The Two Sides of de Soto: Property Rights, Land Titling, and Development

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1. Introduction

In the pursuit to explain why some countries become rich while others remain poor, economists offer many conceivable explanations. Although there is no general consensus, some factors are widely recognized as being positively correlated with economic development. More recently, economists are emphasizing the role of institutions in the development process (North 1990, 2005). The most important of these institutional structures is the presence of secure and well-defined property rights, something that economists have long claimed must exist for markets to function effectively (Montesquieu 1748; Smith 1776; Mises 1920; Hayek 1945, 1960).

Hernando de Soto (1989, 2000), in his books *The Other Path* and *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, explains the importance of property rights in promoting prosperity. Specifically, he identifies the channels through which insecure and poorly defined property rights stifle economic development. Insecure property rights weaken the incentives for owners to make long-term capital investments and hinder the ability of owners to use their property as collateral to secure loans to finance capital investment. Without access to credit and investments in the future, capital formation and economic growth are hindered.

In addition, de Soto argues that to achieve secure property rights, a country must incorporate the informal, unarticulated rights into a written, formal, legal property rights system. To do so, an integrated system of standard legal titles is necessary. That is why he argues for the codification of informal property rights through a written legal system of property titles as the way to establish secure property rights. Thus, land titling is a mechanism through which property rights can be achieved.

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De Soto's work can be viewed as providing two separate testable hypotheses: 1) property rights impact development by altering the ability and incentives for capital formation, and 2) land titling provides the means to secure property rights. If de Soto is correct, we would expect that an increase in secure property rights would be associated with an increase in access to credit markets and an increase in capital formation. Further, we would expect that a comprehensive land titling system would allow property holdings to serve as collateral for loans and grant access to enforcement of these rights as defined by the titles.

This article empirically tests both of de Soto's hypotheses in order to verify the specific mechanisms through which secure property rights influence development and the ability for land titling to secure property rights. I first show the positive relationship between well-defined property rights and the level of economic development, as previously established in the existing literature. I discuss the channels through which property rights affect economic growth by examining their impact on domestic credit and gross capital formation. Secondly, I examine the capacity of government land titling to achieve well-defined and secure property rights institutions. Specifically, I focus on the capacity for titles to provide access to credit to finance investments and on the public and private mechanisms that define, establish, and enforce property rights. In order to undertake this investigation, I focus on recent fieldwork, examining the effects of land titling in Peru. This analysis finds support for Hypothesis 1 but not for Hypothesis 2. In other words, the analysis presented here finds that secure property rights are associated with an increase in development, access to credit, and gross capital formation; however, land titling does not necessarily provide the magic bullet to establish a system of private property. I conclude by considering future implications for investigating the political economy of land titling.

2. Importance of Property Rights

Property rights define an economic system and determine the success of an economy by promoting specialization and the division of labor through voluntary exchange. Private property provides information and incentives that stimulate entrepreneurship, capital accumulation, and investment that efficiently allocate scarce resources and ultimately facilitate economic development (Mises 1920; Hayek 1945).

Douglass North (1990) argues that the costliness of exchange and production is largely determined by institutions. He defines institutions as constraints created to reduce uncertainty in exchange and stabilize expectations by structuring political, economic, and social interaction. Private property rights internalize externalities by guiding incentives. Property rights arise when the gains of privatization outweigh the costs of defining and enforcing those rights (Demsetz 1967).[1] Insecure property rights

[1] For a historical analysis of the evolution of property rights, see also North and Thomas (1973), North (1981), Rosenberg and Birdzell (1986), and North and Weingast (1989).

increase transactions costs, which in turn reduce capital formation. Peter Bauer (2000) also argues that capital formation, which is essential for an economy to progress from subsistence production to market production, is an outcome of institutions. Property rights institutions provide incentives, facilitate production and exchange, and lead to increased capital accumulation, investment, technological innovation, and entrepreneurship. Hence, property rights ultimately promote economic growth (Scully 1988; Boettke 1994; Leblang 1996; Acemoglu, Johnson, and Robinson 2001, 2002; Kerekes and Williamson 2008). Thus, the works of these scholars provide theoretical linkages between secure and well-defined property rights and economic development consistent with de Soto.

