

14.771: Land Markets

Ben Olken

4. Is there a collateral effect?

- Field and Torero (2006) use the same strategy as Field to look for an effect on access to credit, and find very little evidence of increase (on the other hand they do find much greater investment in the quality of the home, consistent with channel 1).
- Galiani and Schargrotsky look at the same question in Argentina, comparing squatters in Buenos Aires. There again, they find large effects on home investment, but little effect on access to credit
- Possible explanation for this failure: land titling reduces the value of land as collateral since it suggests that seizing the asset will be impossible...

Summary thus far

- Some evidence for all 4 effects of property rights
 - ① Reduced investment
 - ② Effort to prevent expropriation
 - ③ Misallocation
 - ④ Collateral
- But not as strong as you might expect

The macro picture

- Final piece of land puzzle we'll explore looks at macro facts
- 1. Are farms too big or too small?
- What would you expect from micro literature we've discussed?
 - Reasons they are too big: moral hazard on large farms
 - Reasons they are too small: land market frictions, economics of scale, explicit land reform policies
- 2. How much productivity gain could we get from land reallocation?

Farms size in rich vs. poor countries

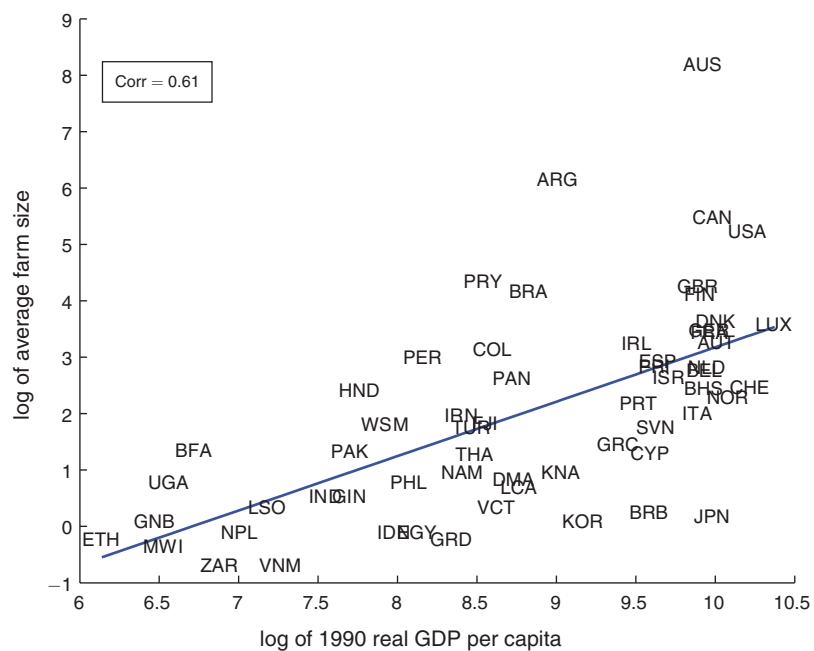


FIGURE 1. AVERAGE FARM SIZE ACROSS COUNTRIES

- But what's the interpretation?
- What would happen to farm size in two-sector model with manufacturing and agriculture if manufacturing became more productive?

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Large farms look have higher value added per worker

