The Annual Proceedings of the Wealth and Well-Being of Nations

2009-2010

Volume II

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The Annual Proceedings of the Wealth and Well-Being of Nations, 2009-2010

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Printed in the United States of America

ISBN: 978-0-578-05849-8

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Introduction

Emily Chamlee-Wright

As the Elbert Neese Professor of Economics, it is my privilege to introduce the second *Annual Proceedings of the Wealth and Well-Being of Nations*.

Under the banner of the Miller Upton Programs, the department of economics and management at Beloit College has developed an ambitious initiative to advance understanding of the ideas and institutions necessary for widespread prosperity and human development. The centerpiece of these programs is the annual Wealth and Well-Being of Nations: a Forum in Honor of Miller Upton. Every fall, the Upton Forum brings to Beloit College a distinguished, internationally recognized scholar who works within the classical liberal tradition. The Upton Scholar engages with students, faculty, alumni, and civic leaders in an informed dialogue around the nature and causes of wealth and well-being. In 2009, we were honored to feature Hernando de Soto, president of the Institute for Liberty and Democracy (ILD) as the second Upton Scholar.

Alongside our Upton Scholar, we featured leading researchers whose work complements the work of Mr. de Soto and the ILD. We assemble this cadre of scholars to demonstrate that the intellectual enterprise of understanding the nature and causes of wealth and well-being is an ongoing project. The essays collected in this volume capture in written form many of the ideas exchanged, challenges posed, and questions considered during the Upton Forum and over the course of the academic year.

Before introducing the substance of the contributions made within this volume, let me say a few words about the man for whom the forum is named. R. Miller Upton was the sixth president of Beloit College, from 1954–75. A nationally recognized leader in higher education, President Upton was known to harbor two intellectual passions. The first was a steadfast commitment to the liberal arts. He believed that the small residential liberal arts college was the ideal place to engage the "great questions," as it is here that students are expected to acquire the intellectual habits necessary for critical thinking and open civil discourse. His second passion was for the ideals of the liberal society: political freedom, the rule of law, and the promotion of peace and prosperity through the voluntary exchange of goods, services, and ideas. He understood that transforming the ideals of liberal democracy into real institutions was at the heart of increasing the wealth and well-being of nations and peoples. We believe that the Upton Forum represents a confluence where these enduring passions meet.

Tapping the Development Potential in the Developing World

Let me now formally introduce the 2009 Upton Scholar, Hernando de Soto, president of the Institute for Liberty and Democracy in Lima, Peru. Through their research of the "extralegal" or "informal" economies of the developing world and post-Soviet countries, Hernando de Soto and his colleagues at the ILD have become leading voices in economic development circles. The principal aim of the ILD is to identify the assets of the world's poor and to design reform strategies that move those assets from the extralegal sector to an inclusive market economy. By "inclusive market economy," I mean one that is governed by secure and defensible property rights, a legal climate conducive to entrepreneurial initiative, innovation and growth, and systems of identification and documentation that enable business people and property owners to signal others unknown to them the value of their enterprises, their credibility in contractual obligations, and their worthiness to secure credit and financial investment.

To understand the significance that Mr. de Soto's work has had in the professional discourse on economic development, we must go back to the post-World War II period when the West began turning its attention to improving the economies of lesser-developed countries through international development organizations such as the World Bank Group and the International Monetary Fund. The dominant thinking among economic development theorists and policy makers from the 1940s through the 1960s was that poor countries would be lifted out of poverty if we could replicate the West's Industrial Revolution in the developing world. The thinking at the time was that a crucial factor was missing if such progress was to be realized. It was assumed that there was no entrepreneurial force robust enough to drive economic progress in the developing world. Governments could create prosperity, so the thinking went, if they filled the so-called entrepreneurship gap through sector-wide development planning. And despite abysmal results in terms of economic stagnation and decline, inefficient state-owned enterprises, and widespread public corruption, policies favoring heavy-handed state control of the economy persisted into the 1970s. It was in the mid-1970s that frontline development organizations started to take notice of entrepreneurs operating in the informal sector as the primary mechanism by which poor people met their day-to-day needs and often improved their material conditions.

But academic economists were still skeptical. While it was a "quaint idea" to study the quaint habits and operations of quaint indigenous entrepreneurs, surely such activities, most economists assumed, represented only a small piece of the overall economy in any given country and were thus hardly worth the attention of any serious economic researcher. Enter Hernando de Soto. In 1988, Hernando de Soto published *The Other Path,* in which he describes in meticulous detail the economic vitality of the informal sector. Through extensive field work, de Soto and his team of researchers estimated that nearly 40 percent of Peru's gross domestic product was created and exchanged within the informal sector. This was accomplished by entrepreneurs who were operating outside the official legal framework, without legal title to their

property, and without documentable evidence of their business operations. And the size of the informal sector and its significance to the overall Peruvian economy was growing rapidly.

At first blush, such an account might suggest that 40 percent of Peru's economy was chaotic, if this vast informal sector was operating outside the official legal framework. But far from being a lawless or norm-less context, the informal sector had developed its own systems of informal property, contract, dispute resolution, and other institutions of social coordination.

Mr. de Soto's research also helped us to realize that while most people operating within the developing world have assets—in the form of land that they cultivate, houses that they build and occupy, equipment that they use in production, and businesses that they develop—these assets are often held in defective forms. Poorly defined systems of property mean that ownership cannot be conveyed beyond the local sphere. Further, legal barriers regulating and limiting entry into industries as basic to day-to-day existence as food processing, transportation, and construction drive the entrepreneur underground, cutting him or her off from potential clients, suppliers, creditors, and investors. De Soto coined the phrase "dead capital" to refer to assets that cannot be effectively leveraged into productive capital because of poorly defined systems of property and legal frameworks that limit the size and scope of business ventures.

In his book *The Mystery of Capital*, de Soto catalogues the hurdles that a typical person must overcome if he or she is operating in the extralegal sector. At the time of the publication of his book, De Soto reports that in the Philippines, acquiring legal title to land could take anywhere from thirteen to thirty-five years and could include 168 discrete bureaucratic steps involving fifty-three different agencies. In Haiti, before land could be purchased, one would have to first lease it from the government for five years. This would take 65 discrete steps and approximately two years. To actually buy the land would require another 111 bureaucratic steps and an additional twelve years (de Soto 2000, 34).

In 2000, when *The Mystery of Capital* was published, de Soto estimated that the total value of assets held but not owned in the developing and post-Soviet worlds was $9.3 trillion. At the time, $9.3 trillion was twice the total U.S. dollars circulating in the money supply, nearly as much as the value of all the companies listed on the main stock exchanges of the world's twenty most developed countries. Additionally, $9.3 trillion was twenty times the total direct foreign investment into all developing and former communist countries from 1989–99, forty-six times as much as all the World Bank loans of the previous thirty years, and ninety-three times as much as all development assistance from all advanced countries to the developing world in the same period (de Soto 2000, 35).

If the international development community was going to help countries realize the potential of all this dead capital, the approach would have to shift from one that focused only on resources that could be brought in from the outside to an approach that focused on tapping the potential of resources that were already there. Realizing this potential would require reform processes that scaled up titling and scaled down

regulatory barriers that stifled entrepreneurship.

But the story does not end there. Ideas have consequences. As the paradigm shift began to take hold, the international development community and political leaders searching for practical solutions to meet the challenges of institutional reform looked to the ILD for technical assistance to design titling programs and streamline the regulatory environment. Mr. de Soto and consultants from ILD have worked in twenty countries in Latin America, Africa, the Middle East, the former Soviet Union, and Central Asia. The most dramatic impact of such efforts can be seen in Peru's urban centers. According to a study published by the World Bank, by 2003, the titling program had titled more than 1.3 million properties. Survey analysis conducted to measure the economic impact revealed increased investment in homes and business, increased access to credit, the creation of a real estate market, and increased property values. Women represented more than half of the beneficiaries of the program. Because families no longer had to ensure that someone stayed close to home to protect their property, the titling program fostered increases in labor participation by adults, which in turn reduced the incidence of child labor (Cantuarias and Delgado 2004). The successes won in Peru have inspired similar programs across five continents.

It is not just in the developing and post-Soviet worlds that de Soto's ideas have relevance. The 2008 financial crisis in the developed world inspired de Soto to inquire whether the wealthiest nations in the world might be suffering from some of the same kinds of issues that plague much of the developing world—namely, the problems associated with poorly defined property rights. It is this inquiry that inspired de Soto's keynote address during the 2009 Upton Forum. De Soto's central argument is that at the heart of the 2008 financial crisis was a weak institutional framework of poorly defined property rights governing financial products. De Soto argues that avoiding such calamity in the future requires a rethinking of how property rights are defined and recorded in the financial sector.

Advancing the Intellectual Enterprise

Although de Soto and the ILD have played a critical role in advancing our understanding of how to tap the capacity of developing countries to rise out of poverty, the effort to craft effective economic development policies and programs is still in its infancy. Further, despite the fact that the economics discipline now clearly recognizes the important connection between property rights and other institutional "rules of the game" and economic development, the scholarly work in this field is still growing, posing new and more difficult questions. During the Upton Forum and over the course of the academic year, we were honored to feature some of the key scholars advancing understanding of the connections between social institutions and the prospects for economic development.

One question that still puzzles development economists is why, despite tremendous efforts to the contrary, we do not see a consistent pattern of convergence between wealthy and poor countries. In his essay "The Biggest Idea in Development That No One Really Tried," Michael Clemens considers the role that dramatically

reduced immigration restrictions might play in closing the gap between the wealthy and poor around the world. Clemens recalls that de Soto's account of the extralegal economy begins as a story of migration. In Lima, for example, it was urban policies limiting the participation of rural migrants in the formal economy that fueled the growth of the informal sector (de Soto 1989). Much of de Soto's work has been aimed at reversing such restrictive policies. Similarly, Clemens argues that the most effective tool the developed world has to combat global poverty is to dramatically scale back restrictions that limit the ability of poor people to migrate to wealthier countries. Clemens considers both the economic and political implications of this idea and argues that such a proposal would be very similar in scale and impact as that of post-Apartheid South Africa when black South Africans were allowed to migrate to central Johannesburg.

The role that political rules play is a central focus within development economics, with most of the attention placed on national and global politics. But state-level and even village-level politics can also play a critical role in either promoting or inhibiting economic prosperity. In his essay "The Microeconomics of Public Choice in Developing Economies: A Case Study of One Mexican Village," Tyler Cowen describes the significant problems associated with the cargo system of local governance in San Agustín, Oapan, in the state of Guerrero, Mexico. Despite these problems, Cowen argues that ineffective local governance can sometimes benefit residents in warding off attempts by outside parties to exert pressure on local officials.

De Soto's case favoring the establishment and enforcement of clear property rights is part of a larger discussion on the connection between economic freedom, prosperity, and well-being. The intuition is that in contexts with greater economic freedom, individuals have greater incentive to pursue productive activities, invest in their businesses, and create opportunities for employment, all of which may in turn lead to overall poverty reduction, improved nutrition and health standards, and other quality-of-life factors. While intuitively appealing, the thesis that economic freedom leads to improvements along these lines is an empirical question, requiring some way to measure the consistency of a country's institutions and policies with economic freedom. But quantifying economic freedom in a meaningful way is a tall order. In his essay "Economic Freedom and the Wealth and Well-Being of Nations," Robert Lawson describes the Economic Freedom of the World (EFW) project that accomplishes exactly that by capturing and distilling the key elements of economic freedom within a single index. Lawson also discusses what the EFW index can tell us about the relationships between economic freedom and political freedom and between economic freedom and patterns of economic performance.

One of the principal advantages of the EFW index is that it allows us to examine, from a bird's-eye view, the general patterns that emerge as economic freedom varies over time and across countries. Two essays within this volume deploy the EFW index to empirically test some of the ideas central to de Soto's case favoring the establishment of private property rights. In their essay "Property Rights and the Return to Capital," Benjamin VanMetre ('10) and Joshua Hall draw upon the Austrian and new institutional schools of economics and empirically test de Soto's thesis to

show that secure property rights enhance economic development. The results of this analysis support the work of Hernando de Soto in that they show that secure property rights are crucial to the return on capital and, consequently, to economic development.

In her essay "The Two Sides of de Soto: Property Rights, Land Titling, and Development," Claudia Williamson examines whether property rights improve economic development by enhancing the ability and incentives for capital formation, and again, she finds empirical support for de Soto's argument. But Williamson also examines whether land titling actually leads to greater security in property rights. Williamson's empirical analysis suggests that while property rights lead to capital formation, land titling on its own has not led to greater property rights security in some of the most ambitious titling programs. Williamson considers what these results might mean for land titling programs in achieving greater economic development.

Even in contexts in which private property rights are well-established and well-enforced, government itself can represent a threat. Government takings of property can be the source of heated controversy in both the developing and developed worlds, but the nature of the takings process and its effects can differ in significant ways. In his essay "Property Takings in Developed Versus Developing Countries," Edward Lopez compares government takings in the United States with takings in lesser-developed countries. Lopez argues that institutional differences account for important disparities in when and how government takings emerge and in the distributional effects these takings have on the rich and poor in the two contexts. Some differences that account for such disparities are the presence of the rule of law and ideologies that support takings under some circumstances but not others.

We close with essays by two distinguished Beloit College alumni, Robert Peck Christen ('78) and Lyle Gramley ('51). In his essay "Beyond Microcredit: Delivering Financial Services to the Poor through Agent Banking," Christen discusses the development of the agent-banking model that links the delivery of financial services to mobile retail networks such as cell phone service providers. It is through innovations such as this, Christen argues, that the delivery of financial services to the world's poor can be dramatically scaled up.

We bring the discussion full circle by returning to the 2008 financial crisis. In his essay "The 2008 Financial Crisis: Causes, Response, and Consequences," Gramley offers a different but complementary story to the one presented by de Soto. In this essay, Gramley discusses the developments in the mortgage market that led to the crisis, the steps that the Federal Reserve and the Treasury took to respond to the crisis, and the long-term consequences (both positive and negative) that these steps will likely have for the future. In both the de Soto and Gramley essays, the point is clear that the right institutional rules of the game are essential to avoiding financial calamity in the future.

With Many Thanks

On behalf of Jeff Adams, the Allen-Bradley Professor of Economics, and the other members of the department of economics and management, I want to extend our thanks to everyone who has played a part in making the 2009 Upton Forum and associated programs a success, including the many scholars and alumni professionals who presented during the forum and over the academic year. In addition to the contributors to this volume, I would like to thank Laura Grube ('08) and Rexford Widmer ('00) for their participation in the alumni panel discussions. The students in my 2009 Senior Seminar on the Wealth and Well-Being of Nations were integral to the success of the forum. Their willingness to dive deeply into discussions of classical and contemporary works is the lifeblood of an intellectual enterprise such as this. A special thanks goes to Jennifer Kodl, program assistant to the Upton Programs and managing editor of this volume, for her tireless dedication to excellence and her generous spirit.

Through their financial support, exceptionally good counsel, and willingness to serve as campaign chairs for the Miller Upton Memorial Endowments, Bill Fitzgerald ('86) and Bob Virgil ('56) laid the foundation for this initiative. Bob Virgil was also instrumental in securing the participation of Mr. de Soto as our 2009 Upton Scholar. By underwriting the first three years of the Upton Forum, the Lynde and Harry Bradley Foundation has played a critical role in ensuring the early success and the long-term viability of this program. I am especially indebted to Janet Riordan, director of community programs at the Bradley Foundation, for her guidance and encouragement in launching the Upton Programs. The Charles G. Koch Charitable Foundation has also played an essential part in advancing the mission of the Upton Programs by providing resources early on and continuing to support the Student Research Colloquium and Speaker Series directed by Joshua Hall. The financial support provided by alumni, friends, and charitable foundations have ensured that the Miller Upton Programs will serve as a fitting memorial to Miller and provide a signature experience for Beloit College students for many years to come.

During the 2009 Upton Forum, I had the honor of announcing that the Upton Forum keynote address will henceforth be the June and Edgar Martin Memorial Lecture, in recognition of a significant gift from the June and Edgar Martin estate. Several years after alumna June Bjorkland ('40) graduated from Beloit with a degree in economics, she and her former professor Edgar Martin, who served as a faculty member in the economics department from 1939–42, struck up an extended correspondence. That correspondence blossomed into a romance, and in 1946, just one month after Edgar completed his service as captain in the army quartermaster corps, they were married. Throughout their marriage, they credited Beloit College for the role it played in advancing their fulfilling careers in New York state government and for making their life together possible. We are grateful to Albert Roberts, longtime friend and advisor to the Martins and executor of their estate, for his thoughtful stewardship and for helping to craft a gift that is a fitting memorial to the love that

June and Edgar shared, to the ideas they held dear, and to the college where they first met.

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Understanding the Shadow Economies of the Developing and Developed Worlds

Hernando de Soto[*1]

During my time here at Beloit College, I have mainly talked about the "two-thirds world": the developing world, including countries like Peru where I come from, and the former Soviet Union. The two-thirds world constitutes five to six billion people; it is a world that, for the most part, lacks well-functioning markets and the rule of law. Initially, the Institute for Liberty and Democracy (ILD) was primarily a research organization. However, soon after our initial research was released, we started getting calls from heads of state around the world. We began to focus on developing solutions, on the basis of our research, to the problems associated with the lack of rules, or the lack of law, within the informal economy. We have become a consultancy for leaders looking for practical solutions to overcoming the problems associated with large "extralegal," "informal," or "shadow" economies.

In such economies, there may be order of a sort, but without the rule of law, the order is fragmented. Rule of law means *standard* law. Countries like mine and others within the developing world, and countries like the Ukraine and others within the former Soviet Union—countries that are trying to make the transition toward market economies—have many different legal systems, some of them formal some of them informal, operating side by side. For markets to function, it is essential to have signals that make it possible for people to read reality and to coordinate their actions with millions, or hundreds of millions, of other people. But the signals that emanate from these differing legal systems also differ, making communication across millions or hundreds of millions of people extremely difficult. Because it is impossible to know and communicate directly with every one of these millions of people personally, a successful transition to a market economy is all about getting the signals right.

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[*] Hernando de Soto is president of the Institute for Liberty and Democracy in Lima, Peru, and author of *The Other Path* and *The Mystery of Capital*. Mr. de Soto served as the 2009 Miller Upton Scholar at Beloit College.

[1] I have been grateful for the opportunity to serve as the Upton Scholar and for my time here at Beloit College. I don't teach. I don't work in a university, and I rarely participate in events such as this wonderful forum. I would like to thank President Scott Bierman and Emily Chamlee-Wright for their kind welcome and introductory remarks.

So that is the nature of our work in the two-thirds world. Some of our critics charge that our focus is one-dimensional—that all we know about is the extralegal economy. However, this work is actually far more varied than one might think. When we begin working with a country, the head of state does not come to us asking, "Tell me what to do about my extralegal economy." Instead, it is, "I'm fighting terrorism, and these guys are hidden in the shadow economy. How do I get the essential facts that I need to develop solutions to the problems facing my constituents? How do I get into the shadows?" Other people point to the poverty within the extralegal economy and ask, "How do we create wealth within this sector? How do we retain what has already been created in the extralegal sector, but with proper documentation so they can connect to the broader market?" Other people say, "I want to provide basic services; I want to provide clean water and build a sewage system. I want to provide electricity to my people. But in order to provide these services, I need a way to collect taxes. But how can I collect if I don't know where they are? I may know where houses are. But who owns the houses? Who's accountable? Who's responsible?" Another person may say, "What we want to do is get credit to people within the extralegal economy, but credit is all about credibility. Who are the people who will guarantee repayment? Again, who's going to be accountable?" When we talk about finding solutions to the problems associated with the shadow economy, the analysis is necessarily multidimensional, requiring expertise on a great diversity of issues.

While most of my work focuses on the two-thirds world and the lessons we can impart to reformers in these contexts, recently I have also been considering how these lessons might apply to the developed world, to countries like the United States. In the course of my travels in this country, I often ask, "What concerns Americans?" When I asked this question during my time here, the replies were, "We're concerned about the economy, what's happening to the economy, and what's happening to capitalism in our own country." Second, "We're concerned about the fact that at this moment we are disoriented. No one knows which signals to trust anymore. What information can you trust?" I said, "Mm-hmm, that's interesting."

So, I would like to address my remarks to these questions. And before you say, "What an irresponsible fellow! I mean, what does he know? He's a third worlder, and he's coming to talk about the empire itself?" let me tell you why I'm addressing these questions.

When it comes to these issues, the fact that I am an outsider is an advantage. Einstein said that when it comes to actually doing a diagnosis of the problem, it is good to have an outsider come in. As Einstein asked, "What does the fish know about the water in which it swims?" The fish, of course, thinks that it is very agile; however, the fish only knows life in the water. As an outsider, I know water, and I know air. I can understand better than the fish that his agility has a lot to do with the water in which he swims. When I set out to diagnose the problems of the developing world, the history of the United States informs what I see. The United States found a way to overcome the problems that developing countries now face. Similarly, as an outsider to the United States, I may be in a better position to diagnose what is going on here because of my experience in diagnosing problems in developing countries.

The economic success of the United States comes from the fact that your system is based on the rule of law. This means that the United States has devised manners and customs by which information travels, and it is packaged in such a way that you are able to transmit and receive shortcut definitions about otherwise complicated concerns. These packages of information allow you to make immediate and informed decisions. Like the fish that may not be aware of the water in which it swims, you may not realize how much complex information is packaged in the signals that you read and respond to every day.

I began thinking about the lessons our work at the ILD might have for the United States in the fall of 2008. Like everyone else, I was concerned about the recession that is, in Milton Friedman's words, a "credit crunch." But coming from a developing country, I can offer you a new perspective on a credit crunch, because developing countries live in a permanent credit crunch.

Why? Because most people in the two-thirds world live in the anarchy of the shadow economy with their assets and contracts covered by paper that is endemically "toxic." That is to say, it is not recorded, not standardized, difficult to identify, and hard to locate. Its real value is so opaque that ordinary people cannot build trust in each other or be trusted in a global market; they thus operate in a constant credit crunch and are stuck in poverty. In short, for shadow economies outside the United States and Europe, recession and poor credit is a chronic condition.

So, when your Treasury Secretary, Henry Paulson, went to congress to appropriate the funds necessary to buy up the huge amounts of "toxic" or "troubled" assets that banks were holding in the United States, I said to myself, "Hey, I know something about this." The assets were troubled or toxic because the subprime lending market had collapsed, and some of that financial paper was not performing. It was critical, Paulson argued, for congress to provide the money necessary to buy up and rid the system of these troubled assets. This was debated back and forth, but congress eventually agreed to direct $780 billion toward buying up those troubled assets.

At this point, like any other observer, I wondered what Secretary Paulson would do with the $780 billion. About three weeks later, Secretary Paulson held a short press conference at the Treasury Department and said, "By the way, we're not going to use those $780 billion to buy the toxic assets." Instead, the money would be used for a stimulus bailout program. Astonished, I wondered how it was that Secretary Paulson could secure $780 billion in a democracy to buy troubled assets, under a program called the Troubled Asset Relief Program (TARP), but was now *not* going to buy them. I had to find out more.

I began by talking to my journalist friends. Secretary Paulson's turnabout was considered a cute subject. It was not on the first page of *The New York Times*, not the second page, but usually on the third or fourth page among the features. I kept searching for an answer, but nobody had one. So I said, "This deserves ringing doorbells in Washington." Over the years I have met many of your leaders. They think I am cute. I tell them about how the informal economy works. They think it is interesting—you know, chewing gum for the mind. "Good to see you, de Soto!" they say. I began asking the people I know for an answer. It is an advantage to be Peruvian.

I am not inside the system, so people tend to tell me the truth because they believe that it doesn't really matter.

What I found out completely changed my program of study over the last year. I found out that the reason Secretary Paulson decided to not go out and buy the troubled assets was because he couldn't find them or price them. He couldn't find the approximately one trillion dollars' worth of nonperforming assets in the U.S. subprime market. And I said to myself, "That is a pretty good indication that you had created a shadow economy." When you have a system in which you can't find the basic facts about assets and can't put a price to them, you have what amounts to a shadow economy.

My admiration for the United States comes from the fact that you have a *super* legal system, a legal system that provides the facts in different forms. I have been studying facts and the forms in which they are bundled for some time. How do you bring facts together? When asked to define what the world was made up of, Bertrand Russell, the great British philosopher of the twentieth century, explained that it is essentially made up of micro facts that add up to the facts that we know. Alone, a piece of oxygen or a bit of hydrogen doesn't mean much. But if you bring them together, you get water. So, the whole issue is how micro facts come together in meaningful packages, or signals, that quickly and informatively guide human decisions. With these signals that bundle complex information in a form that is easily accessible, we are freed from having to understand everything of importance in minute detail.

Most of the facts that we care about in an economic setting are man-made. They are the result of human intelligence putting together various pieces of information in such a way that one can quickly identify the relevant meaning of the facts. Instead of using Adam Smith's metaphor of the invisible hand, I prefer to talk about your "unconscious hand." Knowingly or unknowingly, the market economy in the United States operates like an unconscious hand. Through the legal and property documentation systems that you have created over time, you can quickly identify facts about the assets you hold, where and how many there are, and whether the credit you give and the investments you make are solidly backed by these assets. Property rules and documentation allow you to follow what's going on in your so-called real economy without having to travel and meet everyone involved in the things that you buy, you finance, and you invest in.

Legal systems play a crucial role in packaging together meaningful knowledge that generates robust signals. That is why I want to help bring in the rule of law to the economies of developing and former Soviet countries. Rule of law means standard symbols, standard rules, and signs; having these established enables hundreds of millions of people unknown to one another to communicate with each other. It is this system of communication that allows us to create the extended market economy in which we can divide labor among millions, or billions, of people and create wealth.

During one of my classroom visits, I recalled Leonard Reed's well-known essay "I Pencil," in which he describes the complex system of cooperation that is required just to make a single pencil. How many countries are involved in the creation of a simple pencil? The answer is seventeen countries. The graphite comes from Sri Lanka. The

wood comes from Oregon. The lead doesn't break because it is softened by candela wax from Mexico. The eraser comes from oil, which comes from Saudi Arabia. The filament of metal that wraps the eraser comes from zinc from Peru, copper from Chile, and black nickel from Nigeria. Consider any product around you. There isn't one thing in the world that is made by one person. Each item is made by millions of people, and for millions of people to bring things together—to make the 5,000 parts of a locomotive, to make the 1,000 parts of a watch—you need coordination. You need facts; you need to identify the owner of each item and contract.

In my recent experience entering the United States through the immigration inspection center at the Miami International Airport, I saw a version of this system at work. I stood behind the yellow line, waiting for my turn. The man at the counter said, "Can you identify yourself?" I said, "I'm glad you asked that question. I am Hernando de Soto Polar de la Jara Ugarteche Landázuri Vargas y Jiménez y Angulo. I come from Peru. Interestingly enough, although all of my names may sound Spanish to you, they originally came from Italy, from Genoa. They were Alciatos, but you see, the Alciato family actually married into the de Soto family, which had more money, and that's why the children took the de Soto name." The man behind the counter raised his hand and said, "Stop. Just show me your passport."

So I showed him a legal document invented by the West called the passport, which assembles in a meaningful manner various micro facts into one big fact, which proves to the reader that I am really me. A legal passport creates an identity that can be tested for truth. My passport had a photograph, so he looked at it and compared it to my face. They had fingerprints, so I put all four fingers inside the scanner, and he was able to check my fingerprints against those in the passport. The inspection agent asked, "What brings you to the United States?" I said, "I have come for a conference." "Mm hmm," he said. Had I said, "I am selling shoes," he would have questioned me with greater scrutiny because the micro facts contained in his database pointed elsewhere.

A passport is full of facts that are brought together in such a way that a person without a university education can quickly identify me. My identity is made up of not just one fact, but hundreds or thousands of micro facts that are brought together, as Husserl would say, "in a moment of unity," and they create the identity of Hernando.

We are all a little bit like a passport; we are all composed of a series of micro things called atoms. The atoms come together as cells. The cells come together as organs. The organs come together as you, and you are composed of roughly thirty-two million cells. Now, it can't be that those cells alone are you, because all of your cells die about every six or seven years. So if the cells alone were you, you would have died five, six, or even ten times already. That isn't all that you are made of. What makes you who you are is the way those cells are combined and related to each other. So, your cells can continually die, but it's the relationship of one cell to another that makes you who you are. That relationship of cells to each other is contained in a protocol called DNA, a nucleic acid that provides information as to how you are biologically pieced together. A passport provides information as to how you are socially pieced together. Property and business documents provide information as to

how assets are continually combined to make other assets, who they belong to, and what other interests relate to them at any given time and place. Facts don't grow on trees. They are man-made.

The stunning accomplishment of the United States since the Industrial Revolution is not the development of gadgets. Your most stunning accomplishment is how you bundle your information together—not so much the data itself, but how you package and structure the data. We may all be fascinated by a river, but the river exists because there are banks, and the banks are what give structure to the water that flows. More important than the data that flows in this age of information technology are the structures that package that information into meaningful bundles of facts that guide you and allow you to make swift and informed decisions.

To make this point, I brought with me an apple. Because they saw me pick it up, many people know that this is *my* apple. But is it mine or isn't it? How can you be sure? A stolen apple looks exactly the same as my own apple. How do you know that it's Hernando's apple? You can peel it, you can cut it into three or four pieces, but there is nothing that tells you that it is Hernando's apple. You cannot tell if the apple is borrowed. You cannot tell if it has been leased. There is no way to tell if it has been used as collateral. You cannot determine if there is a secondary interest in it. You cannot know if there is a mortgage on it. You cannot tell if there is an encumbrance upon it. There is no way to distinguish a stolen apple from this one by just looking at it.

To get the economic facts on the apple, you would have to have documentation. Just as the passport conveys a meaningful bundle of information about me, a legal title conveys a meaningful bundle of information about assets in the world. The apple comes from the world of Mother Nature, but U.S. law has created bundles of meaningful information about the economic aspects of assets through the rule of law. Documentation turns the objects found within Mother Nature and the objects created by human beings into assets about which we can know innumerable facts. With appropriate documentation we can size up an investment anywhere without having to travel the whole world.

With the rule of law, you have managed to document identity and assets in a way that can be continually updated. All your airplanes, all your homes, all your buildings, all your land, all your identity cards, all your credit systems, all your capital, all of your movie scripts, all of your authors—everything is recorded. Not only are all these facts recorded, they are all publically accessible, allowing for widespread coordination within the economic system.

Consider coordination within the credit market. Credit is always given against some kind of guarantee. Publicly accessible records are essential for credit markets to function well. When the world is documented, people have the information they need to place a value on an asset, and they can infer how much credit can be extended.

Now comes the moment of drama. For more than ten years, U.S. markets have been creating paper, property rights over assets, called derivatives. Derivatives are financial paper that basically represent a property relationship to underlying assets such as houses, commercial property, or combinations of such assets.

When it became clear that derivatives were at the center of the financial crisis, and shortly after Secretary Paulson made his announcement, Christopher Cox, the chairman of your Securities and Exchange Commission (SEC) set out to tally up the troubled assets. Chairman Cox announced that it was not only the one trillion dollars' worth of nonperforming paper in the subprime mortgage market, but roughly $600 trillion in financial assets that were created but not publicly recorded. Since the Industrial Revolution, this is first time the West has created paper that represents value, but that is not recorded. Keep in mind that the GDP of the United States is approximately $15 trillion. Shortly after Mr. Cox's announcement, the Bank for International Settlements estimated that the right figure was one quadrillion, two hundred trillion dollars—that is, over a quadrillion dollars' worth of financial paper that is not publicly recorded.

So, my friends, the point is this. Your bankers and your authorities have created the world's biggest shadow economy. The shadow economies of the developing world are peanuts compared to your shadow economy. No longer do you know where most of your assets are located. This is essentially where your financial crisis comes from. When you no longer have a way of knowing the basic facts about the assets within your economy, the signals that people depend on to make swift and informed decisions no longer work.

Without clear signals, there is no way for the TARP program to work as it should—there is no way to know who has the paper that represents assets. There is no way to know who is really broke and who is not.

In your country, every stock, every $170 trillion of it, every automobile, every dollar's worth of debt is recorded. But in the case of derivatives, this is not so. This is one source of the uncertainty that fueled the financial crisis. Further, I suspect that the amount of paper that exists in Western markets greatly exceeds the quantity of real assets that they represent. This is another source of the uncertainty. Finally, some of the derivatives, the so-called synthetic derivatives, aren't even related to assets. Now we Latin Americans know something about that. These forms of uncertainty are pervasive. It is this uncertainty that creates the shadow economy and leads to permanent recession.