The empirical literature examining the impact of property rights finds that more secure property rights are positively correlated with a country's level of investment and economic growth (Besley 1995; Knack and Keefer 1995; Mauro 1995). In an examination of the variation in output per worker across countries, Hall and Jones (1999) emphasize the importance of social infrastructure, defined as government policies and institutions, and conclude that a good social infrastructure positively affects economic performance. Using settler mortality rates as an instrument for current institutions, Acemoglu, Johnson, and Robinson (2001) find large effects of institutions on per-capita income in former colonies. They also attribute the reversal in relative incomes from 1500 to today across countries to variations in institutions (Acemoglu, Johnson, and Robinson 2002).[2] Rodrik, Subramanian, and Trebbi (2004) examine the impact of institutions on income levels and find a positive and significant effect of institutions on per-capita income. Property rights also affect investment and economic development by encouraging entrepreneurship (Murphy, Shleifer, and Vishny 1991; Johnson, McMillan, and Woodruff 2002; Boettke and Coyne 2003). (See also VanMetre and Hall in this volume.)

These studies are able to determine that secure and well-defined property rights positively impact the level of economic development. The question that follows is exactly how do property rights influence a country's economic performance. De Soto provides a testable hypothesis that is empirically examined below to provide an answer to this "how" question.

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[2] More recently, Acemoglu and Johnson (2005) find evidence of a positive correlation between property rights institutions and economic growth, investment, and financial development.

3. Testing de Soto's Hypothesis 1

> "*Capital is the force that raises the productivity of labor and creates the wealth of nations. It is the lifeblood of the capitalist system, the foundation of progress, and the one thing the poor countries of the world cannot seem to produce for themselves …*" – Hernando de Soto (2000, 5)

According to de Soto (1989, 159), property rights are those rights "which confer on their holders inalienable and exclusive entitlement to them." He highlights many beneficial aspects of secure property rights, including their ability to fix the economic potential of assets, integrate dispersed information into one system, make individuals accountable and assets fungible, network individuals, and protect transactions (de Soto 2000). Kerekes and Williamson (2008) break down de Soto's property theory into two main avenues: 1) the ability to secure a loan by utilizing property as collateral and 2) the incentive to invest in capital formation.

De Soto argues that secure and well-defined property rights transform assets from "dead capital" into resources that can be used to generate additional capital and obtain credit. In many developing countries, people have de facto rights to their residential property (e.g., as squatters) but hold no formal, legally enforceable title.[3] In 1997, de Soto estimates the total value of all the "dead capital" held by individuals in the third world and former communist countries at $9.3 trillion. This figure represents resources whose insecurity does not allow surplus value to be extracted through multiple transactions or used as collateral to obtain loans. For example:

> "…a lender must make the same costly investments as a purchaser in order to make sure that the property is under the borrower's control and that, in the event of a default, the property can be obtained with the same rights as those enjoyed by the present owner. This increases the interest rate charged by lenders for loans guaranteed by an expectative property right or its equivalent; worse still, it may simply prevent such transactions from taking place" (de Soto 1989, 162).[4]

As a counterexample, de Soto illustrates that in the United States approximately 70 percent of new business credit comes from using titles to other assets as collateral (2000, 84).

More specifically, de Soto emphasizes the important role played by property rights for development by focusing on their impact on capital accumulation. He demonstrates that insecure property rights reduce capital formation by prohibiting

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[3] For a detailed analysis on the impact of land titling on securing property rights see Do and Iyer (2003), Field (2005), Field and Torero (2006), and Galiani and Schargrodsky (2006).

