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# Solomon's Knot: How Law Can End the Poverty of Nations

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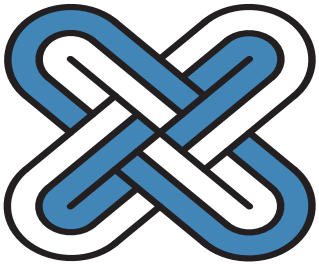
## How Law Can End the Poverty of Nations



Robert D. Cooter & Hans Bernd-Schäfer

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*Robert Cooter's Dedication*

A common dedication reads,

"*To* _____, without whom this book would have been impossible."

During our marriage, my wife and I grew up together. Because of her, I became myself. Hence

"*To Blair*, without whom I would have been impossible."

…

*Hans Bernd Schaefer's Dedication*

TO BE INSERTED

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# Preface

How do you become the richest woman in China? Shang Yin, the eldest of a soldier's 8 children, opened a printing shop in the 1980s when she was in her 20s. As China moved to a market economy, demand swelled for printed products used by new industries. A short supply of paper bottlenecked Shang Yin's business, until she made the discovery of her life: Ships left Chinese harbors for the USA filled with cargo, and they returned almost empty. (The USA imports bulky goods from China to fill stores like Wal-Mart, and exports intangible services like computer programs, Hollywood movies, and banking services.) Shang Yin had discovered a new market and she reorganized her business to exploit this opportunity. She started buying scrap paper in the USA and shipping it back to China. Business burgeoned at her company, Nine Dragons Paper Industries Co., Ltd., and some observers now count her as China's richest woman.

When a developing country has many entrepreneurs like Shang Yin, a cascade of innovations in markets and organizations lifts productivity, wages, and profits. Innovations in markets and organizations combine ideas and capital in bold ventures with big risks and opportunities. The central claim of this book is that sustained growth in developing countries occurs through innovations in markets and organizations by entrepreneurs; developing innovations poses a problem of trust between innovators with ideas and investors with capital (the "double trust dilemma"); and the best solutions require law.

In Shakespeare's *Twelfth Night*, a shipwreck separates brother and sister, who each conclude falsely that the other died. Reunification of Sebastian and Viola at play's end resolves confusion and causes rejoicing (but not by everyone). Similarly, economics began as a close relative to law, but their methodologies diverged in the 20$^{th}$ century. When the subjects lost

communication with each other, some scholars in one subject thought the other subject had died intellectually. In the last quarter of the 20th century, however, a powerful scholarly movement brought these subjects back together.[1] Reunification of law and economics has resolved confusion and caused rejoicing (but not by everyone). With law and economics reunified, now is the time to explain some causes and cures of the poverty of nations.

These pages avoid economics jargon and technical law. Educated generalists can understand them by thinking hard and not shrinking from numbers. Besides inclusiveness, sticking to ordinary language has another big advantage: It spans disciplines. Specialists in law will encounter simple explanations of unfamiliar economic theories, and specialists in economics will encounter simple explanations of unfamiliar legal theories.

Given its importance, readers might suppose that law and economics especially concerns growth. This supposition is wrong. Economic efficiency distinguishes between growth and efficiency. Increasing efficiency requires reshuffling resources from less productive to more productive uses, like shifting a horse and plough to a more fertile field. The theory of allocative efficiency is older, more elegant, and better confirmed empirically than growth theory. The emerging subject of law and economics focused on traditional economic theory, not the relatively new subject of growth theory.[2] Innovation is the source of sustained growth and the economic theory of innovation is underdeveloped, especially concerning entrepreneurship. Here is where law can repay its recent intellectual debts to economics. This book, we hope, is a down payment.

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[1] Coase arguably inaugurated modern law and economics by providing the first demonstration that economic theory, as opposed to economic thought, was useful for analyzing property and contract law, not just for analyzing, say, anti-trust or tax law. See R. Coase, R. (1960), "The Problem of Social Cost." Journal of Law and Economics 3: 1-44. Law and economics subsequently emerged as a specialization with its own university courses in the 1980s in the top U.S. law schools. It now possesses good textbooks, monographs, and specialized journals.