As the financial crisis unfolded, a critical problem was how to price the toxic assets that were left on the balance sheets of financial institutions. If we believe in a free market, we know what needs to happen. If I wanted to sell my apple, I could offer it for sale and see what price it would fetch—ten cents, thirteen cents, two cents—the market will tell us the right price. In Peru, we produce coffee and copper. What is the right price for these commodities? The market tells us. "But wait a second," said the owners of the toxic assets. "That's too simplistic. It's unfair! We need to price these things fairly." These are odd responses coming from a capitalist economy. What does it mean to price these assets fairly? Fair is whatever price they can fetch in the marketplace. In bad times, they are worth less. In good times, they are worth more.

Without facts, there's a widespread fear that potential borrowers will be unable to repay their loans. When there are no clear signals, credit is paralyzed, the volume of transactions shrinks, employment declines, and property values fall. This is what

we are facing at this moment. We have managed to overcome the last hump because the government has bolstered confidence in the market. But sooner or later, the people trading in the market will understand that this is not enough. This collapse of confidence happens to us in Latin America all the time. When we flood the market with money, the first two years are great. "My God," people say. "We're growing at 10 percent, 11 percent! The stock market is going through the ceiling!" Then all of a sudden it comes crashing down again because there's nothing to sustain it. You can't get something for nothing.

Now, what can you do about this situation? First, get the facts. The United States is the king of facts. By this I do not mean rely on the expertise of financial economists. Financial economists will say that what is going on in the U.S. market is too complicated for most of us to understand. To this, I say, "Baloney!" It is much simpler than you might think. Second, it is essential to let the signals do their job in cleaning up the toxic assets—to clean up the financial paper that no longer represents value. Once this happens, once you allow the signals to work, once you know where the assets are and what they are worth, confidence will return.

I investigate shadow economies around the world, and I know that a shadow economy is the result of the lack of facts. Again, it is not that there isn't enough information; the problem is that the information is not packaged and organized into documented facts that can be tested for truth. Having information organized according to legal structures that are standardized and easily recognized as facts is what creates trust.

When trust in the market breaks down, nobody knows where to put their money—in gold, in stocks, or in real estate. Nobody has confidence regarding where their investments will be safe.

Value and wealth creation, contrary to what Karl Marx and even Adam Smith believed, does not only come from labor. Wealth also comes from law—from the precision of an instrument that gets facts and knowledge to you in such a way that you can test them for truth and validity. My Peruvian passport conveys meaningful signals because it adheres to standards that bundle relevant information in a way that others can easily read. That is exactly what your derivative paper doesn't have. You can't test it for truth and validity.

The economy is not just the goods that are traded; it is also the institutions that facilitate their trade. For property rights to work, relevant information about assets needs to be clear and accessible. The essential factor in overcoming the problems you face is to allow the signals to work. It is important that we be able to accept the bad news that many of the assets that we believed had value no longer do. Just as we say when we advise developing countries, it is essential to learn the facts of the shadow economy that exists in the form of financial paper.

American society is strong, in part, because you are not afraid to talk about your failures. In this country, even before this recession, there was an average of 1.6 million bankruptcies per year. That gives you 1.6 million examples of ways in which the economy is not working, and knowing this is the first step to correcting it. The strength of capitalism is the knowledge of failures, not the knowledge of successes.

The intellectual community can play an important role in reminding us what it was that created success in the first place. What really makes the United States great, whether you know it or not, is that you have the best legal, institutional, and political system in the world; it is important to remember why it works and how you built it, because that is what's going to get it out of this recession. The solutions are based on property rights, on institutions, and on all the things that students study at Beloit College. The United States is a great nation, but it is imperative to remember that it's your legal system and the property rights that convey the relevant facts about the assets owned and exchanged within the market that are the source of your success.

The Biggest Idea in Development That No One Really Tried

Michael Clemens[*1]

1. Introduction

Few realize that Hernando de Soto's (1989, 7, 9) influential policy proposal, to fuel development by formalizing property rights in land and enterprise, begins as a story of migration. Exploring the roots of de Soto's ideas in Peru will quickly lead us to a proposal that could extend global prosperity in this still-young century.

In the years following World War II, internal migrants turned Peru from a predominantly rural country to a predominantly urban one. They typically tripled or quadrupled their earnings by moving. From the beginning, migrants got "a hostile reception" and were "barred from legally established social and economic activities." This was not an accident, de Soto (1989, 10–11) writes:

> Assistance and development programs for rural areas were designed to ensure that the peasants improved their lot where they were, well away from the cities. Civilization was expected to go to the countryside; the peasants were not expected to come looking for it. ... Peru's legal institutions had been developed over the years to meet the needs and bolster the privileges of certain dominant groups in the cities and to isolate the peasants geographically in rural areas. ... Thus it was, that in order to survive, the migrants became informals.

De Soto (1989, 201) names the set of policies that created mass informality in Peru: mercantilism, "the belief that the economic welfare of the State can only be

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[1] This paper was prepared for the Upton Forum at Beloit College. The research underlying this text was supported by the John D. and Catherine T. MacArthur Foundation, and by the excellent research assistance of Paolo Abarcar. The views expressed are those of the author alone, and nothing herein necessarily represents the views of the Center for Global Development, its board, or its funders.

secured by government regulation of a nationalist character." The essence of de Soto's work, facilitating access to land titles and formal enterprise in Peru, is to overcome mercantilist barriers to the participation of migrants in the market. Those barriers, he argues, not only impoverished people from rural areas; they ultimately harmed the interests of those they sought to protect, impoverishing the whole country and seeding violence.

This pattern continues to the present day, far beyond Peru. Cities across the developing world are ringed by massive informal economies packed with rural-urban migrants. But national strategies to assist them continue to focus on limiting such migration by "developing" rural areas, rather than facilitating their participation in market activities at urban centers. Black and Sward (2009) show that the Poverty Reduction Strategy Papers for fifty-nine developing countries typically describe internal migration as a problem to be prevented with rural development initiatives. Almost none describe internal migration as an opportunity to be leveraged by dismantling barriers to movement and encouraging full economic participation in urban areas. De Soto's ideas are as necessary today as they were twenty years ago.

But de Soto's vision compels us to ask even bigger questions, questions about the core of policies to foster economic development at the global level. Efforts to stop internal migration in many settings across the developing world, through a combination of assisting rural areas and impeding movement, have proven ineffective at best and impoverishing at worst. What, then, should we expect from a paradigm of global development policy likewise focused on assisting the places that international migrants come from, while imposing much stricter barriers to international movement? Is that paradigm delivering what it seeks, the convergence of living standards between poor countries and rich countries? If not, what alternative development policy might deliver convergence? Here de Soto's ideas have much more to teach than meets the eye.

2. Everything-but-labor Globalization has Failed to Cause Generalized Convergence

Global development policy is a new kind of government action, born after World War II in the world's richest countries. It comprises direct measures to extend the prosperity of people born in places where modern economic growth has taken root to people born in places where it has yet to begin. In the broadest terms, it seeks convergence between the living standards of people from rich countries and those of people from poor countries by assisting poor countries.[2]

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[2] Convergence is not the only possible criterion of global development; even if one country is being left behind by others, it could still be getting richer than it once was. But a world without convergence is a world in which some countries are permanently poorer than others, which would suggest failure of the global development policy project in the eyes of many of its leaders and practitioners.

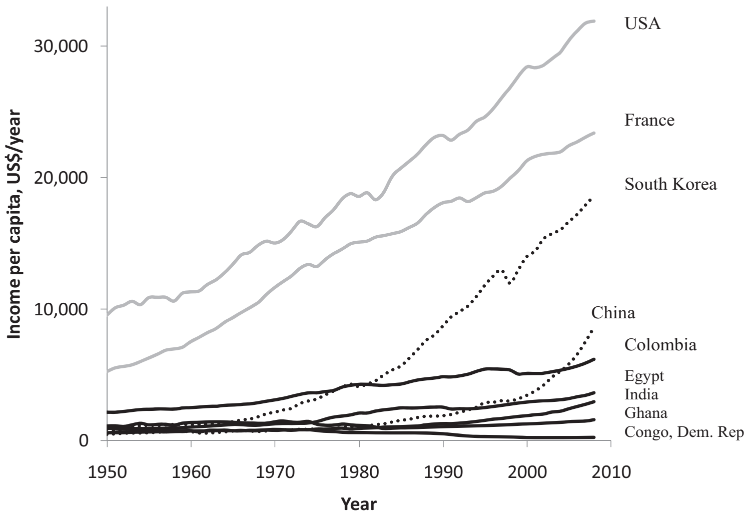
The principal tool of this convergence project has been that of removing international barriers to the movement of things that affect workers' productivity and earnings. These include various forms of financial capital, goods, services, technologies, and institutions. Rich countries' traditional development agenda—give aid, encourage investment, extend trade preferences, transfer technologies—is roughly an effort to lower international barriers to the movement of various factors of production other than labor. Labor mobility remains strictly curtailed, with temporary and permanent work visas to all rich countries vastly oversubscribed. Pritchett (2006, 13) calls this "everything but labor globalization." It is the international analog of the domestic policies described by de Soto to transfer resources to rural areas as an alternative to—and in order to prevent—internal migration.

Barriers to the international movement of factors other than labor have indeed crumbled. Private capital is far more mobile today than it was a generation ago (Caselli and Feyrer 2007; Giannone and Lenza 2009). Foreign aid flows have topped US$100 billion per year (OECD 2009), an all-time high. Trade barriers remain but have collapsed in the past few decades (Clemens and Williamson 2004; Bergin and Glick 2007). Access to schooling has spread massively: Net primary school enrollment in sub-Saharan Africa went from 50 percent to over 70 percent in the last twenty years, and net secondary school enrollment in Latin America doubled during the same period (World Bank 2009). Finally, institutions and technologies from rich countries have spread rapidly to poor countries. In 2008, the world had fifty more countries that were electoral democracies than in 1989 (Freedom House 2009). Access to technologies like vaccines and cell phones has skyrocketed, even in the poorest corners of the world.

The problem is that these changes have decisively failed to bring about generalized convergence. Certainly, people in a handful of developing countries have seen their living standards converge with those of people in the richest countries. This has happened in South Korea, Singapore, and China, and to a less dramatic degree, in Botswana, Mauritius, Chile, and Tunisia. But for most people in most poor countries, divergence of living standards is the big story (Pritchett 1997). Figure 1 shows the course of average real incomes in selected countries, highlighting the typical experience of nonconvergence contrasted with exceptional convergence experiences. Figure 2 shows the trajectory of the earnings of a typical low-skill worker—a bus driver—in several countries in the latter years of the twentieth century. Although levels of health and education have converged (Kenny 2005), incomes generally have not.

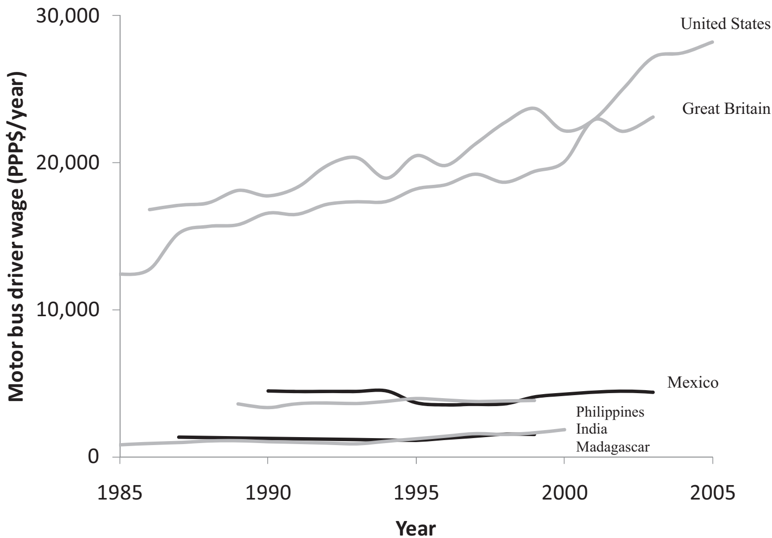
This is not at all to say that the traditional development agenda has no merit. Health and education have inherent value, regardless of their effects on income convergence. And there is evidence that somewhat more income divergence would have occurred if barriers to trade and capital flows had not fallen (Slaughter 1997; McCaig 2009; Henry and Sasson 2009).

Figure 1: Long-run divergence of GDP per capita, with a few exceptions



Incomes measured at 1990 purchasing power parity-adjusted U.S. dollars. Sources: 1950–2003 numbers from Angus Maddison (2003). *The World Economy: Historical Statistics*. **Paris: OECD. 2004–08 numbers take growth rates from the Penn World Table 6.3 and apply them to the Maddison (2003) figure.**

Figure 2: Divergence of low-skill wages



Source: Occupational Wages around the World (OWW) database. Wages shown are average monthly wages for a "motor bus driver" (occupation code 111, wage "x4wuus"), converted to current U.S. dollars at purchasing power parity using the PPP conversion factor (GDP) to market exchange rate ratio (PA.NUS.PPPC.RF) from the World Bank's *World Development Indicators 2008*. **For a description of the underlying wage data see Freeman and Oostendorp (2001).**

3. A New Development Agenda: Labor Mobility

What is clear is that everything-but-labor globalization has been entirely insufficient to cause generalized convergence betweeen the living standards of people born in poor countries and those of people born in rich countries. If such convergence remains an important policy goal, the traditional development agenda is incomplete.

In contrast to the international movements of other factors of production, the international movement of labor itself does cause the earnings of people born in poor countries to converge with those of people born in rich countries. This convergence is nearly complete, nearly certain, and very fast.

Migrants who arrive in the United States, even those from the very poorest countries, typically earn close to what observably identical nonmigrants earn (Hendricks 2002). There is no evidence that migrants to rich countries typically come from the extreme top of the distribution of *unobserved* determinants of earnings. This means that migrants from developing countries to the United States typically raise their real living standards by hundreds of percent, and by over 1,000 percent for the poorest people from the poorest countries. No other development policy realized within developing countries is able to generate anything close to this degree of convergence (Clemens, Montenegro, and Pritchett 2008).

Haiti is a case in point. Prior to that country's catastrophic earthquake in January of 2010, real living standards for the average person in Haiti *fell* by 50 percent over three decades (World Bank 2009). This means that the end result of almost a billion dollars in annual aid flows, hundreds of millions in private investment, and hundreds of millions in annual exports under special trade preferences, was sharp *divergence* between living standards for people in Haiti and people outside of Haiti. During the same period, a thirty-five-year-old male Haitian with less than high-school education typically raised his real earnings by well over 500 percent if he somehow managed to get to the United States. Hundreds of thousands of Haitians departed and reaped similar gains. This means that for generations, migration was the only major force producing substantial convergence between Haitians' living standards and the living standards in rich countries. Everything-but-labor globalization failed Haitians; migration succeeded. The same is true for people from poor countries around the globe.

And this discussion has not yet even mentioned remittances, an aspect of migration that really does bring tremendous benefits to poor places. Globally, remittances to developing countries are now well over $300 billion per year—several times larger than foreign aid (Ratha et al. 2009). Remittances are much maligned as simply contributing to useless consumerism and for reducing labor force participation by the recipient household. Yang (2008) uses a careful research design, using sudden currency devaluations during the Asian financial crisis to separate the true effect of changes in remittances from the problematic correlations analyzed by many studies. He shows that increases in remittances cause households in the Philippines not to engage in wanton consumption but to invest in children's education and entrepreneurial activity.

While many studies show a correlation (a relationship that may not be causal) between increased remittance receipts and decreased labor force participation (e.g., Görlich et al. 2007), there is no reason to criticize this phenomenon from a development perspective. The ability to consume leisure and time at home is something that expands people's freedoms and therefore constitutes development if it does not greatly harm others. Why is it that when a spouse in a rich country no longer feels compelled to work because his or her partner earns enough to support the household, this is seen as a sign of success, but when migration allows the same thing to happen in a developing country, it is a disturbing sign of failure? If development includes an expansion in people's ability to do what they wish with their time, as by any reasonable definition it must, then decreased labor force participation by remittance-receiving households is nothing more than a further sign of the development benefits of migration.

By neglecting migration, the old development policy agenda has omitted the most powerful tool available to spread prosperity to people from many countries. Everything-but-labor globalization has failed as a tool for generalized convergence. This compels anyone with a genuine interest in global convergence to reconsider migration policy as a development tool. Several obstacles immediately arise.

4. Obstacles to a Development Agenda That Includes Labor Mobility

A proponent of international labor mobility for development faces the same general obstacles that Hernando de Soto faced in Peru. Adjusting laws to accomodate migration in the name of development rather than defeat migration—whether at the national or international level—meets fierce resistance for several reasons.

First, many people think of development as something that happens to places rather than to people. Second, it is common to believe that the high levels of emigration must cause harm to individuals or societies. Third, few believe that enough migration can occur to be an important part of the solution for so many millions of poor people. Fourth, many believe that living standards must fall in the places that migrants arrive. Fifth, many believe that higher levels of migration would destroy societies and therefore can never be politically feasible. New research offers insight about each of these beliefs.

4.1 Do places develop, or people?

Oddly, traditional "development" metrics simply define everything-but-labor globalization to be the only kind of globalization that can affect development. They do this by defining even massive gains in income from migration to be irrelevant to development. The most common omnibus measure of economic development for a country's people is the average income of people who live *in* that country.

By this measure, a construction worker who experiences a 50 percent higher living standard by moving from rural Kenya to Nairobi has contributed to Kenya's development. But if the same worker achieves a 300 percent higher living standard

by moving to London, this is irrelevant to Kenya's development—unless that person happens to send money to people who did not leave. Clemens and Prichett (2008) show that about 1.1 billion people live in a group of countries whose income per *natural*—per person born in those countries, wherever they are—collectively is 10 percent higher than GDP per *resident* of those countries.

It gets worse. As Lant Pritchett has pointed out, standard poverty statistics can actually define an *increase* in one person's income to constitute an *increase* in poverty—if that increase arises from international movement. Suppose a Ghanaian earning US$7/day at U.S. prices triples her real income by moving to the United States and earning US$21/day. She came from far above Ghana's poverty line of roughly US$3/day (measured as purchasing power at U.S. prices), but she ended up below the U.S. poverty line of about $30/day for a single adult (Clemens 2009). Thus there is one less person in Ghana who is "not poor," and one more person in the United States who is "poor." The result of her move is that the fraction of people in poverty in both countries rises, even though all that has happened to anyone's income is that one person's income tripled.

Such measures of development conflict with mainstream definitions of economic development, which make no reference to places. The leading textbooks on development economics define "development" clearly around people. Ray (1998, 7) defines development as an increase in "the income, well-being, and economic capabilities of peoples." Perkins, Radelet, and Lindauer (2006, 12, 40) define it as a rise in "per capita income and product" along with "improvements in health, education, and other aspects of human welfare" affecting people's "freedom to live the lives they desire." For Todaro (2000, 16), economic development occurs when three aspects of people's lives improve: "sustenance" or basic needs of food, shelter, health, and protection; "self-esteem" or a sense of not being used by others as a tool for their own ends, stressed by Denis Goulet; and "freedom" or the ability to choose freely without constriction by material conditions or servitude, emphasized by Sir Arthur Lewis. Nobel laureate Amartya Sen (1999, 36) has influentially argued that the "expansion of freedom" is "the primary end and the principal means" of development.

Nothing in these definitions suggests that improvements by people in one place inherently constitute development to a greater degree than those made by people in another place. If we reflect for a moment, a free choice to move from one place to another in order to secure better living conditions—comprising the large majority of all migration from poor to rich countries—fits every aspect of these definitions. Such migration *constitutes* development. Definitions of development that define away the effects of labor mobility apart from remittances, though such definitions are common, have little theoretical justification.

4.2 Does migration generally harm migrants or nonmigrants?

Another common view is that migration imposes such large private costs on migrants that the *net* private benefits of migration are broadly uncertain. A variant of this view posits that migration generally imposes such large costs on nonmigrants in

the origin country that the net social benefits of migration are broadly uncertain.

Many migrants live in the shadows as undocumented workers, many work very long hours in difficult conditions for low wages, and many spend long periods in unfamiliar environments separated from their families. Observers in rich countries often find it difficult to believe that migration of this sort could bring substantial benefits to developing country workers, and they attribute migration choices to murky, irrational forces such as a "migration mentality."

The evidence falls decisively against these ideas. The opportunity to migrate from poor to rich countries is vastly oversubscribed. In 2007, for every one visa the United States granted through its annual Diversity Visa Lottery, there were two hundred applicants. For each of the last several years, the U.S. Department of Homeland Security has reported roughly 400–500 deaths occurring in the process of crossing the U.S. border from Mexico. In 2008, the waiting list for naturalization applications to the United States stood at 2.5 million people.

This tremendous unmet demand for migration means that whatever conditions migrants face at the destination, either migrants are generally irrational, migrants are generally misinformed about what they are getting into, or migrants are far better off at the destination than they would be if forced to choose their best alternative at the origin. No serious research suggests that migrants are systematically less rational than nonmigrants. And the only rigorous study comparing migrants' earning expectations to actual earnings—taking advantage of New Zealand's randomized visa lottery, so that each person's *ex post* increase in earnings is uncorrelated with his or her *ex ante* expectation of the increase—shows that poor migrants from Tonga expect to earn about 50 percent less than they actually do earn, not more (McKenzie, Gibson, and Stillman 2007).

Especially in today's world of voice-over-Internet calls and massive penetration of mobile phones in migrant-origin countries, it is fantastic to think that migrants generally receive little information about the conditions that await them at the destination. Rather, a principal reason why many rich-country observers find it difficult to imagine that migrants are made enormously better off by arriving at difficult working conditions in the destination might be related to difficulties they face in imagining what it is like to live on $2 per day at U.S. prices. This standard of living is the best available alternative for roughly 40 percent of the world's population (Collins, Morduch, Rutherford, and Ruthven 2009), but lies far outside the experience of essentially all observers born in rich countries.

More common is the objection that the act of migration harms nonmigrants, counteracting at the social level the individual benefits of migration. Two common forms of this idea are the concern that migration causes poor political institutions by providing an escape valve for those who would otherwise exert pressure for reform at home (e.g., Li and McHale 2009), and the concern that skilled emigrants erode the human capital base required for development at home (e.g., Bhagwati and Dellalfar 1973).

A profound difficulty with arguments of this type is that stopping migration, by itself, does little to address the complex underlying causes of poor institutions and

poor incentives for human capital accumulation in developing countries. If emigration per se greatly damages institutions and public services, then stopping emigration per se—removing the emigration choice, forcing people to live in a place they prefer not to live—must greatly raise the quality of institutions and public services. If movement substantially causes the problem, stopping movement by itself must substantially solve the problem.

But that is not credible. Why is it that no one would contemplate raising the incentive for better public policies in inner-city neighborhoods of the United States by forcing people to live there and pressure for reform? Why is it that no one would consider improving conditions in those neighborhoods by forcing the smartest inner-city children to remain there and apply their brains exclusively to ghetto problems? Such policies are off the table because it is intuitive to many people that inner-city neighborhoods have complex underlying problems, of which the desire of many people to leave those neighborhoods is a symptom, not the fundamental cause. And if the problems of the inner city are complex, the problems of the world's poorest countries are far more complex.

If mass migration wrecked societies, it would be nowhere more obvious than in Sweden. Sweden was not always among the most highly developed countries on earth. In the early nineteenth century, it was a poor backwater of the European periphery, where real living standards for an unskilled worker were roughly one-fourth of those for the same worker in the United States (Williamson 1995, 1997), comparable to today's gap between Mexico and the United States (Clemens, Montenegro, and Pritchett 2008). In the subsequent half-century, opportunities abroad—coupled with falling transportation costs and a lack of policy barriers to migration—fueled extremely high migration rates out of Sweden. Roughly one-third of the population simply left, never to return (Hatton and Williamson 2005). Yet today Sweden stands near the top of the United Nations Human Development Index. There is no evidence whatsoever that Sweden could have been made even more socially developed by restrictions on migration, whether engineered at home or abroad.

Migration is a choice, a choice of where to live. And if migration greatly harms development, free choice must harm development, so that the removal of choice—forcing people to live where they would rather not—must greatly help development. The burden of proof lies on anyone making this very strong claim (Clemens 2009). For example, even the African countries that have lost vastly more health professionals relative to their populations than others have no worse health indicators—in fact, they have more health professionals at home and better health indicators (Clemens 2007). There is little evidence that highly trained, tertiary-care health professional emigration affects Africans' health to any significant degree relative to the numerous other large influences on Africans' health that are unrelated to emigration. These other influences include the skewed geographic distribution of health professionals within countries, poor efforts at disease prevention, lack of proper pharmaceuticals, warfare, corruption, inadequate or absent performance incentives, and a long list of other factors of which health professional emigration is a symptom.

4.3 With so many poor people in the world, can migration be large enough to make a difference?

A very common reaction to the idea of migration policy as development policy is some form of the statement, "Not everyone can come here." It is certainly true that moving to the United States is not a feasible poverty reduction strategy for every poor person in Mexico or any other developing country. Some of those people would not choose to migrate even if they could, and the gains to migration might decrease markedly if everyone who wished to migrate could do so. Both of these issues are hard to measure quantitatively with existing evidence.

But even if 100 percent of poor people cannot benefit from a policy, this fact alone contains little information about the desirability of that policy. The fact that it is impossible for every black American to be the CEO of a corporation does not justify actively preventing even one black American from a becoming a CEO. The fact that it would be impossible for the entire unemployed population of the United States to find a job in Manhattan does not justify actively blocking even one jobseeker from entering Manhattan. Instead, we have open institutions that punish anyone who regulates access to jobs or neighborhoods based on traits irrelevant to a person's contribution to society, such as being born black or being born outside Manhattan.

Asking whether a policy can benefit every last poor person is the wrong question. Suppose I want to know if a school built in the inner city was effective. The last question I would ask would be whether every last child in all the inner cities of America could hypothetically attend that school. The first question I would ask would be how children who attended that school fared relative to those who did not. For example, if a large fraction of the inner-city children from that metropolitan area who continued to college went through the school in question, that would start to suggest that that the school was effective. To assess the value of the school to children, it is much more important to know whether that school has been an important part of advancement for children in the real world than to know whether that school could hypothetically advance every last child.

We can ask a closely related question about migration. Rather than asking how many Mexicans who are poor would not be poor in a hypothetical world where everyone left Mexico, we could ask what role migration has played in the poverty reduction that has actually happened for Mexicans. It turns out that migration has been at the heart of poverty reduction for Mexicans.

Suppose we set a conservative poverty line of US$10/day of purchasing power at U.S. prices (about one-third of the true poverty line in the United States). How many Mexicans who ever rose above this poverty line did so by migrating? Clemens and Pritchett (2008) show that, out of the 23 percent of all the Mexicans living either in Mexico or the United States who have emerged from poverty and live on more than US$10/day, a very large share did so by leaving Mexico; 43 percent of those people live in the United States. If we were to add in the Mexicans who live in Spain and other rich countries, we would find that roughly half of all Mexicans who have ever

emerged from poverty—by this poverty measure—did so outside of Mexico. Thus, even if it is the case that migration cannot lift every Mexican out of poverty, it is nevertheless the case that migration has been the principal escape from poverty for Mexicans who have done so.

And this estimate is conservative, because it does not account for the fact that emigration from Mexico has caused earnings to rise in Mexico for those who did not leave. This happened both because emigrants pushed up wages in Mexico by reducing the labor supply (Mishra 2007) and because many emigrants helped people in Mexico to emerge from poverty by sending remittances. The estimate is also conservative because there is no evidence of "positive selection" of migrants out of Mexico; that is, there is no evidence that people who emigrated would have made systematically more in Mexico if they had not migrated than people who did not migrate (Clemens, Montenegro, and Pritchett 2008).

Clemens and Pritchett (2008) also show that by the same measure, 27 percent of all Indians who have escaped poverty, and live either in the United States or in India, did so living in the United States. For Haitians, the same figure is 82 percent. Migration has gone hand in hand, on a massive scale, with poverty reduction—the real poverty reduction that has occurred, not the hypothetical poverty reduction we wish for *in situ* but cannot find a way to accomplish.[3]

While it might be nice to imagine other things that could happen in Haiti that would hypothetically bring people out of poverty without necessitating departure, the fact is that those things have not happened. After Haiti's devastating earthquake, they are less likely than ever before. Migration has been, and is likely to remain, the principal cause of convergence, to date, between the incomes of Haitians and Americans. No one should doubt the power of migration to achieve income convergence. Migration deserves a sizeable seat at the table of development policy.

4.4 Do migrants harm nonmigrants at the destination?

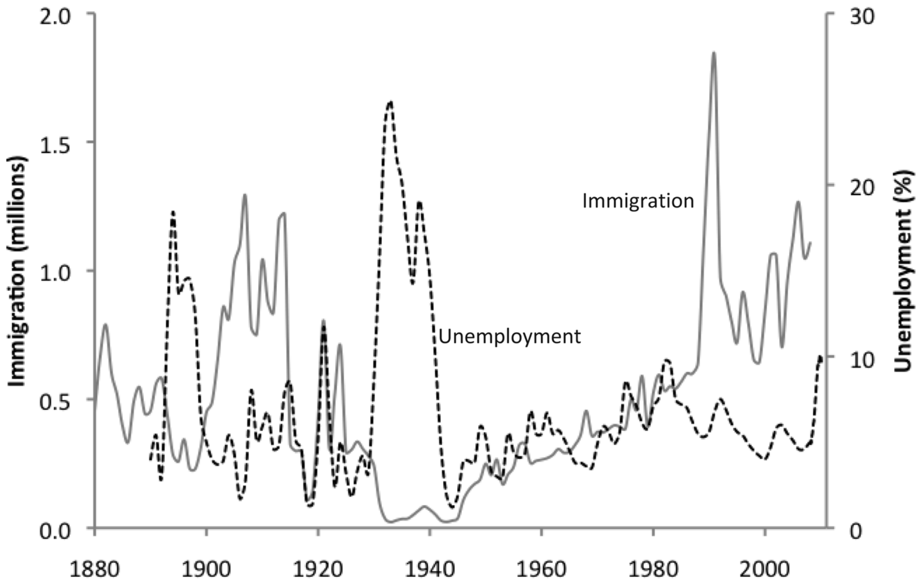
Large numbers of people in migrant destination countries believe that migrants from poor countries must do great harm to people at the destination (GMFUS 2009).

One common view is that migrants are responsible for unemployment at the destination country. In fact, Figure 3 shows that unemployment and levels of immigration in the United States have little discernable relationship over the past 120 years—except perhaps an *inverse* relationship in some periods (when jobs are

[3] These statistics represent a correlation between movement and poverty reduction, not strictly and entirely the effect of movement on poverty reduction. It is possible, for example, that some number of the Haitians living above $10/day in the United States would be living above that line if they had been forced to stay in Haiti. That said, it is implausible that a large fraction of Haitians living in the United States would be earning $10/day ($3,650/year) in Haiti. Only 1.4 percent of the Haitian population lives on greater than $10/day (Clemens and Pritchett 2008), and there is no evidence at all that Haitian emigrants typically come from the top 1 percent of the income distribution (Clemens, Montenegro, and Pritchett 2008).

scarce, fewer migrants come). Though each generation has feared that the next wave of immigrants would take away jobs, Figure 3 shows that the U.S. economy has generated enough jobs for every immigrant for over a century. It also shows that a policy of stopping immigration until no Americans are unemployed would have been equivalent to the policy of stopping all immigration permanently since 1890, since unemployment has never been zero.

Figure 3: Immigration versus unemployment, 1880–present



Source for unemployment: Data for 1890 to 1970 come from U.S. Dept. of Commerce (1975), *Historical Statistics of the United States: Colonial Times to 1970* **(Washington DC: U.S. Bureau of the Census), Part 1, p. 135, Series D85–86. Data for 1971 to November 2008, from the White House (2009),** *Economic Report of the President 2009* **(Washington DC: U.S. Government Printing Office), Table B-42. Data for Dec. 2008 to January 2010 come from the U.S. Bureau of Labor Statistics website, http://data.bls.gov/PDQ/servlet/SurveyOutputServlet?data_tool=latest_numbers&series_id=LNS14000000, accessed February 25, 2010. Source for immigration: U.S. Citizenship and Immigration Services (2009),** *Yearbook of Immigration Statistics 2008* **(Washington DC: U.S. Dept. of Homeland Security).**

Another common view is that immigrants to rich destination countries bid down wages, lowering living standards for workers at the destination. Economic research on this subject finds either zero effect or a tiny negative effect of large-scale immigration on the wages of the average worker, with a slightly larger effect for workers who have acquired the lowest levels of skill.

