

Institutions, Property Rights and their Impact on the Poor

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Institutions are the formal and informal rules that determine economic incentives, and proper incentives increase economic growth.

The set of property rights are the most important institution of a society for economic growth and the ability of the poor to ascend the economic ladder.

A full specification of property rights includes:

- Right to use an asset, provided it does not interfere with the rights of others.
- Right to derive income from the asset, including rental income.
- Right to sell an asset
- Right to bequeath an asset
- Right to exclude others from using the asset
- Can be held privately or collectively or in the semi-commons

This full set of rights typically comes with either formal or informal restrictions. For example, I may have the right to own a gun for the purposes of hunting but I do not have the right to shoot my neighbor. Informal restrictions or norms of behavior abound. For example, in many neighborhoods landowners allow trespass over their land.

Enforcement of Property Rights ¹

Property rights are only useful if they are enforced.

- ? Government – typically defines and enforces formal property rights. Governments specify the rights, obligations and enforcement mechanisms for titles to assets.

In democracies legislative bodies along with the executive specify rights. The judicial branch adjudicates disputes. The police power of the state enforces formal property rights in the event of transgression.

- ? Private Citizens

Private Citizens also take measures to defend their rights, e.g., locks and occupation

- ? Third Party enforcement

Social norms through ostracism also enforce rights. This mechanism works best in homogenous societies.

¹ For the role of the state in specifying and enforcing property rights, see Alston and Mueller (2004).

Why Do Property Rights Matter?

- Incentive to retain value of asset
 - Security of present return from asset
- Incentive to invest
 - Security of future returns from asset
- Ability to invest
 - Collateral
- Ability to sell establishes market prices
 - Resources flow to highest value use

For the poor I want to particularly stress the importance of using assets for collateral. This implies that debt can be a mechanism for improving welfare. The best example is the use of home mortgages. In the absence of a mortgage people would have to wait until they had saved sufficient income to pay cash for their homes. For many this means that they might never own a home. Home ownership not only raises the consumption of the poor but raises the value of the asset because society dispenses with the costly monitoring of landlords.

Private Property Rights, Prices and Trade

- Establish “true” prices
- Prices signal present and future values
- Consumers response to “high” prices: conservation and substitution
- Producers response to “high” prices: new technologies
- Private property rights provide the incentives and trade the mechanism for economic growth

Transparent formal property rights lead to economic growth overall for societies but may disproportionately enhance the livelihood of the lower classes.

Property Rights and the Poor: Enforcement

- Formal (i.e., governmental) enforcement of property rights benefits the poor more than the rich– the problem is that the rights of the poor are not generally enforced as much as the property rights for the rich.
 - Poor face a budget constraint, e.g. they can not hire private police
 - In most countries the government enforces property rights more for the rich than the poor. This is an empirical question. Poor neighborhoods have more burglaries, and murder per capita than rich neighborhoods. Though many poor stand to gain more than the rich from theft, the vast majority of the poor would gain if property rights were better enforced.
 - In developing countries the poor spend a considerable amount of time enforcing their property rights because the enforcement by governments is weak.

- In both rural and urban areas squatters' norms are contingent on the degree of homogeneity of the squatters. Where squatters' rights are secure, enforcement costs are minimal. This is what we found for the Amazon (more on this below) but in urban areas there is more a norm of: “occupy and use it or lose it.”
- If government enforces formal property rights the poor can spend less of their own time enforcing claims. The result is that the poor can spend more time in the labor force, and their children spend more time in school.

Erica Field, found that title reform increased hours of work for the poor by a net 16 hours a week. This is a 17% increase. She based her study on a sample of 2,750 households in eight Peruvian cities in 2000. She argues that areas that had title reform versus those that did not were very similar in terms of poverty, access to electricity and sewage, and literacy. Child labor also fell enabling children to devote more time to school: in neighborhoods where the government introduced title reform children worked 27% less than in neighborhoods without title reform.²

Property Rights and the Poor: Investment in Physical Capital

– property rights give the poor both an incentive and a mechanism (collateral) for investment.