[2] The tradition of growth theory represented by (Solow 1969) contains no institutions and says nothing about the causes of innovation. Consequently, it is not useful for law and development economics. Newer and relatively undeveloped theories of endogenous growth are useful to law and economic development.

How much understanding of national poverty can law and economics deliver? No one predicted that outsourcing of services and computer software would drive so much of India's economic growth, but we can now understand the reasons for this success. Like evolution in the natural world, innovation is unpredictable looking forward and understandable looking backward. Since innovation is foreseen imperfectly, mystery necessarily clings to economic growth. Law and economics can explain how laws promote development, but it cannot predict the innovations that entrepreneurs will make.

# Chapter 1

## It's About the Economy

A grand master asks to be paid for winning a chess tournament by placing one penny on the first square of a chess board, two pennies on the second square, four on the third, etc. Using only the white squares, the initial penny would double in value thirty-one times, leaving $ 2.15 million on the last white square. Growth compounds faster than the mind can grasp. Compounded over a century, 2% annual growth increases wealth more than 7 times, which is roughly the growth rate of the United States in the previous century, and 10% annual growth increases wealth almost 14,000 times, which is roughly the growth rate of China in the last 30 years.

From the perspective of two centuries, the wealth of the richest countries has risen above the poorest like Mount Everest rising above the Ganges Plain. The gap in wealth opened because the richest countries grew richer, not because the poorer countries grew poorer. Most poor countries today are somewhat richer relative to their past and much poorer relative to the rich countries of the contemporary world. One scholar estimated income per capita for 56 countries in 1820.[1] He found that the richest countries in the sample had income per capita of approximately $1,800 and the poorest had $400, for a ratio of 4½ :1. Instead of 1820, we repeated the same exercise for 2003 and found the richest countries had income per capita of approximately $25,000 and the poorest countries had approximately $500, for a ratio of 50:1. Such is the difference between roughly 2% and .1% annual growth over two centuries.

The question of whether growth is faster in rich or poor nations will determine whether living standards in the world converge or diverge. If poor nations grow faster than rich nations, the gap between them will close surprisingly quickly. Lifting so many Asians out of poverty in the late 20th Century, especially by rapid growth in China and India after 1980, is one of the most remarkable accomplishments in history. Conversely, if rich nations grow faster than poor nations, the gap between them will

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[1] Angus Maddison, The World Economy: A Millennial Perspective, Development Center of OECD. He used 1990 dollars as the base. See further discussion of his findings in Chapter 2.

widen surprisingly quickly. Income per capita declined in sub-Saharan Africa by roughly 20% between 1970 and 1990, which is one of history's depressing failures. Growth has resumed in Africa, but not at a rate that will overtake rich countries.

How does an economy grow? Through business ventures.[2] A bold ship's captain in 17th century England proposes to investors in a port town that they finance a voyage to Asia for spices.[3] The voyage is inherently risky. Weather is uncertain and channels are unchartered. The Dutch prey on English ships, the English prey on Dutch ships, and other pirates prey on both of them. If, however, the captain returns to the English port with a cargo of spices, they will be worth a fortune. The ship's captain must convince the investors that he can do it. He needs a large ship outfitted for 2 to 5 years of travel. To convince them, he discloses secrets about how to get to Asia and what to do when he arrives. The captain must trust the investors with his secrets, and the investors must trust the captain with the ship and its supplies.

This is a *double-trust dilemma*. To solve it, the captain and the investors form a new kind of firm invented in the 17th century for the spice voyages: a joint stock company.[4] The participants – investors, captain, and crew – are legally entitled to shares of the hoped-for cargo. Some participants have larger shares than others, depending on their contributions. With these legal arrangements, the investors stand to gain more from the success of the voyage than by selling the captain's secrets. Similarly, the captain stands to gain more from the success of the voyage than by

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[2] "Perhaps the eradication of poverty--underway for the first time in history, and when only two countries on earth are formally committed to socialism--will serve to confirm his (Schumpeter's] theory that growth happens at the hands of individual, risk-taking entrepreneurs, unmolested and lightly taxed by government, and that the more of them we have the better off everyone will be." -- Carl J. Schramm, "Economics and the Entrepreneur," Claremont Review of Books 8, no. 2 (2008): 1-7, at page 7.