Borjas (2003) finds that all immigration to the United States between 1980 and 2000, both authorized and unauthorized, cumulatively caused the wages of the average American worker to decrease by 3.2 percent. Ottaviano and Peri (2008) find that the cumulative effect of all immigration to the United States between 1990 and

2006 was to lower average native-born workers' wages by just 0.4 percent—they find that immigrants are less perfect substitutes for the native born than Borjas. Both of these studies include all immigration, authorized and unauthorized. Orrenius and Zavodny (2007) study the impacts of new legal permanent residents (LPRs) from 1994 to 2000, finding that new arrivals (the majority of LPRs) had no statistically significant impact on any workers' wages, apart from a positive effect on professional workers' wages. They also find that new LPRs who were already in the United States with another immigration status had no statistically significant effect on professional or service workers' wages, but they caused a decrease of about 0.8 percent in manual labor wages. Barcellos (2009) finds that immigrants had negligible impacts on natives' wages in thirty-eight U.S. cities over twenty-six years.

These estimates have several things in common. First, their estimates of statistically significant impacts on wages fall in the range of 0 percent to 3 percent cumulatively over roughly two decades—between 0 percent and 0.15 percent per year. This figure is tiny, especially considering that the period under study includes some of the highest numbers of annual immigrants in U.S. history. Second, they are all short-run effects; Ottaviano and Peri calculate that the average long-run effect of the same immigrants on the same U.S. workers' wages is to increase their wages by 0.6 percent, as native-born owners of capital and labor adjust their investments to the presence of immigrants. Third, these effects are measured in nominal dollars and do not account for the fact that the same immigrants made many goods and services cheaper for native-born workers than they would have been without immigration, tending to raise those workers' real wages. Cortes (2008) shows that two decades of immigration lowered prices for things like child care, cleaning services, and construction in the United States to such a degree that the typical consumption basket became 0.3 percent to 0.4 percent cheaper.

Two of the above studies find that immigration reduces the wages of the least-educated Americans by more than it reduces the wages of the average American. About twenty years of immigration cumulatively reduced the wages of high school dropouts by 9 percent according to Borjas, and about 2 percent according to Ottaviano and Peri. This fact is often cited by immigration opponents who seek support among Americans concerned with U.S. inequality.

For several reasons, this fails to provide a legitimate rationale for blocking the movement of low-income people. First, similar effects accompany labor market changes that are almost universally seen as desirable. Acemoglu and Autor (2004) show that the entry of women into the U.S. labor force during the twenty years following World War II caused a decline of similar magnitude in low-skill male workers' wages. The post-World War I movement of blacks out of the South and into urban formal sector jobs traditionally held by whites was a major cause of convergence between black and white earnings (Bailey and Collins 2006), and there is little doubt that this movement exerted downward pressure on wages of urban white Americans, particularly the least educated. Yet few today would use either of these facts to block access to any part of the U.S. labor market for any woman or any black person.

Second, if indeed blocking immigration would raise the wage returns to dropping

out of highschool relative to completing highschool, such a policy is directly contradictory to other policy efforts to encourage disadvantaged kids to stay in school. A range of national government, local government, and community efforts are dedicated to raising the incentives for U.S. high school completion (Smink and Reimer 2005). Many people concerned about U.S. inequality would support such efforts; it would be odd for them to simultaneously support immigration limits that undo those efforts by lowering the relative rewards of staying in school. High school dropout rates have steadily declined in the United States over the past twenty years, at all income levels and for all ethnic groups (Cataldi et al. 2009). If immigration sped that process by decreasing the rewards to dropping out of school, this is an added benefit of immigration.

Third, the rise in inequality in the United States over the past thirty years has happened mostly at the top of the wage distribution, far from the earnings of low-skill migrants. It owes much more to an increase in the wage premium for college graduates relative to high school graduates than it owes to changes in the wage premium for high school graduates relative to high school dropouts (Goldin and Katz 2007). This type of inequality is exacerbated not by allowing immigration but by limiting immigration of a particular kind: high-skill workers.

Fourth, the median high school dropout in the United States earns $24,000 per year (Cataldi et al. 2009), even after decades of massive immigration. This is roughly five times the average living standard enjoyed by people in developing countries, after adjusting for differences in the cost of living. A high school dropout moving to the United States from Ghana, Cambodia, India, or Ecuador immediately raises his living standard by well over 300 percent (Clemens, Montenegro, and Pritchett 2008). If blocking all immigration were to be considered a legitimate antipoverty policy for the United States, it would be a meager one with enormous costs; after decades it would have raised incomes of a few of the least educated by a few percentage points, while denying opportunity to many millions of people born into vastly poorer circumstances.

4.5 Is it politically impossible for destination countries to permit more migration?

Immigrants are often accused of causing social disintegration, cultural corruption, increased welfare spending, and crime. There is extensive evidence on each of these, showing, for example, that immigrants typically contribute as much to public coffers as they take out (e.g., Auerbach and Oreopoulos 1999, Lee and Miller 2000) and that they obey the law at least as much—apart from immigration-related infractions—as the native born (e.g., Riley 2008, 193–97, Clemens and Bazzi 2008). Simply put, even recent increases in labor mobility have not managed to change the fact that the major migrant destination countries remain the world's wealthiest countries, the world's strongest democracies, and the world's most comprehensive welfare states with the firmest rule of law.

But even if past levels of labor mobility have not wrecked the destinations' societies, might greater mobility in the future wreck those societies yet? Current rates of immigration to the United States, relative to its size, are at or below decades-long rates of pre-1914 immigration that the country absorbed with great success—despite religious and linguistic differences between those immigrants and natives (Table 1). The U.S. economy is enormously bigger, stronger, more diverse, and vastly less dependent on agriculture now than it was then, meaning that its ability to absorb new workers without conflict over scarce resources is greater now than it was when there was an agricultural frontier. Britain's total removal of all barriers to labor mobility from Poland, Lithuania, and six other transition countries in 2004 has neither wrecked Britain's economy and social services nor led to major social conflict (e.g., Blanchflower and Shadforth 2009).

Table 1: Comparing recent immigration rates to historical rates

		Permanent resident arrivals			
Country of origin	Period	Total over period	per year	Average U.S. population during period	Annual arrivals per 1000 population
Ireland	1840-1859	1,695,626	84,781	23,751,163	3.6
Germany	1840-1889	4,282,190	85,644	36,819,922	2.3
Italy	1895-1914	3,335,263	166,763	83,825,250	2.0
Russian Empire	1895-1914	2,760,987	138,049	83,825,250	1.6
Mexico (*includes unauthorized*)	1990-2008	9,265,517	487,659	278,226,682	1.8

Sources: Permanent arrivals from Ireland, Germany, Italy, and Russian Empire are from Bureau of the Census (1975: Series C89–119, pages 105–06). Estimated authorized arrivals from Mexico, 1990–2008, are from DHS (2009, Table 2, page 6). Estimated unauthorized arrivals from Mexico, 1990–99 are from DHS (2003, Table B), and for 2000–08 from Passel and Cohn (2008, Table 3). Annual estimates of population of the United States from Maddison (2009).

Many fear that large-scale immigration must lead to levels of social diversity that undermine the social contract (such as Goodhart 2004), eroding support for redistributive programs such as Medicaid or unemployment insurance. This requires the simplistic view that the social contract depends on an altruistic willingness to redistribute income to people "like ourselves," one that can be broken if too many people unlike ourselves suddenly appear. But support for redistributive social programs can be based on many desires other than altruism: a desire to reduce crime, prevent insurrection, and create a safety net if we ever need one ourselves—all desires that could increase with greater immigration. Australia and Canada sustain robust social programs despite having roughly double the foreign-born population share of the United States. About half the population of Toronto is foreign-born, and 43 percent of its population is from racial minorities, while Toronto remains a society under law and offers some of the world's finest social services. Today Sweden has the same foreign-born share as the United States, about half of which come from outside the EU, and it would be difficult to claim that Swedes' support for the welfare state is nearing collapse (Legrain 2006).

But there is an even greater example of free movement without social catastrophe, an example on a much larger scale and involving populations utterly different from one another. It is little discussed.

Today in downtown Johannesburg, South Africa, black African faces fill the sidewalks. They did not get there by accident: The white population of South Africa made the policy decision to allow them free access. Until the early 1990s, a complex system of laws strictly limited the ability of black South Africans to enter, live in, and work in rich areas such as downtown Johannesburg. A 1970 law stripped most black South Africans of their citizenship and made them citizens of other, very poor countries known as "homelands" (an act not recognized by the international community, but locally enforced). An elaborate and difficult procedure was necessary for blacks to work in high-income areas, particularly in certain professions, a procedure closely analogous to applying for restricted work visas.

It is not difficult to imagine the fear that many white South Africans in the 1980s felt as they pondered eliminating these restrictions. Most black South Africans were very poor and unskilled, were profoundly different culturally and linguistically from their white counterparts, and were enormously more numerous. In terms of the relative numbers, incomes, and cultural differences, the opening of the rich portions of South Africa to unfettered movement and work by black South Africans is analogous to the opening of the United States to the entirety of Latin America, or the opening of the United Kingdom to free immigration from all of Nigeria.

Astonishingly, precisely this happened. South Africa not only eased restrictions on blacks' movement and economic participation, it eliminated *all* of the barriers and added in full permanent citizenship and voting rights for good measure. The result: no civil war, no collapse of public services, no cultural disintegration, no economic depression. Crime did rise somewhat.

But the principal consequence of this opening has been that goal that has eluded achievement by the traditional development policy agenda: convergence. Bhorat,

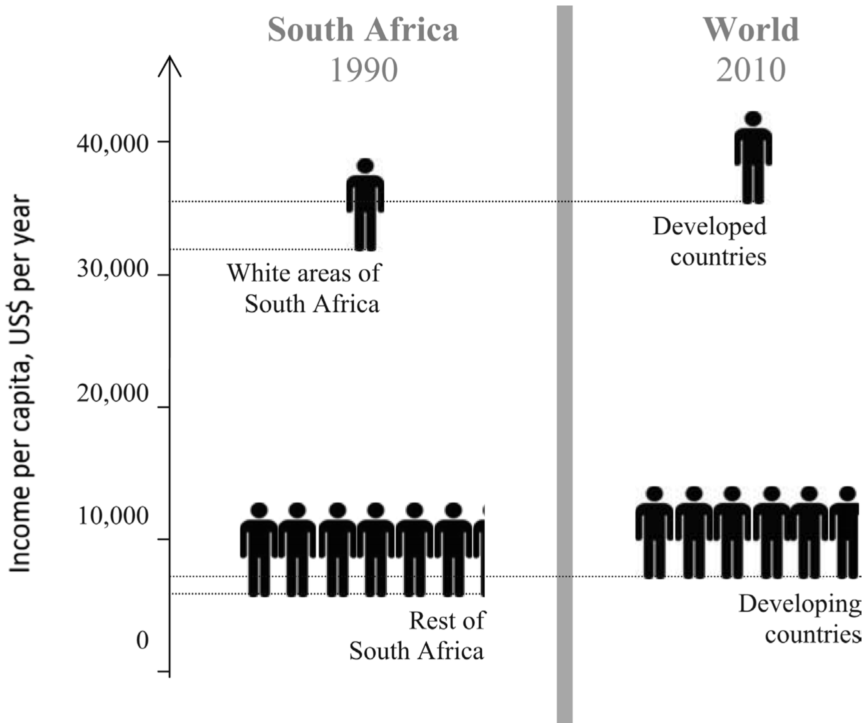
van der Westhuizen, and Goga (2007) show that poverty headcounts among black households decreased from 55 percent to 27 percent between 1993 and 2005, while the same welfare measure showed no decrease at all for whites, but rather a slight improvement. They show, in fact, that whites' economic welfare has risen since 1993 at all levels of the distribution, from the poorest 10 percent of whites to the richest 10 percent.

In other words, the opening of South Africa's white areas to free movement and labor market participation by a vastly poorer and less educated population six times greater in size has been insufficient to reduce white South African's living standards by even a tiny amount after over a decade. Meanwhile, it allowed living standards of the poor to sharply converge toward those of the rich. The elusive goal of moving toward income convergence has been achieved, and none of the worst fears of those favoring continued restrictions on movement has been realized.

Is it outlandish to draw analogies between the world at large and South Africa? The left side of Figure 4 shows the relative populations and per-capita income of the poor black areas and the rich white areas of South Africa at the end of Apartheid. The right side of the figure shows the same numbers for the developed countries of the world and the developing countries today, as defined by the World Bank. The people to whom South Africa granted not just free movement and labor-force participation, but full citizenship, were relatively neither no less poor nor less numerous than today's entire population of the developing world relative to the developed world.

Why, then, is it so unquestionable that comparatively modest increases in labor mobility at the global level must usher in social, political, or economic collapse? Even a tripling of work visas between poor and rich countries—certainly not requiring anything like immediate full citizenship in rich countries for the entire developing world—would not approach the magnitude of what South Africa did. To the extent that there have been any negative impacts in the white areas of South Africa, then, the impacts of any global easing of labor mobility that is seriously being contemplated should be far smaller. Each such visa would be a step toward the elusive goal of convergence.

Figure 4: Relative incomes and relative populations: Today's world looks much like South Africa just before Apartheid ended



Sources: Income: Income figures are all in 2005 US$ at Purchasing Power Parity or PPP (reflecting the amount that would be necessary in the United States to purchase the same standard of living). White areas of South Africa 1990: PPP$31,502, rest of South Africa: PPP$3,977. High-income OECD: PPP$35,650, developing countries: PPP$5,319. Per-capita income figures for South Africa in 1990, measured in 2000 rand, are from van der Berg and Louw (2004), Table 1. The ratios of these figures for "black" (6,008 rand), "colored" (11,404 rand), and "white" (51,951 rand) to the national "total" (12,903 rand) are then applied to the national figure for GDP per capita in 1990, measured in 2005 US$ at PPP, from the *World Development Indicators 2009* (PPP$7,824), to estimate GDP per capita by racial group. The "white areas" figure is estimated as the "white" estimate of GDP per capita, and the "rest of South Africa" figure is estimated as a population-weighted average of the estimates of GDP per capita for "black" and "colored." "Indians" are excluded for simplicity. Per-capita income figures for High-Income OECD countries and Low & Middle Income ("developing") countries for 2008 come from the World Bank's *World Development Indicators 2009*, and estimates for 2010 are created by applying to the 2008 figures the estimated growth rates in 2009 and 2010 for "advanced economies" and "emerging and developing economies" found in the International Monetary Fund's *World Economic Outlook* for September 2009, Table 1.1. Population: There were 31.6 million "black" and "colored" South Africans in 1990, and 5.0 million "whites," thus 6.3 blacks and coloreds for each white (van der Berg and Louw 2004). There were 5.62 billion residents of Low and Middle Income countries, and 0.97 billion residents of High-Income OECD countries, in 2008, thus 5.8 developing-country residents for each High-Income OECD resident (from the World Bank's *World Development Indicators 2009*), a ratio that would not substantially change between 2008 and 2010.

5. Conclusion

Hernando de Soto's vision of formalizing informal economies is ultimately a vision of facilitating rural migrants' access to market participation in urban areas. His life's work has been to show that the alternative, blocking such access while meagerly aiding rural areas, is bankrupt as a national development strategy. This is the biggest idea in development that no one has really tried at the global level.

Hatton and Williamson (2005) have shown that labor mobility in the long nineteenth century was crucial to income convergence among people in rich countries of the Atlantic economy and people born in then-poor countries like Ireland, Sweden, and Greece. In the late twentieth century we have tested whether labor mobility is necessary for income convergence by building an international system of development policy based on assisting poor areas while doing everything possible to limit labor mobility.

And we have come up short. Incomes of most people born in most poor countries are not converging toward those of people born in rich countries. The next step for global development policy is to take labor mobility seriously as a powerful weapon in the long fight to give all people on earth the same opportunities that many readers of this article now enjoy.

Are Americans capable of considering migration policy a tool for development policy? Yes: they already do, and they have for centuries. If we conceive of development as improving the living standards of people rather than places, then development has stood at the center of America's immigration policy from the beginning. In the common at Cambridge, Massachusetts, stands a proud monument to the role of U.S. immigration in fighting the poverty resulting from the Great Irish Famine. At least one in five Americans has known an immigrant in their own family—that is, about 22 percent of the U.S. population is either an immigrant, has an immigrant parent, or has an immigrant grandparent.[4] Today the United States hosts over 365,000 refugees and asylum seekers from across the globe (UNHCR 2007), more than the entire population of Pittsburgh. This policy would be inexplicable if Americans did not deeply feel that migration policy can transform the well-being of people thrown into unfortunate circumstances through no fault of their own.

In fact, migration could be a more politically palatable development tool than other tools, such as foreign aid. Foreign aid is costly and requires government to actively coerce taxpayers to fund payments abroad. Allowing immigration saves money because it is much cheaper to allow than to prevent. Blocking migration can

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[4] The U.S. Census Bureau Statistical Abstract of the United States 2009, Table 39, estimates the foreign-born fraction of the population as 12.5 percent. Lee and Miller (1998, 187) estimate that for every foreign-born person, there is an additional 0.77 person who has either at least one foreign-born parent, or at least one foreign-born grandparent, or both. Thus 12.5% × (1.77) = 22.2% of the U.S. population is two generations or fewer from an immigrant. This estimate is conservatively low because it does not count U.S.-born children who have a foreign-born sibling.

be much more costly than aid: The United States spends $15 billion per year on border enforcement (Hanson 2009), but spends just $6 billion a year on aid to the least developed countries (OECD 2009, 217). And unlike taxing to fund foreign aid, allowing immigration requires no active coercion by the government; on the contrary, allowing immigration requires reducing active coercion by the government.

The clearest step toward a migration policy that includes development, and a development policy that includes migration, is for rich countries to greatly raise the number of temporary work visas available to people from poor countries. Even working for limited periods in rich countries can offer spectacular earning opportunities to developing-country workers (Clemens, Montenegro, and Pritchett 2008) while raising economic growth in the destination country (Hinojosa-Ojeda 2010).

Currently very few temporary work visas are accessed by people from the poorest countries. Just 0.7 percent of U.S. temporary work visas now go to people from low-income countries, even though those countries comprise 14 percent of the world's population.[5] But the remarkable fact is that those people, once in the United States, are almost as productive as people with the same observable skills who are from richer countries. Hendricks (2002, Table 1) shows that while immigrants in general typically earn 98 percent of the earnings of U.S. natives with identical observable skill, this number is 90 percent for immigrants from low-income countries. Given that immigrants from low-income countries concentrate in occupations with lower returns to observed skill, this small difference is not surprising.

The big story is that once a person of a given education level is in the United States doing a given job, it matters little to that person's productivity whether he or she is from a low-income country or from a more developed country. This creates an opportunity: By creating a mechanism to weight visas to some limited degree toward low-income countries, a developed destination country can do more for development without giving up any of the economic benefits of immigration.

One clear way to leverage migration policy for development would be to create a new class of immigration policy, which might be called a Golden Door Visa (Clemens 2010). It takes its name from an 1883 poem by Emma Lazarus about the Statue of Liberty in New York. Its purpose would be to reserve a certain number of work visas for people from the poorest countries, a number that could change annually and respond flexibly to economic conditions in the destination country. Reserving a limited number of visas for this purpose could be done in the context of an increase or decrease in the number of overall entry visas. It could be done for either permanent or temporary visas, though a focus on temporary visas would maximize the development benefit.

It would fill a role not served by existing visas. The U.S. "Diversity Visa" requires secondary education and hundreds of dollars in fees, putting it out of reach of the extremely poor; refugee visas are only available to those facing warfare or group-based

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[5] The United States gave 1.9 million temporary work visas in 2008, of which 12,602 went to people from countries defined as "low-income" by the World Bank—those with Gross National Income per capita below US$905 (DHS 2009, World Bank 2009).

persecution at home. A Golden Door Visa would simply create a legal mechanism for the United States and other destination countries to directly leverage one of their most powerful tools for poverty reduction to promote global prosperity.

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The Microeconomics of Public Choice in Developing Economies: A Case Study of One Mexican Village

Tyler Cowen[*1]

1. Introduction

So much of development economics focuses on the macroeconomic level and national policies. For instance, one argument is that freer countries grow and overregulated, statist economies stagnate or regress. The empirical growth regressions focus on how GDP per capita correlates with national policies, as might be defined by one of the extant "freedom indices." (See Lawson in this volume.)

For all the importance of this line of work, it is missing some relevant factors, namely local government and local institutions. If we are to understand economic development and underdevelopment, we need a better understanding of local institutions and how they operate. In this brief paper, I'll outline some of what I learned about one pueblo in Mexico, San Agustín Oapan, in the state of Guerrero, Rio Balsas region.

For background, Oapan has an active population of about one thousand five hundred people, three thousand if the itinerant merchants were all back home at the same time. The pueblo lies along the Rio Balsas, and the residents have grown corn since pre-Hispanic times. Squash, pumpkins, watermelons, and other crops are grown as well. The terrain has mountains, canyons, and very large cactuses and is renowned for its beauty. Most of the cash income in the village comes from selling crafts such as painted pottery, bark paper drawings ("amates"), and painted stones, often to North American tourists in locales such as Acapulco and Cancun. Until 2007, the village was

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[1] For useful comments, I am especially grateful to Jonathan Amith, Marcial Camilo Ayala, and Inocencio Chino Jimenez.

at least three hours from any major paved road, although with the new road, Oapan is only a bit more than an hour from Iguala, a city of 60,000. A typical Oapan family might have seven members and a yearly income of two thousand dollars. There is poverty, but in the last generation, starvation has disappeared, mostly because of the income from crafts. My interest in the pueblo dates from my role there as art collector, but I've also learned a fair amount about village politics, and I am using this paper to pass along that information.[2]

I view the political lessons from Oapan as complex rather than simple. We do observe a largely dysfunctional politics. Much of Mexican politics has been about extracting wealth from productive individuals rather than supplying public goods, such as roads, schools, or refuse collection, to rural communities (see Andreski 1966), and we see this tendency throughout the country, including in Oapan. Nonetheless the villagers have established some (partially) effective defense mechanisms against the external appropriation of village resources. The net effect of those protections, however, is to make internal politics in the village even more dysfunctional. One general lesson is that in an overall climate of wealth predation, it is very difficult to establish good local institutions.

Rural Mexican municipal government, as found in Oapan and numerous other pueblos, presents some special features:

- Local governmental structures are extremely weak, relative to the outside forces they confront
- Corruption is a paramount danger
- Local office holding is a cost rather than a benefit, under the "cargo system," to be explained below
- Local democracy is participatory
- The political spectrum is usually defined along issues of preservation versus change, rather than along traditional left- or right-wing ideologies
- The lines between politics, religion, and kinship are blurred; personal quarrels dominate politics

These features, taken together, have created a political environment that discourages the production and accumulation of wealth. It also limits the incentive to provide local public goods. In other words, many of the problems of economic development are the problems of establishing effective local governance. Let's start with the cargo system and then see how politics in Oapan operates.

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[2] I've visited the village a dozen times, and my longest stay there was three weeks. I've conducted extensive interviews with North Americans who have lived in the area and also with numerous village residents. I present the artistic history of the village (and also some discussion of its politics) in my book Markets and Cultural Voices: Liberty vs. Power in the Lives of the Mexican Amate Painters (Cowen 2005).

2. The Cargo System

The system of town government is derived from both pre-Hispanic and colonial influences. Town politics are participatory and democratic, and decisions consume a lot of time and energy. A decision to involve oneself in politics places one's time and money at the mercy of community demands. Furthermore, the community is sufficiently small that a personal relationship or enmity usually precedes a political one. In effect, weak systems of local government are superimposed on social and kinship-based quarrels.

Unpaid volunteer labor, under the threat of community pressure, is the core form of political service. The comisaríos, the mayordomo, and the fiscál are the most important political posts. In addition to these offices, volunteers record transactions (the secretarío), serve in the village band, perform songs and prayers, and help the major officeholders prepare for fiestas. Among other tasks, preparations for feasts include sewing, making candles, baking bread, repairing public buildings, and carpentry.[3]

Most notably, public expenditures often come directly from the pocket of the officeholder, rather than from the general till or from tax revenues. The officeholder can draw up fines levied locally, but often that money runs out. The result is that holding political office is more of a cost, or a form of coerced contribution, than a means of enrichment. Officeholders, for instance, pay for most of the town fiestas, one of the most prominent public goods. This practice, common to many Mexican and Central American pueblos, is known as the "cargo system."

Most duties in the cargo system are organized around local public goods. The comisarío is the political leader, akin to a mayor. Comisaríos are responsible for acting as town ambassador to the outside world, making sure town affairs run smoothly, organizing the fiestas, enforcing the laws, deciding when a tribunal should be called, preventing disorderly behavior, and, most of all, resolving disputes.[4]

The comisarío receives the complaints from villagers. In theory, the comisarío receives payment from the fines he collects, but very little of this income ends up in his hands. When individuals are censured for disorderly conduct, they are to pay a fine, at the discretion of the comisarío, but no more than ten to twenty dollars. These fines are considered morally legitimate, but most comisaríos see little of this money. The helpers of the comisarío demand that the money be spent on them in the form of small tips or gifts of food. Usually there is little or nothing left over from

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[3] See Good (1993, 314–316).

[4] Serious crimes, however, are brought to the county seat at Tepecualcuilco. On institutions in neighboring Ameyaltepec, which are similar in form, see Good Eshelman (1988, chapters 6–9).

the fines and so again, the comisarío is responsible for expenditures at the margin. Furthermore, social pressures discourage the comisarío from levying excessive fines. [5]

Accepting the comisarío office, therefore, is a very costly decision, and for many officeholders, it effectively amounts to bankruptcy. It commonly involves expenditures of several thousand dollars on the village fiestas or incidental expenses for that year.

Another official, the mayordomo, takes care of the chapel of his barrio, opens and closes the doors of the church at the appropriate times, and contributes expenses toward the fiestas. He buys fireworks, flowers, and food and drink for ceremonial events, including for church services every Sunday. The mayordomo also receives no pay. In fact, one former mayordomo, Inocencio Chino, estimates that the post cost him about two thousand dollars in direct expenses, not counting his time and energy. The mayordomo's family and social network will help him bear these costs to some extent, but the mayordomo must later repay these favors with future reciprocal assistance, so many of the private costs of these posts are simply postponed.

The fiscál organizes some religious festivals and takes care of the church. He is responsible for opening and closing the church every day, caring for offerings, keeping the church clean, taking care of the church "saints" ("santos," or statues, used in some fiestas), coordinating the activities of the church singers, and receiving offerings to the saints. Again, this is more of a burden than a benefit.

The powers of these officeholders are tightly circumscribed, and thus Oapan government is constrained and responsive to public opinion. Individuals serve a single year term, which typically is not repeated. Major officeholders must meet the informal approval of what pueblo members call "the authorities" ["las autoridades"]. These are respected individuals, typically older, who have held important pueblo posts in the past. They are the ultimate court of opinion through which all political decisions must pass, if those decisions are to command long-run community support.

The obvious cost to the cargo system is that it is ill-suited for producing local public goods. The quality of the town school is low, and usually no teacher is present. The result is that most of the villagers have only minimal literacy. The village gullies have an increasing quantity of garbage and plastic that does not get picked up or otherwise processed or restricted. Villagers themselves debate which local public goods should be the priority, but in practice, the money goes to the yearly town fiestas, the fireworks, the candles, and so on. In the cargo system, the incentive to serve the public interest simply isn't that strong, if only because the officeholder pays the bill for most proposed benefits at the margin.

The cargo system may appear strange from our vantage point, but it is not without rationale. In lieu of using tax revenue, the community conscripts labor and forces a few individuals each year to pay an especially large part of the total tax bill through "donations" of their time and money. It is not obvious that the community

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[5] A number of "topiles," or assistants, help the comisaríos implement their decisions.

has the tax infrastructure to raise money and pay full salaries each year; a lot of income is in-kind or produced within the household. Technologies of measurement and monitoring simply aren't very advanced in Oapan, if only because of limited literacy. Furthermore, many villagers would rather do a year's worth of work as an officeholder than pay higher taxes throughout their lives.

The cargo system also eases monitoring costs. The authorities assess the lifetime contribution of each family head and then decide which subsequent burdens, in the form of political office, would be fair or appropriate. Since most of the cargo expenditures take the form of highly visible outputs, such as fireworks, beer, candles, and flowers, villagers can directly observe how good a job the officeholder has done. Monitoring the labor contribution, in the form of the cargos, is possibly easier than monitoring tax contributions.

The cargo system also makes it easier for the community to implement discretionary taxation. The injured, the sick, the alcoholic, and the totally destitute are not typically expected to execute major cargos. No one wants these people to hold major offices, so the decision to excuse them is noncontroversial and "incentive-compatible." It would be harder, however, to use discretion to adjust the tax burden of each family each year. Everyone might agree that an alcoholic should not hold a major cargo, but not everyone will agree what alcoholism should imply, if anything, for a pecuniary tax burden. The cargo system thus helps an inevitably discretionary system to economize on decision-making costs. The point is not that the system is efficient but simply that it has some rationales rather than none, and that helps explain why it persists.

Some anthropologists, writing about other Mexican villages, have treated the cargo system as a means of purchasing social status and rising in the hierarchy of the village. This hypothesis, however, underrates the expenditures and the hassles relative to the status. We need to understand the marginal incentives of the cargo system, not just focus on whether some people enjoy being the leader.[6]

The operation of the cargo system resembles a university department in some regards. High-status individuals are seen as eligible for cargos, much as an academic department might pressure successful members to become department chair for several years. Senior members of the department think about who has not yet been chair and who might serve as a plausible candidate. (Note that the individuals who most want the job are not necessarily most wanted by others.) They then try to recruit this individual with a mix of pressure and persuasion, most of all appealing to guilt and a sense of community service.

[6] Greenberg (1981, chapter one) offers a systematic survey of hypotheses about status and the cargo system; see also Foster (1967, 207–11). Some writers have mentioned a redistributivist motive for the cargo system; see Greenberg (1981, 7–12). Brandes (1988, pp.55–56) offers some evidence against the egalitarian and "economic leveling" explanations of the cargo system.

Being chair offers some kinds of status but not others. Saying no when one is due to be chair or is an eligible candidate involves a negative stigma. Furthermore, there is status in being *asked*, even though the job itself brings little status. Nonetheless, being a good chair is not the primary means to status in academia, just as being comisarío is not the primary means to status in the pueblo. In Oapan social networks, wealth, articulate speaking, and effective politicking produce more prestige than does office holding. Whether as a department chair or as a comisarío, it is easier to lose prestige through one's service than to gain it. Both jobs are more of a burden than a blessing. In both cases, individuals usually look forward to the end of their term.

Most individuals accept the cargos simply because they have to. They can leave the village altogether, as many people do, but otherwise an eligible candidate is expected to take the job. Failure to take the job would result in a loss of personal standing within the village. And while the job is costly, many individuals (until lately) had not expected to accumulate much wealth in any case. In other words, the feeling was that a person could either lose his wealth through a cargo or lose it in some other fashion, so why not accept the cargo? In any case, excess wealth tends to be soaked up by the demands of relatives for aid when bad times or medical emergencies appear, as they very frequently do in Oapan. In the village, the effective "marginal tax rate" on wealth accumulation is very high, whether the demands on that wealth come through the cargo system or not.

Performing a major cargo duty does bring some benefits. A comisarío, for instance, has considerable influence for his year in office and some influence beyond that, if he was successful in building coalitions. People come to him to ask for favors, much as they might go to a departmental chair. Many comisaríos enjoy being a center of attention in this fashion.

For better or worse, a cargo system is hard to get rid of, once in place. Most of the minor cargo burdens fall on individuals who are between twenty and thirty years of age. The major cargos fall on individuals who are somewhat older but still relatively young, say in the range of thirty to fifty years old. The elderly typically already have served their major cargos. As a result, this demographic distribution of the tax burden makes the system very stable. In essence, the elderly already have paid their taxes for life, and they are receiving a steady stream of benefits from the labor of others. Thus they tend to oppose change, for the same reasons that the elderly oppose changing social security systems in the wealthier Western democracies. Reformers have found age-linked social security systems to be among the most difficult institutions to change or improve, and the cargo system is "sticky" for related intergenerational reasons.

3. Why Weak Government Has Some Benefits for the Villagers

Probably the biggest benefit of the cargo system has to do with protecting the village against the possibility of internal corruption. Oapan residents sometimes

benefit from having a weak and ineffective government. Limiting the power of the pueblo officials, and giving them little or no access to a "public purse," makes it harder and less worthwhile for outside parties to purchase the loyalties of those individuals.

The pueblo faces periodic confrontations with the outside world, during which time the entire future of the pueblo may be at stake. External institutions, such as the Mexican federal government or General Motors (more on these below), are more powerful than the pueblo itself. To the extent that individuals in power are corruptible, the pueblo will never have the resources to purchase their loyalties. By checking their political power so tightly, the pueblo tries to ensure that corruption cannot be used against them. In other words, "buying the comisarío" simply isn't worth that much. During normal times, this weakness of power may lead to ineffective government with weak powers and lots of squabbles, but during critical periods, the system allows the loyalties of the leaders to stay connected with the interests of the pueblo. This is a general theme stressed by James C. Scott in his recent book *The Art of Not Being Governed* (2009), which focuses on how poorer communities resist absorption or corruption at the hands of larger and wealthier outside cultures.