If this is true we should observe that squatters should perceive that otherwise similar land is more valuable. We should also observe squatters exerting effort to strengthen their claims and petition government for formal titles.

Evidence:

In 1992 and 1993 Lee Alston, Gary Libecap and Robert Schneider conducted surveys of smallholders in the Brazilian Amazonian state of Para. Based on 249 surveys the characteristics of the households were³:

Percentage with title: 56%

Percentage with sales receipt indicating the occupant paid cash to another squatter: 12%

Percentage with no documentation: 32%

Average area: 109 hectares

Percentage area cleared of forest: 40%

Percentage in pasture: 38%

Percentage in permanent crops: 7%

Average years of education: 2

Average age: 43

Average time on plot: 8 years

Average number of migrations: 3

Perception of increase value of having a title;

For a subset of our households in the area near Tucuma, we asked “How much is your land worth now?” and “How much would it be worth if you had a definitive title” On average our settlers perceived that having a definitive title compared to a provisional

² For more details see Field (2002)

³ For more elaboration, see Alston, Lee J., Gary D. Libecap and Bernardo Mueller (1999b).

military title, sales receipt or nothing, would increase the value of their land by US\$35 per hectare or 36%.⁴

Given the perceived increase in value we would expect that settlers would exert effort to secure definitive titles. We asked 88 settlers in Tucuma, Nova Alianca and Colonia Reunidas what efforts they undertook regularly to maintain their claims and they reported as follows :

1. Keeping the boundaries clear was the most frequent response. 71 reported that they did so and spent approximately 6 days a year doing so.
2. 8 settlers with sales receipts got them notarized.
3. one settler paid land taxes which is very rare, even for people with definitive title.
4. some settlers hired a topographer to provide a map of their borders
5. some settlers built markers on their boundaries
6. many settlers went to offices of INCRA, the government agency responsible for titling, to petition for titling. These trips cost at least a day's worth of work.
7. in the colony of Nova Allianca the settlers paid for an emissary to travel to Belem, the capital of the state of Para and to Brasilia the federal capital to petition the government to hasten the titling process.

These efforts represent investments. We estimated the dollar value (1992 \$) of the efforts to secure titles of seven settlers in Tucuma. We valued their time at US\$2/per day, this is a low threshold level for unskilled wages at the time. Collectively these seven settlers expended US \$188 to firm their property rights. If they had succeeded in getting a title the perceived collective increase in land value was U.S. \$10,800. Even if it takes years to get a title, which it often does, the payoff is large.

- The rich do not need collateral as much as poor because they can pay cash for assets.
- Formal specification and enforcement of property rights by government enables the poor to invest more and spend less time and money enforcing their own claims.

Evidence:

We used the household responses of 249 settlers to estimate the impact of having a title on investment, (proxied by land devoted to pasture, requiring costly fencing, and permanent crops.) The impacts varied across our sites. Controlling for a host of individual characteristics we can estimate the % of total farmland representing investments for those with and without a title. The results across our sites follow:

⁴ See Alston Libecap and Mueller (1999b): 111-112.

% Acreage devoted to pasture or permanent crops

	Without a Title	With a title
Altamira	26%	55%
Sao Felix	7%	28%
Tailandia	12%	33%
Tucuma	32%	80%

These represent large investments in materials, effort and patience (in the case of tree crops). Of those who had pasture the mean level of fencing was 1,181 meters which represents about an investment of U.S. \$550.

Controlling for investment having a title increased land values over and above the increases investment. Why? Settlers had to expend less time enforcing their own claims and it increases the extent of the market for their land. For example, most investors in Sao Paulo or Rio de Janeiro would only buy titled land. The increased value of a title is greater for land that is closer to a market center. For land at the market center our estimates indicate that a title would increase land values by 189%. For land that is 40 kilometers from the market, land would increase by 72% with a title; and for land 140 kilometers from a market land values would increase by 45%. These estimates make sense because titled land closer to a market should have a greater value due to increased competition for the land.