[3] This account is based on Harris, R. (2004). Institutional Innovations, Theories of the Firm and the Formation of the East India Company. Berkeley Law and Economics Workshop. Harris, Ron. "The Uses of History in Law and Economics." *Theoretical Inquiries in Law* 4.2 (2003): 659-696.

[4] The joint stock company has earlier origins. In the middle Ages, the republic of Venice monopolized trade with Alexandria, through which the products of Asia flowed. The Venetians improved a legal form from classical Roman times (fraterna compagnia*)*. In case of a loss of a ship, every merchant lost a share instead of one merchant loosing everything. Commercial risk spreading was a crucial condition for the rise of Capitalism. See Sinn, H.W. (1996), Social Insurance, Incentives and Risk-taking, in: *International Tax and Public Finance*, 3, 259–280. In the 17th century, the English and Dutch greatly improved this form by allowing different parties to have different numbers of shares and allowing the owner of a share to sell it to others. Marketable shares are very different from earlier forms like partnerships, as Chapter 7 explains.

stealing the ship and its cargo, at least in most circumstances. Self-interest enforces the commitment of the parties to the voyage.

Unlike so many other ships that sail for Asia, this one returns safely after two years. The townspeople spot the vessel sailing towards the harbor and the investors rush to the dock to keep watch over the cargo. They immediately hold a meeting of shareholders called a "general court." It divides the cargo among the shareholders, they leave the dock with their spices, and the company dissolves.

Similarly, an engineer in Silicon Valley in 1985 has an idea for a new computer technology. The engineer cannot patent the idea until he develops it. Developing it requires more money than the engineer can risk personally. He drafts a business plan and meets with a small group of investors. The engineer fears that the investors will steal his idea, and the investors fear that the engineer will steal their money. Besides the fear of betrayal, developing the idea is inherently risky – it might fail or someone else might patent the idea first. If the innovation succeeds, however, it will be worth a fortune.

The engineer cautiously explains his idea to the small group of investors who accept his invitation to form a corporation with himself as chief executive. They distribute shares of stock among themselves according to their contributions, and the shareholders elect a board of directors that carefully balances their interests. With this legal arrangement, self-interest causes the investors to keep the engineer's secrets and the engineer to use the money as promised. Unlike so many other startups, this one succeeds after five years and the firm acquires a valuable patent. The engineer and the investors subsequently dissolve the company by selling it for a lot of money to a large, established firm.

17th century spice voyages and 20th century technology startups involve secrets, up-front investment, high risk, and high return. Many business ventures have these characteristics in muted form. To grow quickly, a business venture must combine new ideas and capital. An ancient motif on this book's cover depicts two interlinking rings called "Solomon's Knot." Sailors particularly favored this kind of knot for strength and

durability. Like the two rings, King Solomon of the Bible united two Jewish kingdoms into a single nation. Similarly, ideas and capital must unite to develop innovations and grow the economy.

In every country, growth occurs through innovative ventures, but the form of innovation differs. Innovations in Silicon Valley usually have a technological basis, such as new computer chips or programs that were previously unknown to the world. Technological innovation often requires research universities and similar institutions found especially in developed countries. The relative weakness of research universities and similar institution in developing countries today limits their capacity for technological innovation. Technology mostly flows from developed countries to developing countries through international trade, investment, and educational exchanges. The flow hastened in the last century when major wars abated, communism collapsed, and tariffs and transportation costs fell.