Let's look at two of these critical episodes when the future of the village was at stake in more detail.

The first episode came in the early 1990s when there was talk of displacing the entire community through construction of a dam. The dam would have been built at San Juan Tetelcingo, a nearby Nahua pueblo, to meet the growing national demand for electricity. It was hoped that the World Bank would support the project with a loan. The proposed dam would have inundated most of Oapan, requiring the relocation of the residents. Oapan residents would have lost their homes, their growing fields, their ancestral graves, and, from their point of view, their cultural identities. They would have been lumped together with displaced individuals from other villages on a piece of unpromising mountainous land with no water located nearby. Given other recent examples of these resettlements, it's not obvious that the displaced residents would have received much compensation. The state- and county-level politicians, however, generally favor such infrastructure projects because they can receive kickback income from the contracts, either directly or indirectly.[7]

In response to the dam crisis, the villagers allied with some neighboring villagers and formed a council to organize protests, starting in October of 1990. The group consisted of numerous town comisaríos and other local leaders of note. The county government was not trusted and so the villagers took the matter into their own hands. But the Council wasn't so much a governmental entity as a loosely organized group, deriving its authority from the villagers and their leaders themselves. The primary personal returns for Council members came from their standing in the community

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[7] In addition to interviews, I have drawn on Hindley (1999) for information about the dam and the protests.

and it proved difficult for outside powers to "buy out" the Council. There was no powerful leader who could be bought and who could then betray the pueblos.

The Council basically won the battle. In addition to organizing demonstrations, roadblocks, and protests, the Council drew up a petition to then-President Carlos Salinas, asking him to cancel the dam. The Council organized several roadblocks of the Mexico City-Acapulco highway, which won press attention, generated support from environmentalists, and caused some members of the opposition PRD party to take the side of the villagers. A march to Mexico City garnered further attention.

Eventually the state governor (of Guerrero) yielded to pressure and cancelled the dam, and the federal government of Mexico ratified this decision. Furthermore, funding interest from the World Bank was drying up, partly because the dam did not appear economically sound and partly because it was now politically problematic.

A second and more recent controversy in the pueblo concerned a General Motors offer to buy village lands. In 2001, it became known that General Motors was negotiating to buy land in Oapan and the neighboring pueblo of San Miguel. GM would have used the land to construct a large track for testing automobiles. The project would have occupied about two-thirds of the agricultural lands of the village, and it probably would have changed the way of life in Oapan.

The community voted to reject the offer, in large part because of their extreme suspicions. Pueblo members expect that the outside world, especially the Mexican government, will lie to them. They simply did not believe the talk of how a GM test track would bring money and jobs to the town. The price received by each family would have depended on its particular land holdings; overall, the rate would have given many typical families somewhere between four hundred and a thousand dollars. To the villagers, this seemed like a small amount for giving up their way of life and their land forever.

Fewer than fifteen voting villagers supported the project. Villagers know that big changes bring them under the scrutiny of the broader Mexican political establishment, and they have a general sense that this would turn out badly for them. Again, the villagers would not expect to receive the money that is promised to them. Today they can live largely undisturbed and off the radar screen, so to speak.

Note that while Oapan land holdings usually function as private property, the final land title is vested in the community, as in typical "ejido" systems. So the villagers never faced individual choices as to whether they wished to sell to General Motors. Instead, the community as a whole voted no, and that was binding on everyone.

The state government pressured the villagers to take the GM offer, but for obvious reasons, that strategy did not work and it may even have been counterproductive, as government pressure made the villagers more suspicious. A number of village leaders report that the government promised to resolve some ongoing land disputes with other pueblos if the villagers would sell the land. The no votes remained firm, and

GM moved on to look for other village lands to buy.

This desire to preserve the past and the suspicion of outsiders has remained strong in the entire region. Decades before, textile interests tried to set up commercial looms in Ameyaltepec, another neighboring pueblo, but the villagers refused to cooperate, in large part because of their suspicion of outsiders. Anthropologist Peggy Golde notes that villagers in the region often gave pseudonyms to their pueblos in the late 1950s so that no one from the outside world could find or identify them.[8]

Although the GM sale fell through, the villagers do not regard the matter as closed. The villagers know that they sit on potentially valuable land, underused from the point of view of the Mexican government. The Mexican government would gain economically, if only through opportunities for corruption, if it could bring large economic projects into rural Guerrero and push out the villagers.

The General Motors episode also shows why institutions such as NAFTA are problematic for many of the indigenous groups in Mexico. While the economic case for free trade is a strong one, politics matters as well. The long-run benefits of NAFTA, most of all for Mexico, are likely to dramatically outweigh the costs, but trade can worsen some political problems in the shorter run.

The core problem is that greater wealth sometimes brings greater political confiscation along some margins. NAFTA, and economic development more generally, has attracted much foreign investment to Mexico. The land in Guerrero is suddenly more valuable than before, or at least potentially so. With decent roads, Oapan would be no more than two-and-a-half hours from Mexico City. The Mexican national and state-level government therefore would like to get the villagers off the land, whether by legitimate means or not. The Mexican state and federal governments also favor foreign investment when the villagers do not—again, if only to capture payoffs. NAFTA in some regards has increased conflicts of interest between the villagers and higher levels of Mexican government.

4. *Church Disputes*

It's also interesting to scrutinize disputes that are internal to the pueblo or the region, to get a better sense of how governance works—or in some cases, does not work. Some of the major debates in Oapan have concerned the nature of church services in town. In Oapan there has been a modern priest (a charismatic) and a traditional priest (a LeFebvrist), both of whom visit the pueblo. The villagers have fought over whether the ways of the modern priest or the traditional priest should reign, and the disagreement came to a head in the 1990s. Throughout most of the last decade, this has represented the most significant fracture within Oapan.[9]

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[8] On this episode, see Golde (1986, 79)

[9] Some members of Oapan have become Jehovah's Witnesses or Mormons, especially the

It is possible to interpret the fights in terms of a modernization faction and an anti-modernization faction. Beneath the religious issues, the two sides are arguing over the future of the pueblo and its relation to the outside world. It is a common pattern in Latin America for the more "charismatic" or "protestant" religions to support commerce, a strong work ethic, and modernization, while turning their back on many indigenous customs, including costly fiestas. In the Alto Balsas region, the charismatic factions are much stronger in the more modernized nearby pueblos of Ameyaltepec and Xalitla, and in the larger cities. The anti-charismatic faction understands these associations with modernization and resents them. So even though most villagers do not have well-worked-out theologies, the church has become a symbolic forum for disputes over what Oapan should be.

Throughout the 1990s, these religious disputes have mapped into party disputes, causing the village to split into factions. The village has two parties, PRI and PRD, corresponding to the two major parties on the Mexican national scene (PAN has fewer supporters in Oapan). On the national scene, PRI has the image of the establishment party that ruled in the past, while PRD is more left wing. The role of these parties in the village does not map tightly to their ideological reputations at the national level, but the divide is nonetheless real. The choice of party signals a stance on internal village politics.

The opponents of the modern priest tend to come from the left-wing PRD party, and supporters of the modern priest tend to come from PRI. That said, most individuals of the pueblo do not have a good idea what either party is about at the national level, so party membership should not be considered an explanatory variable in these disputes. If anything, party membership results from a position in the disputes, rather than vice versa.

The political fracture has influenced the fiestas of the pueblo and split their audience. At times the PRI followers seek to stage their own fiestas, typically to be held after the fiestas of the PRD followers. They want to have a different castillo (fireworks structure) and different bullfights. So far, the PRD forces have resisted this potential split in the fiestas. When the PRI supporters tried to bring in their own bulls for their own bullfight, the PRD forces blocked the road and would not allow it. Disputes over the castillos, the bullfights, and the fiestas have all led to tensions.

In part, the fracturing of local government derives from the recent democratization of Mexico and the arrival of parties in the village. Democratization means that voting now matters, unlike in the past when PRI held a virtual political monopoly. In earlier times, outside politicians never visited the village, as they had no need to do so. Today

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former. This is considered a conscious decision to reject the traditions of the pueblo and to embrace some parts of the outside world. Many villagers object to the antipathy that these converts hold to the traditional fiestas, costumes, and ceremonies. In fact these conversions are threatening to break down the cargo system, as converts are not eligible for the cargo duties.

political candidates come to the village to obtain votes and support. This tends to politicize the village, create factions, and split opinion. The outsiders are perceived as having access to resources that the villagers do not have, if only the ability to pave the road down the mountain.

The greater wealth of the village is another reason why politics has heated up. In earlier times, there was much less of a surplus to fight over, as residents were living much closer to subsistence. In contemporary times, the fiestas involve more material resources, the land is worth more, and the church has more money. At the same time, the increasing wealth of the village has created more free time, including free time to pursue politics. Villagers need not spend all their spare time working the fields to hold off starvation, but now enjoy a surplus, albeit a modest one.

We can think of the village as having a set of social networks and a set of conventions for how those networks operate. Those conventions evolved over many decades when Oapan was a much poorer and much more isolated place. The conventions may have produced stability in an earlier time. But in the more modern environment of greater wealth, more free time, more contact with the outside world, and more democracy, these norms and conventions have led to quarrels and disunity.

More generally, the Oapan experience suggests a modification to extant theories of cooperation. A wide variety of writings in the social sciences argue that cooperation is possible when interactions are repeated, anonymity is absent, and the number of participants is relatively small. These same conditions, however, are precisely what have damaged cooperative behavior in Oapan, at least once people could find the time and energy to fight. When individuals are driven by envy and the desire for status, their behavior will not fit models of material self-interest. They will seek to feel good about themselves, and hold a feeling of self-righteousness, rather than striking a quick and simple bargain or compromise. In part, the various parties are locked into ongoing bargaining games and are looking to maximize their share of the surplus. Simple favor trading no longer suffices, as everyone cares about his bargaining position for the future. And in part, the participants do not wish to give up their historic grudges.

Excess familiarity becomes the root of conflict rather than the solution (Cowen and Sutter 1999). Since neither party will find a cooperative solution to be fair or acceptable in terms of local prestige, repeated interactions escalate the emotional import of conflict.

For this reason, the so-called Coase Theorem does not apply to village politics. Disputants cannot eliminate their problems simply by sitting down at the bargaining table and cutting a deal. The principle of identity—a person's sense of who he is and what he stands for—interferes with the principle of mutual benefit through trade.

5. Toward the Future

At present, most of the Rio Balsas villages are in the process of becoming remittance economies. Oapan lags behind in this process because out-migration has been slower, but it was headed in the same direction, at least until the recent economic crisis led to reverse migration back to Mexico. Oapan has developed at a solid pace since the 1960s; I have estimated this at roughly 6 percent a year (Cowen 2005), with occasional breaks during Mexican recessions and financial collapses, such as in the early 1980s. Some Oapan families are building up their craft businesses, and some families now earn as much as $10,000 a year or more.

The village does not yet show signs of throwing off the institutions of traditional governance. Many Mexican villages have abandoned the cargo system, however, and moved to more mainstream municipal forms. For this to occur in Oapan, it might be required that first the village have natural and less suspicious relations with the outside world. As Mexico continues to democratize, and as more villagers vote and gain national political influence, this will likely someday come about.

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Economic Freedom and the Wealth and Well-Being of Nations

Robert A. Lawson [*1]

When you can measure what you are speaking about, and can express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, then your knowledge is of a meager and unsatisfactory kind.

– Lord Kelvin

If it matters, measure it. If it can't be measured, measure it anyway.

– Milton Friedman

1. Introduction

The idea that institutions are important in determining the degree of economic productivity in a nation is hardly new. Long ago Adam Smith ([1776] 1937), speaking of China, wrote,

> China seems to have been long stationary, and had probably long ago acquired that full complement of riches which is consistent with the nature of its laws and institutions. But this complement may be much inferior to what, with other laws and institutions, the nature of its soil, climate, and situation might admit of (Book I, Chapter IX, Paragraph 15, 95).

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[1] This paper is based on talks given as a part of the 2009 Upton Forum at Beloit College and draws heavily on various editions of the Economic Freedom of the World annual report (Gwatney and Lawson 2009) and Lawson (2008).

Of course the notion that "institutions matter" is hardly unique to advocates of laissez-faire. Karl Marx ([1867] 1906) himself acknowledged the productive capacity of the capitalist system, even while disparaging its impact on the relative standing of workers, and argued for economic institutions based on socialized planning.

The debate that ensued between Marxists (and other socialists) on the one hand and Smithian free-market advocates on the other was to rage for the better part of the next century. While the political debate between totalitarian communism and liberal democracy was to continue throughout most of the twentieth century, lasting at least until the fall of the Soviet Union in 1991, the intellectual debate had receded into the background by around mid-century.

A mathematical and formalization revolution took over the economics profession in the mid-twentieth century, and untidy concepts like institutional arrangements and entrepreneurship gave way to the new "science" of development economics. Development and growth economists (e.g., Solow 1956) modeled entire economies as if they were production functions: output is a function of inputs. It is certainly true that increasing inputs should increase output *ceteris paribus*, but there was little discussion about what was being held constant. While the model was eventually extended to include technological progress, the implicit assumption was that labor and capital would always be combined in the most efficient way possible; that is, the models assumed that countries were always functioning on their production possibilities frontier.

Another line of reasoning, mostly associated with Jeffrey Sachs (2001), is that geographic/locational factors such as a temperate climate and ease of access to markets are critically important for the achievement of high-income levels and growth rates. In contrast, tropical climatic conditions both erode the energy level of workers and increase the risk of disabling and life-threatening diseases such as malaria. As a result, worker productivity and the general level of development are retarded in tropical areas.

But even a casual look at the real world revealed problems with these theoretical perspectives. Countries that appeared to have high levels of inputs in terms of natural resources, such as Argentina, did not necessarily perform very well. High investment rates in the centrally planned economies likewise did not generate rapid economic development. On the other hand, the strong economic performance of resource-poor and tropical Hong Kong and Singapore appear anomalous. It seemed obvious to anyone who cared to look that the real world pattern of economic development was based on more than just the available quantities of resources and technology or location. Nevertheless, development economics continued to recommend building roads, schools, bridges, airports, factories, etc. without regard to whether those input investments were likely to be productive in the context of the institutions in place.

Recent researchers, however, have rediscovered the role of institutions as a cause of economic development. Acemoglu, Johnson, and Robinson (2001; 2005) argue that differences in institutions have been important in determining the pattern of economic development and that, after controlling for these institutional differences, geographical location loses much of its explanatory power. Rodrick, Subramanian, and Trebbi (2004) also strongly reinforce this view.

One problem for the early theorists and empirical researchers alike is that institutional quality is quite difficult to measure quantitatively. Fortunately, today we have many measures of these institutional factors at our disposal.

2. Why Measure Economic Freedom?

As anyone who has taught macroeconomics knows, students sometimes have difficulty grasping the enormity of the concept of GDP. We give them a definition, "the market value of all final goods and services produced in a nation in a year," and some insanely large number like "$14 trillion." But what does it mean? To most of my students, it is just a number. To make it seem more concrete, I ask my students to imagine a long printout with everything produced in the United States this year: 10 million cars, 1.2 billion haircuts, 2,430 major league baseball games … Then I ask them to imagine the same printout but with dollar values instead of quantities: $200 billion worth of cars, $12 billion in haircuts, $2 billion in ticket sales at major league games … Finally I ask them to imagine adding up all the numbers. Slowly it dawns on them what we are talking about. Clearly, the total production of the United States is a big, multidimensional thing, and GDP boils it down to a single, mind-bogglingly huge number.

Why do we go to so much trouble to measure GDP? The simple answer is that we want to know how much we have produced this year relative to last year. We also want to know how much we've produced (per person) relative to Japan or other countries.

Despite the fact that GDP is a single number, we know that it represents a multidimensional thing, and we worry about the ability of the number to tell us anything useful. We wonder, for instance, whether today's number is comparable with yesterday's or if the United States's number is comparable with Japan's. Because these questions and others are important to us, we persevere, doing our best to adjust for price changes over time and purchasing power parity difference among countries. The bottom line is that unless we take the time to measure GDP, we simply cannot address many of the questions that we economists are interested in.

Now consider the concept of economic freedom. It is not too difficult to come up with a quick, working definition such as "the ability of individuals to consume, produce, and voluntarily trade with others without interference" that would satisfy

most.[2] Economists would probably agree that freedom is an economic good in the sense that people prefer more of it to less, all things being equal. We may be interested in a number of questions about this economic freedom thing: How much freedom do we have? Are we more or less free than we used to be? Are the Japanese more free than we are? Do societies with more economic freedom perform differently than those with less?

More than anyone else, Milton Friedman (1962) was responsible for elevating the concept of economic freedom to our minds. Milton and Rose Friedman (1980, 148–49) wrote:

> [A] society that puts freedom first will, as a happy by-product, end up with both greater freedom and greater equality. Though a by-product of freedom, greater equality is not an accident. A free society releases the energies and abilities of people to pursue their own objectives. It prevents some people from arbitrarily suppressing others. It does not prevent some people from achieving positions of privilege, but so long as freedom is maintained, it prevents those positions of privilege from becoming institutionalized; they are subject to continued attack by other able, ambitious people. Freedom means diversity, but also mobility. It preserves the opportunity for today's disadvantaged to become tomorrow's privileged and, in the process enables almost everyone, from top to bottom, to enjoy a fuller and richer life.

Free market advocates like the Friedmans like to paint a rosy picture of economic freedom leading to higher growth and incomes, less poverty, more equality, more civil rights, etc.

Meanwhile many other scholars of the same period argued that economic freedom would lead to ruin. Harrington (1962), Galbraith (1967), and Thurow (1980) all argued forcefully that the United States should reject economic freedom in favor of greater government taxation, regulation, and industrial planning to solve various social problems like poverty, inequality, slow growth, and business cycles. The free market, in their eyes, is the source of much misery, and thus, aggressive government action is required to rein in the destructive forces of the market.

All sides to the debate appear to agree on the ends (higher incomes and growth are good; poverty, inequality, and business cycles are bad), but they disagreed on the means for achieving those ends. But the debate was mostly unscientific and loaded with heated rhetoric. It was as though two chemists who disagreed about a particular chemical reaction decided to argue about it in the hallway rather than go to the lab to run the necessary experiments to decide who was correct. The problem for the great debate between free market advocates and central planners was the inability to empirically test their competing hypotheses. Either economic freedom results in

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[2] Sen (1999) would probably not be one to agree with this definition as he prefers a definition of freedom based on positive rights.

higher incomes, faster growth, more equality, less poverty, etc., as the free market advocates claim, or it does not. It is as simple as that, but to test these hypotheses, we first need to measure economic freedom.

3. The Economic Freedom of the World Index

The Economic Freedom of the World (EFW) index is designed to measure the consistency of a nation's institutions and policies with economic freedom. The key ingredients of economic freedom are: personal choice, voluntary exchange coordinated by markets, freedom to enter and compete in markets, and protection of persons and their property from aggression by others.

These cornerstones underpin the design of the EFW index. Put simply, institutions and policies are consistent with economic freedom when they provide an infrastructure for voluntary exchange and protect individuals and their property from aggressors. In order to achieve a high EFW rating, a country must provide secure protection of privately owned property, evenhanded enforcement of contracts, and a stable monetary environment. It also must keep taxes low, refrain from creating barriers to both domestic and international trade, and rely more fully on markets rather than on the political process to allocate goods and resources.

Since 1980, there has been a gradual but steady movement toward economic freedom. Monetary policy has been more stable, trade barriers have declined, high marginal tax rates have been reduced, and exchange rate controls have been virtually eliminated. Consider the following: The median inflation rate was 4 percent in 2007, down from 14 percent in 1980. Among the ninety-three countries with data from both periods, only seventeen had a double-digit average annual rate of inflation during 2003–07, compared to sixty-one for the five years ending in 1980. The mean tariff rate fell from 26.2 percent in 1980 to 9.0 percent in 2007. The number of countries imposing marginal tax rates of 50 percent or more fell from sixty-two in 1980 to nine in 2007. Fifty countries imposed exchange rate controls that generated a black market premium of 10 percent or more in 1980 but only 3 percent in 2007.
Economic growth is primarily the result of gains from trade, capital investment, the discovery of improved products, lower-cost production methods, and better ways of doing things. Numerous studies have shown that countries with more economic freedom grow more rapidly and achieve higher levels of per-capita income than those that are less free. Similarly, there is a positive relationship between changes in economic freedom and the growth of per-capita income. Given the sources of growth and prosperity, it is not surprising that increases in economic freedom and improvements in quality of life have gone hand in hand during the past quarter of a century.

The construction of the Economic Freedom of the World Index is based on three important methodological principles. First, objective components are always

preferred to those that involve surveys or value judgments. Given the multidimensional nature of economic freedom and the importance of legal and regulatory elements, it is sometimes necessary to use data based on surveys, expert panels, and generic case studies. To the fullest extent possible, however, the index utilizes objective components. Second, the data used to construct the index ratings are from external sources such as the IMF, World Bank, and World Economic Forum that provide data for a large number of countries. Data provided directly from a source within a country are rarely used, and only when the data are unavailable from international sources. Importantly, the value judgments of the authors or others in the EFW network are never used to alter the raw data or the rating of any country. Third, transparency is present throughout. The report provides information about the data sources, the methodology used to transform raw data into component ratings, and how the component ratings are used to construct both the area and summary ratings

Exhibit 1 indicates the structure of the EFW index. The index measures the degree of economic freedom present in five major areas: (1) Size of Government: Expenditures, Taxes, and Enterprises, (2) Legal Structure and Security of Property Rights, (3) Access to Sound Money, (4) Freedom to Trade Internationally, and (5) Regulation of Credit, Labor, and Business.

Within the five major areas, there are twenty-three components in the index. Many of those components are themselves made up of several subcomponents. In total, the index is comprised of forty-two distinct variables. Each component and subcomponent is placed on a scale from 0 to 10 that reflects the distribution of the underlying data. The subcomponent ratings are averaged to determine each component. The component ratings within each area are then averaged to derive ratings for each of the five areas. In turn, the five area ratings are averaged to derive the summary rating for each country. The following section provides an overview of the five major areas.

3.1 Area 1: Size of Government: Expenditures, Taxes and Enterprises

The four components of Area 1 indicate the extent to which countries rely on the political process to allocate resources and goods and services. When government spending increases relative to spending by individuals, households, and businesses, government decision making is substituted for personal choice, and economic freedom is reduced. The first two components address this issue. Government consumption as a share of total consumption (1A) and transfers and subsidies as a share of GDP (1B) are indicators of the size of government. When government consumption is a larger share of the total, political choice is substituted for personal choice. Similarly, when governments tax some people in order to provide transfers to others, they

Exhibit 1: The Areas and Components of the EFW Index

Area 1: Size of Government: Expenditures, Taxes, and Enterprises

A General government consumption spending
B Transfers and subsidies as a percentage of GDP
C Government enterprises and investment
D Top marginal tax rate
 i Top marginal income tax rate
 ii Top marginal income and payroll tax rates

Area 2: Legal Structure and Security of Property Rights

A Judicial independence (GCR)
B Impartial courts (GCR)
C Protection of property rights (GCR)
D Military interference in rule of law and the political process (CRG)
E Integrity of the legal system (CRG)
F Legal enforcement of contracts (DB)
G Regulatory restrictions on the sale of real property (DB)

Area 3: Access to Sound Money

A Money Growth
B Standard deviation of inflation
C Inflation: Most recent year
D Freedom to own foreign currency bank accounts

Area 4: Freedom to Trade Internationally

A Taxes on international trade
 i International trade tax revenues (% of trade sector)
 ii Mean tariff rate
 iii Standard deviation of tariff rates
B Regulatory Trade Barriers
 i Nontariff trade barriers (GCR)
 ii Compliance cost of importing and exporting (DB)
C Size of the trade sector relative to expected
D Black-market exchange rates
E International capital market controls
 i Foreign ownership/investment restrictions (GCR)
 ii Capital controls

Area 5: Regulation of Credit, Labor, and Business

A Credit market regulations
 i Ownership of banks
 ii Foreign bank competition
 iii Private sector credit
 iv Interest rate controls/Negative real interest rates
B Labor market regulations
 i Minimum wage (DB)
 ii Foreign bank competition
 iii Private sector credit
 iv Interest rate controls/Negative real interest rates
C Business Regulations
 i Price controls
 ii Administrative requirements (GCR)
 iii Bureaucracy costs (GCR)
 iv Starting a business (DB)
 v Extra payments/Bribes (GCR)
 vi Licensing restrictions (DB)
 vii Cost of tax compliance (DB)

reduce the freedom of individuals to keep what they earn.

The third component (1C) in this area measures the extent to which countries use private rather than government enterprises to produce goods and services. Government firms play by rules that are different from those to which private enterprises are subject. They are not dependent on consumers for their revenue or on investors for capital. They often operate in protected markets. Thus, economic freedom is reduced as government enterprises produce a larger share of total output.

The fourth component (1D) is based on (Di) the top marginal income-tax rate and (Dii) the top marginal income- and payroll-tax rate and the income threshold at which these rates begin to apply. These two subcomponents are averaged to calculate 1D. High marginal tax rates that apply at relatively low-income levels are also indicative of reliance upon government. Such rates deny individuals the fruits of their labor. Thus, countries with high marginal tax rates and low-income thresholds are rated lower.

Taken together, the four components of Area 1 measure the degree to which a country relies on personal choice and markets rather than on government budgets and political decision making. Therefore, countries with low levels of government spending as a share of the total, a smaller government enterprise sector, and lower marginal tax rates earn the highest ratings in this area.

3.2 Area 2: Legal Structure and Security of Property Rights

Protection of persons and their rightfully acquired property is a central element of economic freedom and a civil society. Indeed, it is the most important function of government. Area 2 focuses on this issue. The key ingredients of a legal system consistent with economic freedom are rule of law, security of property rights, an independent judiciary, and an impartial court system. Components indicating how well the protective function of government is performed were assembled from three primary sources: the International Country Risk Guide, the Global Competitiveness Report, and the World Bank's Doing Business project.

Security of property rights, protected by the rule of law, provides the foundation for both economic freedom and the efficient operation of markets. Freedom to exchange, for example, is meaningless if individuals do not have secure rights to property, including the fruits of their labor. When individuals and businesses lack confidence that contracts will be enforced and the fruits of their productive efforts protected, their incentive to engage in productive activity is eroded. Perhaps more than any other area, this area is essential for the efficient allocation of resources. Countries with major deficiencies in this area are unlikely to prosper regardless of their policies in the other four areas.

3.3 Area 3: Access to Sound Money

Money oils the wheels of exchange. An absence of sound money undermines gains from trade. As Milton Friedman informed us long ago, inflation is a monetary phenomenon, caused by too much money chasing too few goods. High rates of monetary growth invariably lead to inflation. Similarly, when the rate of inflation increases, it also tends to become more volatile. High and volatile rates of inflation distort relative prices, alter the fundamental terms of long-term contracts, and make it virtually impossible for individuals and businesses to plan sensibly for the future. Sound money is essential to protect property rights and, thus, economic freedom. Inflation erodes the value of property held in monetary instruments. When governments use money creation to finance their expenditures, in effect, they are expropriating the property and violating the economic freedom of their citizens.

The important thing is that individuals have access to sound money; it makes little difference who provides it. Thus, in addition to data on a country's inflation and its government's monetary policy, it is important to consider how difficult it is to use alternative, more credible currencies. If bankers can offer saving and checking accounts in other currencies, or if citizens can open foreign bank accounts, then access to sound money is increased and economic freedom expanded.

There are four components to the EFW index in Area 3. All of them are objective and relatively easy to obtain, and all have been included in the earlier editions of the index. The first three are designed to measure the consistency of monetary policy (or institutions) with long-term price stability. Component 3D is designed to measure the ease with which other currencies can be used via domestic and foreign bank accounts. In order to earn a high rating in this area, a country must follow policies and adopt institutions that lead to low (and stable) rates of inflation and avoid regulations that limit the ability to use alternative currencies.

3.4 Area 4: Freedom to Trade Internationally

In our modern world of high technology and low costs for communication and transportation, freedom of exchange across national boundaries is a key ingredient of economic freedom. Many goods and services are now either produced abroad or contain resources supplied from abroad. Voluntary exchange is a positive-sum activity: both trading partners gain, and the pursuit of the gain provides the motivation for the exchange. Thus, freedom to trade internationally also contributes substantially to our modern living standards.

Responding to protectionist critics and special-interest politics, virtually

all countries adopt trade restrictions of various types. Tariffs and quotas are obvious examples of roadblocks that limit international trade. Because they reduce the convertibility of currencies, controls on the exchange rate also hinder international trade. The volume of trade is also reduced if the passage of goods through customs is onerous and time consuming. Sometimes these delays are the result of administrative inefficiency while in other instances they reflect the actions of corrupt officials seeking to extract bribes. In both cases, economic freedom is reduced.

The components in this area are designed to measure a wide variety of restraints that affect international exchange: tariffs, quotas, hidden administrative restraints, and exchange rate and capital controls. In order to get a high rating in this area, a country must have low tariffs, a trade sector larger than expected, easy clearance and efficient administration of customs, a freely convertible currency, and few controls on the movement of capital.

3.5 Area 5: Regulation of Credit, Labor, and Business

When regulations restrict entry into markets and interfere with the freedom to engage in voluntary exchange, they reduce economic freedom. The fifth area of the index focuses on regulatory restraints that limit the freedom of exchange in credit, labor, and product markets. The first component (5A) reflects conditions in the domestic credit market. The first two subcomponents provide evidence on the extent to which the banking industry is dominated by private firms and whether foreign banks are permitted to compete in the market. The final two subcomponents indicate the extent to which credit is supplied to the private sector and whether controls on interest rates interfere with the market in credit. Countries that use a private banking system to allocate credit to private parties and refrain from controlling interest rates receive higher ratings for this regulatory component.

Many types of labor-market regulations infringe on the economic freedom of employees and employers. Among the more prominent are minimum wages, dismissal regulations, centralized wage setting, extension of union contracts to nonparticipating parties, and conscription. The labor-market component (5B) is designed to measure the extent to which these restraints upon economic freedom are present. In order to earn high marks in the component rating regulation of the labor market, a country must allow market forces to determine wages and establish the conditions of hiring and firing, and refrain from the use of conscription.

Like the regulation of credit and labor markets, the regulation of business activities (component 5C) inhibits economic freedom. The subcomponents of 5C are designed to identify the extent to which regulations and bureaucratic

procedures restrain entry and reduce competition. In order to score high in this portion of the index, countries must allow markets to determine prices and refrain from regulatory activities that retard entry into business and increase the cost of producing products. They also must refrain from "playing favorites," that is, from using their power to extract financial payments and reward some businesses at the expense of others.

3.6 Summary Economic Freedom Ratings, 2007

Exhibit 2 presents summary economic freedom ratings, sorted from highest to lowest. These ratings are for the year 2007, the most recent year for which comprehensive data are available. Hong Kong and Singapore once again occupy the top two positions. The other nations in the top 10 are New Zealand, Switzerland, Chile, United States, Ireland, Canada, Australia, and the United Kingdom. The rankings of other major countries include Germany (27th), Japan (30th), Korea (32nd), France (33rd), Spain (39th), Italy (61st), Mexico (68th), China (82nd), Russia (83rd), India (86th), and Brazil (111th). The ten lowest-rated countries are Niger, Chad, Democratic Republic of Congo, Guinea-Bissau, Central African Republic, Republic of Congo, Venezuela, Angola, Myanmar, and again in last place, Zimbabwe.

The EFW index is calculated back to 1970 as the availability of data allows; see the Web site <http://www.freetheworld.com> for information from past years.