Property Rights and the Poor: Investment in Human Capital

- mortgage markets for real estate enables investments in human capital
 - Today many parents refinance homes in order to defray costs of education for their children.
- “mortgaging” labor for investment: indentured servant contracts
 - The U.S. got off to a good start in the 18th century in part because of indentured servitude.
 - Close to 70% of free immigrants came to the colonies of Britain as indentured servants.⁵ An indentured servant had the right to sell his future labor in return for a boat trip to the colonies. In the absence of this property right we would have had fewer immigrants who overtime increased the number of middle class farmers in the colonies in North America. The cost of passage was more than the gross

⁵ See Galenson (1981).

salary of low income potential migrants. It would have been impossible for the poor to save enough to migrate and, if they heroically did, by the time they saved enough they would be at an age where the investment would have a much lower return.

- Cost of passage during peacetime – first half of 18th century – about 5 lbs sterling
 - Cost of passage during wartime – second half of 18th century – 8-10 lbs sterling
 - Wages in England: for English servants in husbandry 6-7 lbs⁶
- Result: immigration of the poor to British colonies that allowed indentured contracts greatly exceeded immigration to Portuguese and Spanish colonies where indentured contracts did not exist.

• Restricting Property Rights Hurts the Poor

- In agriculture it was historically the case in the Western world that rental markets were an important way to acquire the physical and human capital required for ownership. Based on a sample of black farmers in Arkansas in 1938, Alston and Ferrie (2005) estimated the percentage of farmers who started as wage workers, sharecroppers or tenants and ended up as owners: 25% ultimately became owners. The characteristics of the sample of Arkansas black farmers are very similar to black farmers in the cotton south. We also have evidence from earlier years indicating the same type of economic ascension up the “Agricultural Ladder.” For example, the 1880 census indicates that about 25% of black farmers in the South owned the farms that they operated. This is remarkable given that freedom was only 15 years prior.
- Historically for developing countries rental markets in agriculture were as prevalent as in North America yet rental markets have declined in importance in most Latin American countries over the past several decades. Evidence follows on the use of rentals in selected countries in the Americas.

Percentage of Agricultural Farmland or Farms Rented for Selected Countries in the Americas⁷

North America	
Canada	37% of farmland
U.S.	41% of farmland
Latin America	
Argentina (1988)	5% of farmland
Bolivia (1984)	2% of farms

⁶ The figures for cost of passage and wages came from personal correspondence from Professor Farley Grubb at the University of Delaware, a noted expert on indentured servitude.

⁷ Source: de Janvry, Macours and Sadoulet (2002)

Brazil (1995)	12% of farms
Chile (1976)	7% of farms
Dominican Republic (1998)	7% of farms
Honduras (1993)	3% of farmland
Mexico (1991)	1% of farmland
Venezuela (1997)	2% of farmland

- In much of rural Latin America, it is difficult to evict renters. The result is that landowners are afraid to rent and the number of landless peasants increases. Landowners may be afraid to rent not only because they can not evict but because land reform agencies may see them as a target for expropriation.

- ? In urban areas it is also difficult to evict tenants who are delinquent in their rental payment. Renters in essence pay a litigation risk premium which covers the landlord for those who do not pay. Gustavo Rangel (2000) estimated that the litigation risk premium in Rio de Janeiro is R\$1,800 per year on an apartment valued at R\$50,000. This is a big city premium where landlords have to engage in costly litigation compared to small cities who can use the informal sanctioning of threatening to print the names of those in default in the newspapers.

Land Reform in South America

Experiences in South America

- Peru and Bolivia – Giving land to highland peasants with the proviso that they could not sell their land has led to the disappearance of formal capital markets. Glave (1992) found that the poor had faced high credit costs for seeds, fertilizers and transport to markets because their land could not be used for collateral. Keating (1998) argues convincingly that in Bolivia following the 1953 Agrarian Reform Law landholders reduced capital investments because of insecurity in property rights and poverty increased in regions where land reform took place.