[4] De Soto (1989) defines an "expectative property right" as a right to property that has no legal equivalent and that applies temporarily until ownership is recognized by the government.

the use of assets as collateral, as discussed above. According to de Soto (2000), in 1997, the savings of poor individuals in developing countries was equal to forty times the value of all foreign aid received since 1945. Despite these significant accumulated savings, de Soto estimates that 80 percent of the world is undercapitalized as a result of insecure property rights that impede the process by which individuals generate capital from these accumulated assets.

De Soto (1989) takes the undercapitalization argument one step farther by outlining the means by which insecure property rights reduce long-term fixed investment. In the absence of secure property rights, businesses are more likely to use labor-intensive technology and operate at an inefficient level, decreasing capital investment. Also, financiers will require high rates of return from investors, resulting in low levels of long-term investment in production. As businesses attempt to avoid detection, mobility of assets is an important factor when property rights are insecure. In the absence of property rights, individuals prefer to hold short-term inventories rather than savings and investment in long-term fixed capital. This is a result of the perverse incentives created by the uncertainty arising from insecure property. When property rights are insecure, individuals and businesses avoid long-term investment in fixed capital, accumulate mobile inventories, and are more likely to sell "from barrows rather than from stalls made with proper building materials" (de Soto 1989, 67).

Figures 1, 2, and 3 illustrate the relationship between secure property rights and the level of development, domestic credit, and capital formation. Property rights are measured by the average score (1985 to 1995) from International Country Risk Guide's average protection against risk of expropriation, a common proxy for property rights institutions (Acemoglu, Johnson, and Robinson 2001, 2002; Acemoglu and Johnson 2005). The index is measured from zero to ten, with ten representing secure property rights.

