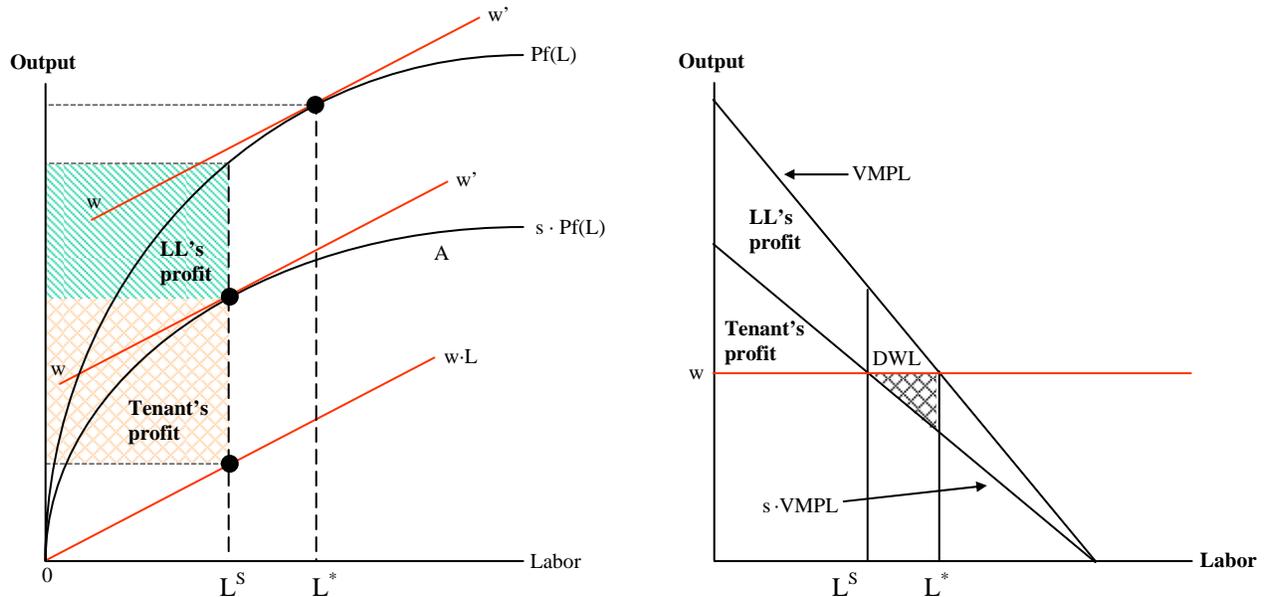
Key Points

(1) **DWL incurred by owner**

(2) Under sharecropping, tenant receives higher income than if he were a wage laborer producing the same amount (given by shaded area). This is a **subtraction from the owner's profits** under either cash tenancy or hiring labor to farm the land.

(3) **Not a stable equilibrium.** Owners would like to move more toward L* and tenants would oblige if the accompanying losses (hatched area) were compensated

$\Rightarrow$ **Potential unexploited gains** that are Pareto efficient.

V. LANDOWNER MODEL (CHEUNG)

Assumptions

(1) Landowner controls amount of labor input, share (S), size of parcels

(2) Only constraint is that contract must allow tenant to earn at least as much as a wage laborer.

Outcome

Production occurs at L^*

Landlord is a capitalist farmer

No more advantage for the tenant

Landlord alters share to insure that VMP_{LAND} = Rent (i.e., hatched area = tenant's profit area)

Problems with this model

(1) Landowner as monopolist offering "take-it-or-leave-it" proposition to potential tenants

(2) Assumes **zero enforcement cost** in getting tenants to work at stipulated levels

Positive aspects of the model

(1) Under sharecropping, **motivation for work greater than is the case for wage labor** – share tenant is more motivated at least up to L_S.

(2) **Threat of non-renewal** of share contract may cause tenant to work more than L_S.

VI. IMPERFECT INFORMATION MODELS

Questions

1. If share tenancy is so inefficient, why is it so ubiquitous?

2. If Cheung's Landowner (Efficiency) model is true and tenants are simply dressed up wage laborers, why do we still see share arrangements?

3. Why don't we see fixed rent contracts more?

Answers

A. Risk

- Under fixed rent, all risk is borne by tenants; under wage labor, all risk is borne by landlord.

- Share tenancy represents a mechanism for sharing risk between landlords and laborers (in same proportion as output shares)

<u>Problems</u>

- Why would less risk-averse agents (e.g., landlords) accept any risk?

- Some combination of fixed rent and self-cultivation (with labor hiring) will result in exactly the same amount of risk spreading for a given share contract.