Exhibit 2. Economic Freedom Ratings, 2007

Rank	Countries	EFW Index	Rank	Countries	EFW Index
1	Hong Kong	8.97	71	Ghana	6.80
2	Singapore	8.66	71	Kyrgyz Republic	6.80
3	New Zealand	8.30	73	Romania	6.79
4	Switzerland	8.19	74	Poland	6.78
5	Chile	8.14	75	Barbados	6.75
6	United States	8.06	76	Bulgaria	6.74
7	Ireland	7.98	77	Pap. New Guinea	6.71
8	Canada	7.91	78	Israel	6.69
9	Australia	7.89	79	Egypt	6.68
9	United Kingdom	7.89	80	Fiji	6.64
11	Estonia	7.81	81	Montenegro	6.58
12	Denmark	7.74	82	China	6.54
13	Austria	7.67	83	Russia	6.50
14	Luxembourg	7.65	84	Serbia	6.47

Rank	Countries	EFW Index	Rank	Countries	EFW Index
14	Panama	7.65	85	Azerbaijan	6.46
16	Finland	7.62	86	India	6.45
16	Mauritius	7.62	87	Haiti	6.44
16	Taiwan	7.62	88	Turkey	6.42
19	Unit. Arab Em.	7.58	89	Macedonia	6.40
20	Bahrain	7.56	90	Tunisia	6.39
20	Costa Rica	7.56	91	Paraguay	6.38
20	Netherlands	7.56	92	Lesotho	6.36
23	Malta	7.54	93	Indonesia	6.35
24	Iceland	7.53	94	Moldova	6.34
24	Norway	7.53	95	Croatia	6.33
26	Slovak Rep	7.52	96	Tanzania	6.32
27	Germany	7.50	97	Nigeria	6.31
28	El Salvador	7.48	98	Madagascar	6.29
28	Honduras	7.48	99	Mali	6.28
30	Japan	7.46	100	Dominican Rep.	6.27
30	Kuwait	7.46	101	Vietnam	6.22
32	Korea, South	7.45	102	Rwanda	6.20
33	France	7.43	103	Bolivia	6.18
34	Jordan	7.40	104	Morocco	6.16
35	Lithuania	7.38	105	Argentina	6.10
36	Cyprus	7.36	105	Bosnia and Herzegovina	6.10
36	Oman	7.36	105	Sri Lanka	6.10
38	Hungary	7.33	108	Cote d'Ivoire	6.09
39	Spain	7.32	109	Mauritania	6.05
40	Sweden	7.28	110	Pakistan	6.01
41	Peru	7.26	111	Brazil	6.00
42	Georgia	7.25	112	Iran	5.99
42	Guatemala	7.25	113	Guyana	5.98
44	Latvia	7.22	114	Sierra Leone	5.97
45	Jamaica	7.19	115	Bangladesh	5.93
45	Portugal	7.19	115	Malawi	5.93
47	Belgium	7.18	117	Togo	5.90
48	Armenia	7.17	118	Benin	5.89
49	Zambia	7.13	119	Burkina Faso	5.87
50	Botswana	7.12	120	Ecuador	5.83
50	Kazakhstan	7.12	121	Colombia	5.81
52	Greece	7.11	122	Gabon	5.80
53	Bahamas	7.10	123	Cameroon	5.79

Rank	Countries	EFW Index	Rank	Countries	EFW Index
54	Czech Rep.	7.09	124	Syria	5.76
54	Kenya	7.09	125	Mozambique	5.74
56	Trinidad & Tobago	7.07	126	Senegal	5.72
57	Albania	7.06	127	Ethiopia	5.71
57	South Africa	7.06	128	Ukraine	5.68
59	Thailand	7.04	129	Nepal	5.58
60	Nicaragua	6.96	130	Burundi	5.54
61	Italy	6.95	131	Algeria	5.34
61	Uruguay	6.95	132	Niger	5.11
63	Mongolia	6.91	133	Chad	5.09
64	Slovenia	6.90	134	Congo, Dem. R.	5.00
64	Uganda	6.90	135	Guinea-Bissau	4.84
66	Malaysia	6.88	136	Central Afr. Rep.	4.79
67	Belize	6.87	137	Congo, Rep. Of	4.44
68	Mexico	6.85	138	Venezuela	4.33
69	Namibia	6.83	139	Angola	4.04
69	Philippines	6.83	140	Myanmar	3.69
			141	Zimbabwe	2.89

4. Economic Freedom and Democracy: Friends or Foes?

It is important to recognize the difference between economic freedom and democracy. Democracy has to do with how political choices are made, while economic freedom is about the consistency of those choices with voluntary exchange and the protection of people and their property from aggressors.

For our purposes, we can say that liberal democracy is present when all adult citizens are free to participate in the formal political process (vote, run for office, lobby, etc.) and larger societal debates (freedom of press, speech, and assembly). While democracy in some narrow sense can occur without political freedom (as in the case of the former Soviet Union), and likewise much political freedom can occur without much democracy (as in the case of Hong Kong today), it is reasonably acceptable for our purposes to equate democracy with political freedom.

The key thing to note is that restrictions that inhibit personal choice, voluntary exchange, the opportunity to compete, and the right of individuals to keep what they earn are in conflict with economic freedom. This is true regardless of whether they are adopted by democratic or nondemocratic procedures.

Clearly, democratic political decision making will not guarantee economic freedom. Voters may elect political leaders who substantially restrict economic freedom. In recent years, this has been the case in both Venezuela and Zimbabwe. The experiences of India and Israel during 1960–90 also illustrate the potential conflict between political democracy and economic freedom. Interestingly, it is also possible for a country with very little democracy to nonetheless have a substantial amount of economic freedom. Hong Kong during the last several decades provides an example.

Despite possible conflicts between economic freedom and political freedom/democracy, many scholars have speculated that they may be positively linked in practice. In *The Road to Serfdom*, Friedrich A. Hayek sounded the alarm bell among intellectuals worried about the prospects for political liberalism in Europe. Hayek speculated that the centralized planning embraced by the United Kingdom during the war would continue and spread after the war, and this would ultimately threaten the liberal democratic values of Western Europe. Hayek (1944, 69–70) wrote,

> If "capitalism" means here a competitive system based on free disposal over private property, it is far more important to realize that only within this system is democracy possible. When it becomes dominated by a collectivist creed, democracy will inevitably destroy itself.

Writing eighteen years later in the United States, Milton Friedman (1962, 9) echoed Hayek in *Capitalism and Freedom*,

> Historical evidence speaks with a single voice on the relation between political freedom and a free market. I know of no example in time or place of a society that has been marked by a large measure of political freedom, and that has not also used something comparable to a free market to organize the bulk of economic activity.

Lawson and Clark (forthcoming) examine empirically these views of Hayek and Friedman that economic freedom is a necessary though not sufficient condition for political freedom, and conclude,

> As both Milton Friedman and F. A. Hayek suggested, there are relatively few instances of societies combining high political freedom without high levels of economic freedom. It appears that at least some reasonable amount of economic freedom is a precondition, necessary but not sufficient, if a nation is to have high political freedom. The number of cases where countries have tried to combine high political freedom and low economic freedom appears to be diminishing over time with almost all of them moving in the direction of freer markets.

5. Economic Freedom and Economic Outcomes

The relative contribution of economic freedom and political freedom on prosperity has also been the subject of considerable scholarly attention. With respect to economic growth, which over time leads to greater average incomes, the evidence is solid that economic freedom is highly important (de Haan et al. 2006), and that in turn, economic freedom is more potent than democracy (Wu and Davis 1999) in fostering growth.

Related to this evidence, Clark and Lawson (2008) found that progressive taxation, as measured by high top marginal tax rates, appears to foster increased income equality. However, they note that broader measures of economic freedom (private property rights, sound money, trade openness and government size) correlate very strongly with increased income equality. Scully (2002) also found that economic freedom promotes both economic growth and income equality.

The Economic Freedom of the World index has allowed scholars to examine the impact of market liberalism in many areas. Of particular interest has been the relationship between economic freedom and political freedom/democracy and the relative importance of each in various societal outcomes. While there may be conflicts on some margins between economic and political freedom, the two concepts can go hand in hand. The evidence suggests that while political democracy may yield many good things for society, economic freedom is at least as important if not more so.

A final lesson is also emerging. As Easterly (2006) notes: Top-down or imposed efforts to foster more economic freedom are not likely to succeed. Bottom-up, home-grown approaches toward more economic freedom that are supported with local education and consistent with local cultural norms are more likely to work in the long run.

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Property Rights and the Return to Capital

Benjamin J. VanMetre[*] and Joshua C. Hall[**]

1. Introduction

Property rights are clearly important for economic development. Without secure property rights, individuals are limited in the benefits they can derive from resources under their control. To give but one example, informal and insecure property rights are a hindrance to the types of widespread and anonymous exchanges that are necessary for economic advancement. The importance of property rights to economic development was recognized early on by Adam Smith (Gay, 1975). For Smith, it was straightforward that expectations of profit from improvements to the stock of capital were greatly improved if individuals had secure property rights (Smith [1776] 1998). Like many of Smith's insights, however, the primacy of property rights to economic development disappeared from the mainstream of economic thinking for nearly two centuries until rediscovered by scholars within the mainstream of the economics profession such as Ronald Coase (1960), Harold Demsetz (1967), and Armen Alchain ([1961] 2006).

Outside the mainstream of the economics profession, but not the mainline Austrian economists such as Ludwig von Mises and Friederich Hayek helped to build upon Smith's insights. According to Leeson (2008, 17), Smith, Mises, and Hayek "created a two-pronged approach to understanding the primacy of private property for wealth creation." The first prong of this approach comes from Smith's ([1776] 1998) argument, which focused on the idea that private property creates a beneficial incentive-based system of behavior in the context of the market. The second prong of this approach, flowing from the work of Mises and Hayek, argues that in order to maximize the potential for economic progress, we must be able to utilize the information generating capacity of property rights. Mises (1920; 1947; 1949), for

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example, argues that there can be no exchange in the market unless private ownership exists. Moreover, he argues that without the institution of private property, there can be no meaningful economic calculations, and thus no rational market prices can be determined. Hayek (1937; 1945) further extends Mises by arguing that it is through the institution of private property that economic actors are able to receive the wealth of information provided by meaningful market prices and use it to make efficient market decisions.

In the field of development economics, the two economists who have done the most to bring property rights to the forefront of the discussion have been Peter Bauer (1971; 1991; 2000) and Hernando de Soto (1989; 2000). According to Bauer, the process of economic development is not easy or straightforward but is the result of years of hard work and effort predicated on secure property rights and prudent investment. In further stressing the importance of property rights, Boettke (2005, 2) argues against common ownership, stating that "poorly defined and weakly enforced private property rights lead to incentives with regard to the use of scarce resources and insecurity with regard to investment in the improvement of those resources." In books such as *The Other Path* and *The Mystery of Capital,* Hernando de Soto focused the attention of researchers and policymakers on the hard task of getting the State to codify and recognize the informal property rights that already exist within developing countries. *The Mystery of Capital,* in particular, has brought the concept of property rights back into the discussion within the study and practice of development economics.[1]

While all of this attention has improved the study and practice of economic development *on the margin*, many development economists still proceed as though economic activity were taking place on a faceless plane. A key case in point is the focus on physical and human capital as inputs into development. Historically, the *raison d'être* for a significant portion of foreign aid was to enable the accumulation of physical capital. In the middle part of the twentieth century, economists such as Sir Arthur Lewis, Paul Rosentein-Rodan, and Walt Rostow argued that developing countries were stuck in a poverty trap because their incomes were too low to be able to save enough for significant capital accumulation. As William Easterly (2006) points out, these ideas led to a "big push" of spending on infrastructure and physical capital in an attempt to get developing countries to "take off" to higher levels of economic growth.

Unfortunately, there is very little evidence that this spending had any positive

[1] One way of measuring scholarly impact is by citations. As of March 2010, *The Mystery of Capital* had garnered over 2000 citations, according to Google Scholar. To put that in perspective, here are the Google Scholar citations of some other influential books of the past thirty years: *Losing Ground* by Charles Murray (2750), *In Defense of Globalization* by Jagdish Bhagwati (1064), *The Elusive Quest for Growth* by William Easterly (710).

return. While good data on public investment in physical capital is scarce, Easterly (2006) was able to obtain data for a set of twenty-two African countries from 1970 to 1994. Over this nearly twenty-five-year period, these countries received $187 billion in aid and spent nearly $350 billion on public investment. What was the result of this "big push"? Nothing! These twenty-two countries saw *zero* per-capita income growth over this period. Yet the emphasis on physical capital accumulation continues unabated today in the policy advice of many economists. Consider the words of Jeffrey Sachs (2005, 56–57), who says in his influential book *The End of Poverty* that individuals in developing countries "are too poor to save for the future and thereby accumulate the capital that could pull them out of their current misery."

Not all economists have continued to advocate for public investment in physical capital. Many have instead shifted their efforts to promoting the accumulation of human capital. With early empirical work on the returns to education showing a positive relationship between education and economic growth, many development economists began to shift their attention away from physical capital and toward human capital. As Coyne and Boettke (2006) note, this focus on human capital accumulation caused international development organizations to try to increase schooling levels in developing countries. Like the efforts to increase physical capital, the evidence on investment in human capital is mixed. While some research finds a positive relationship between education levels and economic growth, other studies find no consistent relationship (Gwartney, Holcombe, and Lawson 2004). In an important paper, for example, former World Bank economist and Harvard professor Lant Pritchett (2001) found no relationship between education increases and growth in output per worker.

To many observers, the failure to observe a macroeconomic relationship between the stock of physical and human capital and economic growth is not only troubling but perplexing. At the most basic microeconomic level, increases in physical capital or human capital most assuredly increase utility and, in all likelihood, output. Consider Robinson Crusoe, shipwrecked alone on a desert island. If he were suddenly given new saws, hammers, and other tools, his productivity and standard of living would almost assuredly increase. So why do we not observe this effect in the aggregate? An answer, one put forth first by Pritchett (2001) and tested by Hall, Sobel, and Crowley (forthcoming), is that it is the quality of institutions—including private property protection—that help translate an individual positive into a social positive. The stronger the institutions of a free society—rule of law, monetary stability, property rights, scope of government activity, and so on—the greater the return on human and physical capital.

In this paper we extend the empirical work of Hall, Sobel, and Crowley (forthcoming) who, in a recent paper, find that the quality of a country's institutions directly affects the return on human and physical capital. Our hypothesis is that secure

property rights create the conditions necessary for human and physical capital to be productive. In the absence of strong property right protection, human and physical capital either goes to waste or gets used in rent-seeking activities that lower aggregate output and well-being. Here we differ from the work of Hall, Sobel, and Crowley (forthcoming) in that we explicitly focus on private property rights instead of all of the institutions of a free society.

2. Property Rights, Capital, and Growth of Output Per Worker

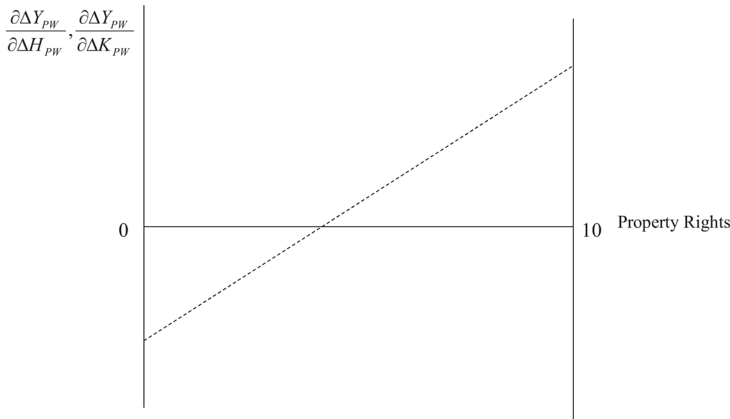
Hall, Sobel, and Crowley (forthcoming) argue that the conventional view of development economists is that increases of human and physical capital have the same return, regardless of the level of institutional quality. While this may be a reasonable assumption for the individual returns to education, it may not be a reasonable assumption for the social returns. In an institutional environment characterized by corruption and insecure property rights, for example, few additional opportunities are afforded someone just by virtue of a higher level of education. The best options typically are limited to leaving the country or working in the government bureaucracy or in a corporation closely related to the government. In all cases, while the individual will see personal returns on her education, the social returns are likely to be nonexistent (at best) or negative (at worst). We think that what Hall, Sobel, and Crowley suggest is true for development economists in general with respect to institutional quality is also true for property rights protections. The mental model that most economists have with respect to capital investment is that its return is the same regardless of the level of property rights. This view can be seen in Figure 1, which shows the return for education as constant while the security of property rights varies along the x-axis from completely insecure property rights (zero) to completely secure property rights (ten).[2]

What Hernando de Soto has done, in part, is focus attention to the fact that the returns to capital vary with the strength of property rights. The argument is that the

Figure 1: Marginal Effect of Capital on Output Per Worker: The Conventional View

marginal effects of increases in human and physical capital will have varying effects on economic growth, depending on the security of property rights. In other words, an additional unit of human and/or physical capital in a country that has highly secured property rights is going to have a larger effect on economic development than it would in a country where property rights are not as protected. This perspective can be seen graphically in Figure 2. We argue that Figure 2 is a better representation of the relationship, as the marginal effects of increases in human and physical capital have varying effects on the change in output per worker as the security of property rights increases from a hypothetical zero property rights to a hypothetical "perfect" property rights protection of ten.[3] The subject of the remainder of this article is whether this is the case empirically.

Figure 2: Marginal Effect of Capital on Output Per Worker: Our View



3. Data and Empirical Approach

Our empirical approach in this paper is similar to that in Pritchett (2001) and Hall, Sobel, and Crowley (forthcoming). Using regression analysis, we seek to explain changes in the growth of output per worker from 1980 to 2000 as a function of independent variables thought to be related to economic growth. Thus we employ data on changes in human and physical capital over the period as well as controlling for other factors that do not vary with time, such as property rights protections and geographic factors. In order to test our hypothesis that the return on capital is positively related to the security of property rights, we employ interaction terms. The

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[3] We have drawn Figure 2 to have a negative range. We do so because this is consistent with the findings of Hall, Sobel, and Crowley (forthcoming), who find that there exists a range within which the returns to capital are negative. It should be pointed out, however, that the existence of a negative range and a break-even point is an empirical matter that depends on the incentives created by the low security of property rights environment.

interaction variables essentially measure how economic growth in different countries responds differently to changes in both human and physical capital depending on the degree to which the property rights are protected. In other words, the interaction variables are useful in that they isolate the "property rights effect" on the return to increases in human and physical capital. Our use of these interaction variables was inspired by Stroup (2007) and Hall, Sobel, and Crowley (forthcoming). The full empirical specification is detailed in Section 4.

To empirically test our hypothesized relationship, we employ cross-country measures of property rights, investment in human and physical capital, and economic growth. In addition, we control for other factors, such as geography, that are often thought to be important for economic growth. The property rights data were collected from the *Economic Freedom of the World* (EFW) index (Gwartney and Lawson 2009). The EFW index attempts to measure the extent to which a country's policies are consistent with economic freedom.[4] The authors divided economic freedom into five different areas: (Area 1) Size of Government: Expenditures, Taxes, and Enterprises, (Area 2) Legal Structure and Security of Property Rights, (Area 3) Access to Sound Money, (Area 4) Freedom to Trade Internationally, and (Area 5) Regulation of Credit, Labor, and Business. For our purposes, the area of interest is Area 2: Legal Structure and Security of Property Rights.

In Area 2, the authors rank each country on a scale of 0–10, with zero being an extremely poor legal structure and security of property rights, and ten being extremely high. They do so using data from three primary sources including the *International Country Risk Guide,* the *Global Competitiveness Report,* and information from the *World Bank* (Gwartney and Lawson 2009). More specifically, these data get at the heart of the security of property rights as they (in addition to capturing rule of law differences also important to property rights) directly measure the protection of property rights by the state, regulatory restrictions on the sale of property, and legal enforcement of contracts. There are eighty-seven countries with Area 2 data for the years 1980–2000, a complete list of which can be found in Appendix Table 1. Over this period, the average country in our sample had an Area 2 average of 5.4. To put this into perspective, countries with scores similar to this average include India (5.4), Turkey (5.2), and Mexico (5.6), whereas the Republic of Congo had the lowest average score (2.4), and Switzerland had the highest average score (8.6).

Our measures of the real growth of output per worker and changes in the stock of physical and human capital all come from Baier, Dwyer, and Tamura (2006). The average country in our sample experienced a 12.45 percent increase in output per worker during the period in question, with the lowest being the Republic of Congo (decline of 79 percent) and the highest being South Korea (165 percent increase).

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[4] See the chapter by Robert Lawson in this volume for a more complete discussion of the EFW index.

Changes in human capital and physical capital per worker also come from Baier, Dwyer, and Tamura (2006) because these are the most comprehensive data available, as the authors calculate both human capital and physical capital using the perpetual inventory method. This means, for example, that when calculating human capital per capita, they consider both the average number of years of schooling per worker as well as other demographic variables that would be expected to influence experience, such as age.

In addition to the basic model, we include explanatory variables that enable us to examine the robustness of the model as well as to help control for an omitted variable bias. These explanatory variables are often referred to as the "Sachs variables," as Jeffrey Sachs was the economist who introduced them to the literature. The three Sachs variables we include are 1) the air distance from core markets, 2) the percentage of the population living within a hundred kilometers of an ocean, and 3) the proportion of the country located in a tropical region (Gallup, Sachs, and Mellinger 1999). The Gallup, Sachs, and Mellinger hypothesis is that living near an ocean and/or near core markets should have positive effects on growth, whereas being located in the Tropics has a negative effect on growth rates. The reason for this negative effect is that countries in the Tropics generally experience high rates of diseases such as malaria. This factor alone is likely to negatively impact development. But as Lesson (2008) points out, the high prevalence of disease means that when initially colonizing the Tropics, the colonizers created an extraction-based system in which they attempted to gather as many resources as they could before quickly moving out. This ultimately led to poorly developed systems of property rights and a lack of sustainable economic development in areas located in the Tropics.

4. *Empirical Results*

Table 1 presents the original regression results. The baseline model—denoted as Model 1—fits the data fairly well explaining 61.7 percent of the change in output per worker from 1980–2000. More importantly, both interaction terms show positive coefficients and are statistically significant. These results show that secure property rights have a statistically significant positive effect on economic growth, which is exactly the hypothesis proposed by de Soto. The negative coefficients on the growth of both human capital and physical capital per worker (the noninteraction terms) have an interesting interpretation. As the interaction term is showing the impact of human and physical capital when directed through secure property rights, these coefficients represent the impact of increases in physical and human capital from 1980–2000 *absent property rights*. Thus, investment in human capital in a zero property rights world is estimated to yield a negative (-0.9675) rate of return in terms of output per worker.

In order to test the robustness of the original model to the inclusion of other factors that might be important to the growth of output per worker, the Sachs variables

Table 1: Determinants of Economic Growth

Variables	Dependent Variable: Growth of Output Per Worker			
	Model 1	Model 2	Model 3	Model 4
Constant	-21.35 **	-27.23 **	-18.88	-9.81
	(-2.13)	(-2.55)	(-1.42)	(-0.71)
Growth of Human Capital Per Worker (Baier et al.), 1980-2000	-0.9675 *	-0.9528 *	-0.8172	-0.3942
	(-1.97)	(-1.96)	(-1.63)	(-0.74)
Growth of Physical Capital Per Worker 1980-2000	-0.012	0.01	0.0201	-0.0663
	(-0.06)	(0.05)	(0.10)	(-0.31)
Growth of Human Capital Per Worker x EFW Area 2 Average	0.29913 ***	0.29086 ***	0.26283 ***	0.1513
	(3.46)	(3.38)	(2.92)	(1.45)
Growth of Physical Capital Per Worker x EFW Area 2 Average	0.0824 **	0.07547 **	0.07335 **	0.09031 **
	(2.28)	(2.09)	(2.03)	(2.48)
Percentage of Population within 100km of Coast		13.924	11.121	11.661
		(1.51)	(1.16)	(1.24)
Air Distance from Major Trading			-0.00158	-0.00057
			(-1.06)	(-0.37)
Percentage of Land Area Located in Tropics				-17.849 **
				(-2.01)
R^2 Adjusted	61.70%	62.20%	62.30%	63.70%
Observations	87	87	87	87

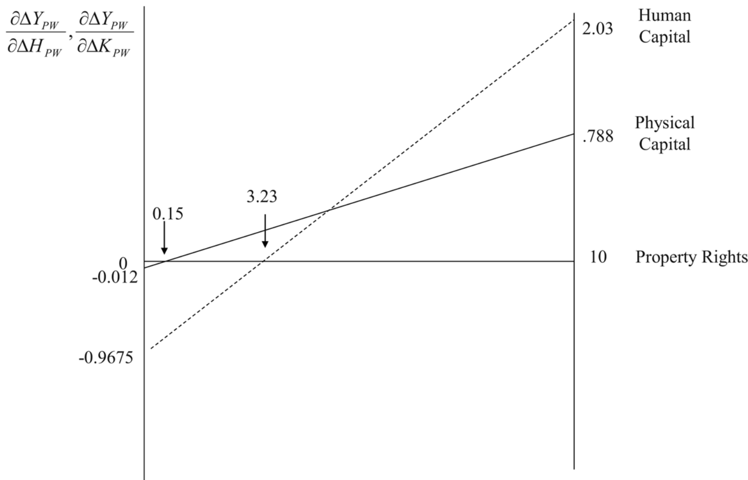
Note: * indicates significance at the 10% level, ** at the 5% level, and *** at the 1% level.
Absolute t-statistics in parentheses.

were introduced in a stepwise fashion in models 2, 3, and 4. As can be seen in model 2, the percentage of the population that lives within a hundred kilometers of the coast did slightly increase the explanatory power of the model but was not statistically significant.[5] Model 3 shows that the air distance from core markets was not statistically significant, but the addition of this variable caused the growth of human capital per capita to become statistically insignificant. This means that while we are relatively certain about the direction and general magnitude of the relationship between human capital per worker and output per worker, the inclusion of air distance makes us a somewhat less certain that this relationship is the true relationship. Finally, the tropics variable was statistically significant, and the addition of this variable caused the human capital interaction variable to become statistically insignificant at conventional levels of significance, thus leaving the physical capital interaction variable as the only other statistically significant variable. For our purposes, the significance of these results is that it is clear that the rate of return to capital rises with property rights protection,

5 In other words, the addition of the "coast" variable helps to better explain economic growth (at least as measured by the higher adjusted R-squared) but the relationship between coast and economic growth was not strong enough to be convinced that there was a "true" relationship between the variables at conventional levels of statistical significance.

although the statistical (not economic) significance is lessened once certain geographic factors of development are accounted for in the regression.

Figure 3: The Marginal Effect of Capital on Growth: An Estimate



In Figure 3, we use the coefficients from model 1 in Table 1 and apply them to the hypothesis first presented in Figure 2. The left y-axis intercept values of -0.012 and -0.9657 for physical and human capital, respectively, show that the countries with the lowest protection of property rights experience negative returns on physical and human capital. The break-even point for investment physical capital was at a score of 0.15, whereas the break-even point for investment in human capital was 3.23. What this implies is that investment in physical capital is less sensitive to the security of property rights than is investment in human capital. Furthermore, this suggests that it would be beneficial for countries below a score of 3.23 to invest in physical capital relative to human capital, as this type of capital investment will be more likely to yield higher social returns. As a practical matter, however, there are very few countries, such as Guatemala, with Area 2 scores below 3.23 over this period. Thus, the key point in allocating public investment is the slope of the line relative to a country's current level of property rights and rule of law.

Perhaps it is not the average security of property rights that matters, but the initial conditions. To test this idea, and to test the robustness of the empirical model, we use EFW Area 2 data from 1980 instead of the twenty-year average from 1980–2000 as in Table 1. Using the 1980 data alone allows for an examination of the initial level of property rights with the understanding that the results should stay similar to that of the EFW twenty-year average. As can be seen in Table 2, the results of using this 1980 value are very similar to those in Table 1. The minor differences include the growth of human capital per worker was not significant in any model and all three of the Sachs

Table 2: Determinants of Economic Growth (EFW 1980)

Variables	Dependent Variable: Growth of Output Per Worker			
	Model 1	Model 2	Model 3	Model 4
Constant	-13.7 (-1.33)	-21.46 (-1.94)	-7.59 (-0.58)	-0.03 (-0.00)
Growth of Human Capital Per Worker (Baier et al.), 1980-2000	-0.6389 (-1.39)	-0.6708 (-1.48)	-0.5052 (-1.11)	-0.3102 (-0.71)
Growth of Physical Capital Per Worker 1980-2000	0.0922 (0.58)	0.1184 (0.75)	0.1145 (0.74)	0.0604 (0.41)
Growth of Human Capital Per Worker x EFW Area 2 1980	0.2018 *** (2.63)	0.20624 *** (2.72)	0.17671 ** (2.32)	0.11529 (1.52)
Growth of Physical Capital Per Worker x EFW Area 2 1980	0.06245 ** (2.42)	0.05381 ** (2.07)	0.0538 ** (2.10)	0.06463 ** (2.62)
Percentage of Population within 100km of Coast		16.94 * (1.76)	11.244 (1.13)	11.291 (1.19)
Air Distance from Major Trading			-0.00277 * (-1.89)	-0.00097 (-0.63)
Percentage of Land Area Located in Tropics				-23.042 *** (-2.95)
R^2 Adjusted	58.00%	59.10%	60.30%	63.80%
Observations	87	87	87	87

Note: * indicates significance at the 10% level, ** at the 5% level, and *** at the 1% level.
Absolute t-statistics in parentheses.

variables were statistically significant. What is important here is that the coefficients on both interaction variables remained positive and statistically significant, with the exception of the human capital interaction variable becoming insignificant in model 4.

An alternative measure of human capital was used as a final robustness check in Table 3. Data for this new measure were obtained from the widely used Barro and Lee (2000) data set. Unfortunately, the Barro and Lee data were only available for eighty of the eighty-seven countries for which Area 2 EFW data are available going back to 1980; thus, our sample size for these regressions is reduced from eighty-seven countries to eighty. Their measurement of human capital includes the number of years of education for individuals fifteen years old or older. As can be seen in Table 3, when using the Barro and Lee data, the results remain similar to those seen in Table 1. The differences in Table 3 include the growth of human capital remained statistically significant in models 1–3. Also, the human capital interaction variable remained statistically significant in model 4, where it had become insignificant in Table 1 with the Baier, Dwyer, and Tamura (2006) definition of human capital. However the

general conclusion holds true in that the return to human and physical capital rises with the security of property rights and improvements in the rule of law.

Table 3: Determinants of Economic Growth, Alternative Measure of Human Capital

Table 3: Determinants of Economic Growth, Alternative Measure of Human Capital

Variables	Dependent Variable: Growth of Output Per Worker			
	Model 1	Model 2	Model 3	Model 4
Constant	-5.135	-12.764	-0.91	3.07
	(-0.83)	(-1.47)	(-0.08)	(0.28)
Growth of Human Capital Per Worker (Barro), 1980-2000	-0.7188 **	-0.6586 *	-0.5825 *	-0.24
	(-2.10)	(-1.91)	(-1.69)	(-0.69)
Growth of Physical Capital Per Worker 1980-2000	-0.0837	-0.0883	-0.0412	-0.1136
	(-0.38)	(-0.40)	(-0.19)	(-0.54)
Growth of Human Capital Per Worker x EFW Area 2 Average	0.09532 **	0.9303 **	0.08433 **	0.09799 ***
	(2.54)	(2.48)	(2.25)	(2.72)
Growth of Physical Capital Per Worker x EFW Area 2 Average	0.16519 **	0.16037 **	0.14435 *	0.06744
	(2.10)	(2.04)	(1.84)	(0.85)
Percentage of Population within 100km of Coast		12.6	8.25	11.956
		(1.24)	(0.82)	(1.20)
Air Distance from Major Trading			-0.00234	-0.00055
			(-1.60)	(-0.36)
Percentage of Land Area Located in Tropics				-23.579 ***
				(-2.95)
R^2 Adjusted	59.20%	59.50%	60.30%	64.10%
Observations	80	80	80	80

Note: * indicates significance at the 10% level, ** at the 5% level, and *** at the 1% level.
Absolute t-statistics in parentheses.

5. Concluding Thoughts

The literature on property rights has been reinvigorated by the work of Hernando de Soto. In this paper, we test an idea inspired by de Soto's work on the security of property rights and the return on capital investment. Using data from the widely cited *Economic Freedom of the World* index on the security of property rights and the rule of law, we find that the return on investment in human and physical capital increases with the security of property rights. Thus, because the results of our analysis largely support the arguments presented by de Soto, we conclude that de Soto's arguments are not only intuitively appealing, they also conform to empirical reality. Clearly, property rights are at least part of the key needed to unlock the poor from the world of poverty in which they are currently trapped and to further make the most of the limited capital that they currently possess.

Finally, the results of this paper demonstrate some important implications to

the policy-making community. When making further policy recommendations in attempt to enhance economic development, it is crucial to not only consider property rights but to understand that the accumulation of human and physical capital are not independent of property rights; thus, these variables must be considered together as a result of being conditional upon each other. Further, the degree to which property rights are protected in a county must be considered when recommending the types of capital investments that are to be made.