Figure 1

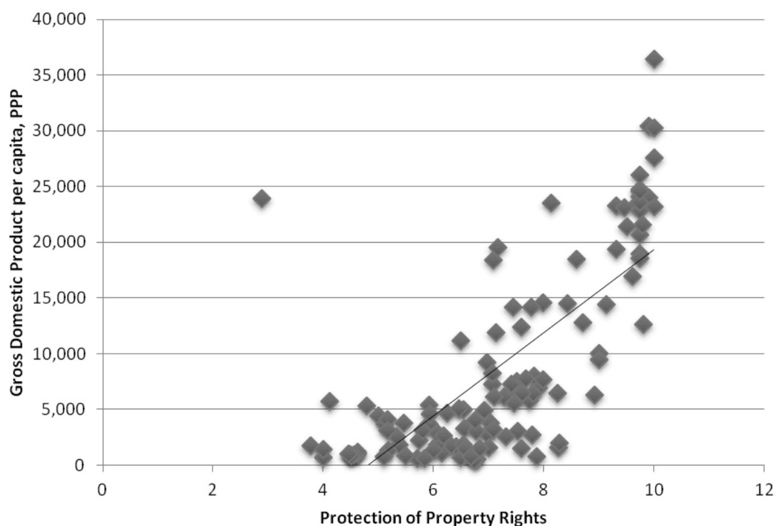

Figure 2

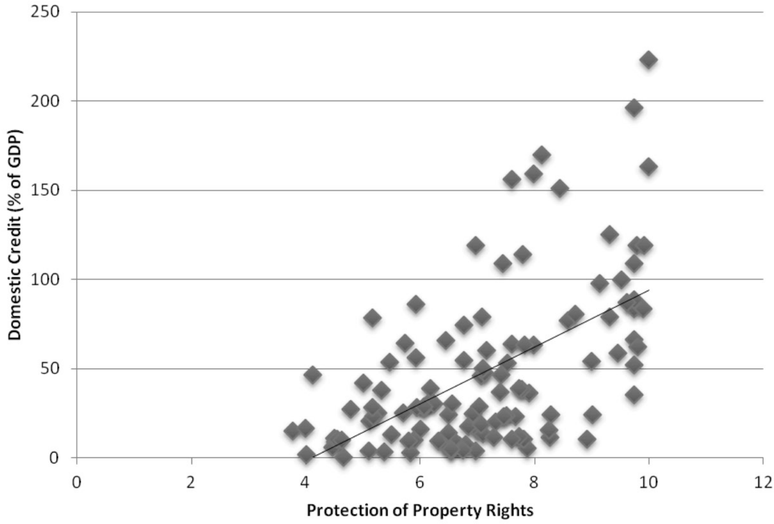

Figure 3

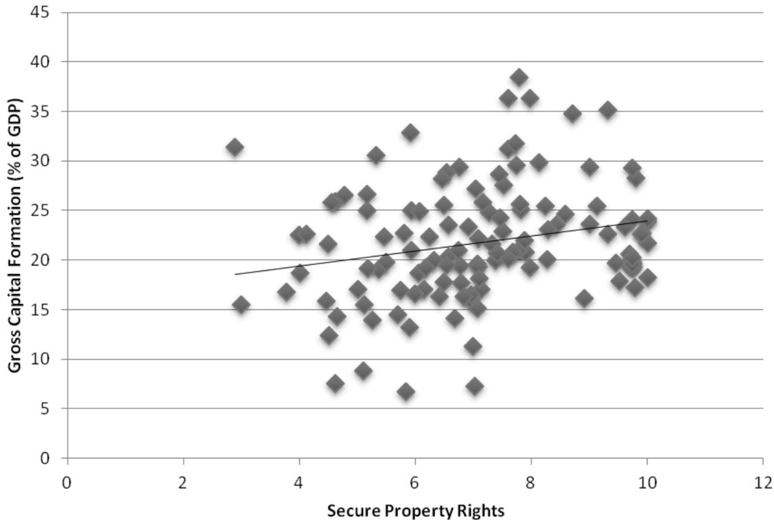

Figure 1 illustrates the strong positive relationship between property rights and the level of development (GDP per capita, PPP in 1995). As property becomes more secure, the level of development increases dramatically. Moving from Haiti, one of the countries with the lowest property rights score, to the United States (ten, on the property index) represents an increase in income from $1,720 per capita to $30,300 per capita.

Figure 2 documents the relationship between property rights and access to credit, measured as domestic credit to the private sector (in 1998), as a percent of GDP. As predicted, stronger property rights are associated with an increase in the access to credit. Since securing a loan typically involves some form of credit or collateral, this figure suggests that as property becomes more secure, assets can be used as collateral,

making it easier to obtain a loan. Figure 3 shows how property rights affect capital formation (averaged from 1990 to 1999, as a percent of GDP). An increase in property rights is correlated with an increase in capital formation, as de Soto suggested.[5]

These results uniformly support de Soto's first hypothesis that secure property rights lead to increases in credit, through the collateral effect, and to increases in capital formation. These effects, in turn, lead to economic development. The next logical question is to ask, "How do we get secure property rights?"[6]

4. Establishing Property Rights

Although there is relative consensus on the importance of property rights for economic growth and development, the question remains as to how to achieve secure property rights institutions. Economists understand that property rights are important for economic growth, but a large portion of the developing world fails to establish and maintain well-defined and secure property rights. This is partly due to a lack of understanding of how to achieve secure property rights institutions.

De Soto claims that to further stimulate economic growth in many developing countries, informal property rights should be codified within a written formal legal system; however, the formalization of property as a necessary constraint for development has been called into question. For example, Hayek (1945) illustrates the importance of distinguishing between coordination that occurs as a consequence of human design and coordination that occurs spontaneously. Institutions, including those of property rights, evolve and derive their significance through human action, but they are not necessarily the outcome of human design.

Recent literature examines formal versus informal institutions, including those of property rights. Although inconclusive, many studies point out the significance of informal property rights institutions and their function for economic performance. These ideas have been presented in historical, conceptual, and empirical analysis. For example, Bruce Benson (1989a) argues that the establishment and enforcement of property rights can and has been done without government, or a coercive state. He shows that customary law existed in primitive societies to govern and enforce property rights. This occurred as individuals realized that the gains of respecting others' property outweighed the costs. Outcomes were upheld because the threat of boycott or ostracism was sufficient to ensure cooperation from the members of these primitive societies.