TABLE 2—STATISTICS BY FARM SIZE IN THE UNITED STATES

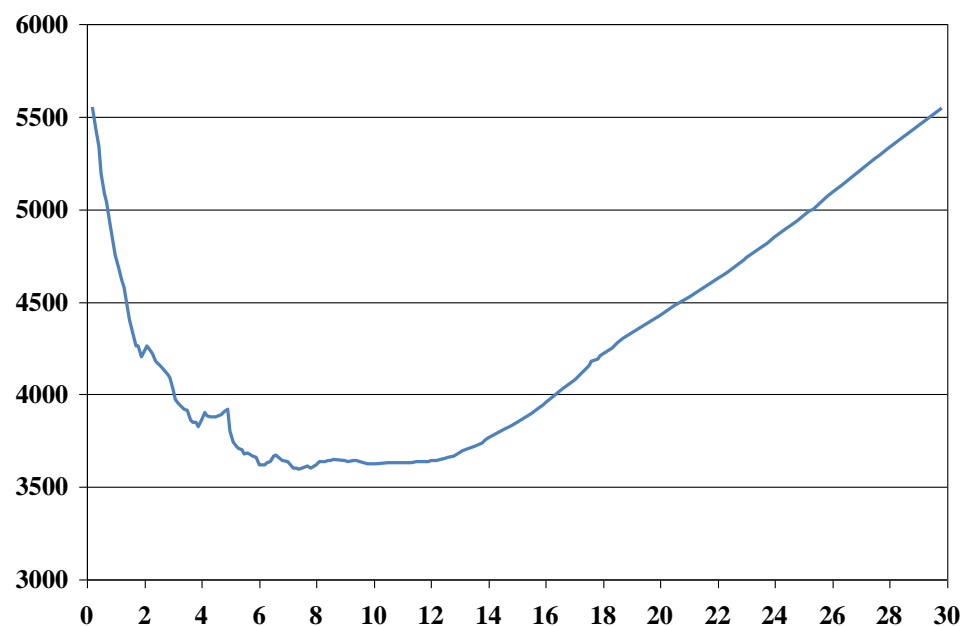
Farm size (acres)	Farm distribution	Land share	Value added per acre	Value added per worker	Capital-land ratio
1–9	0.1056	0.0012	33.31	1.00	84.85
10–49	0.2813	0.0173	6.54	1.10	17.88
50–69	0.0698	0.0097	4.23	1.54	9.65
70–99	0.0871	0.0171	3.2	1.92	7.49
100–139	0.0794	0.022	2.67	2.22	5.96
140–179	0.0633	0.0238	2.4	2.67	4.98
180–219	0.0397	0.0187	2.59	3.38	4.73
220–259	0.031	0.0176	2.76	4.15	4.56
260–499	0.0964	0.0823	2.7	5.63	4.05
500–999	0.0679	0.1129	2.92	10.03	3.54
1,000–1,999	0.042	0.1384	2.52	14.25	2.95
2,000+	0.0365	0.5389	1.00	16.45	1.00

- But what's the interpretation?
- What would happen in a model with diminishing returns to scale and heterogeneity in productivity?

Putting it together

- Foster and Rosenzweig (2017) look in India find a u-shape in output – high at the low end (moral hazard) and high at the high end (mechanization)

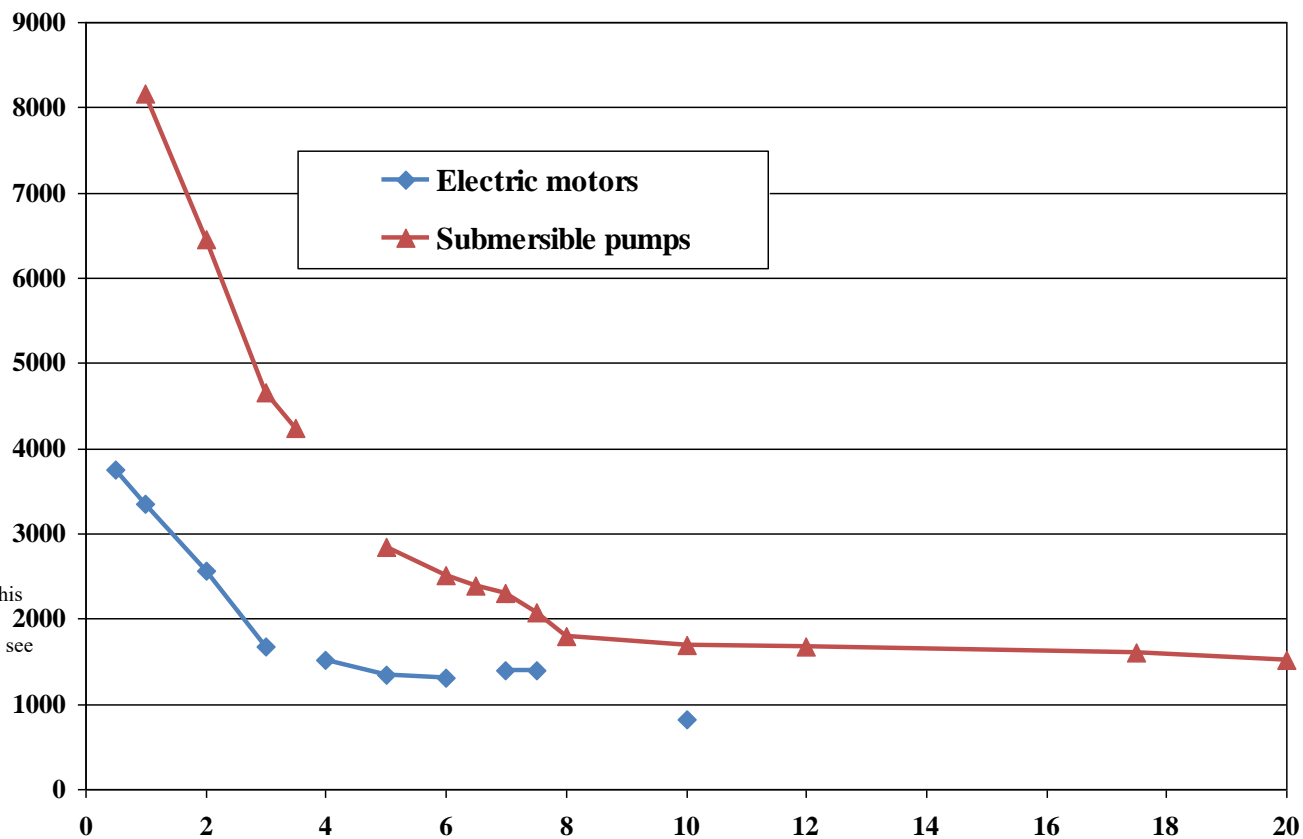
Figure 6. Relationship Between Real Average Profits per Acre and Farm Size (Acres)
(ICRISAT VLS 2009-14)