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Appendix 1

List of Countries Used in Analysis

Australia	Spain	Congo, Dem. R.	Jordan	South Africa
Austria	Sweden	Congo, Rep. Of	Kenya	Sri Lanka
Belgium	Switzerland	Costa Rica	Kuwait	Syria
Canada	Turkey	Dominican Rep.	Malawi	Taiwan
Denmark	United Kingdom	Ecuador	Malaysia	Tanzania
Finland	United States	Egypt	Mali	Thailand
France	Algeria	El Salvador	Morocco	Togo
Germany	Argentina	Gabon	Myanmar	Trinidad & Tobago
Greece	Bangladesh	Ghana	Nicaragua	Tunisia
Ireland	Benin	Guatemala	Niger	Uganda
Italy	Bolivia	Haiti	Nigeria	Unit. Arab Em.
Japan	Brazil	Honduras	Pakistan	Uruguay
Mexico	Burundi	Hong Kong	Panama	Venezuela
Netherlands	Cameroon	India	Paraguay	Zambia
New Zealand	Central Afr. Rep.	Indonesia	Peru	Zimbabwe
Norway	Chad	Iran	Philippines	
Portugal	Chile	Israel	Senegal	
South Korea	Colombia	Jamaica	Singapore	

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

Claudia R. Williamson[*]

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.

[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

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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.

demonstrates that insecure property rights reduce capital formation by prohibiting 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

Figure 1

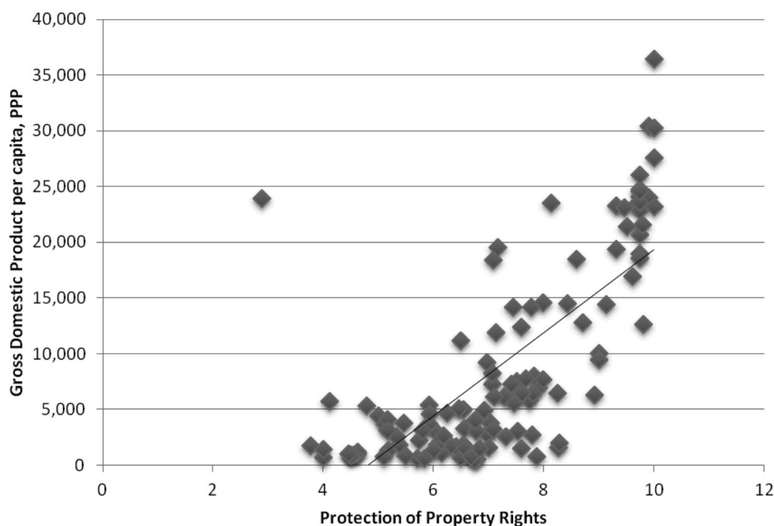


Figure 2

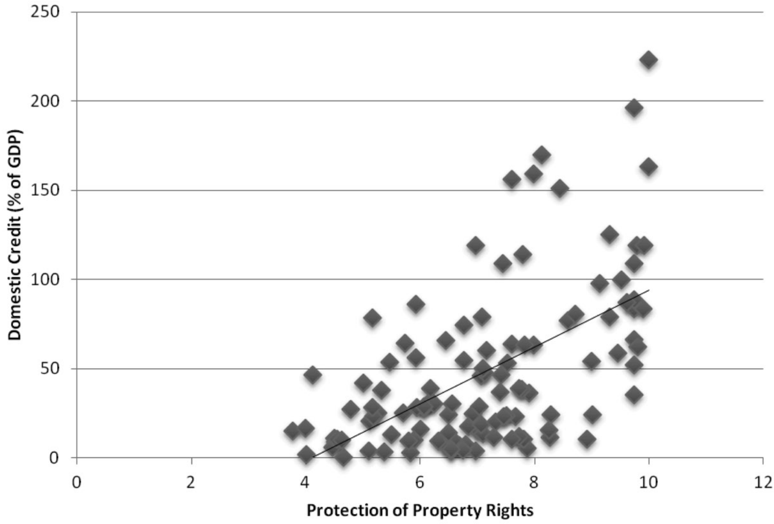
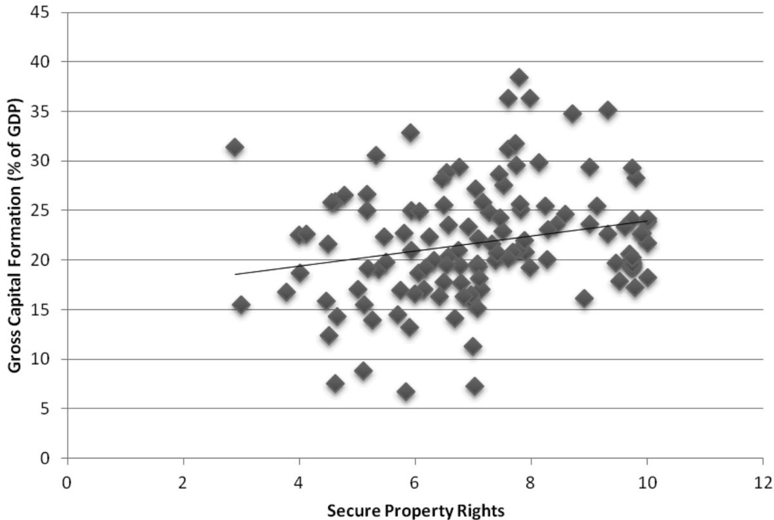


Figure 3



2005). The index is measured from zero to ten, with ten representing secure property rights.

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.

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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.

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 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.

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Property Takings in Developed versus Developing Countries: Economics, Politics, and the Limits of the Holdout Problem

Edward J. López[*1]

1. Introduction

Property takings are common in the developing world. For example, despite Chinese reforms in 2003 to protect property rights, Chinese governments forced thousands of families to relocate during the buildup to the Beijing Olympics. In recent years, governments in Peru, Venezuela, Bolivia, Zimbabwe, Russia, and others have nationalized heavy industry as well as specific firms. Large-scale land takings also have occurred in some of these same countries through reallocation of commercial farmland across economic and ethnic lines to preferred constituencies. Because they are occurring in underdeveloped economies, these takings share the feature that they occur under weaker political and legal institutions and, generally speaking, under a poor rule of law; that is, they occur in countries whose governments are at least partially unconstrained from violating individual rights to private property.

Perhaps surprisingly, similar cases of takings occur in developed countries where the rule of law is generally strong. We need look no farther than the United States to draw this point. In 1978, for example, the State of Hawaii compelled the transfer of land ownership from a small number of traditional family owners to a large number

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[1] I thank Emily Chamlee-Wright for comments that improved the paper during the editorial process. I would also like to thank the students and faculty of Beloit College for providing excellent discussion during my presentation and for being gracious hosts during my visit to Beloit.

of their lessees. Most home dwellers on the island owned their homes but leased the land that the houses were on from one of these traditional families. The State argued that the concentration of land ownership created undesirable, oligopolistic outcomes in the housing market. Their policy would achieve a wider disbursement of fee simple titles, which, it was argued, would bring about more competitive circumstances. The Supreme Court ruled in *Hawaii Housing Authority v. Midkiff* (1984) that the State's plan fulfilled the Fifth Amendment's public use requirement.[2] The Court applied the relatively weak "rational basis" level of scrutiny, ruling that the taking must be rationally related to a legitimate public purpose—in this instance, a more competitive real estate market. The Hawaii case is not an isolated incident. *Midkiff* was anticipated by an earlier case in Washington DC, in which an urban renewal plan called for razing an entire neighborhood. In the landmark case *Berman v. Parker* (1954), the Supreme Court upheld this use of the takings power and thereby ushered in an era of urban renewal programs across many cities in the United States.[3] As the failures of urban renewal became widely known, plans for localized economic development became more targeted in their use of eminent domain. In particular, removing entire neighborhoods grew out of fashion in favor of condemning a few properties whose owners stood in the way of assembling a tract for development. The issue of "holdout" properties came to a head in the *Kelo v. City of New London* (2005) Supreme Court case, which authorized the government to take residential properties from a small number of unwilling sellers to make way for a new commercial development.[4] These are only the most famous cases. In any given year, thousands of properties across the United States are taken or threatened by eminent domain pursuant to economic development plans (Berliner 2003, 2006). In total for the post-World War II era, Somin (2008) estimates that a combined one million properties and 3.6 million people have been reallocated for economic development purposes.[5]

There are many interesting margins of contrast between takings in developed and developing countries. For example, as suggested above, the rule of law is one contrast. Furthermore, poor countries are more likely to have a history of political instability, so takings can be a means of settling political scores between a new regime and its opponents. Similarly, takings are a way for socialist leaders to denounce and expel the ideology of capitalism. For example, on May 1, 2010, Bolivian President Evo Morales nationalized four major electricity firms, telling the media that the expropriation was needed to combat injustices created by capitalist imperialists. This continues several years of expropriation in various industries, such as mining. "Basic services cannot be

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[2] Hawaii Housing Authority v. Midkiff, 467 U.S. 229 (1984).

[3] Berman et al. v. Parker et al., 348 U.S. 26 (1954).

[4] Kelo et al. v. City of New London, Connecticut, 545 U.S. 469 (2005)

[5] (Garvin 1995) provides an earlier estimate for urban renewal programs only: one million people, two-thirds of whom were black.

a private business," he said about the May Day takings. "We're recovering the energy, the light, for all Bolivians."[6] Recently he told the international media, "capitalism must die, or it is Mother Earth."[7] Third, and for related reasons, agricultural takings in developing countries usually redistribute land from relatively wealthy (and white) minorities to relatively poor (and indigenous) majorities. In contrast, the costs of takings in the United States fall disproportionately on the poor and ethnic/racial minorities.[8]

Yet, on economic margins, takings in these respective settings lead to remarkably similar consequences because property rights are the foundation of economic development, regardless of the broader institutional and ideological context. Sound property rights support the division of labor, which increases productivity while necessitating exchange and promoting the discovery of ever more extensive exchange opportunities. Wealth and living standards increase, in no small part because people can securely exchange property rights over valuable resources, which pushes resources toward increasingly valued ends. This is the general process by which entrepreneurship and exchange of property rights create wealth. This role of property is among the deepest lessons in the history of economic thought. The ancient Greek, Xenophon, for example, drew a causal link between ownership of distant property and people's specialization in navigation skills. He described the resulting variety of specializations of labor among sea crew. Some would specialize in navigating small craft, others in

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[6] Ore, Diego and Eduardo Garcia, "Bolivia Nationalizes Four Power Companies," Reuters, May 1, 2010, (accessed at http://news.yahoo.com/s/nm/20100501/bs_nm/us_bolivia_power_nationalization May 1, 2010). The article reads further: "Morales, the country's first indigenous president and a self-declared anti-capitalist, took office for a second term in January pledging to diversify the economy from its dependence on natural gas and mining exports and to launch state-run paper, cement, iron and lithium companies.

"His efforts to give the state more control over the economy are very popular with Bolivia's indigenous majority, who say foreign companies have ransacked the country's natural resources and invested little to help the poor.

"Critics say Morales […] has scared away crucial foreign investment with nationalizations of companies and is not acting on behalf of all Bolivians but primarily for Aymara and Quechua Indians and other indigenous groups."

[7] Andres Shipani, "Evo Morales' message to grassroots climate talks—planet or death," The Guardian U.K., April 21, 2010. http://www.guardian.co.uk/environment/2010/apr/21/evo-morales-grassroots-climate-talks

[8] For debate on the racial/ethnic/socio-economic incidence of economic development takings, see Somin (2007) versus Dana (2007). In earlier seminal work, Munch (1978) details the particular history of takings pursuant to Chicago's urban renewal programs, finding that low-value properties tend to be undercompensated while high-value properties tend to be overcompensated. Furthermore, in American states with greater percentages of poor and minority population, governments are less constrained from using the takings power for economic development purposes (López, Jewell, and Campbell 2009).

larger merchant vessels, still others in larger warships, and so on.[9] Much later, among political philosophers of the Scottish Enlightenment, the division of labor was seen to necessitate exchange opportunities that in turn serve as the channels through which Adam Smith's invisible hand would function. More recently, modern economics has studied deeply and widely the fundamental role of property rights in growth and development. For instance, in *The Mystery of Capital* Hernando de Soto explains how a regime of formalized property rights allows people to integrate dispersed information in value-creating ways, to make accountable capital investments through collateralization and to make assets more fungible by protecting a wide nexus of exchange transactions (de Soto 2000). De Soto's work unfolds within a wider corpus of economic theory on property rights, including their evolutionary origins (Demsetz 1967; North and Weingast 1989), their causal role in the development of economies in Western countries (North and Thomas 1973; Rosenberg and Birdzell 1986), and the robust statistical relationship between secure (though not necessarily formal) property rights and spillover benefits like economic growth and measures of well-being.[10] The essential lesson to this wide range of work is captured by de Soto's own theme, which is that property rights promote the division of labor and the extent of exchange and thereby promote economic growth and development. Takings, especially when applied with uncertain constraints, reverse the social benefits imparted by property rights—namely, their role as a fundamental building block of economic development.

In the spirit of the Upton Forum, I will take this opportunity to compare and contrast takings in developing versus developed countries (specifically the United States). I will argue that takings differ in the two realms by the political processes through which they pass, which reflects the different institutional and ideological contexts through which they are enacted. These political differences help explain the fact that the distributional effects operate in opposing directions in the two settings: from rich to poor in developing countries but from poor to rich in the United States. Yet there is an important similarity as well. Takings in both developed and developing

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[9] In The Polity of the Athenians and Lacedaemonians, Xenophon writes: "Furthermore, owing to the possession of property beyond the limits of Attica, and the exercise of magistracies which take them into regions beyond the frontier, they and their attendants have insensibly acquired the art of navigation. A man who is perpetually voyaging is forced to handle the oar, he and his domestics alike, and to learn the terms familiar in seamanship. Hence a stock of skilful mariners is produced, bred upon a wide experience of voyaging and practice. They have learnt their business, some in piloting a small craft, others a merchant vessel, whilst others have been drafted off from these for service on a ship-of-war." Quoted without footnotes from http://www.fullbooks.com/The-Polity-of-the-Athenians-and-the-Lacedaemo.html (Accessed May 1, 2010).

[10] A small sample of relevant papers is Gwartney, Lawson, and Hall (2009); Kerekes and Williamson (2008); Acemoglu, Johnson, and Robinson (2002); Besley (1995); Mauro (1995); and Scully (1988).

countries alter people's incentives for maintaining and investing in their property. This paper explores these margins of contrast between takings in the developed versus developing world, and then discusses implications for the primary economic justification of the takings power, known as the holdout problem. The holdout problem is an argument based on economic efficiency, but it does not account for two sources of inefficiency that I highlight here.

In the following section, I discuss the main similarity between takings in developed versus developing countries, the adverse incentive effects to property owners. Section 3 discusses their primary differences, which are political, ideological, and directional in terms of the way they redistribute wealth. Section 4 deploys the arguments of Sections 2 and 3 to provide a fuller account of the holdout problem as the basic economic justification for takings.

2. Incentives to Property Owners

In de Soto's *The Other Path*, private property is defined as a bundle of rights "which confer on their holders inalienable and exclusive entitlement to them" (de Soto 1989, 159). Compulsory sale infringes on the alienability and exclusivity aspects of this definition of private property. More generally, the takings power creates uncertainty among property owners and distorts their incentives for maintenance and investment in their property. In that event, the accounting of the social costs of eminent domain would need to include misallocation of resources under the threat of eminent domain. This section explains how the law in the United States has widened the meaning of "public use" so as to effectively remove all formal legal constraints on the majoritarian use of eminent domain for economic development. This relatively unconstrained power creates uncertainty as to the defined circumstances under which a property may be taken. This uncertainty, in turn, perturbs the economic plans of property owners and places the market process onto adverse paths of dynamic inefficiency. Some of the most thorough uses of takings for economic development in the United States illustrate the argument.

Under U.S. law, the government's taking power has become stronger over time. The evolution of cases and politics that explains this process is covered well in recent literature.[11] For our present purposes, I will emphasize a few of the economic implications of the changes in legal doctrine. Early courts interpreted the takings clause of the Fifth Amendment, which reads "nor shall private property be taken for public use, without just compensation," to mean the government acquires title to real property for *use by the public* such as common carriage rights of way (roads,

[11] The erosion of the public use requirement has been documented in greater detail by Somin (2008); Sandefur (2006); Ely (2005); Staley and Blair (2005); Rubinfeld (1993); and Epstein (1985, see chapter 12).

rail, power lines) or public buildings (courthouses, schools, post offices). Doctrine for these traditional types of takings is evident in early U.S. jurisprudence, which institutionalized a legal principle that entails important economic implications: public use does not authorize transfers of property from one person to another person. This prohibition on private transfers promotes economic efficiency because if the transfer from person A to person B were truly an improvement in the allocation of resources, it would be reached through voluntary exchange. Thus, constraining the takings power with this particular bright line imparts beneficial economic incentives by strengthening property rights. Similarly, the compensation requirement promotes efficiency by preventing the government from treating the takings authority as an indirect source of tax revenue. If the state were not required to compensate the property owner, it would begin to finance its land requirements through eminent domain and would over utilize property takings to finance its operations. Like a levy on a narrow tax base, the deadweight loss would be large because property owners would do much to try to avoid bearing the tax burden, such as not investing in property. The nineteenth century Supreme Court reflected this in upholding the fundamental fairness doctrine, under which no individual property owner should bear excessive burden of supplying public uses.

It was not until late in the nineteenth century that limitations on the takings power were gradually eroded. Beginning in the Progressive Era, and accelerating in the New Deal, the Court increasingly deferred to legislative bodies as to what constitutes "public use." On cue, governments in many parts of the country began to advance an ever-expanding notion of public use. By the middle of the twentieth century, the stage was set for the Court to advance the public purpose doctrine, under which it has allowed takings for such purposes as the elimination of blight by urban renewal (*Berman v. Parker*, 1954), enhanced competition in real estate (*Hawaii Housing v. Midkiff*, 1984), expansion of the tax base, and economic development broadly conceived (*Kelo v. New London*, 2005). By the time of the *Kelo* case, the Court's deference to majority rule was complete. Citing *Berman* heavily, the *Kelo* majority opinion reasoned that a carefully considered development plan that is generated by an open, democratic process, such as the one in New London, "unquestionably serves a public purpose."[12] Therefore, so long as there is a rational basis connecting the development plan with some notion of the public purpose or benefit, the Court will not preclude a property taking pursuant to the plan. In short, the public use requirement had been defined to mean whatever a government majority says it means. By the final decade of the twentieth century, one legal scholar described the public use clause as being of "nearly complete insignificance" (Rubenfeld 1993, 1078). As expected, economic development takings and urban renewal programs became very common across many, but not all, states in the country. In some areas of the country, the practice became routine.

[12] Kelo et al. v. City of New London, Connecticut, 545 U.S. 469 (2005) at 13.

As the public use requirement has been weakened over time, the takings power has become a more uncertain policy instrument. Majorities are effectively unconstrained by the Court, which it demonstrated in *Berman v. Parker* as follows. "The concept of the public welfare is broad and inclusive … If those who govern the District of Columbia decide that the nation's capital should be beautiful as well as sanitary, there is nothing in the Fifth Amendment that stands in the way."[13] Under such broad latitude to legislatures, properties are vulnerable to takings for effectively any reason agreed to by a majority of a city council or other relevant governing body. As Justice O'Connor's dissenting opinion in the *Kelo* case remarked, "this [public use] constraint has no realistic import … The specter of condemnation hangs over all property. Nothing is to prevent the State from replacing any Motel 6 with a Ritz-Carlton, any home with a shopping mall, or any farm with a factory."[14] Furthermore, granting the takings power for economic development purposes enables governments to use it for other purposes as well. Because the court defers to legislatures with such broad latitude under the rational basis level of scrutiny, there is no effective limit to the takings (Somin 2010). The mantra among the grassroots backlash after the *Kelo* case seemed to be, "If they can take Susette Kelo's house, they can take mine."

Furthermore, there is additional variation depending on the rules established by state and local governments. After the *Kelo* ruling in June 2005, a wave of legislation brought reforms to a majority of the states. In a few states, the laws have also changed through court cases. High courts have ruled in recent cases in Illinois, Michigan, Ohio, Oklahoma, and South Carolina, making illegal takings for economic development. In New York, however, lower courts have recently ruled in opposite directions on two prominent cases, making people even more uncertain of the security of their property rights.

When the institutional rules provide little constraint on the threat of property expropriation, economic incentives lead property owners to make less efficient use of resources. First, people plan their maintenance, investment, and other development decisions over a shorter time horizon. Spot exchanges and short-term investments are relatively secure because the takings process is a deliberative one that features advance public notices and other purposefully instilled lags. But over longer planning horizons, it is uncertain how to factor in some probability that investments will be lost to expropriation. The effect is equivalent to an increase in the discount rate of time preference. It changes the quantity and composition of property investments, resulting in foregone long-term developments and greater allocation of resources according to short-term contracts than would otherwise occur under more secure rights. In addition, people may exchange over less extensive margins more generally; for example, across shorter distances, over shorter time spans, under more limited

13 Berman et al. v. Parker et al., 348 U.S. 26 (1954)

14 Kelo et al. v. City of New London, Connecticut, 545 U.S. 469 (2005) at 11.

access to credit, and so forth. With enough substantial uncertainty due to threat of expropriation, economic activity can be pushed into the shadow economy where people feel less extensive and less secure in their exchange opportunities. De Soto explains this process in *The Other Path* (de Soto 1989).

Market process theory provides the most effective basis for understanding the distortive impacts of unconstrained takings power. Boettke, Leeson, and Coyne (2010) present the argument in terms of Israel Kirzner's theory of entrepreneurship (Kirzner 1973) and Robert Higgs's theory of regime uncertainty (Higgs 1997). Two fundamental conditions motivate the analysis. First, entrepreneurship is a ubiquitous trait—it is a mode of activity that all individuals practice in order to make the most of their available knowledge and opportunities. For instance, people are entrepreneurs in making their decisions about real estate if for no other reason than that, for most people, real estate is the largest good in their household budget. Second, the incentives of the market are a function of the institutional environment, which is affected by political rules such as constraints on the takings power. Changes to the institutional environment will entail a new incentive structure, which in turn results in different outcomes. When uncertainty is built into the rules of the game—as when relying on policymaker discretion to decide when properties may be taken—this, in turn, increases uncertainty in entrepreneurship, and the market process will generate adverse consequences. So, for example, where the takings power is meaningfully constrained, economic incentives are shaped by a well-functioning system of exchange with secure rights to property and contract, and entrepreneurship will exploit arbitrage opportunities to the point that resources become used in ever greater-valued uses. On the other hand, if the soundness of property rights were compromised, as with the uncertain threat of eminent domain, then so will be the social function of Kirznerian entrepreneurship in propelling the market onto a path of dynamic efficiency. When governments possess effectively unconstrained use of eminent domain, as under the rational basis test to satisfy public use, this perturbs the institutional structure and creates altered entrepreneurial incentives that direct the market process onto a different path. Evidence across the American states is consistent with this argument. In states that expressly authorize governments to use takings for economic purposes, the government sector occupies a greater share of economic activity. As Turnbull and Salvino (2009) demonstrate, tax revenues as a share of personal income are significantly greater at both the state and local levels when takings for economic purposes are expressly authorized. Strong takings powers, then, correlate significantly with incentives to engage in unproductive entrepreneurship, rent seeking, tax avoidance, and other inefficient activities.

The distortive effects can be seen also in many urban areas where eminent domain has been used extensively. In New York City, for example, the threat of eminent domain contributed to the decline of Times Square in the 1970s. When the city's

development authority announced its ambitious, large-scale plans with the assurance of using eminent domain to assemble the necessary land, property owners adopted a shorter planning horizon. The area became filled with tenants who welcomed short-term leases and whose clientele were not dissuaded by the poor neighborhood conditions, such as sex shops (Stern 2009). The promise of eminent domain altered property owners' incentives, and the results mattered. In New Haven and other Connecticut cities, where urban renewal programs in the 1950s and 1960s were used more than in any other place in America, entire cities failed. Already in 1967, *Time* wrote of New Haven's many woes and dashed hopes of grandeur, quoting long-time Mayor Richard Lee: "For everything we've done, there are five things we haven't done, or five things we've failed at. If New Haven is a model city, then God help urban America."[15] By 1980, the population had dropped by 30 percent in thirty years, and New Haven ranked among America's poorest cities, as it still does today.[16] Nearby in New London, the site has been cleared where Susette Kelo's house formerly sat, and an empty terrain sits undeveloped, after the city spent some $80 million purchasing the properties. *Midkiff* also failed on utilitarian grounds. In the years after transferring title from leasers to lessees, the island became a more active real estate market, and prices increased substantially (Stark 2007). The same overall trend characterizes most of the major takings cases that have reached the courts: Where eminent domain has been used for economic development projects, peoples' incentives have become distorted, and the economic outcomes suffer as a consequence.

3. Politicized Takings Power

It is in the political realm where focus turns more toward the differences between takings in developed versus developing countries. Takings in developing countries tend to occur for ideological reasons within political systems that have weak rules of law, concentrated executive powers, weak judiciaries, and a dependent or state-run media. Even though compensation requirements are ubiquitous, officials in these situations are relatively unconstrained from taking properties to fulfill political objectives. They often offer minimal compensation as well. By contrast, takings in developed countries occur mostly for social utilitarian reasons within a strong rule of law system of shared and federal powers under the watch of an independent

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[15] "Washington has rewarded the city's imaginative urban-renewal administration with a greatly disproportionate share of federal renewal money—$852 per capita (given or pledged), or six times as much as Philadelphia, in terms of population, seventeen times as much as Chicago, twenty times as much as New York." Time editorial, "Cities: No Haven," Friday September 1, 1967, http://www.time.com/time/magazine/article/0,9171,837213,00.html.

[16] By 2005 more than a quarter of its residents were living in subsidized housing (Gelinas 2005).

media. Perhaps the economic effects of the takings in both situations are similar, as detailed above. But these political differences appear to be substantial. They also fix our attention on certain neglected aspects of the economics of eminent domain.

Consider initially the ideological context. The system of property rights selected by a people is generally informed by the society's culture, its systems of shared beliefs, and other salient values (North 2005). As a consequence, institutional arrangements including property rights are ingrained within the prevailing ideological profile of a society. In certain developing country situations—for example, Bolshevik Russia and Castrovian Latin America—socialist revolutions have taken hold such that abolishing private property becomes the central change that will bring about the transition from capitalism toward the egalitarian utopia. The question of whether property rights promote economic development and lead to better outcomes for one's society becomes secondary. As Bolivian president Evo Morales told the socialist publication *Monthly Review*, the ultimate goal is:

> "To live in community and equality … It is an economic model based on solidarity, reciprocity, community, and consensus. Because, for us, democracy is a consensus … And within this framework we are seeking a communitarian socialism based on the community. A socialism, let's say, based on reciprocity and solidarity. And beyond that, respecting Mother Earth, the Pacha Mama. It is not possible within that model to convert Mother Earth to merchandise."[17]

Under this rationale, Bolivia's government has seized and redistributed commercial farmland to indigenous poor peoples and has nationalized energy and other industries. These patterns resemble the clear path to Marxist socialism that has been charted in Venezuela and an increasing number of neighboring countries (Haber 2009). In other countries where there is a history of expropriations, the operative ideology has taken on slightly different appearances. In Zimbabwe, for example, after decolonization, the prevailing ideologies supported a solution based on black self-rule, as in other postcolonial African countries. This gave rise to Zimbabwe's first president, Canaan Banana, and his successor, Robert Mugabe, who eventually corrupted the spending of foreign aid dollars and expropriated enormous swaths of land en route to destroying the economy. Mugabe was more of a kleptocrat than a socialist demagogue. Elsewhere in Putin's Russia, the Yukos affair illustrates that there is ideology in play, but it is an ideology of oligarchy and control over energy supplies.[18]

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[17] Dieterich, Heinz. 2006. "Evo Morales, Communitarian Socialism, and the Regional Power Block," Monthly Review, Saturday January 14. Original in Spanish: http://mrzine.monthlyreview.org/2006/dieterich070106.html. Translation to English: http://www.axisoflogic.com/artman/publish/article_20656.shtm

[18] In an influential paper, Martha Brill Olcott (2004, p.30) explains: "Putin's priorities with regard to natural resource development…[provide that] state interests must take precedent over those of individuals or private enterprise. Free markets will not direct foreign policy

The ideology surrounding the takings power in the United States is, relatively speaking, more pragmatic. On the one hand, property rights are held very dearly in people's beliefs. This can be seen from the time of the American founding[19] to the substantial public backlash after the *Kelo* ruling, which evidently struck a chord with the American polity (López and Totah 2007). On the other hand, Americans do value progress, and they especially desire economic progress for the opportunities it provides, its innovations, employment and rising living standards. There is relatively little sympathy for property owners who merely hold out for more money and thereby block beneficial investment projects. By comparison, the *Kelo* backlash suggests that there is significant sympathy for principled holdouts like Susette Kelo and others. The default position is secure private property. Yet people may be willing to empower government to infringe on property rights if it means being able to pursue a project for the greater good, or if unreasonable and isolated nodes of greed are holding it up.

As a result, takings in the United States are usually carried out for more pragmatic purposes. The typical property taking is at least nominally intended to promote the public good rather than nakedly to instill preferred social institutions or to settle political scores. Quite often, takings are justified by alluring promises of utilitarian gains under centrally planned economic development projects—by notions of the public interest that Americans have come to associate with economic development, such as high incomes, good jobs, steady tax bases, and rising living standards. In this public interest view, takings are viewed as a rare but necessary tool for promoting commerce and capitalism in the face of strategic holdouts. Individual property rights take priority, but, in certain situations and on relatively rare occasions, these rights can be compromised for the greater good of the society.

To be prepared for such circumstances when they emerge, a democratic people may occasionally want to avail itself of the option to use eminent domain to move development along. To wit, electorates in many American states and localities have chosen to entrust their governments to use discretion in determining when those particular circumstances justify takings. In these areas, it is common for officials to make public comments to assure property owners that their use of eminent domain will be limited—"only when absolutely necessary" and "only as a last resort" are two common refrains (Lopez and Totah 2007).

Efficient implementation is another matter, of course, and rigidities in political

under a Putin administration. He believes that private property should exist and that the state has to grant property owners legal protection, but the rights of property are not absolute and do not take priority."

[19] "The country that became the United States was unique in world history in that it was founded by individuals in quest of private property…. [T]he conviction that the protection of property was the main function of government, and its corollary that a government that did not fulfill this obligation forfeited its mandate, acquired the status of a self-evident truth in the minds of the American colonists." Pipes (1999, p. 240).

and legal institutions often confound public interest rationales. For example, contrary to the efficiency-restoring justification for the use of eminent domain, U.S. law does not decide takings based on economic measures of the public interest. Rather, the *Kelo* Court expressly rejected the argument that governments should demonstrate to a "reasonable certainty" that the promised economic benefits are likely to materialize in order to justify the taking. Citing *Midkiff*, the *Kelo* Court reinforces that "our cases make clear that empirical debates over the wisdom of takings—no less than debates over the wisdom of other kinds of socioeconomic legislation—are not to be carried out in the federal courts."[20] Lower courts have gone as far as to rule that developers cannot be required to proceed at all with the development plan, much less proceed in such a way that the promised economic benefits are realized.[21] Instead, the relevant test is whether the crafting of the development plan adhered to deliberative, democratic procedures. Thus, under current federal law, a planned development could ultimately accrue no benefits whatsoever in the form of promised jobs, tax revenues, and general economic vitality, yet the taking would be legal as long as the process that created the plan was a deliberative, open, democratic one. While inconvenient for the utilitarian public interest rationale, the Court's rejection of "reasonable certainty" is pragmatic for at least two reasons. First, there is no practical way to impose binding legal obligations on the new property owners to provide the promised benefits (Somin 2010). Second, the Court may want to avoid substituting rational basis with a stricter form of scrutiny in order to not burden the lower courts with having to decide piecemeal which takings will be likely to generate utilitarian gains.[22] In short, the courts lack effective means to limit development takings only to circumstances in which the promised gains have a good chance of materializing—to argue otherwise would be to place the Court in the role of entrepreneur.

Statutory rigidities also confound the implementation of public interest takings. For example, while most of the American states prohibit or curtail the use of eminent domain for economic development purposes, many of these laws include generous

[20] Kelo et al. v. City of New London, Connecticut, 545 U.S. at 488, citing Hawaii Housing Authority v. Midkiff, 467 U.S., at 242–243. The Kelo opinion further reads: "A constitutional rule that required postponement of the judicial approval of every condemnation until the likelihood of success of the plan had been assured would unquestionably impose a significant impediment to the successful consummation of many such plans."

[21] City of Detroit v. Vavro 177 Mich. App. 682 (1989). For detailed discussion see Somin (2010).