- Land Reform in Brazil

- In the 1980s and 1990s Brazil relied on expropriations for land redistribution

Results:

- 1) Violence over land in an effort to prevent (by landowners) and increase (by landless) expropriations

- 2) Premature deforestation in an effort to demonstrate use in order to prevent expropriation

- Barrantes (1992) also found premature deforestation for the Peruvian Amazon as means to capture property rights.

- 3) Labor effort devoted to redistribution rather than production is harmful for economic growth

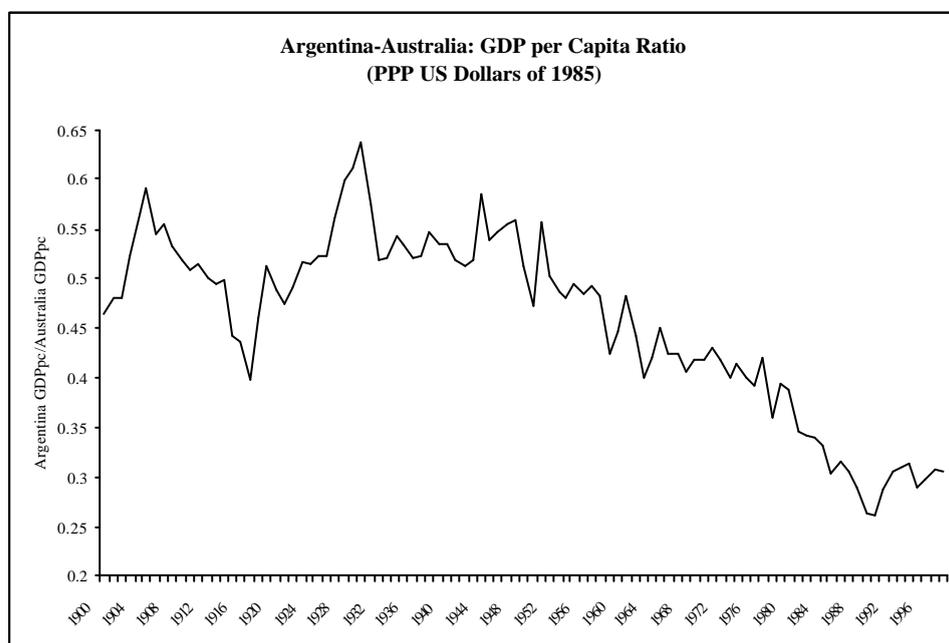
Property Rights and the Poor: Consumption

- The ability to mortgage assets enables the poor to smooth out their consumption stream leading to higher utility
- With a mortgage market the poor would have to wait until they had cash in order to buy a house
- “Owning” a house promotes better stewardship and increases values

The Abridgement of Property Rights in Argentina⁸

- In the early 20th Century Argentina had a per capita standard of living of roughly 60% of Australia which was the world’s richest country per capita at the end of the 19th century. Argentina placed in the top ten in the world in per capita income.
- In both cases growth resulted from agricultural exports
- The administration of Juan Peron in the 1940s put Argentina on a trajectory from which it never recovered. He controlled the prices of wheat and cattle, the major exports, as well as controlled the rents paid by tenants. Agricultural investment declined as did long-run economic growth
- Below is evidence showing the break point between Argentina and Australia in economic growth.

Graph 1



Source: Gallo (2003)

⁸ For further elaboration see Alston and Gallo (December 2005).

? As you can see, the relative income of Argentina to Australia peaked in 1930 which was the date of the first military coup in Argentina. The military coup set in motion an abandonment of the rule of law upholding property rights. The military handed over the control of government to conservatives who stayed in power through fraudulent elections. The decade of fraud eroded a belief in the rule of law which upheld property rights. Instead the population increasing supported populism which brought Peron to power. As President, one of Peron's first measures was to initiate proceedings impeaching all but one of the Supreme Court Justices. Since then, all but two administrations impeached Supreme Court Justices, forced resignations of Justices or added Justices.⁹ The result has been institutional volatility and volatility in economic growth. Again, this should be viewed in comparison to Australia whose endowment was very similar. Abandoning the rule of law that maintained property rights can best account for the difference in the growth trajectories.

