Property Rights: Further Studies

Institutional Economics Lecture 3

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Outline

Property Rights and Economic Development

Besley & Ghatak (2010), In: Handbook of Development Economics, Vol. V

Two fundamental questions on the relationship between PRs and economic development:

1. How do property rights affect economic activity?
2. What are the determinants of property rights?

To answer: survey empirical and theoretical ideas from the extensive literature on the topic.

Major point: PRs affect resource allocation by *shaping the incentives* of individuals to carry out productive activities:

- the use of the good or asset
- undertake investments that maintain or enhance its value
- derive profit
- trade or lease it for other uses

How property rights affect economic activity?

What are the mechanisms through which property rights affect economic activity? Insecure property rights $\Rightarrow$

1. Higher **expropriation risk**: individuals may fail to realize the fruits of their investment and efforts.
2. Higher **costs to defend property**: resources are allocated to unproductive activities
3. Lower **mobility of production factors**: those with the most efficient ideas may not get the rights to use the production factor.
4. Lower **collateral value**: getting a loan is harder, lending is riskier –> access to finance, interest rates?

$\Rightarrow$ PRs affect efficiency of resource allocation in two ways: limiting expropriation (1, 2 above), and facilitating market transactions (3, 4 above): *property rights institutions* and *contracting institutions*.

Questions to consider **before** you go to the data:

1. What are the theory predictions?
2. How to capture/measure property rights? Are they really measuring PRs? What types of PRs they are measuring? Or something else?: "Our simple theoretical parameter, τ, masks a whole range of possibilities" (Besley & Ghatak, 2010)
3. How to *identify* the causal effect of changes in property rights on investment or productivity?
4. What is the evidence you are trying to provide?
   - Macro-evidence: country or region-level data –> declines in importance
   - Micro-evidence: firms, households, communities –> increases in importance

Evidence on How PRs affect Economic Activity

A typical model: both macro- and micro level evidence

The general empirical approach is to run a version of:

$y_{it} = \alpha_{it} + \beta PR_{it} + \gamma X_{it} + \varepsilon_{it}$, where:

y_{it} - the outcome you are studying over time t; i is the unit of observation;
PR_{it} - the property rights measure;
X_{it} - additional relevant factors for y_{it};
ε_{it} - the error in your prediction.

Major issues in estimating β:

1. **Omitted variables**: β captures a simple correlation between y_{it} and PR_{it}: e.g., better governance could be driving both secure property rights and a more investment-friendly environment.
2. **Reverse causality**: y_{it} could affect PR_{it} –> PR_{it} is **endogenous**.

Evidence on How PRs affect Economic Activity

Addressing endogeneity

Two main methods to mitigate endogeneity:

1. **2SLS estimation** (IV estimation): find a source of variation in PR_{it} which is NOT related to y_{it} –> AJR (2001) settler mortality on macro level; easier done on micro studies
2. **Difference-in-difference**: explore effects before and after the PR reform in some countries/firms/households/i's which reform (the treatment group) VS non-reforming i's (the control group)

Due to inherent difficulties in finding exogenous variation in macro data, micro studies more popular now.

Evidence on How PRs affect Economic Activity

Macro evidence: Acemoglu and Johnson (2005). Unbundling Institutions, *JPE*

Motivation and setup:
North: good institutions will simultaneously support private contracts (contractual institutions) and provide checks against expropriation by the government or other politically powerful groups (property rights institutions).

However, the contemporary literature has not attempted to determine the relative roles of contractual institutions and of PR institutions.

"This paper is an attempt to unbundle the broad cluster of institutions and learn more about the relative importance of contracting versus property rights institutions at the macro level."

AJ: multiple instrumental variables strategy: **legal origin** instruments for contractual institutions; **settler mortality** and **population density in the year 1500** instrument for PR institutions

Evidence on How PRs affect Economic Activity

Macro evidence: Acemoglu and Johnson (2005). Unbundling Institutions, *JPE*

Results: A large effect of property rights institutions on economic outcomes: Countries with **greater constraints** on politicians and elites and more protection against expropriation by politicians and elites have **substantially higher income per capita**, greater investment rates, more credit to the private sector relative to gross domestic product, and more developed stock markets.

The role of contracting institutions is more limited: that countries with worse contracting institutions have less developed stock markets.

It seems that economies can function with weak contracting institutions, but not in the presence of a significant risk of expropriation.

Robust effects or PRs on outcomes. However, they are still something of a *black box*: how exactly do property rights institutions affect investment, credit, and growth?..

Evidence on How PRs affect Economic Activity

Micro evidence: Johnson, McMillan and Woodruff (2002). PRs and Finance, *AER*

Property rights are fundamental: entrepreneurs will not invest if they expect to be unable to keep the fruits of their investment.
The focus: the amount entrepreneurs choose to reinvest out of their profits in different PR environments.
Main results:

1. when PRs are insecure, firms reinvest less: 40% less reinvestment by the firms in the weakest PR environments $\Rightarrow$ Secure PRs necessary for I
2. the absence of bank finance does not prevent investment $\Rightarrow$ Secure property rights sufficient for investment (with the proper internal financing)

Conclusion: The issue is not whether entrepreneurs have enough resources, but rather whether they want to invest their retained earnings or instead consume these earnings, perhaps outside the country.