Not much empirical support for risk being a "dominant" explanation of share tenancy ⇔ **SHARECROPPING IS FOUND IN BOTH RISKY AND LESS-RISKY ENVIRONMENTS**.

B. Imperfect Labor Markets

- Landowners can't always find sufficient labor at bottleneck periods

- Tenants can't always find work when they want it.

- Share cropping resolves both of these issues

C. Other Incomplete Markets

- **Credit:** crop share = pre-harvest collateral

- **Bullocks:** sharecropping allow tenants to make efficient use of bullocks (but then again, so would fixed rent)
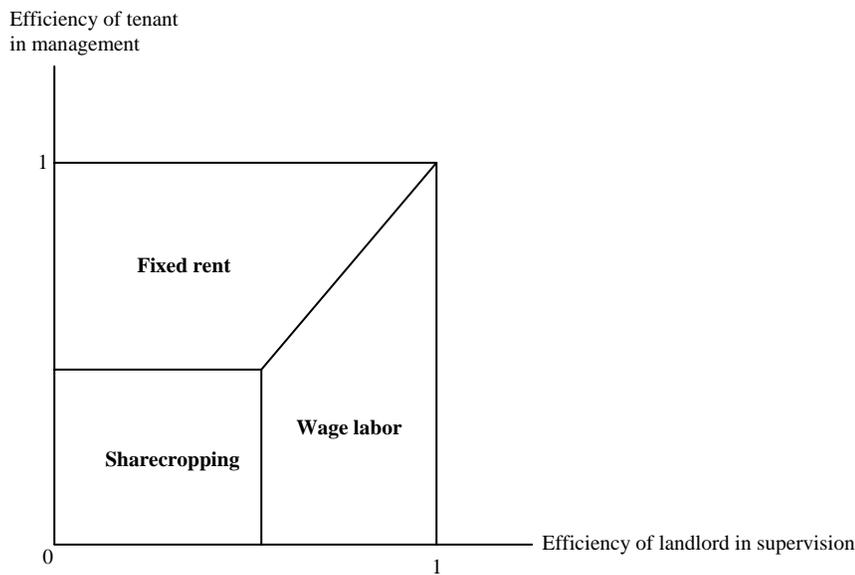
D. Monitoring and Enforcement (Eswaran and Kotwal)

Assumptions:

- Dual moral hazard

  ➤ Tenant has incentive to shirk in work
  ➤ Landlord has incentive to shirk in management

- No markets for supervision or management (!!!)

- Tenants are landless

- Tenants are better supervisors, landlords are better managers

Model:

Landlord takes one of three possible actions:

1. **Fixed Wage:** Self-cultivate by hiring wage laborers $\Rightarrow$ landlord provides both mgmt and supervision himself

2. **Fixed Rental:** Lease land to a tenant at a fixed price $\Rightarrow$ tenant provides both mgmt and supervision himself

3. **Share Contract:** owner supplies mgmt., tenant supplies supervision, output is shared $\Rightarrow$ specialization reduces moral hazard

Efficiency of tenant in management (y-axis, from 0 to 1)

Fixed rent

Sharecropping

Wage labor

Efficiency of landlord in supervision (x-axis, from 0 to 1)

Solution:

1. Sharecropping occurs more where managerial abilities of landless and supervisory capacity of landowners are relatively low.

2. As managerial ability of landless increases, fixed rent becomes more likely/common

Prediction:

Expect less sharecropping where land is more evenly distributed (and information access & managerial ability is correlated to land ownership).

Evidence:

- **India:** Sharecropping more common where land ownership more skewed.

- **Absentee landlords:** Tendency toward fixed rent since landowners' supervision efficiency ≈ 0 and mgmt. efficiency of landowners also small (i.e., relative mgmt efficiency of landless is high).

- **Post-bellum South:** Abolition of slavery lowered landlords' ability to supervise & lowered overall level of (potential) tenants' managerial efficiency/ability $\Rightarrow$ rise of share cropping

VII. INTERLOCKED MARKETS

Share contracts link at least two markets, <u>often more</u>

A. Neoclassical interpretation of interlinked markets

Profit maximizing landowners use interlinked markets to overcome the inefficiencies of incomplete markets. By this view, interlinked markets **enhance overall social welfare** via:

- Efficiency gains,

- More rapid adoption of innovations.

- Internalizes adverse externalities (risk, low work effort, default)

Examples
1. **Consumption loans:** Sharecropping → harder work to make repayment. (**Note:** this is also consistent with Marxian view of sharecropping as exploitation)

2. **Production loans:** Sharecropping directly ensures adoption of innovations. Example: landlord provides credit for "investment" in new techniques that would be unavailable to the tenant otherwise.