Concluding Remarks:

Capitalism rests on a set of institutions that generates economic growth. The most fundamental institutions are the set of property rights in a society. Not only are secure property rights fundamental for economic growth but, as the examples that I have given illustrate, secure property rights defined and enforced by government enable many of the poor to ascend the economic hierarchy.

⁹ In the most recent election of 2003 there was another movement to impeach the court. In a poll from the first week of June over 80% of the respondents wanted all or some of the Supreme Court Justices to resign.

References:

- Adelman, Jeremy. Frontier Development, Land, Labour, and Capital on the Wheatlands of Argentina and Canada, 1890-1914. Oxford, 1994.
- Alston, Lee J. and Joseph P. Ferrie "Career Mobility in Agriculture, 1890-1938" Journal of Economic History (December 2005)
- Alston, Lee J. and Andres Gallo "The Erosion of Checks and Balances in Argentina: An Explanation for Argentina's Economic Slide from the Top Ten" Working Paper December 2005.
- Alston, Lee J., Gary D. Libecap and Bernardo Mueller. "Property Rights to Land and Land Reform: Legal Inconsistencies and the Sources of Violent Conflict in the Brazilian Amazon." Journal of Environmental Economics and Management. (2000).
- Alston, Lee J. Gary D. Libecap and Bernardo Mueller. "A Model of Rural Conflict: Violence and Land Reform Policy in Brazil." Environment and Development Economics. 4. (1999a), 135-160.
- Alston, Lee J., Gary D. Libecap and Bernardo Mueller. Titles, Conflict and Land Use: The Development of Property Rights and Land Reform on the Brazilian Amazon Frontier. Ann Arbor, 1999b.
- Alston, Lee J., Gary D. Libecap and Bernardo Mueller. "Property Rights and Land Conflict: A Comparison of Settlement of the U.S. Western and Brazilian Amazon Frontiers." in Latin America and the World Economy Since 1800, edited by John H. Coatsworth and Alan M. Taylor, pp. 55-84. Cambridge, 1998.
- Alston, Lee J., Gary D. Libecap and Robert Schneider. "Property rights and the preconditions for markets: the case of the amazon frontier." Journal of Institutional and Theoretical Economics. 151.1 (1995), 89-107.
- Alston, Lee J., Gary D. Libecap and Robert Schneider. "The determinants and impact of property rights: land titles on the Brazilian frontier." The Journal of Law, Economics and Organization. 12 (1996), 25-61.
- Alston, Lee J. and Bernardo Mueller. "Property Rights and the State." in Claude Menard and Mary M. Shirley, eds. Handbook of New Institutional Economics. Norwell MA: Kluwer Academic Publishers, 2004.
- Alston, Lee J. and Morton Owen Schapiro. "Inheritance Laws Across Colonies: Causes and Consequences." Journal of Economic History. 44 (1984), 277-287.
- Amaral, Samuel. The Rise of Capitalism on the Pampas: The Estancias of Buenos Aires, 1785-1870. Cambridge, 1998.
- Anderson, Terry L., ed. Property Rights in Indian Economies. Lanham, 1992.
- Anderson, Terry L. and Peter J. Hill. "The Evolution of Property Rights: A Study of the American West." Journal of Law and Economics. 18. (1975), 163-179.
- Anderson, Terry L. and Peter J. Hill. "The Race for Property Rights." Journal of Law and Economics. 33. (1990), 177-197.
- Anderson, Terry L. and Peter J. Hill. The not so Wild, Wild West: Property Rights on the Frontier. Stanford: Stanford University Press, 2004.
- Barrantes Caceres, Roxana Maria Irma. Land Tenure Security and Resource Use in the Peruvian Amazonia. Ph.D. Dissertation. University of Illinois, Urbana -Champaign; 1992.
- Barzel, Yoram. Economic Analysis of Property Rights. Cambridge, 1989.
- Besley, Timothy. "Property Rights and Investment Incentives: Theory and Evidence from Ghana." Journal of Political Economy. 103. (1995), 903-37.
- Bidwell, Percy Wells and John I. Falconer. History of Agriculture in the Northern United States. Washington D.C., 1925.
- Binswanger, Hans P. and Klaus Deininger. "Explaining Agricultural and Agrarian Policies in Developing Countries." Journal of Economic Literature. 35. 4 (1997), 1958-2005.