Instead of improving technology, many innovations improve organizations and markets.[5] Philip Knight began the Nike Corporation by making running shoes with soles formed on the family waffle iron and selling them out of the trunk of his car in 1972. In 2006 the company reported $15 billion in worldwide sales of sports equipment and clothing. Knight obviously discovered something new, but what was it? His company does not manufacture anything. Its main facility in Beaverton, Oregon, is a "campus," not a factory. Instead of manufacturing, it contracts with foreign companies to make all of the goods that it sells. The business of Nike is research and marketing. It thinks up new products, contracts with other firms to make them, and then markets them through extensive advertising. This new organizational form has spread dramatically in the USA as more and more companies "outsource" manufacturing and focus on research and marketing. Other examples of recent innovations in markets

[5] We distinguish innovations into technology, organization, and markets. Joseph Schumpeter distinguished a new good, a new method of production, a new organization, and a new market. Since technological innovations yield new goods and methods, his categories resemble ours. However, he adds a fifth type: new sources of raw materials. We omit his fifth type because, unlike ideas, resources are exhaustible. In general, our theory of innovation draws heavily on Schumpeter, especially his idea of entrepreneurs creatively disrupting equilibria. See Joseph A. Schumpeter, The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle, Translated from the German by Redvers Opie, Harvard University Press, Cambridge, MA (1936).

and organizations in the USA include debit cards, hostile takeovers, networks of innovators, and team production (imported from Japan).

Innovation in developing countries mostly takes the form of improving organizations and finding new markets, especially by taking organizations and markets that originate in developed countries and adapting them to local conditions. To illustrate, people who buy edible oil for cooking need confidence in its quality. African consumers smell and taste it to assure that it is fresh, which requires selling in open containers. Closed containers, however, have many advantages, including lower shipping and storage costs. Bhimji Depar Shah figured out how to sell oil in closed containers and retain the trust of African consumers. He started an edible oil company in Thika, Kenya, in 1991 that developed into a business empire. The company's homepage reads: "Integrity is what all our people value and uphold ruthlessly which enables trust leading to empowerment." Selecting reliable salespeople and trustworthy workers dispersed around Africa required innovation in organization, like Phil Knight and the Nike Corporation.

Adaptation in markets and organizations often use new kinds of contracts. Two such innovations were crucial to developing the textile business in Bangladesh: bonded warehouses and back-to-back letters of credit.[6] Bonded warehouses protect producers against theft or fraud in the chain of distribution, and letters of credit protect buyers against theft or fraud at the point of sale.

In business, adaptation is creative and risky. The adapter has an idea that is new to a developing country. Proving its worth in the market place requires risky investment. The investment often goes to building an organization embedding the new idea. The innovator must trust the investor not to steal his organization, and the investor must trust the innovator not to steal his money. If the adaptation succeeds, it attracts competitors, who diffuse the idea and reduce the innovator's profits. Adaptation

[6] William Easterly, The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics (MIT Press, Cambridge, MA, 2001).

in developing countries thus faces much the same obstacles as invention in developed countries.

Instead of adaptation, some people imagine that developing countries can grow by imitation that is mechanical and safe. If growth were this simple, poor countries would already be rich. In poor and rich countries alike, new business ventures mostly fail and the investors lose their money, whereas a few succeed spectacularly and drive growth. Picking out the adaptation that will succeed in Africa is just as hard as picking out the invention that will succeed in Silicon Valley.

Nations are poor because their economies fail to innovate and grow. Innovation and growth require certain background conditions. An economy can fail to grow because of military invasion as in Poland in 1939, or isolation as in the New Guinea Highlands in 1920, or civil war as in Somalia in 2000, or natural disaster as with the Sahara Desert's encroachment on farms, or a bursting financial bubble as in the U.S.A. in 1929. These background conditions – peace, open economies, no natural disasters, no bursting bubbles – have been satisfied in recent decades in many countries of the world. With these background conditions satisfied, law moves to the foreground with big effects on growth. Good law is like a transmission that engages the spin of business to move the economy forward, whereas bad law is like a toothless gear that lets business spin without moving the economy forward.

