

L18 Land Reform

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Introduction

- Focus on a key aspect of rural development: ownership of land
- Rural sector plays a much larger role in LDCs, esp. with regard to population composition
- Rural poverty typically higher than urban poverty, in S Asia and S-S Africa
- Ownership of land is the single most important determinant of incomes, consumption, security and social status

- *References:* Ray, Development Economics, Ch 12

Income and Consumption Across Land Classes, West Bengal 2003

Table 1
Income, consumption and occupation by land ownership status.

land category	Landless	Marginal	Small	Medium	Large	Big
<i>A. Household size</i>						
Average household size	4.64	4.80	5.67	6.76	7.93	9.11
<i>B. Sources of income (rupees)</i>						
Farm income	676	5203	17,047	27,924	35,008	57,259
Wage income	1032	1466	309	43	0	0
Remittances	270	541	442	492	960	0
Other income	139	52	454	1022	760	0
Total	2117	7262	18,252	29,481	36,728	57,259
<i>C. Consumption (food and durable goods)</i>						
Two meals a day (%)	88.18	91.01	96.92	97.66	98.00	92.59
Own house (%)	81.41	92.16	94.62	97.27	98.00	100.00
At least one cow (%)	55.66	65.85	80.00	87.50	90.67	92.59
TV (%)	26.65	25.16	49.23	53.91	72.00	85.19
Radio (%)	35.37	38.40	45.38	45.70	54.00	70.37
Refrigerator (%)	2.85	1.63	6.15	8.98	15.33	22.22

Why/How Land Matters in Rural Areas

- Distribution of landownership therefore very important determinant of rural inequality and poverty
- It also affects agricultural productivity
- The productivity effect is less obvious: is a more equal land distribution likely to generate higher or lower productivity?
- To answer this, need to understand different modes of agricultural cultivation

Modes of Agricultural Cultivation

- OC: Owner Cultivated Farms, relying mainly on household labor
- T: Tenant Cultivated Farms, usually relying on household labor; types of rental contracts:
 - Sharecropping
 - Fixed Rent
- HL: Owner Managed Farms, cultivated by hired labor (e.g., plantations, haciendas)
- CC: communally owned and communally cultivated (communes, kibbutzes)
- COC: communally owned, but cultivated by individual households (tribal lands)

Table: Table 12.2: % Distribution of Farmland Across Different Modes, 1970

	Asia	Africa	L America
Owner Cultivation (OC, HL)	84.0	9.2	80.4
Tenancy (T full or in part)	16.0	32.1	11.8
Others (CC, COC)	0.0	58.7	7.8
Avg Farm Size (ha.)	2.3	0.5	46.5

Mode of Cultivation and Farm Size/Technology

- OC, T: small farms (owing to use of family labor), low tech, labor intensive (Asia)
- HL: large farms, mechanized or labor intensive (L America, parts of Asia)
- CC: typically large, mechanized (Soviet, Chinese communism)
- COC: typically small, labor intensive (African tribal society, post-1978 China)

Large Land Redistribution Programs in 20th Century

- Private Land Redistribution: Mexico (1930s), Korea, Japan, Taiwan (1930-50), parts of India (1970-2000), Brazil (1993-2002): HL to OC
- Communal Land Redistribution: China (1978-1984), Vietnam (1988-93): CC to COC/OC

Other Types of Land Reforms

- Land Purchase Grants/Loans: LRAD in S Africa (2000–) to landless and tenants
- Sharecropping Tenancy Regulations (security, minimum share of tenant): parts of India (1970-2000)
- Formal Legalization of Informal Rights (Titling, Registration, Mortgage and Sales): Argentina, Peru, parts of Africa

Productivity Comparisons Across Modes of Cultivation

- Focus on comparisons across OC, T, HL and CC
- Three Factors of Production: land, labor, capital equipment
- Large farms (HL, CC) adopt more capital-intensive (mechanized) technology which entails fixed costs
- Small farms (OC, T) adopt labor intensive production methods, as mechanization is not cost-effective, and owners are not wealthy or high-skilled

Productivity Comparisons Across Modes of Cultivation, contd.