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Returns to scale

Figure 9. Cost per Horsepower for Electric Motors and Submersible Pumps by Horsepower (ICRISAT VLS Equipment Inventory, July 2011)



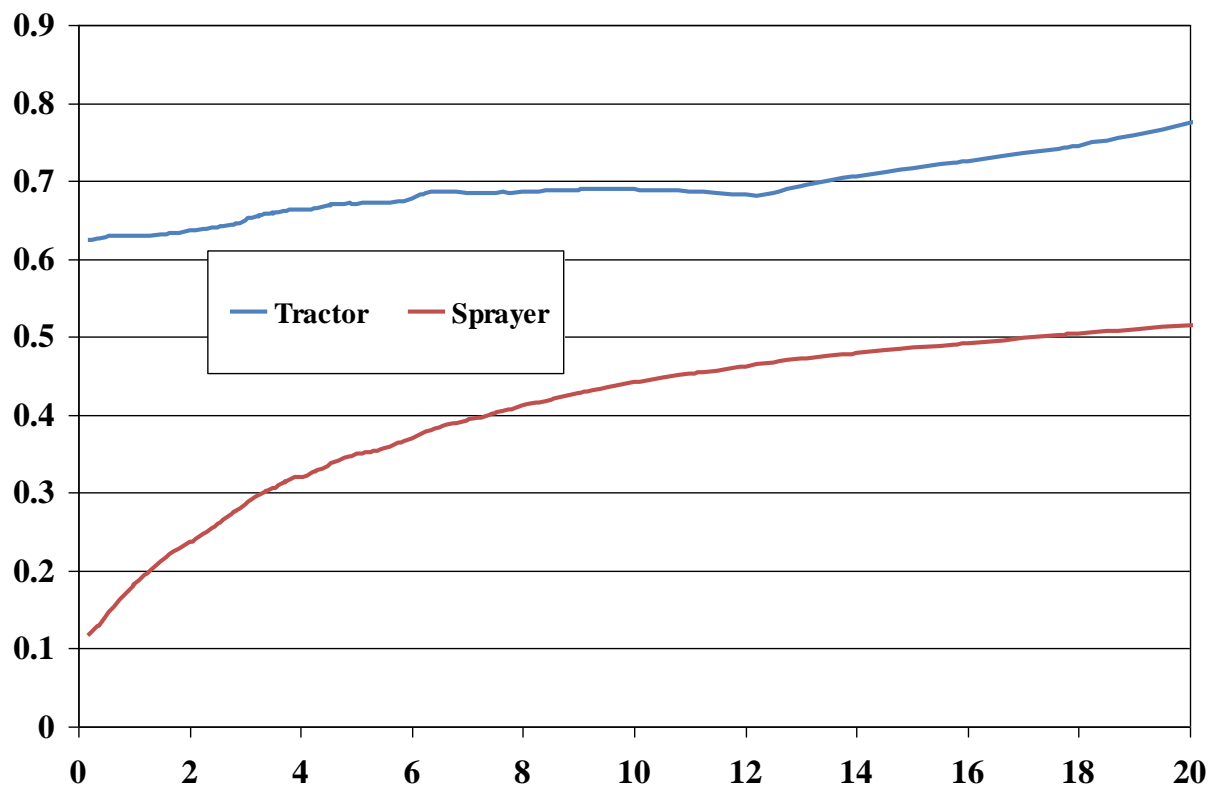
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Land Markets

Returns to scale

Figure 21. Fraction of Farms using Sprayers and Tractors, by Farm Size (ICRISAT VLS 2009-14)



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So what does this mean?

- What does all this imply for land reform and land policy? Views?

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