Benson (1989b) also provides another example of how law can be established and enforced without a formal legal system. Commercial law, or the medieval law

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[5] For a more comprehensive and robust analysis, see Kerekes and Williamson (2008).

[6] GDP per capita, gross capital formation, and domestic credit are taken from World Development Indicators.

merchant, spontaneously evolved based on customs and traditions that served to guide international trade during the time period of the tenth, eleventh, and twelfth centuries. As the law merchant became codified, the code was actually weakened, as it was more rigid, less efficient, and no longer in line with the informal norms of tradition and customs.

This illustrates that in order for markets to exist and function properly, property rights do not need to be imposed on a society from a formal legal system. Instead, property rights can and have been enforced based on customary law that spontaneously arose and evolved to facilitate cooperation and exchange between members of society. Informal institutions arise from the ground up; are based on norms, customs, and traditions; and allow for an evolutionary process that reflects the local conditions of a society. Recent empirical work begins to sort out the relationship between formal and informal institutions. Acemoglu and Johnson (2005) attempt to "unbundle institutions" by examining the effect of property rights institutions and contracting institutions on economic growth, investment, and financial development. They define contracting institutions as those institutions that enforce private contracts between individuals. Property rights institutions are those that protect individuals from public predation. They find that property rights institutions have a positive and significant effect on economic growth and development, whereas contracting institutions only weakly affect financial development. This suggests that informal institutions may be a component of economic growth, the importance of which has been underestimated.

Tabellini (2009) provides the next step by investigating the effect that culture, an informal institution, has on development. He shows that identical formal institutions perform differently across countries due to culture, defined as a system of values and social norms. Tabellini provides evidence that formal institutions may not be the most important factor for growth, and highlights the role of informal institutions, i.e. culture. Knack and Keefer (1997) also discuss the importance of informal norms and culture. In their examination of informal institutions, they claim that trust can protect private property when government does not. They also argue that dependence on formal institutions is lower in high-trust societies. Williamson and Kerekes (2009) empirically separate property rights into formal and informal components and find that the informal rules dominate the formal in securing property rights.

Although much is said about the importance of informal norms and customs in securing property rights, most economists still argue that formalization is necessary to reap all the benefits associated with property rights. The next section empirically tests de Soto's second hypothesis that codification of property rights via land titling is a precursor for economic development. This is done by providing an analysis of the current literature on the effects of land titling, including the impact of titling in de Soto's home country of Peru.

5. Testing de Soto's Hypothesis 2

One method of achieving secure property rights is through government land titling. For example, de Soto emphasizes the importance of a written, formal, legal property rights system and the need to incorporate the informal, or extralegal, sector within the established legal sector. He argues that to best facilitate economic growth, an integrated system of standard legal titles is necessary. In short, de Soto believes that government codification of unarticulated, informal property rights is needed in order to realize the positive benefits associated with secure and well-defined property rights that promote economic development. Property titling is increasingly considered one of the most effective forms of government intervention (Binswanger, Deninger, and Feder 1995; Baharoglu 2002).

Specifically, de Soto (as well as other scholars) argues that a formal land titling system can generate the positive outcomes associated with secure property rights as formally outlined in Besley (1995). The advocates of titling programs emphasize the ability of owners to utilize their titled property as collateral to secure financing for investments as an essential advantage. In addition, in order for a land titling program to achieve these positive effects, the complementary enforcement mechanism must exist to secure the rights; therefore, a legal government land title should be enforceable through public institutions, such as a court system. If secure property is achieved via land titling programs, then land titling should provide access to credit markets not previously attainable and access to enforcement of these rights as defined by the land titles. For de Soto, the process of transforming "dead capital" into capital accumulation is only possible if the government reduces the costs of formal titling.