- Large vis-a-vis small farms: capital advantage, labor efficiency disadvantage
- Small farms rely on household labor for key cultivation tasks: planting, irrigation, pest control, land management etc
- How does labor efficiency vary across different kinds of farms? Related to incentives/motivation of workers

Labor Motivation Comparisons Across Modes of Cultivation, contd.

- OC farmers or fixed rent tenants: highly motivated (appropriate 100% of marginal returns)
- Sharecropping tenants: less motivated (appropriate a fraction of marginal returns)
- Large HL/CC farms: even less motivated (appropriate 0 or tiny fraction of marginal returns)
- HL/CC farms require supervisors to check on work effort of production workers, but supervisors themselves have to be motivated

Worker Incentives: Theory

- Fix land size and capital: farm revenue $R(e)$ increasing in worker effort e , subject to diminishing returns
- Effort disutility of worker $C(e)$, increasing in e , at an increasing rate
- Socially optimal effort e^* : where marginal return to effort $MR(e^*)$ equals marginal disutility $MC(e^*)$

Worker Incentives: Theory, contd.

- OC farm: worker is owner, e chosen to maximize $R(e) - C(e) \longrightarrow e = e^*$
- Tenant with fixed rent \bar{r} : maximize $R(e) - \bar{r} - C(e) \longrightarrow e = e^*$
- Sharecropping tenant with share s of farm return: maximize $sR(e) - C(e) \longrightarrow e < e^*$

Worker Incentives in Large HL/CC Farms

- Large HL/CC farm: earn fixed wage, or infinitesimal share s of farm revenue $\rightarrow e$ approximately zero, unless closely supervised
- Supervisors also have to be motivated to supervise, e.g., with bonuses that depend on revenues generated of farmers that they supervise
- Supervision costs $S(e)$, increasing in e ; min. worker wage has to be $w(e) = C(e)$
- Owner-manager selects e to maximize $R(e) - C(e) - S(e) \rightarrow e < e^*$

Analogous Urban Contexts

- Transport: driver owned taxis vs. drivers leasing taxis vs. mass transit
- Restaurants: family-owned restaurants vs. family-renting restaurants vs. franchises vs. supermarket food outlets
- Tailoring: family-operated tailor business vs. mass produced garments
- Medical/Legal services: doctor/lawyer-owned practice vs. hospital/corporate law firms

Economies of Scale versus Small is Beautiful

- Large farms/firms have capital/scale/technology advantage
- Small farms/firms that are OC/franchises have labor efficiency advantage
- Which is more important?

Economies of Scale versus Small is Beautiful

- Answer depends on the product:
wheat/corn/cattle-raising vs. rice/vegetables;
garments vs. food preparation
- When labor efficiency/attention/service quality is more important (rice, food prep.), small farms/firms outperform large ones
- Large farms superior when mechanization is more important

Implications for Productivity Effects of Land Reforms

- Land redistribution from large landowners (HL) or communes (CC) to landless: replace HL/CC with small OC farms
- In corn/wheat/cattle contexts, likely to lower agricultural productivity (loss of scale economies, skill etc.): Zimbabwe, big concern in post-apartheid S Africa
- In rice/vegetable growing areas, likely to *raise* agricultural productivity

Empirical Evidence on Farm Size and Productivity

- Tables 12.6, 12.7 in text: ratio of yields (income/output per acre) in small to large farms varies between 2:1 in India, to 2.7:1 in Pakistan, 1.5:1 in Malaysia, and 5.6:1 in Brazil
- Experience of many large land reforms: significant increases in agricultural output followed (Mexico (early 1940s), Japan, Korea (1950-60), China (1978-84))
- Combined with large reductions in poverty and inequality

Summary

- Important land redistribution programs in Mexico, East Asia, China
- Effects on agricultural productivity depend on how they affect the cultivation mode (capital/scale/skill vs. labor efficiency)
- Evidence shows small farms are more productive, hence such redistributions also raise agricultural output and growth in general
- Next session: critical reassessments of the empirical evidence, political/administrative problems of implementation, some recent 'softer' kinds of land reforms (tenancy regulations, subsidized land grants)