[22] This point was argued by Richard Posner on the Becker-Posner blog at the time of the Kelo ruling. See "The Kelo Ruling," Becker-Posner Blog, June 24, 2005. Cf. Justice Stevens for the Kelo majority: "A constitutional rule that required postponement of the judicial approval of every condemnation until the likelihood of success of the plan had been assured would unquestionably impose a significant impediment to the successful consummation of many such plans." Kelo et al. v. City of New London, Connecticut, 545 U.S. at 488.

loopholes and exemptions that serve to nullify their restrictiveness.[23] The most common and important type of exemption allows takings for the removal of blight. Since the condemning authorities are often the same or very close to the personnel who write the statutory definitions of "blight," it is common to see expansive and vague definitions. In New York, for example, a property may be blighted if the government deems it to be "underutilized" (Gelinas 2010). In California, the statute applies to structures of "obsolete design," properties with "adjacent or nearby incompatible land uses," and "lots that are in multiple ownership."[24] In Lakewood, Ohio, the redevelopment agency attempted to blight a residential area, citing homes that lacked a two-car attached garage, had less than two full bathrooms or three bedrooms, and for being too small.[25] A lawsuit later found that under these standards, most of the City Council members' homes would be blighted. Similarly expansive definitions of blight are still on the books in many states as holdovers from the post-*Berman* urban renewal era.

Nebulous blight rules play to the strengths and strategies of people who aim to use the takings power beyond its narrow, public interest justification. Policymakers may want to use eminent domain as an expedient rather than as a last resort. With such expansive definitions of blight, this becomes an easy task—as Justice Antonin Scalia has famously remarked, in "practically every case," only a policymaker with a "stupid staff" would fail to muster a rational basis.[26] Case studies have revealed that in many instances, authorities have used eminent domain as a first resort and have initiated condemnation proceedings prior to making any private offers (Staley and Blair 2005; Gelinas 2010). Certain instances are particularly revealing when eminent domain is introduced, then removed under popular backlash, only to then have the parties negotiate a voluntary sale.[27] Eager to see their proposals constructed, urban planners have also advised opportunistically, suggesting that cities use a "quick take by

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[23] In the four years after the Kelo ruling, a total of forty-one states revised their eminent domain statutes. Qualitative analyses have estimated that about 40 percent of the post-Kelo laws are effectively nullified by loopholes and exemptions. See Lopez, Jewell, and Campbell (2009), Somin (2008), and Morris (2009) for details.

[24] California Health and Safety Code Sections 33030–33039, http://law.justia.com/california/codes/hsc/33030-33039.html.

[25] In the four years after the Kelo ruling, a total of forty-one states revised their eminent domain statutes. Qualitative analyses have estimated that about 40 percent of the post-Kelo laws are effectively nullified by loopholes and exemptions. See Lopez, Jewell, and Campbell (2009), Somin (2008), and Morris (2009) for details.

[26] California Health and Safety Code Sections 33030–33039, http://law.justia.com/california/codes/hsc/33030-33039.html

[27] Institute for Justice. "Ohio's 'City of Homes' Faces Wrecking Ball of Eminent Domain Abuse," Litigation Backgrounder, http://www.ij.org/index.php?option=com_content&task=view&id=1053&Itemid=165.

eminent domain" to "reduce the time and cost required to ready a site" and to "allow immediate public possession" (Strategic Planning Group 2002). Adopting such a routine stance toward takings has turned development authorities into commercial real estate firms, regularly purchasing properties, maintaining a portfolio of properties, advertising for tenants, and taking losses for lack of occupancy.[28] These patterns give pause to the idea that eminent domain is a tool of last resort meant for rare use only when necessary to solve a strategic holdout problem.

Nebulous blight rules also interact with public interest intentions to create distributional effects along race and income lines. As mentioned, the burden of takings in the United States has been disproportionately borne by poor and nonwhite populations (*supra* note 9). Concentrating takings in poor areas is consistent with the public interest rationale because these are the areas where development is most needed. However, the compensation requirement also gives policymakers an instrumental, budgetary incentive to target properties where property values are low. And furthermore, since subjective value is high relative to market value in poor areas, property owners are more likely to resist initial offers, which in turn makes it more likely that the negotiations escalate to condemnation proceedings.

Finally, combining the above institutional realities with well-defined and organized interests enables rent seeking dynamics to displace public interest intentions. Organized interests align in predictable ways on this issue. Opposing takings for economic development are homebuilders, realtors, owners of large land holdings (such as the King Ranch in Texas), and public interest groups such as the NAACP and the libertarian Cato Institute. Groups that support takings for economic development include municipal governments, urban planners, and some developers. These groups of concentrated interest have lobbied legislatures and filed briefs with courts to influence the outcomes of specific takings as well as the institutional rules that define government's powers. Campaign contributions are also a factor that may persuade these decisions. As a result, rent seeking tends to divert the decision process from serving the public interest as intended, and instead winds up serving the interests of those groups that can most successfully influence the condemnation authority and its legislative overseers.

In summary, takings for economic development fail to serve the public interest in either developing or developed countries. In the former settings, the effect is by design of ideology and concentration of power in the executive. In the United States, the effect is a byproduct of upholding a public interest rationale for government regulation while institutional rigidities in the legal and political systems cause implementation of policies to follow private interests instead.

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[28] Lucas v. South Carolina Coastal Council, 505 U.S. 1003, at 1025–06, note 12 (1992).

4. The Limits of the Holdout Problem

Just as there is strong ideological and political support for economic development takings, there is also strong intellectual support. The primary justification for takings in economic theory is known as the holdout problem, which is a form of market-failure argument as follows. Large-scale developments and rights of way require land assembly. When the developer begins buying up properties, the stakes may become known to existing property owners, who now have the incentive to refuse to sell in order to hold out for higher prices. This creates a position of increased bargaining power, which puts the property owner in a position of monopoly power. If the development fails or incurs delay costs under significant holdout pressure, then the result is a market failure in the sense that voluntary exchange fails to efficiently transfer resources to higher-valued uses.

An equivalent way to understand the holdout problem is as a situation of prohibitively high transaction costs. While defined and secure property rights impart the benefits discussed above, property rights are no free lunch. Private property entails costs of definition, search, enforcement, and transfer—in short, transaction costs. When the transaction costs of private property exceed its economic gains, economic efficiency calls for alternative institutional arrangements such as communal rights, state control, or even commons. The holdout problem is a particular mode of transaction costs, which, in situations of land assembly, can become dominant. The remedy is to infringe upon voluntary exchange through the use of eminent domain to acquire the properties of holdout owners. This argument is the primary economic justification for the policy under *Kelo*. When governments promise to use eminent domain "only as a last resort," they are implicitly suggesting that the only circumstance in which using eminent domain would be justified is in the presence of a holdout. In other words, the holdout problem represents the theory underlying the public interest rationale discussed above.

At issue is whether economic efficiency is improved by granting governments the power to forcibly transfer property so that it will be used in more socially valuable ways. The general response is "no" because voluntary exchange is Pareto optimal. However, under strategic holdout conditions, the market-failure response is "yes," which means that eminent domain can be used to recover monopoly deadweight loss of strategic holdout. The holdout argument justifies takings for economic development on the basis of economic efficiency. Yet granting that power, especially in an unconstrained way, creates new incentives for all the decision makers involved—property owner, policymaker, developer, and planning consultant. New sources of economic inefficiency arise from these new incentives. Thus, the holdout argument itself is incomplete. The political economy view advanced here provides a fuller account of the institutional choice whether to empower governments to take

properties for economic development. This fuller view concludes that economic efficiency provides only a weak, perhaps even nonexistent, justification for economic development takings.

5. Conclusion

Property takings are common in both the developing and developed world, and Hernando de Soto's work attracts us to the task of comparing the causes and consequences of takings in these two alternative settings. This paper compares the two within the framework of economic theory, including the economic efficiency argument that is used to justify eminent domain under conditions of strategic holdout. By comparing takings in developed versus developing countries, we come to see the limitations of the holdout problem justification for the takings power.

In developing countries, property takings tend to occur for ideological reasons under weak rule of law by regimes with little regard for conditions of Pareto optimality. In the United States, meanwhile, takings occur mostly on the basis of social utilitarianism in a relatively constrained democratic system of shared powers. This helps explain the different directions of distributional effects between the two settings—from rich to poor in developing countries and from poor to rich in the United States. This paper also draws attention to the main similarity between takings in the two settings, which is the adverse effect on economic incentives. The takings power increases regime uncertainty—in the developing world because governments are not constrained by a strong rule of law, and in the United States because "public use" has become a nearly completely ineffective check on takings for economic development. This creates uncertainty in the market, which shortens time horizons and reduces the extent of exchange, thus reversing the benefits that secure property rights would have imparted. Takings for economic development serve the public interest in neither setting, the fault of intention in developing countries and in the United States of rigidities in legal and political institutions.

The holdout problem is a form of market-failure argument. It implicates the principle of voluntary exchange as imposing unnecessary costs on the free transfer of property to increasingly higher-valued uses. Markets are inefficient under this condition, which in turn justifies the use of eminent domain in order to correct market failure and restore an efficient outcome. While the logic of the holdout problem is sound as far as it goes, the efficiency implications of the takings power go well beyond correcting the inefficiencies of strategic holdouts. As I have discussed, when governments possess effectively unlimited takings powers, this creates economic costs from mal-investment while also creating the scope for counterproductive activities such as rent seeking. If economics is to offer sound policy analysis on grounds of economic efficiency, it must account for the full range of efficiency effects of empowering governments to use eminent domain for economic development purposes.

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Beyond Microcredit: Delivering Financial Services to the Poor through Agent Banking

Robert Peck Christen*

Anyone interested in issues related to the developing world is likely to be familiar with the concept of microcredit. Most people have heard of Muhammad Yunus and his work with the Grameen Bank. The idea behind microcredit—the notion that tiny loans to very poor micro-entrepreneurs, usually women in the developing world, can be a pathway out of poverty as entrepreneurs invest these modest sums in their small businesses—has now become standard within economic development policy and academic circles.

For the past thirty years, I have had the opportunity to work in this field. What this work has given me is a particular understanding of the financial lives of the 2.6 billion people in the world who live on less than $2 a day. Understanding the financial lives of people living on less than $2 a day has not only inspired our work at the Bill & Melinda Gates Foundation, this understanding has been the basis of a more nuanced and sophisticated set of strategies for meeting the financial services needs of the poor—strategies that go beyond the microcredit model. What I will describe here are some of the challenges associated with delivering financial services to the poor and the strategies we are supporting to overcome those challenges.

We started by considering the perspectives of all the 2.6 billion people living on less than $2 a day, not just micro-entrepreneurs and not just women. We wanted to gain a better understanding of everyone in this category and the wide variety of things they do, and *then* to consider how financial services could be the most helpful in their lives. We asked, "What *kind* of intervention can an organization like ours make that will produce the greatest impact for a much broader set of people?"

In their book *Portfolios of the Poor,* Collins et al. (2009) describe, in detail and on a weekly basis, the financial lives of hundreds of poor people in Bangladesh, India, and South America. In the context of particular families, the authors track all the money coming in and going out. What we learn from reading this book is that no matter how

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poor people are, they lead very, very complex lives—far more complex and difficult than ours. And I do not mean "difficult" in the sense you might expect, as in "they are poor, so their lives must be difficult." What I mean is that in order to meet the goals they consider essential—sending their kids to school, getting to a doctor if their child is sick, repairing their roof if it is damaged, or providing for themselves in old age—they must overcome many obstacles besides the fact that they are poor. They are trying to accomplish many of the same essential things that we are trying to accomplish in our lives. But they must attempt to accomplish these important and essential goals without the financial tools that we are accustomed to using.

Just imagine that you did not have access to an organized financial system. How would you accomplish those very important life goals? How would you pay for your children's education? Would you arrive at the college or university with a wheelbarrow and a satchel of money and drop it off at the admissions office? How likely would it be that you would make it to your destination without being robbed? It is almost unimaginable to us how life would exist without financial services. But this is the reality for people living on less than $2 a day; 90 percent of whom will never see any form of financial services unless we are successful in our work.

But it is for this reason that the financial lives of the poor are so complex and difficult. People have to plan for and organize their lives around the things that matter most but without the benefit of formal financial services. Instead, they must rely on informal means. Instead of putting their money in a savings account, they will put it in a little tin and bury it in the yard, or they will stick it deep in the rice bin, or they will buy gold jewelry so that when they need to get cash in a hurry, they can go to a pawn shop, or they will buy extra animals, hoping they will be able to sell them when they need to.

Holding cash within the household presents several problems if the goal is financial stability. Not only is cash vulnerable to theft, keeping cash within the household makes it far more difficult to maintain financial discipline. In order to get cash out of the household, people will lend money to a neighbor or ask a neighbor to hold on to money so that it can't be used for something else. Collins et al. (2009) find that poor people typically adopt ten to fifteen different informal strategies to manage their financial lives. The problem is that these strategies are costly. If you lend money to your brother because you wanted it gone from your house and he needs it, what are the chances that you are going to get your money back when you need it? If you have purchased a sheep as a way to store $20 worth of value and your child is sick, how do you get the $5 out of that sheep to go to the doctor? If you sell the sheep, everybody in the village knows that you are in a hurry to sell. Under such circumstances, you are not likely to get anything close to $20 for the sale of your sheep.

The informal means that people deploy to save or organize their finances actually degrade value. People lose roughly 20 percent a year on average, in the value of their savings. Informal means of holding assets in reserve in case of emergency are similarly problematic. Fifty-five percent of poor people in the world end up in poverty due to health shocks. When a medical condition strikes a family member, the family starts selling assets to replace income or to pay for healthcare, and frequently they fall into poverty.

While many people have some sense of the magnitude of poverty in their own country, few recognize how dynamic poverty is. Any given rate of poverty tends to disguise the fact that a very large number of people are climbing their way out of poverty every year, and a very large number are getting pushed back into poverty every year. Health shocks and other forms of vulnerability are the common cause for why so many people are pushed back into poverty.

In developing programs that provide financial services, much of our focus is to reduce these kinds of vulnerability through the use of financial tools. The central question we ask is, "What are the kinds of financial tools that help people reduce their vulnerability and enable them to climb their way out of poverty?" But the challenge is that the 2.6 billion people living on less than $2 a day don't have a lot of money and don't have a lot of annual income. If you are living on $50 a month, you will typically be transacting a dollar or two at a time. If a banking system is to serve the poor, it needs to be able to engage in very small transactions.

The challenge facing the typical market trader operating in the informal sector is this: If she has an extra dollar or fifty cents and would like to save it, is there a system possible that can serve her at the end of that workday? If she gets home with the dollar in her pocket, she won't come back to the marketplace the next day with the dollar still intact. One of her children is going to badger her to death for something, or perhaps her husband will take it from her. *Something* will happen such that she won't be able to come back the next day with that dollar.

The question we need to ask is whether there is anything we can do to help her get that dollar out of her possession and into the banking system every single day so that maybe the family that lives on $50 a month can have reserves at the ready to face an emergency. If they need $10 to see a doctor, is there a safe, affordable, and easy way to get that $10 without destroying the value of their remaining assets? That's our challenge. Can we manage transactions of $1 or $2 or $5 in a way that is sustainable and viable in the banking system? If we could, we can imagine financial progress for the vast majority of the world's population who need but have no access to financial services.

But achieving that sustainability and viability is very difficult. Every time you or I stand in front of a bank teller it costs the bank somewhere between $0.80 and $1. And many of the costs of providing financial services in the developing world are higher still. Depositors make small transactions in small denominations. The bills they deposit are usually wadded up and dirty, which makes them difficult to handle. A transaction that costs the bank roughly $1 in the US can cost $3 in the developing world. And if we want the bank tellers to be nice to people, that increases the cost even further because then our tellers will have to chat a little bit. This may sound like a small thing, but such interactions tend to be highly valued by poor people who want to be respected and want to develop a relationship with the organization handling their money. From the bank's perspective, that doesn't work. Nor does it work from the customer's perspective. For the typical poor client, the nearest bank branch will require at least an hour's journey and payment of $1 to $2 to someone to take them there. The time spent in line can be significant, costing both the bank and the client.

As you can see, this whole system isn't working very well.

And yet, we are at this moment facing a historic opportunity to develop an entirely new technologically driven business model for carrying bank services to where people actually live and work. We are now finding ways to turn the old banking model on its head. Instead of requiring the client to travel to the bank, we are now developing ways to bring the bank to the client. By bringing banking services to the doorsteps of where people live in their villages, they don't have to pay money for transportation. They can send their deposits in the normal course of a working day to a banking institution.

Led by southern countries like Brazil, Mexico, Kenya, and Philippines, this "agent banking model" has been spreading around the world. Banks are signing up with retail networks like a post office, a lottery chain, or a mobile phone company. Retail networks such as these are able to use their distribution networks to capture financial transactions that are then sent to banks. What this amounts to is a teller who goes to where the clients are—someone who will make one-tenth of what a bank teller will make—to make the transactions at a fraction of the cost for the banking system.

One of the biggest success stories unfolding right now, and likely to chart the course for the future in much of the developing world, is taking place with Kenya's M-PESA service. "Pesa" means money, and "M" is phone. Most phones in the world, particularly in the developing world, do not have prepaid plans; customers buy airtime minutes as they are needed. This arrangement, by which someone can purchase as little as five minutes of airtime, has fostered a significant increase in cell phone use around the world. This has also meant that cell phone companies have developed vast networks of people who sell minutes. Kenya has one of the biggest agent networks across Africa, with approximately five thousand M-PESA agents and fifteen thousand agents overall who sell minutes all over the country. In any market area, you can find dozens of people selling minutes from kiosks just large enough for one agent to sit at a table to conduct the transactions.

Because these agents are already set up to receive cash for airtime, they can just as easily receive cash for deposit, and with the use of a cell phone, can have that money credited to the customer's account. And just as easily, for a nominal fee, that money can be sent back to a client's family in their home village. This is extremely valuable in a context like Nairobi, where many people have come to work in anticipation of sending money to their families in their home villages. For example, a woman in the village may receive a text message from her son working in the city: "Hi Mom, I just sent you some money." The mother goes to another agent, again operating from a small market kiosk close to where she lives, who can access the relevant account and disperse the cash to her. The growth of this system has been staggering. It has grown from 0 to 7.5 million clients in almost three years. Given that there are about 18 million Kenyans, this practice is changing the economic life of Kenya at an unprecedented pace.

So far, this system is just a system that sends money around. What will be very interesting—what's on the verge of happening in Kenya—is that networks are starting to negotiate with banks to have their agents serve as the front-end transaction system

for bank accounts.

We are also beginning to see initiatives like this develop in rural communities in Brazil, where agent banking was put in place about four years ago, not with cell phones but with cards and machines that can access accounts through the information embedded in the card's magnetic strip. Such machines are deployed in Brazil in post offices, lottery outlets, and mom and pop stores, connecting previously unconnected villages up and down the Amazon.

As this system has developed, economic activity in the rural villages and towns on the river has increased. Prior to this system being in place, municipal employees, school teachers, and other people receiving government payments had to travel down the river five, six or ten hours to find the nearest bank branch before getting paid. Now, most of these people can get paid in the same building where they are living or working. This has meant that the economic activity in those villages has increased substantially. It may very well be that over time, delivering financial services to where people live and work may lead to profound changes in the volume and diversity of the goods and services exchanged in these smaller local economies.

In the area of microfinance, the key contribution of the Bill & Melinda Gates Foundation has been twofold. First, we are supporting and developing agent banking models like those I have described here. We are looking for ways to develop financial systems based on agents who are already in the villages. We are developing financial products and services that can ride on top of other transaction systems, which will then hopefully lead to higher-value products that will encourage people to save even more.

Secondly, we are focusing the attention of the microfinance community on the power and impact of providing a safe place to save. It is essential that we get the savings back into the microfinance equation. The solution cannot only be about microcredit. By making saving services available to people at extremely low cost, we think that the microfinance community will come to recognize that there are more people who desire to open a deposit account than want a loan. This is exactly what has been demonstrated with banks that we have supported in Congo, Malawi, and other countries in Africa. For every single client seeking a loan, we see five to ten clients coming in to open a deposit account.

This is a striking result that compels us to focus our attention beyond microcredit alone. To work well, microcredit requires the existence of investment opportunities. But consider the investment climate of, say Congo. While there may be some investment opportunities, they are small in number and magnitude relative to clients' need to just keep their cash in a secure place outside of the household. In the entire country, there are only about five banks and virtually no bank branches outside the capital city of Kinshasa. If you look at the distribution of formal banking services across Africa, you will find virtually no presence of banks where most people live and certainly no presence in the neighborhoods where people live. So, this is a fundamental challenge. The only way to deliver banking services to the bulk of the population any time soon will be through an agent banking model.

In conclusion, we think there is a real opportunity to move the gauntlet on

affecting peoples' lives through financial services if we bring those services to where they live and work, and in a manner that is safe, affordable, and easy to use. By making their financial lives less complicated and less difficult, the agent banking model is having a profound impact on the lives of people living on less than $2 a day.

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The 2008 Financial Crisis: Causes, Response, and Consequences

Lyle E. Gramley*

To anyone other than an economist, economics tends to be a fairly dull subject. But to make it a bit more interesting, I have a story to tell. If you don't remember anything else I say, you will probably remember this story.

A young lad goes to see his father, and he says, "Daddy, can you explain to me how the economy works?" "Oh yes, my son, I'll be happy to do that. Every morning, I go to work in our family-owned business. All of our family money is tied up in that business. That, my son, is capital. You notice that things work smoothly around the house. When it is time to eat, food is on the table. When you need some clean clothes, just open your drawers; they are all laid out for you. That requires management. Your mother supplies the management. We have a maid who does the housework, the dishes, and the laundry. That, my son, is labor. When you were born some ten years ago, that was productivity. When your baby brother was born just a few months ago, that was the future. That, my son, is how the economy works."

The young lad couldn't figure out a thing from this story. But a few days later, something happened that made everything clear. He heard his baby brother crying. So, he went down to see what was wrong, and as he entered the baby's room, his nose told him that the baby's diaper needed changing. He went to find his mother, but she was fast asleep. He knew that if he awakened her, she would be very angry. So, he went to the other end of the house to the maid's room, and the door was closed. He knocked, and he knocked, and he knocked. Finally, the door opened. There stood his father in a rather disheveled condition.

His father snapped, "What do you want?" The young man said, "The baby's diaper needs changing." "Don't bother me with that!" scolded his father, as he whacked him on the bottom and closed the door.

With that, the economics lesson was perfectly clear. When management sleeps, capital takes advantage of labor, productivity suffers, and the future stinks.

Like Hernando de Soto, I will also discuss the financial crisis. My story is going to

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sound rather different from Mr. de Soto's, but our stories are not competitive; they are complementary. It is certainly true that the lack of information on who owned what made the crisis much more severe. But I will discuss developments in the mortgage market that were the trigger for the 2008 financial crisis, steps that were taken by the Federal Reserve and the Treasury to contain the damage, and then to the potential problems those steps have created for the future.

In the first few charts I present here, many of the figures are truncated at 2006 so that we can see what the world looked like leading up to the crisis. Beginning around the middle of 1990 and continuing for a decade or more, we had an enormous increase in the demand for homes. We added approximately twelve million new households to the ranks of homeowners (see Figure 1). One of the reasons for this increase in demand for homes was the fact that mortgage interest rates were relatively low (see Figure 2). But I think the far more important contributor to the increased demand was an unprecedented expansion in the availability of credit to immigrants, to minorities, and to people in lower- and middle-income brackets. I am speaking here of individuals who were borrowing in the subprime mortgage market.

Although the housing stock is very large, it is relatively fixed. If we have a significant increase in demand and the stock is fixed, prices are going to rise. Housing prices rose relative to median incomes (see Figure 3). Under normal circumstances, we would have expected the increase in prices to cut off the boom, because higher prices mean lower affordability. But that was countered by a progressive relaxation of mortgage standards, so the boom went on.

First, I will describe how subprime lending came to play a dominant role in the housing market. Subprime loans have been around for a long time. They are simply loans available at higher interest rates to more risky borrowers. But government interest in promoting home ownership has been a factor. In 1979, Congress passed the Community Reinvestment Act, and the Act was strengthened in 1993. The Community Reinvestment Act encourages federal depository institutions to lend in communities from which they have received deposits. But the word "encourages" is perhaps not strong enough to describe the impact. An institution that is a federally regulated depository institution has to set goals for the proportion of its loans that go to low- and middle-income borrowers and to minorities, with those goals reflecting the demographic characteristics of the area it serves. If the institution fails to take those goals seriously, it is marked down on its examination report. Perhaps it is only a slight exaggeration, therefore, to say that the U.S. Government is one of the official sponsors of subprime lending.

Another contributor was the demise of the Savings and Loan (S&L) industry in the late 1980s and early 1990s. Savings & Loans were portfolio lenders, making loans and holding them in portfolios; they took all the risk. That tends to focus the mind and keep one prudent. Leadership at mortgage lending passed to mortgage banks, which had very little skin in the game, and to mortgage brokers who had none at all. It is very easy for mortgage lenders to become more lax in lending standards if the trend is going in this direction.

Unlike S&Ls, mortgage banks sell these loans in the secondary market. We needed

a sizeable secondary market to absorb all those mortgages being generated, but that had been developing for some time. Indeed it had become the principal source of capital to finance household debt. The government had a role to play here, too, through the government-sponsored enterprises, particularly Fannie Mae and Freddie Mac. The growing use of the Internet to obtain mortgages also played a role because that made for a national mortgage market. If an individual whose local lender didn't offer the kind of terms he thought were appropriate, he could search the Internet and find someone who would make a loan with a lower rate or easier terms.

We had to have a substantial inflow of funds to finance this surge in mortgages. Much of it was coming from funds abroad, generated by a glut of savings internationally, particularly in the emerging nations of Asia. And then we had to have a decline in risk aversion, as these products were becoming riskier and riskier. Indeed, by the end of 2006, investors were buying garbage and begging for more. Figure 4 illustrates the decline in risk aversion, which shows the yield spread between junk bonds and 10-year Treasuries. This spread is a reflection of the risk that investors perceive, for which they require compensation. A normal spread is approximately six to eight percentage points. By the middle 2000s, it was down to half of that or less.

Ironically, there was some basis for decline in risk aversion because the world appeared to be becoming a more stable place. If we consider real GDP in the United States (see Figure 5), we see that after the middle 1980s, recessions (shown by the shaded vertical lines) were less frequent and much shorter. Inflation, which had been a significant problem in the 1970s, was brought under control. More stable economies were characteristic abroad as well as at home, and inflation came down everywhere. This period has been called the "Great Moderation."

But, of course, the decline in risk aversion went much too far. Looking back, it is difficult to understand why smart people did not figure out that something funny was going on. A few lonely souls did foresee the problems ahead, but they were very few and very lonely, and no one paid much attention. On the other hand, the list of those who didn't figure it out was very long indeed. The list includes economists (I am one of them), mortgage lenders, credit agencies, investors (not just in the United States, but abroad as well), the Federal Reserve, the Treasury, and central banks and finance ministries all around the world. None of us saw this happening.

Understandably, you may ask, "How could people have been so blind?" Well, things looked a little different during this period. Consider, for example, delinquency and foreclosure rates for all mortgages (Figures 6a and 6b, respectively), and delinquency and foreclosure rates for the most toxic products, adjustable rate subprime mortgages

(Figures 6c and 6d, respectively). In 2006, delinquency and foreclosure rates were still below where they had been about five years earlier, and indeed, for the adjustable rate subprime mortgages, the foreclosure rate was significantly below what it had been five years earlier.

But probably the most difficult problem of interpretation in this period was what to make of the significant run up in home prices. Figures 7a–7c show the three major home price indices provided by the National Association of Realtors. Although we experienced a severe recession from 1973 to 1975 and a severe recession with extremely high interest rates in the early 1980s, we never experienced a significant decline in home prices nationally. People somehow convinced themselves that a fall in home prices simply wasn't going to happen—that it couldn't happen. There seemed to be something about the housing market that was different—that we were not going to experience a significant drop in home prices.

The house of cards began to collapse in early 2007 with failures of large firms in the subprime market. It spread from the subprime market to other areas in the mortgage market in the second quarter, and from there to other financial sectors in the third quarter, and around the globe. I thought it might be interesting to see if we could quantify how serious this financial crisis was, and I thought of two ways, which I describe below.

The Federal Reserve Bank in Kansas City has constructed a Financial Stress Index (FSI). On the left-hand side of Figure 8, notice the increase in the FSI. This was the credit crunch of 1990–91. At that time, Chairman Alan Greenspan of the Federal Reserve said it posed "fifty-mile-an-hour headwinds" through the economy. Those "headwinds" created a mild recession. Later, we had another increase in the FSI in the fourth quarter of 1998, associated with the failure of Long-Term Capital Management. In late 2008, the level of financial stress was literally seven times what it had been in the credit crunch of 1991. Seven times as high.

Another way of quantifying the magnitude of the financial crisis is to look at business and consumer borrowing (see Figure 9). In the credit crunch of 1990–91 and the recession that accompanied it, the annual rate of business and consumer borrowing declined by $500 billion. In the credit crunch of 2007 to 2009, and the recession that ensued, business and consumer borrowing fell $2.7 trillion. It was a financial tsunami that hit the United States and the rest of the globe. It threatened to push our economy into another Great Depression.

Figure 10 illustrates further that this recession has been the deepest and longest in recent history. Housing starts declined by 75 percent. We had never seen anything like this before. Payroll employment to date has declined 7.2 million (see Figure 11). That decline is continuing. The median duration of unemployment increased to eighteen weeks, 50 percent higher than anything we had seen previously (see Figure 12). Household net worth declined by $14 trillion, roughly 25 percent, although we have gained some of that back again (see Figure 13).

I want to discuss now some of the steps that we took to moderate the crisis.

Figure 14 summarizes some of what the Fed has done in response to the crisis.[1] The first item on that list, reducing short-term interest rates to near-zero, has been an aggressive move in what we would consider traditional monetary policy—changing the short-term interest rates to either invigorate or slow down the economy. But when the financial markets are frozen up, conventional monetary policy will not do very much.

The Fed was forced to innovate to get things going in credit markets that were essentially not functioning at all. For example, the Fed created the Primary Dealer Credit Facility. When Bear Stearns began to fail and was merged into JP Morgan in March of 2008, the large investment banks in New York finally couldn't borrow at all. They typically financed themselves short-term. The only way for them to gain access to money now was to sell long-term securities. This would have aggravated the crisis by putting downward pressure on securities markets. In response, the Fed created for the first time an opportunity for large investment banks to borrow directly at the Federal Reserve.

The Commercial Paper Facility was another important innovation. With the failure of Lehman Brothers in September of 2008, commercial paper firms that typically financed inventories, payroll, and receivables by issuing commercial paper for three to six months, found that they couldn't find financing for longer than overnight. Some couldn't finance themselves at all. The Federal Reserve created a facility by which they could borrow directly from the Federal Reserve to finance themselves. These kinds of operations required use of Section 13-3a of the Federal Reserve Act, which permits the Federal Reserve to loan to any individual, partnership, or corporation under "unusual exigent circumstances." That clause was used over and over again in the lending areas that I mentioned here. All in all, the Fed put out about $1.7 trillion in loans. Many of those loans have been paid back at this point.

From late 2008–09, the Fed also began to buy long-term treasury securities, agency issues, and mortgage-backed securities to try to invigorate the housing market. So far, they have purchased almost a trillion dollars' worth of those securities. The program for buying long-term Treasury securities ended in October 2009, and the program for buying agency debt and mortgage-backed securities ends in September 2010.

In this process, the Fed has been accused of doing things that it should not have done. Congress is unhappy about the fact that the Fed has put considerable sums of

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[1] There are two books that I would recommend that help us to understand these events. The first is called *Lords of Finance* by Liaquat Ahamed. *Lords of Finance* is about the four great central bankers of the first half of the twentieth century: Benjamin Strong of the Federal Reserve Bank of New York, Montague Norman of the Bank of England, Emile Moreau of the Banque de France, and Hjalmar Schacht of the German Reichsbank. The story is how these four central bankers—great though they were—following the monetary orthodoxy of their time, pushed the global economy into the Great Depression. The second book is *In Fed We Trust*, by David Wessel of *The Wall Street Journal*. It is a story about how the Federal Reserve, and to some degree the Treasury, followed quite different policies and kept us from slipping into a depression.

taxpayers' money at risk. But there was no clear alternative. The Fed had to act quickly and could not wait for Congress to decide what to do. The criticism has been made that the Fed was engaged in adhockery—that it had no overall plan for how it was going to deal with the crisis. But Fed officials never knew from one day to the next what was going to happen. They had no choice but to do whatever it took to prevent utter disaster.

The Federal government, under both the Bush and Obama administrations, took important actions as well (see Figure 15), including injecting equity capital in banks; taking over Fannie Mae and Freddie Mac; increasing deposit insurance from $100,000 per account to $250, 000 per account in an attempt to stabilize confidence; extending deposit insurance to money market mutual funds when a run had developed in the fall of 2008; through the FDIC, providing loan guarantees so that banks could issue medium-term debt; adopting a fiscal stimulus program equal to one-half of one percent of GDP; and providing loans to auto producers and assistance to the housing industry.