Binswanger, Hans P., Klaus Deininger and Gershon Feder. "Power Distortions, Revolt and Reform In Agricultural Land Relations." In Handbook of Development Economics, edited by Jere Behrman and T.N. Srinivasan, pp. . Amsterdam, 1995.

Brading David. Haciendas and ranchos in the Mexican Bajío León, 1700-1860. Cambridge, 1978.

Carlson, Leonard A. "Learning to Farm: Indian Land Tenure and Farming Before the Dawes Act." In Property Rights and Indian Economies, edited by Terry L. Anderson, pp. 67-84. Lanham MD, 1992.

Chevalier, Francois. Land and Society in Colonial Mexico: The Great Hacienda. Berkeley, 1963.

de Janvry, Alain, Gustavo Gordillo, Jean-Philippe Platteau and Elisabeth Sadoulet (editors). Access to Land, Rural Poverty, and Public Action. Oxford, 2001.

De Soto, Hernando. The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else. New York, 2000.

Deacon, Robert T. "Deforestation and the Rule of Law in a Cross Section of Countries." Land Economics. 70. (1994), 414-30.

Coase, Ronald H. "The Problem of Social Cost." Journal of Law and Economics. 3. (1960), 1-44.

Deacon, Robert T. "Assessing the Relationship between Government Policy and Deforestation." Journal of Environmental Economics and Management. 28. (1995), 1-18.

Dean, Warren. "Latifundia and Land Policy in Nineteenth Century Brazil." Hispanic-American History Review. Nov. (1971) 606-625.

Demsetz, Harold. "Toward a Theory of Property Rights." American Economic Review. 57. (1967), 347-59.

Dennen, R. Taylor. "Cattlemen's Associations and Property Rights in Land in the American West." Exporations in Economic History. 13. (1976), 423-36.

Duncan, Kennet, Ian Rutledge; and Colin Harding (editors). Land and Labour in Latin America: essays on the development of agrarian capitalism in the nineteenth and twentieth centuries. Cambridge, 1977.

Eggertsson, Thrainn. Economic Behavior and Institutions. Cambridge, 1990.

Ellickson, Robert C. Order Without Law: How Neighbors Settle Disputes. Cambridge, 1991.

Eidt, Robert C. Pioneer Settlement in Northeast Argentina. Madison, 1971.

Feder, Gershon and David Feeny. "Land Tenure and Property Rights: The Theory and Implications for Development Policy." World Bank Economic Review. 3. (1991), 135-53.

Feder, Gershon and Tongroj Onchan. "Land Ownership Security and Farm Investment in Thailand." American Journal of Agricultural Economics. 69 (1987), 311-20.

Feder, Gershon, Tongroj Onchan, Yongyuth Chalamwong, and Chira Hongladrarom. Land Policies and Farm Productivity in Thailand. Baltimore, 1988.

Field, Erica "Entitled to Work: Urban Property Rights and Labor Supply in Peru." Working Paper, Princeton University. October 2002.

Furtado, Celso. Formação Econômica do Brasil. Rio de Janeiro, 1961.

Galenson, David W., White Servitude in Colonial America: An Economic Analysis, (New York: Cambridge University Press, 1981.

Gallo, Andres. "Argentina-Australia: Growth and Convergence in the XX Century" Working Paper March 2003.

Glade, William. The Latin American Economies: A Study of their Institutional Evolution. New York, 1969.

Glave Testino, Manuel Augusto. *Economic Analysis of Peasant Family Farms: Agricultural intensification, cost-accounting, and sharecropping in Andean peasant communities*. Ph.D. Dissertation. University of Illinois, Urbana-Champaign; 1992.