Recent papers examine these effects of land titling programs on economic development; however, no general consensus as to the effectiveness of these programs has emerged. Several studies conclude that land titles positively influence the level of investment (Feder, Onchan, Chalamwong, and Hongladarom 1988; Banerjee, Gertler, and Ghatak 2002; Do and Iyer 2003). On the contrary, Kimuyu (1994), Place and Migot-Adholla (1998), and Firmin-Sellers and Sellers (1999) find that land titling does not significantly increase the level of investment and capital formation. This claim is also supported by Atwood (1990), Brasselle, Gaspart, and Platteau (2001), and Place and Otsuka (2001). These articles conclude that informal, local mechanisms of order do provide basic incentives for small-scale investment. In addition, these local rights may be less costly and wasteful than formal land titling; hence, there is no need for state intervention.

In addition to the studies discussed above, several recent papers examine the impact of land titling in Peru. Field (2005) detects increases in housing investment due to land titling in the urban areas surrounding Lima, but the majority of this investment is financed without credit. This finding could be an indication that government land

titling does not necessarily increase access to credit. In addition, Field and Torero (2006) conclude that land titling in Lima is related to increases in loan approval rates from the public sector bank for housing construction materials. However, they find no increases in loan approval rates from private financial institutions, suggesting that land titles do not provide sufficient collateral to increase the loan approval rate from a private institution and, therefore, do not provide adequate access to credit.

Kerekes and Williamson (2010) investigate the impact of land titling in rural Peru and do not find support for the argument that government land titling can be used as collateral to guarantee a loan. For example, in the communities surrounding Cusco, the national banks require a government land title, but private banks do not. Private institutions charge higher rates of interest to compensate for the lack of secure collateral, with or without a land title. Even with a land title, the national banks often require additional collateral as a warranty. These findings indirectly suggest that neither public nor private institutions fully believe in land titling programs as securing property.

In addition to investment and credit effects, the enforcement mechanisms of titles are of equal importance. Field (2003) finds no evidence that public enforcement costs (i.e., police expenditures) increase with additional legal titles. This may indicate that although land titling may define the land legally, it does not provide a system of property enforcement. This suggests that individuals find it more beneficial to rely on informal, private enforcement methods than on provision from local governments. Kerekes and Williamson (2010) find support for this where the enforcement of property rights is not achieved through public institutions. Rather, private mechanisms arise for the enforcement of property rights. Private enforcement mechanisms include trust and confidence in verbal agreements between individuals due to culture and social norms, respect, and arbitration conducted by local authorities usually chosen by locally held elections. In addition, failure to respect local decisions regarding property limits results in punishment, discrimination, and/or ostracism.

From these studies, no general consensus emerges on the effects of land titling. Because of the lack of clear evidence indicating that government land titling establishes secure property rights, I cannot support de Soto's second hypothesis. A formal system of land titling does not necessarily lead to the benefits associated with secure property rights, such as increased access to credit and property enforcement. This raises an important political economy question where, theoretically, land titling should secure property rights, but in practice, it does not. Future studies could include public choice concerns highlighting the costs of government into the analysis, incorporating the analytics of bureaucracy theory, and focusing on the incentive incompatibilities between government titling agencies and local citizens and communities.

6. Conclusion

The work of Hernando de Soto leads to two main testable theories. First, secure property rights provide access to credit as assets are collateralized to secure a loan. Property rights also provide the necessary incentives for individuals to engage in entrepreneurial investments, accumulating gross capital. This process drives economic prosperity and development. Both conceptual and empirical studies support these arguments.

De Soto's second hypothesis predicts that government land titling establishes secure property rights and leads to the associated positive benefits. However, the literature on the effects of land titling finds mixed results. Some findings suggest that government land titling is not necessarily the best means of achieving secure property rights institutions in all locations across time. Government land titling, in theory, can lead to positive benefits; in practice, however, these benefits may not emerge because of public choice concerns surrounding the incentives faced by government agencies. Also, a broad, one-size-fits-all, top-down approach may not be the best avenue for securing property due to insufficient local knowledge, especially in rural communities. Given these results, government land titling programs should not be automatically preferred over utilizing the existing local institutions.