These same kinds of things were going on abroad as well as at home. Many countries rescued their banking systems. Many countries adopted fiscal stimulus programs and, in many cases, on a scale much larger than in the United States. Ireland, for example, nationalized its entire banking system. China adopted a stimulus program, which, relative to the size of its economy, was 2.5 times as large as the U.S. stimulus program. But it worked. We are seeing signs of recovery now, both in the United States and in the global economy.

In the third quarter of 2009, real GDP rose at a 3.5 percent annual rate. At this point, there were many questions about whether or not we were really experiencing a recovery. Figures 16a–16d show a number of reliable indicators that have convinced me that we are in a recovery. We have had a significant decline in initial claims for unemployment insurance (see Figure 16a). We have had six months in a row of increases in the index of leading economic indicators (see Figure 16b). The Industrial Supply Management (ISM) Composite Index for manufacturing and nonmanufacturing (see Figures 16c and 16d, respectively) have now moved up to over fifty, which is the breaking point between expansion and contraction.

In my mind, there is really no question anymore of whether we are in a recovery—we are. The question now is, what kind of a recovery is it going to be? My view—which is also the consensus view—is that this is going to be a very moderate recovery by postwar standards. Normally, we expect real GDP to increase by about 6 percent in the first year of recovery. We will be lucky if it does half that well.

There are two major reasons for this. First, financial markets have been healing, and this process continues, but it is not over yet. In Figure 17, we can see that the interest rate spread between corporate Baa issues and ten-year Treasury issues is still 3 percentage points—a lot lower than the 6 percentage points at the peak of the crisis, but not down to the 1.5 to 2 percentage point figure that we normally see. Investors are still reluctant to lend. The monthly data on bank loans to businesses and consumers (see Figure 18) is still falling more rapidly than anything we have seen in the entire postwar period. We know from studies by economists Rogoff and

Reinhart—studies of major financial crises in other countries—that it often takes three years before real GDP returns to the pre-crisis level. As Rogoff and Reinhart say, there is no reason why it won't happen here.

The second reason for a moderate recovery is the state of the consumer. The typical consumer still has a lot of debt. His wealth is greatly reduced from where it was. But the major problem is that he doesn't have the income to spend aggressively. Real aggregate wages and salaries are still declining because of the drop-off in employment and the moderation of wage rates (see Figure 19). Consumers now are a much more disciplined group than they were a few years ago. They have learned that they cannot count on increases in the value of their 401K or the value in their home to provide all the funds they need for their retirement years, for educating their children, and so on. They have to do some of the hard lifting themselves, and the savings rate is moving up (see Figure 20).

But now because markets are improving, we are beginning to worry about inflation. We need to break down the thinking about inflation into two parts: 1) what is going to happen in the next several years, and 2) what might happen in the longer run? Unit labor costs and consumer prices are closely tied together (see Figure 21). They have to be. If consumer prices were to rise much more rapidly than unit labor costs, corporate profits would soar. If consumer prices were to rise significantly slower than unit labor costs, corporate profits would collapse. In considering unit labor costs (see Figure 22), what we see is that they are in negative territory because productivity is doing very well, and compensation per hour is moderating (see Figures 23 and 24, respectively). And all the signs are that this is continuing.

The GDP figures for the third quarter of 2009 imply a large increase in productivity in that quarter—somewhere between 7 and 8 percent at an annual rate. The year-over-year number in productivity in the third quarter will be somewhere between 3.5 and 4 percent. As long as we have a moderate recovery with continued high unemployment, unpleasant though that may be, it is going to mean a very low-inflation environment.

But we do have to wonder about what may lie ahead given what has happened in terms of monetary and fiscal policy. We have an enormous federal deficit. Figure 25 shows that the Administration's outlook for 2019 is a deficit equal to 4 percent of the GDP, which is almost as large as anything we have seen in any time in the postwar period—and Administration figures are always overoptimistic. We have a Federal Reserve balance sheet that has increased from approximately $800 billion in August of 2008 to over $2 trillion at the present (see Figure 26). This has created a significant increase in bank reserves, but has not created a significant increase in the money supply. As seen in Figure 27, M2 is growing at less than 7 percent a year because most bank reserves are primarily held as excess reserves. The level of excess reserves in August of 2008 was about $2 billion. It is now over $800 billion (see Figure 28). If those excess reserves were suddenly and dramatically converted to loans and securities, M2 would explode and we would have inflationary problems.

The Fed does, however, have an exit strategy. The Fed will need to shrink the balance sheet and raise interest rates to normal levels. (For a summary of the Federal Reserve's exist strategy, see Figure 29). That cannot start now because the economy

still needs nourishment. Some of the shrinking of the balance sheet will occur as loans are automatically paid down as financial markets improve, and that process has begun. Some of it will occur when these special lending facilities are closed as markets begin to function normally.

The Fed has told us that it is going to rely heavily on reverse repurchase agreements. Repurchase agreements have been in use for a long time to add to the bank reserves; reverse repurchase agreements would subtract from bank reserves, but they have never been used on a large scale before. The Fed is engaging in conversations with market participants about how that will work.

The most important tool that the Fed has to keep inflation under control is a new tool: payment of interest on reserves. The Fed is now paying interest of ¼ of one percent on reserves that banks hold with it. When the time comes to raise the federal funds rate, that rate on reserves will be raised as well. What that means is that no bank will want to lend in the federal funds market at less than what they can earn with the Fed, because they would be taking some risk by doing so. But the concern remains that banks may still fuel inflation if they see attractive opportunities to make loans or buy securities. The Fed has an answer for that as well. The Fed is going to offer longer-term deposits—with maturities of a month, three months, or six months—at higher interest rates to discourage acquisition of loans or securities from taking place at too rapid a pace.

These are new policy instruments that have never before been used. The room for policy error is greater, to be sure, but it is not rocket science. The Fed's argument is that the decisions that have to be made are basically the same kind that are always required—determining when it is time to start tightening up monetary policy and how fast to do it.

We also need an exit strategy for the federal deficit. The Administration has said that it will put forth a solid plan to reduce the deficit longer run in connection with the next budget. Let's hope it does. If it doesn't, will this mean inflation? We have a big deficit; does that necessarily mean inflation? Not at all. Deficits mean inflation only if the debt is monetized. The Fed has told us in no uncertain terms that the debt will not be monetized. But if we have big deficits and we don't monetize them, that will mean very high real interest rates. And that will be extremely damaging to the housing market, to business investment and productivity, and to the long-term growth of the economy. Thus it is essential that the Obama Administration does indeed come through with a meaningful deficit-reduction plan.

There is one other area that requires attention, and that is the regulatory reform of financial institutions. (For a summary of necessary regulatory reforms, see Figure 30.) The list of what needs to be done in this area is not extensive, but a few things stand out as particularly important. We are certainly going to have to bring nonbank financial institutions that are large enough to create systemic risk under the umbrella of federal supervision. We are going to have to have significantly higher capital requirements. An interesting idea is to make capital requirements a function of the degree of systemic risk that the institution creates. We need procedures for managing failures of nonbank financial institutions other than letting them go bankrupt—

something like what we do for banks with the FDIC. We need compensation systems that discourag … that will police the marketing …

If we do … going to have another financ … us better tools to deal with th …

Figure 1

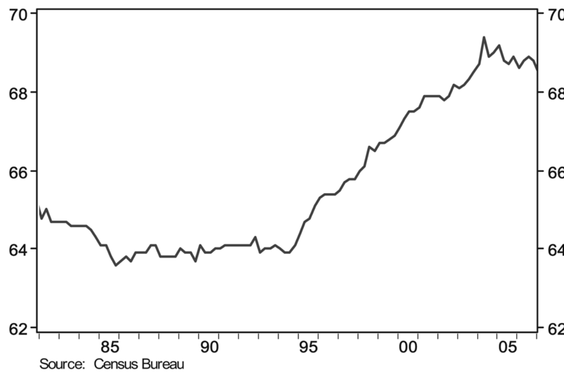


Figure 2

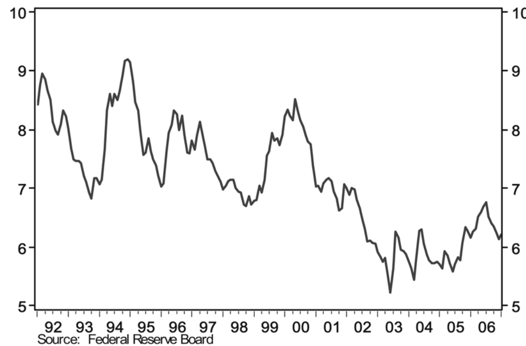


Figure 3

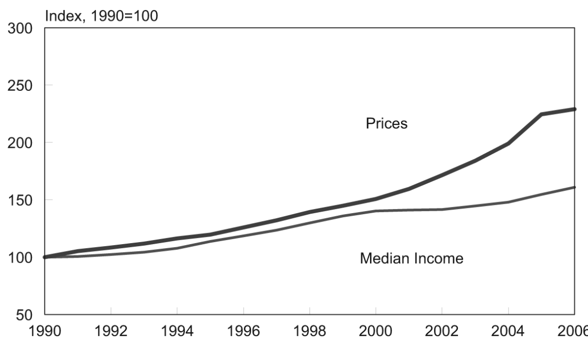


Figure 4

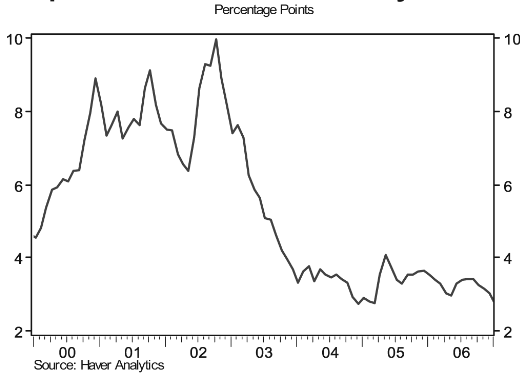


Figure 5

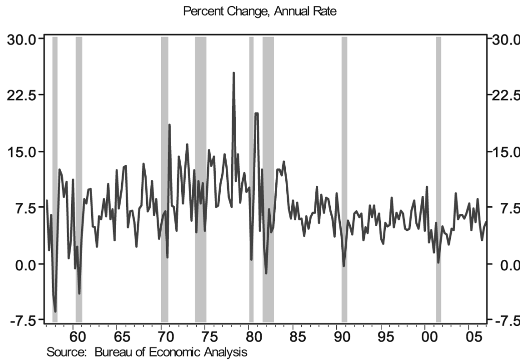


Figure 6a

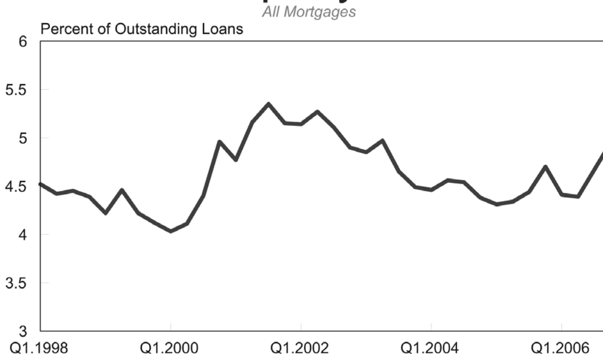


Figure 6b

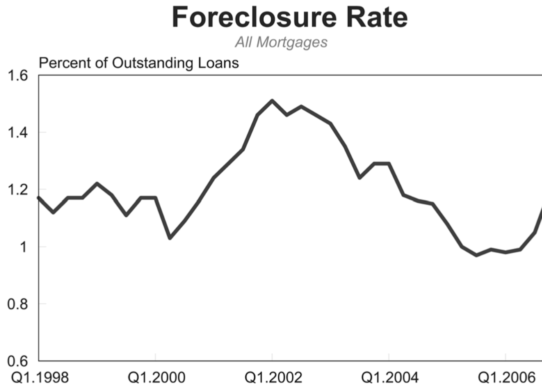


Figure 6c

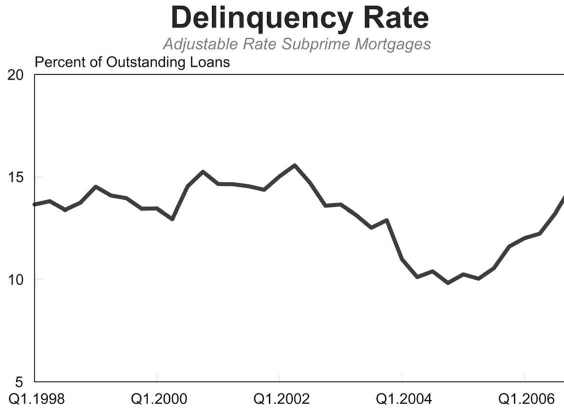


Figure 6d

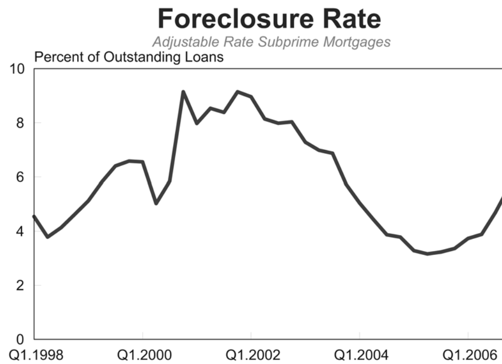


Figure 7a

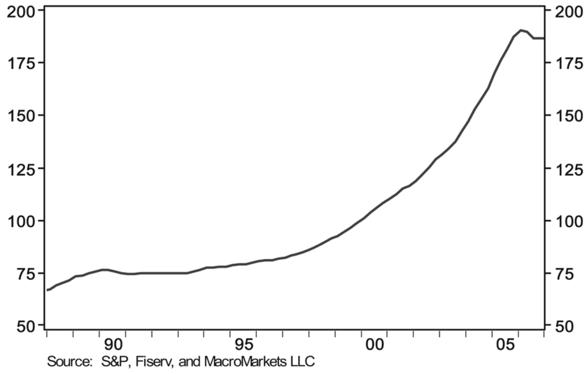
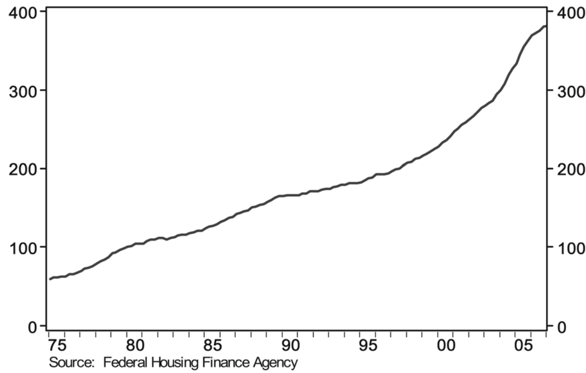


Figure 7b



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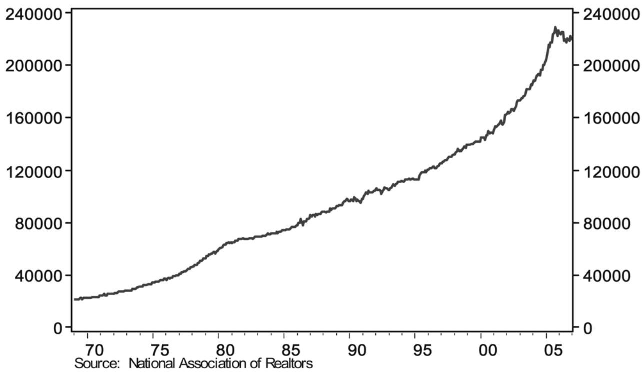

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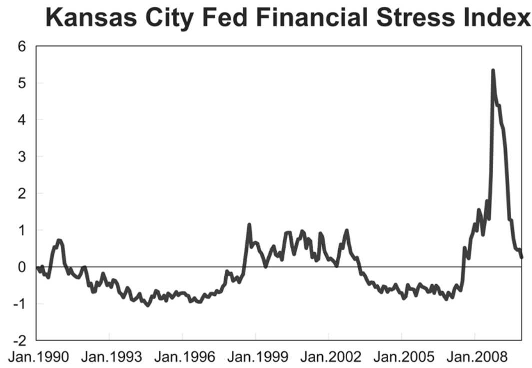

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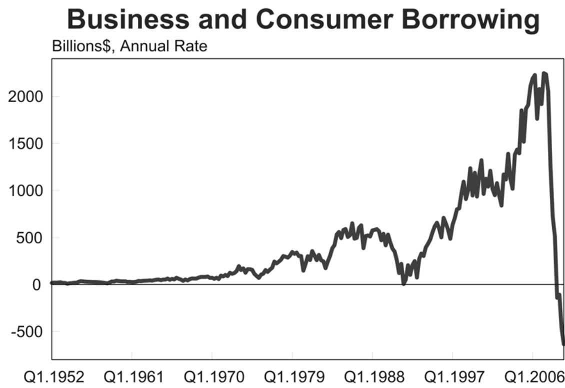


Figure 10

Figure 11

Figure 12

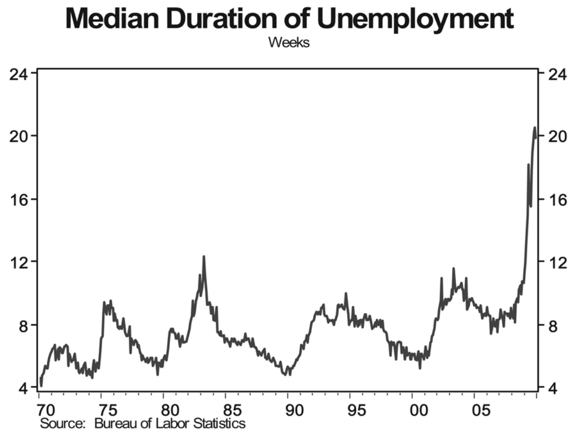


Figure 13

Figure 14

Actions Taken by the Federal Reserve

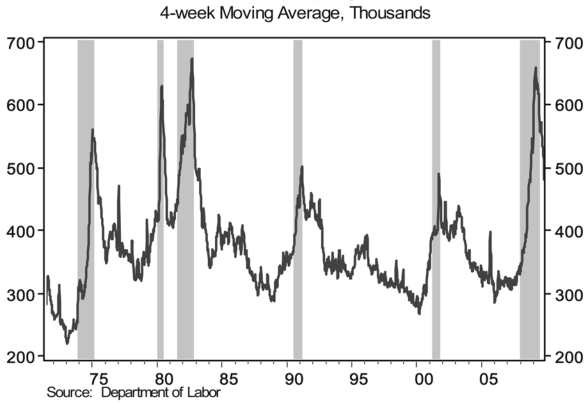
- Reduced short-term interest rates to near zero
- Created a Term Auction Facility
- Increased swap lines with foreign central banks
- Assisted in the bailout of Bear Stearns and AIG
- Created a Primary Dealer Credit Facility
- Created a Term Securities Lending Facility
- Created a Commercial Paper Funding Facility
- Created a facility to assist money market mutual funds
- Created a Term Asset-Backed Securities Loan Facility
- Purchased large quantities of long-term Treasury securities, agency debt and mortgage-backed securities

Figure 15

Actions Taken by the Federal Government

- Injected equity capital into banks
- Took over Fannie Mae and Freddie Mac
- Increased deposit insurance to $250,000 per account
- Extended deposit insurance to money market mutual funds
- Provided loan guarantees for newly-issued bank debt
- Adopted a fiscal stimulus program amounting to one-half percent of GDP
- Provided loans to domestic auto producers
- Adopted measures to help stabilize the housing industry

Figure 16a



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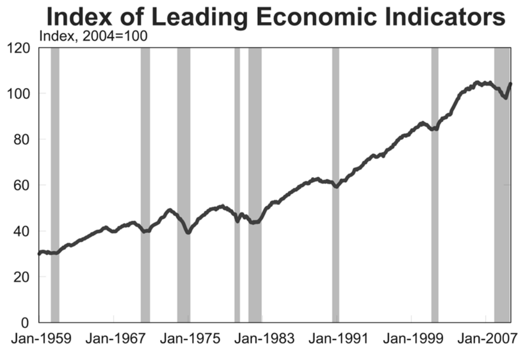

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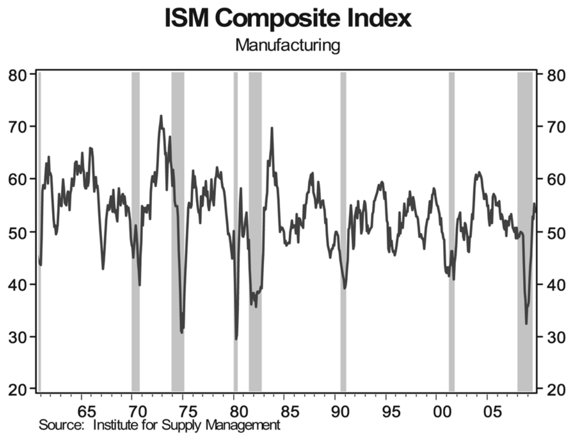

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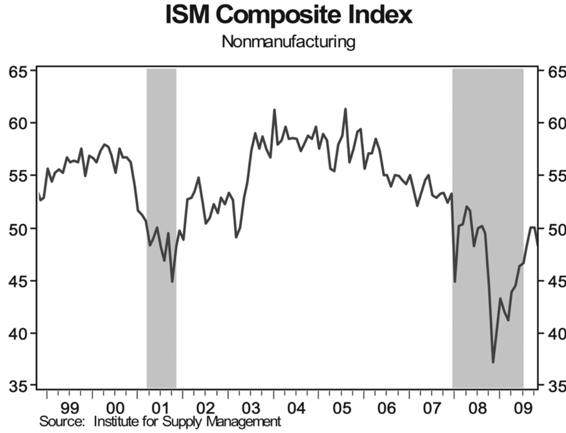

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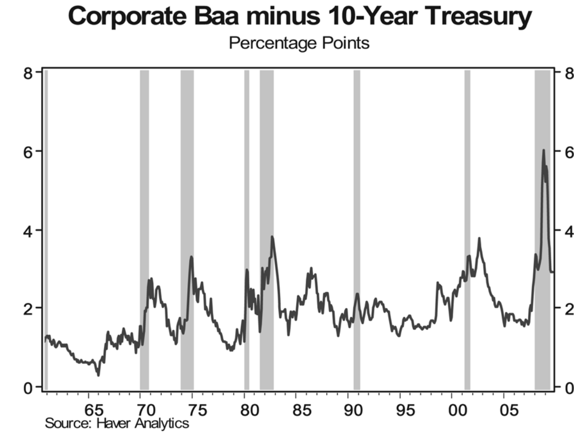

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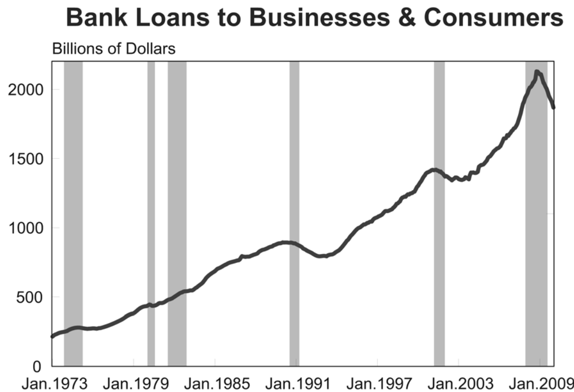

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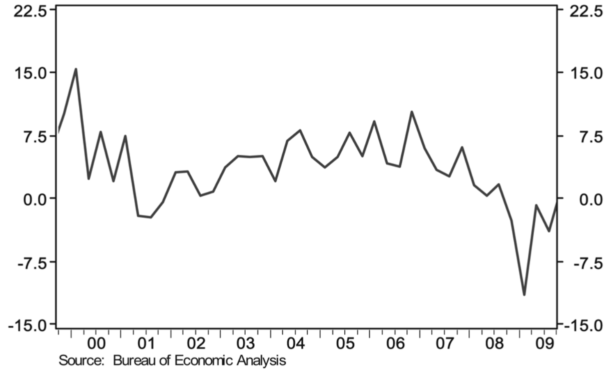

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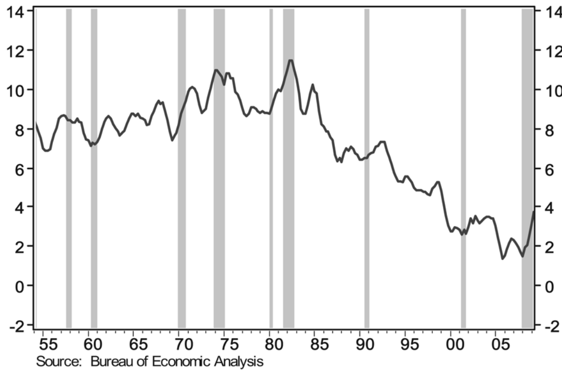

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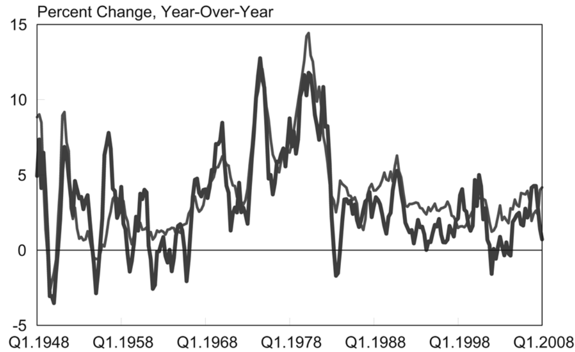

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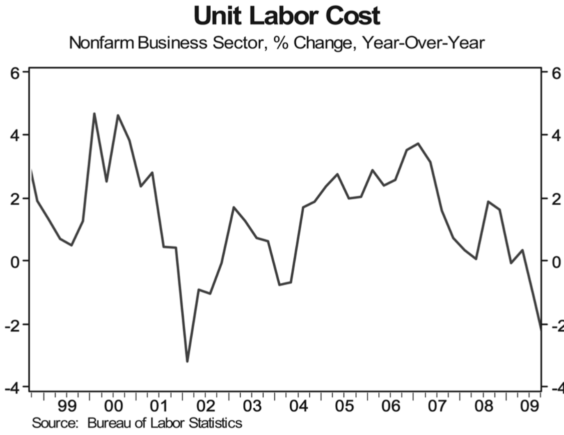

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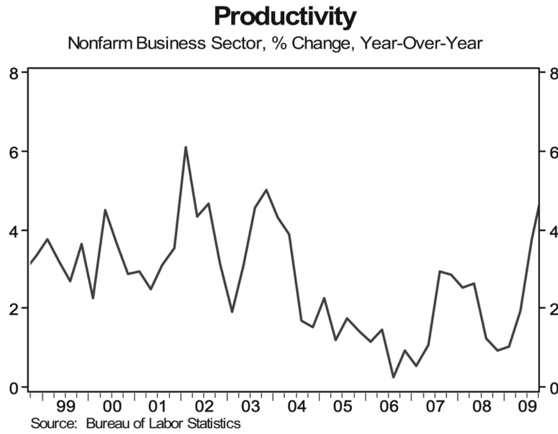

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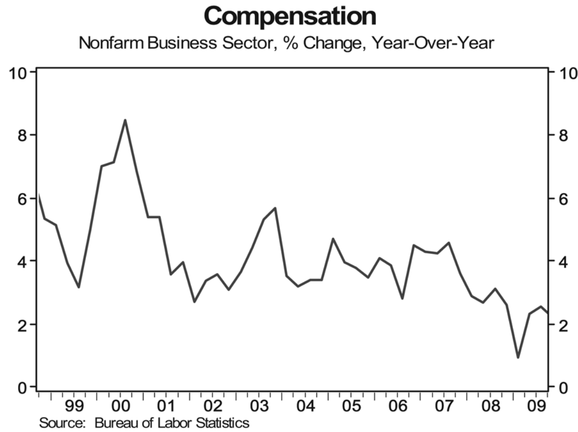

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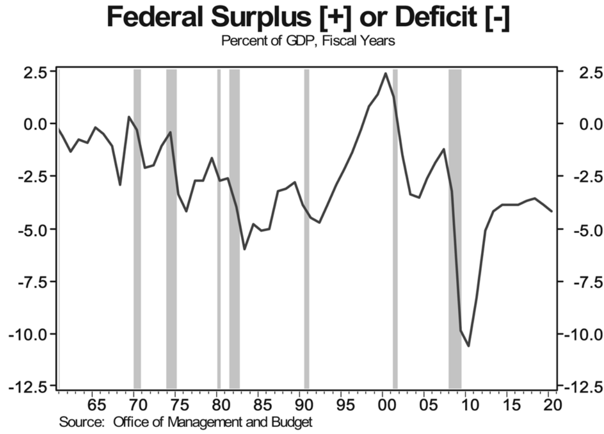

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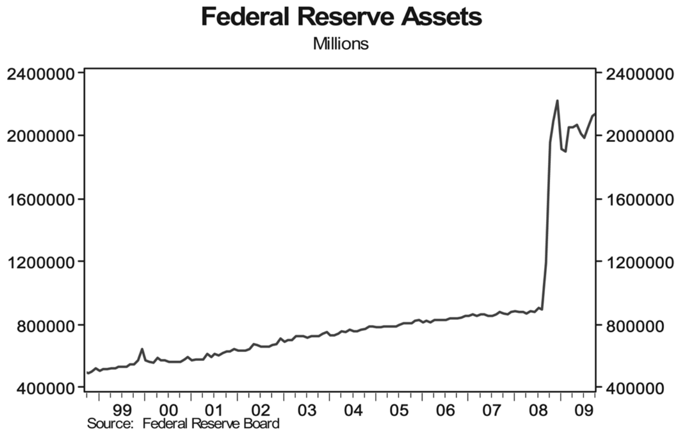

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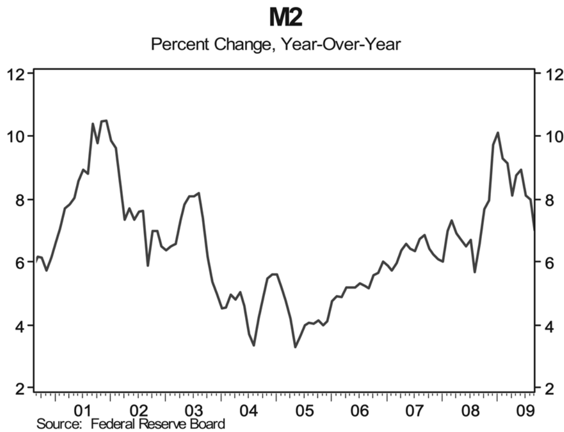

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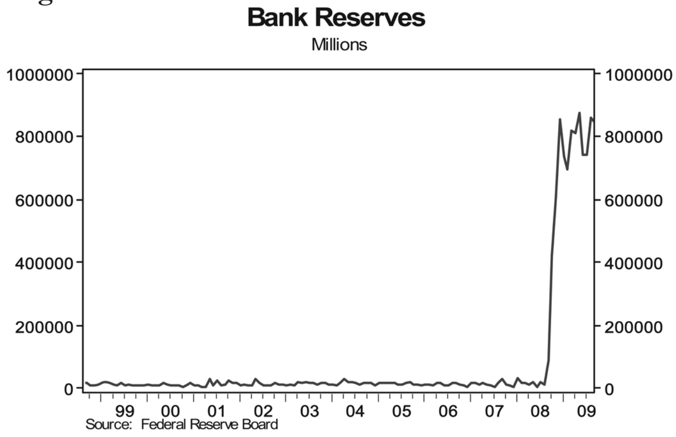

Figure 29

The Federal Reserve's Exit Strategy

The Fed needs to do two things:

- Shrink the balance sheet to reduce bank reserves
- Raise interest rates to normal levels

- Shrinking the balance sheet:
  - Loans will be paid down automatically as financial conditions improve
  - Special lending facilities will be closed
  - Reverse repurchase agreements will be used
  - Long-term securities can be sold if necessary
- Interest paid on reserves will be employed to "pin in" excess reserves
  - Rate paid on demand deposits will be raised with the federal funds rate
  - Longer-term deposits at higher rates will be offered to control the rate at which excess reserves are put to work by banks making loans or acquiring securities

Figure 30

Regulatory Reform of Financial Institutions

- Nonbank financial institutions posing potential systemic risk will be subject to supervision and regulation similar to banks
- Capital requirements will be raised and designed to discourage excessive risk taking
- Capital requirements may be based on the systemic importance of firms
- Procedures will be developed for managing failures of nonbank financial institutions similar to those employed by the FDIC for banks
- Compensation systems will be regulated to discourage excessive risk taking
- A consumer protection agency will police marketing of credit to consumers