3. **Variable input cost sharing:** Sharecropping induces efficient input use by <u>spreading risks</u> associated with inputs

B. Marxian interpretation of interlinked markets

Share tenancy facilitates exploitation of landless by the landed by better enabling them to extract maximum rents

"Sharecropping may increases social welfare but for whom?"

⇒ **Can lead to significant social unrest**

VIII. POLICIES TO REDRESS UNEQUAL ECONOMIC POWER

A. Two Not Very Promising Policies

1. Legal controls on shares

- Can be subverted or avoided when inter-locked marketing arrangements exist (e.g., just jack up the interest rate)

2. Subsidized credit

- Problems include high administrative costs, high default, often loans end up going to large landowners

B. Land Reform

To the extent that share tenancy and interlinked markets lead to most rents being extracted by landowners, **land reform** may break the cycle.

- Land reform follows from concern over both **inefficiency** and **income distribution** concerns (*LR could promote <u>both efficiency and equity</u>)

- Very profound **change in social structures/relationships** usually accompanies land reform $\Rightarrow$ it is **difficult to accomplish**

- Where major land reforms have been attempted, evidence points to LR accelerating the transition to either capitalist or commercial farms.

- Land reform is "needed" where **liquidity constraints** bind due to

  - Credit market failure

  - Land price > capitalized value of earnings (due to anticipated appreciation, land as hedge against inflation, collateral value of land).

DIGRESSION: FARMSIZE–PRODUCTIVITY RELATIONSHIP

Actual measure used: Land or labor productivity

Ideal productivity measure: $\dfrac{\text{Profit}}{\text{Assets}} = \pi/\textbf{unit of economic size}$

- Few empirical studies have come close to measuring this

- Those that have indicate a significant negative relationship **between farmsize and profit** for all but smallest farmsize classes

- Lots of empirical work shows this inverse relationship using π/acre or output/acre.

BASIC ANALYTICAL ISSUE

Large farm "assets"	vs.	**Small farm "assets"**
Scale economies (lumpy assets)		Family L quality advantage
Access to credit		Supervision economies
Superior (?) management skills		No search costs for family L
		Better land quality (?)

POINTS

- Land rental mkts <u>can</u> dissipate decreasing returns to scale

- Empirical evidence (Binswanger & Elgin): "tenants are less efficient than owners, but not by as much as expected"

- Decollectivization can have positive impact

- IRS may be crop specific (e.g., sisal, sugar) and/or linked to tight processing or marketing requirements (e.g. bananas)

TYPES OF LAND REFORMS (LEAST TO MOST RADICAL)

1. **Reform of Rental Contracts**

- **Basic Idea:** Mandatory "long-term" contracts promote tenant security which promotes tenants' willingness to invest in land **improvements**

- Enhances tenants' property rights without altering income distribution

2. **Rent Reduction**

- Ceiling on landlord's share of output (**"not very promising"**)

- Can have significant income redistribution effect if ceiling is well below the usual share **and landlords don't subvert** (unlikely)

3. **Land-to-Tillers WITH Compensation**

- **Limitation on acreage owned:** Forces landlords to sell "excess land."

- **Limit ownership to only that area that can be farmed:** Forces sell-off of lands not farmed by owner

- **Gov't subsidized sales:** Government role may be to provide credit, guarantee repayment, or direct subsidy (partial or full).

4. **Land-to-Tillers WITHOUT Compensation**

- Biggest impact on rural income distribution

- Often leads to or accompanies violence.

EXAMPLES OF SUCCESSFUL LAND REFORMS

- Bolivia   \
- India   \
- Ethiopia   \   **Landlord estates (entirely**
- Iran   /   **tenant farmed) broken up**
- Japan   /
- Korea   /
- Taiwan   /

- Gov't involvement in these ranged from landholding ceilings to establishing prices paid by new landowners

- These land reforms were successful in that they led to **stronger incentives** for tenants to work, invest in land improvements which in turn promoted **productivity increases, technology adoption.**

Productivity increase from more secure post-reform tenure are modest if:

1. Tenants had to compensate owners at near-market prices

2. Security of tenure was already high.

3. Fixed rent contracts already prevailed (in which case the pressure for land reform wouldn't have been so great).

Most Land Reforms associated with social upheaval

1. Revolts of peasants

2. Revolution (Mex, Chile, China, Cuba, Salvador, Nicaragua, Russia)

3. Conquest (Japan, Taiwan)

4. End of colonial rule (E. India, Kenya, Mozamb, Viet, Zimbabwe)