- Hoff, Karla, Avishay Braverman, and Joseph E. Stiglitz (editors). The Economics of Rural Organization: Theory, Practice and Policy. New York, 1993.
- Hughes, Jonathan R.T. Social Control in the Colonial Economy. Charlottesville, 1976.
- Keating, Christopher James. Institutional Constraints and Bolivian Agrarian Development During the Pre-Agrarian Reform and Post-Agrarian Reform Periods. Ph.D. Dissertation. University of Illinois, Urbana-Champaign; 1998.
- Libecap, Gary D. Contracting for Property Rights. Cambridge, 1989.
- Libecap, Gary D. and Ronald N. Johnson. "Legislating Commons: The Navajo Tribal Council and the Navajo Range." Economic Inquiry. 18. (1980), 69-86.
- Lockhart, James. "Encomienda and Hacienda: the evolution of the great state in the Spanish Indies." Hispanic American Historical Review. 49.3 (1969), 411-429.
- Lima, Ruy C. Pequena História Territorial do Brasil: Sesmarias e Terras Devolutas, Edições Sulinas, Porto Alegre, 1954.
- Lueck, Dean. "The Rule of First Possession and the Design of the Law." Journal of Law and Economics. 38. (1995), 393-436.
- Moog, Vianna. Bandeirantes e Pioneiros: Paralelo Entre Duas Culturas, Editora Globo, Rio de Janeiro, 1955.
- Morner, Magnus. "The Spanish American Hacienda: A Survey of Recent Research and Debate." Hispanic American Historical Review. 53.2 (1973), 183-216 .
- Morner, Magnus. The Andean Past: Land, Societies and Conflicts. New York, 1985.
- Morner, Magnus and Thommy Svensson (editors). The Transformation of Rural Society in the Third World. London, 1991.
- Mueller, Bernardo. The Economic History, Political Economy and Frontier Settlement of Land in Brazil, PhD Thesis, University of Illinois, 1995.
- Mueller, Bernardo et. al. "Land, Property Rights and Privatization in Brazil." The Quarterly Review of Economics and Finance, 34. (1994), 261-280.
- Ostrom, Elinor. Governing the Commons: The Evolution of Institutions for Collective Action. Cambridge, 1990.
- Ostrom, Elinor, Roy Gardner, and James Walker. Rules, Games and Common Pool Resources. Ann Arbor, 1994.
- Platteau, Jean-Philippe. "The Evolutionary Theory of Property Rights as Applied to Sub-Saharan Africa: A Critical Assessment." Development and Change. 27. 1 (1996), 29-86.
- Rangel, Gustavo Borges. *The Inefficiency of the Judiciary and Alternative Forms of Social Control: A Case Study of Rental Contracts in Brazil*. Ph.D. Dissertation. University of Illinois, Urbana-Champaign; 2000.
- Simonsen, Roberto C. História Econômica do Brasil: 1500-1820 Companhia Editora Nacional, São Paulo, 1937.
- Salvucci, Richard J. "Agriculture and the Colonial Heritage of Latin America: Evidence from Bourbon Mexico." In Colonial Legacies. The Problem of Persistence in Latin American History, edited by Jeremy Adelman, pp.
- Smith, Henry E. "Semicommon Property Rights and Scattering in the Open Fields." Journal of Legal Studies. 29. (2000), 131-70.
- Stein, Stanley. Vassouras: A Brazilian Coffee Country, 1850-1900, Princeton University Press. 1985.
- Umbeck, John R. "Might Makes Rights: A Theory of the Formation and Initial Distribution of Property Rights." Economic Inquiry. 19. (1981), 38-59.
- Van Young, Eric. Hacienda and Market in Eighteenth Century Mexico: The rural economy of the Guadalajara Region, 1675-1820. Berkeley, 1981.
- Van Young, Eric. "Mexican Rural History since Chevalier: The Historiography of the Colonial Hacienda." Latin American Research Review. 18. 3 (1983), 5-61.