References

Acemoglu, Daron, and Simon Johnson. 2005. Unbundling Institutions. *Journal of Political Economy* 113(5): 949–95.

Acemoglu, Daron, Simon Johnson, and James A. Robinson. 2001. The Colonial Origins of Comparative Development: An empirical investigation. *The American Economic Review* 91(5): 1369–1401.

2002. Reversal of Fortune: Geography and institutions in the making of the modern world income distribution. *The Quarterly Journal of Economics* 117(4): 1231–94.

Atwood, David A. 1990. Land Registration in Africa: The impact on agricultural Production. *World Development* 18(5): 659–71.

Baharoglu, Deniz. 2002. World Bank Experience in Land Management and the Debate on Tenure Security. Washington DC: The World Bank.

Banerjee, Abhijit, Paul Gertler, and Maitresh Ghatak. 2002. Empowerment and Efficiency: Tenancy reform in West Bengal. *The Journal of Political Economy* 110(2): 239–80.

Bauer, Peter. 2000. *From Subsistence to Exchange and Other Essays*. Princeton, NJ: Princeton University Press.

Benson, Bruce L. 1989a. Enforcement of Private Property Rights in Primitive Societies: Law without government. *The Journal of Libertarian Studies* 9(1),

1–26.

____. 1989b. The Spontaneous Evolution of Commercial Law. *Southern Economic Journal* 55(3): 644–61.

Besley, Timothy. 1995. Property Rights and Investment Incentives: Theory and evidence from Ghana. *The Journal of Political Economy* 103(5): 903–37.

Binswanger, Hans P., Klaus Deininger, and Gershon Feder. 1995. Power, Distortions, Revolt, and Reform in Agricultural Land Relations. In Jere Behrman and T. N. Srinivasan, eds. *Handbook of Development Economic*s Volume IIIB. Amsterdam: Elsevier.

Boettke, Peter J. 1994. The Political Infrastructure of Economic Development. *Human Systems Management* 13: 89–100.

Boettke, Peter J. and Christopher Coyne. 2003. Entrepreneurship and Development: Cause or consequence? *Advances in Austrian Economics* 6: 67–88.

Brasselle, Anne-Sophie, Frederic Gaspart, and Jean-Philippe Platteau. 2001. Land Tenure Security and Investment Incentives: Puzzling evidence from Burkina Faso. *Journal of Development Economics* 67: 373–418.

Demsetz, Harold. 1967. Toward a Theory of Property Rights. *The American Economic Review* 57(2): 347–59.

De Soto, Hernando. 1989. *The Other Path*. New York, NY: Basic Books.

____. 2000. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. New York, NY: Basic Books.

Do, Quy Toan and Lakshmi Iyer. 2003. Land Rights and Economic Development: Evidence from Vietnam. World Bank Policy Research Working Paper No. 3120.

Feder, Gershon, Tongroj Onchan, Yongyuth Chalamwong, and Chira Hongladarom. 1988. *Land Policies and Farm Productivity in Thailand*. Baltimore: Johns Hopkins University Press, for the World Bank.

Field, Erica. 2003. Entitled to Work: Urban tenure security and labor supply in Peru. *Quarterly Journal of Economics* 4(122): 1561–1602.

Field, Erica. 2005. Property Rights and Investment in Urban Slums. *Journal of the European Economic Association* 3(2–3): 279–90.

Field, Erica and Maximo Torero. 2006. Do Property Titles Increase Credit Access Among the Urban Poor? Evidence from a nationwide titling program. Working Paper.

Firmin-Sellers, Kathryn and Patrick Sellers. 1999. Expected Failures and Unexpected Successes of Land Titling in Africa. *World Development* 27(7): 1115–28.

Galiani, Sebastian and Ernesto Schargrodsky. 2006. Property Rights for the Poor: Effects of Land Titling. Working Paper.

Hall, Robert E. and Charles I. Jones. 1999. Why do Some Countries Produce

So Much More Output Per Worker Than Others? *Quarterly Journal of Economics* 114: 83–116.