Discussion: Weak property rights $\Rightarrow$ reinvestment small $\Rightarrow$ consumption of foreign assets $\uparrow$

Evidence on How PRs affect Economic Activity

Micro evidence: Moser (2005). How Do Patent Laws Influence Innovation?, *AER*

"Innovators in countries without patent laws concentrated in industries where secrecy was an effective alternative to patent grants, such as scientific instruments, food processing, ... and countries without patent laws became technological leaders in those industries. At the same time, inventors in the patentless countries tended to avoid innovations in manufacturing and other machinery, which were strongly dependent on patent protection, and the patentless countries lost their early lead in manufacturing industries as machinery and mechanization became more important."

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- Patents laws help to determine the *direction of technical change*
- the adoption of patent laws in countries without such laws may alter existing patterns of comparative advantage across countries

Evidence on How PRs affect Economic Activity

Additional micro evidence

1. Besley (1995). Property rights and investment incentives: Theory and evidence from Ghana, *JPE*: controlling for household fixed effects, investment (the decision to plant cocoa trees) is increased by private land rights VS community land rights.
2. Goldstein & Udry (2008). The profits of power: Land rights and agricultural investment in Ghana, *JPE*: cultivators without political power leave their land idle for significantly shorter duration (for fear that the land will be allocated to someone else), resulting in significant loss in profits –> Also: increased output as insurance against expropriation.
3. Field, E. (2007). Entitled to work: Urban property rights and labor supply in Peru, *QJE*: titles on real estate led to $\uparrow L_s$. The secure property rights reduced the need for guard labor
4. Field, E. (2005). Property rights and investment in urban slums, *JEEA*: residential investment also went up significantly
5. Field & Torero (2006). Do property titles increase credit access among the urban poor?: property titles $\uparrow$ approval rates on loans, $\downarrow$ interest rates

The Political Economy of PRs

Testable predictions

Three empirical propositions come up from the political economy of property rights:

1. more stable governments with institutions that constrain government and enhance voice have better property rights protection.
2. richer and more democratic societies protect better
3. countries with high levels of natural resources to have weaker property rights protection

NB!!! Careful when interpreting correlations as causalities!

Do more constrained governments protect better?

The evidence

Table 2 Cross-sectional determinants of expropriation risk

	(1)	(2)	(3)	(4)	(5)
High constraints on the executive (Polity IV)	−2.249*** (0.515)				−1.545** (0.644)
Settler mortality		−0.001*** (0.000)			−0.001** (0.000)
Average years in civil conflict 1945–1997 (COW)			−5.359*** (1.238)		−3.029** (1.409)
Oil exporter				−0.790* (0.453)	0.122 (0.494)
Observations	123	64	129	122	61
R-squared	0.154	0.105	0.149	0.022	0.265

Notes: Dependent variable is Average Expropriation Risk from the International Country Risk Guide for years 1984–1997. Robust standard errors in parentheses: *significant at 10%; **significant at 5%; ***significant at 1%.

Do richer countries protect better?

The evidence

Table 3 Cross-sectional determinants of property registration

	(1)	(2)	(3)	(4)
Log income *per capita*	−20.790*** (3.303)			−10.648*** (4.023)
English legal origin		−11.387 (8.953)		−0.953 (8.982)
Socialist legal origin		−32.951*** (9.835)		−40.314*** (10.606)
Scandinavian legal origin		−87.751*** (7.332)		−46.793*** (13.234)
German legal origin		−66.984*** (8.955)		−32.330*** (11.619)
Proportion of years in democracy 1944-2000 (Polity)			−44.550*** (10.729)	−28.369** (12.621)
Observations	130	169	172	130
R-squared	0.225	0.162	0.094	0.349

Notes: Dependent variable is a country's rank (1-172) on the World Bank Doing Business Web site for time, number of procedures and cost of registering property. Legal origin omitted category is French legal origin. Robust standard errors in parentheses: *significant at 10%; **significant at 5%; ***significant at 1%.

Revision

1. How PRs affect incentives?
2. What are the property rights institutions and the contractual institutions?
3. How to bring the theory to the data?
4. Why is identifying causal effects crucial?
5. What types of evidence on the impact of PRs do we know of?
6. What is the general empirical approach to do research in this area?
7. What are the major obstacles in doing this research?
8. Name two ways to address endogeneity of PRs
9. How did Acemoglu & Johnson (2005) "unbundle" institutions?
10. Are PRs more important than finance in CEE?
11. Name one unintended consequence of weak PRs coming from the Johnson, McMillan and Woodruff (2002) work
12. How do patent laws affect the direction of technical change? Do they play a role in shaping comparative advantage?
13. Why are Ghana and Peru interesting for the study of PRs?
14. Can you formulate an empirical question for BG/GR in this research domain?

Voluntary homework: Derive from scratch Results 1 and 2 in Besley & Ghatak (2010).

Further reading

1. *** Besley, Timothy & Ghatak, Maitreesh (2010). Property Rights and Economic Development, In: Dani Rodrik and Mark Rosenzweig (Eds.) *Handbook of Development Economics*: Volume V, 4525-4595 (4525-4532 only)
2. *** Acemoglu, Daron, & Simon Johnson (2005, Oct.). Unbundling Institutions, *Journal of Political Economy*, 113(5), 949-95. (Paper, data and program here) (p. 949-954 and 988-989 only. For replication, read the entire paper)
3. Johnson, Simon, John McMillan, & Christopher Woodruff (2002). Property Rights and Finance, *American Economic Review*, 92(5): 1335-1356
4. Moser, Petra (2005). How Do Patent Laws Influence Innovation? Evidence from Nineteenth-Century World Fairs. *American Economic Review*, 95(4): 1214-36. (Paper, data and program here)
5. More readings in the syllabus.