Hayek, F. A. 1945. The Use of Knowledge in Society. *American Economic Review* 35(4): 519–30.

Hayek, Friedrich A. 1960. *The Constitution of Liberty*. Chicago: The University of Chicago Press.

Johnson, Simon, John McMillan, and Christopher Woodruff. 2002. Property Rights and Finance. *The American Economic Review* 92(5): 1335–56.

Kerekes, Carrie B. and Claudia R. Williamson. 2008. Unveiling de Soto's Mystery: Property rights, capital, and development. *Journal of Institutional Economics* 4(3): 371–87.

____. 2010 (forthcoming). Propertyless in Peru, Even With a Government Land Title. *American Journal of Economics and Sociology*.

Kimuyu, Peter K. 1994. Credit and Financial Markets. In Thomas C. Pinckney, ed. *Policy and Rural Development: Two Communities in East Africa,* Williamstown, Mass: Williams College Center for Development Economics.

Knack, Stephen and Philip Keefer. 1995. Institutions and Economic Performance: Cross country tests using alternative institutional measures. *Economics and Politics* 7(3): 207–28.

____. 1997. Does Social Capital Have an Economic Payoff? *The Quarterly Journal of Economics* 112(4): 1251–88.

Leblang, David A. 1996. Property Rights, Democracy, and Economic Growth. *Political Research Quarterly* 49(1): 5–26.

Mauro, Paolo. 1995. Corruption and Growth. *The Quarterly Journal of Economics* 110(3): 681–712.

Mises, Ludwig von. 1920, [1935]. Economic Calculation in the Socialist Commonwealth. In F. A. Hayek, ed. *Collectivist Economic Planning*. London: Routledge & Kegan Paul,

Montesquieu, Charles de Secondat. (1989, [1748]). *The Spirit of the Laws*. New York, NY: Cambridge University Press.

Murphy, Kevin, Andrei Shleifer, and Robert Vishny. 1991. The Allocation of Talent: Implications for Growth. *Quarterly Journal of Economics* 106(2): 503–30.

North, Douglass C. 1981. *Structure and Change in Economic History*. New York, NY: Norton.

____. 1990. *Institutions, Institutional Change, and Economic Performance*. New York, NY: Cambridge University Press.

____. 2005. *Understanding the Process of Economic Change*. Princeton, NJ: Princeton University Press.

North, Douglass C. and Robert Thomas. 1973. *The Rise of the Western World: A*

New Economic History. Cambridge, UK: Cambridge University Press.

North, Douglass C. and Barry R. Weingast. 1989. Constitutions and Commitment: The evolution of institutional governing public choice in seventeenth-century England. *The Journal of Economic History* 49(4): 803–32.

Place, F. and S. Migot-Adholla. 1998. Land Registration and Smallholder Farms in Kenya. *Land Economics* 74(3): 360–73.

Place, F. and K. Otsuka. 2001. Tenure, Agricultural Investment, and Productivity in the Customary Tenure Sector of Malawi. *Economic Development and Cultural Change* 50(1): 77–99.

Rodrik, Dani, Arvind Subramanian, and Francesco Trebbi. 2004. Institutions Rule: The primacy of institutions over geography and integration in economic Development. *Journal of Economic Growth* 9: 131–65.

Rosenberg, Nathan and L. E. Birdzell, Jr. 1986. *How the West Grew Rich: The Economic Transformation of the Industrial World.* New York, NY: Basic Books.

Scully, Gerald. 1988. The Institutional Framework and Economic Development. *Journal of Political Economy* 96(3): 652–62.

Smith, Adam. 1991 [1776]. *The Wealth of Nations.* New York, NY: Alfred A. Knopf, Everyman's Library.

Tabellini, Guido. 2010 (forthcoming). Culture and Institutions: Economic development in the regions of Europe. *Journal of European Economic Association* 8(4).

Williamson, Claudia R. and Carrie B. Kerekes. 2010. Securing Private Property: Formal versus Informal Institutions. *Journal of Law and Economics,* forthcoming.