The central claim of this book is that sustained growth in developing countries occurs through innovations in markets and organizations, innovation poses a problem of trust between innovator with ideas and financiers with capital, and the best solutions are necessarily legal. Most chapters concern the effects of a particular body of law on economic growth. Before turning to particular bodies of law, we give some examples of weaknesses in law that contributed decisively to the poverty of nations in the recent past.[7]

> African Diamonds: Diamond miners in central Africa use hand-tools to dig in a riverbed under the guard of teenage soldiers with Kalashnikov rifles. The miners sell the diamonds to a military officer at a small fraction of world market prices.

[7] These are hypothetical examples inspired by real cases known to the authors.

> The diamonds subsequently pass through various intermediaries until they reach Europe. Finally a courier arrives at the central railway station in Antwerp, walks quickly to one of the nearby gem shops where the merchant examines the diamonds and pays in cash, and the courier leaves the city by train within an hour.

In central Africa, producing and transporting diamonds in recent years occurred in conditions that approached anarchy; so central Africa produced few diamonds and received much less than the world price for them. If anarchy were replaced by a secure system of property rights, central African nations could produce diamonds with better technology, export them through the regular channels of trade, and receive the world price. And the profits would not go to thugs who commit unspeakable cruelties and heinous abuse of human rights.

> Moscow Security: A man opens a small shop selling household goods in Moscow in 1992. A month later three young men visit him with copies of his bank records. Using these numbers, the men calculate a monthly fee that he must pay them to "protect his shop from hooligans." If he does not pay, they will destroy his shop. The shopkeeper pays and his business succeeds.

Unlike diamond thieves, Moscow criminals who sell security do not want to take everything from their clients. Selling protection presupposes something to protect. In this example, the Moscow criminals impose a "security tax" that leaves room for the shopkeeper to succeed. When organized criminals provide security, however, the "tax" is much higher than when a successful state provides it. (Not to mention the dangers of competing "protectors.") The Moscow criminals burden business much more heavily than in successful states that provide security. Security is a "natural monopoly," which means that states can provide it more cheaply and reliably than private parties. Private security of property is better than anarchy but worse than effective state law.

> Indonesian Textiles: In Jakarta in 1987, a businessman manufactures cloth, makes the cloth into dresses, hand-decorates them, and exports the finished product. The entire process occurs inside a single factory where cotton and silk come in the door and decorated dresses go out the door. Managers in the factory are mostly relatives of the owner. Rural households outside Jakarta would do the hand-decorations at lower wages than factory workers in the city. The businessman, however, is unwilling to leave the dresses in rural households in exchange for a promise to decorate them.

The Indonesian businessman in this example gathers everyone needed to produce a particular product into a single factory, where his relatives can monitor them. In countries with weak legal institutions, economic cooperation usually involves people with personal ties, especially relatives and friends. Most people, however, do not have enough relatives and friends to achieve the scale of activity required for affluence. Weak contract law can keep trade local and organizations small. Property and contract law lower the cost of monitoring and extend cooperation to strangers, which facilitates dispersed production, larger organizations, and wider markets.

> Mexican Loan: A poor man in Mexico City needs a loan to buy a refrigerator for storing food that he sells on the street. Before loaning the money, the lender needs security against the debtor's failure to repay. The legal process for repossessing the refrigerator from a defaulting debtor is too slow and unreliable. Instead, the lender requires the borrower to provide information about his family and friends – telephone numbers, addresses, and place of work. If the borrower falls behind in payments, the lender will use the borrower's family and friends to pressure him to repay the loan, and, if necessary, the lender will use their influence to repossess the refrigerator.

The impracticality of collecting debts through courts plagues businesses in poor countries. Mexican courts often assess such low interest rates on delays in collecting court judgments that debtors gain by stringing out the legal process. High-cost debt collection dries up loans to small businesses like the Mexican street vendor. In this example, however, the parties found a way around debt collection through the courts: rely on family and friends. One of Mexico's richest businessmen, Ricardo Salinas, began to build his fortune by figuring out how to collect debts from poor people who buy consumer durables, so household appliances became available to a wider swath of society.

A different kind of financial problem known as the "soft-budget constraint" exists in countries with a socialist tradition:

> Chinese Steel: In 2000, the government privatizes a steel company in northern China by creating stock and divides it three ways. 33% is sold to the public who can resell freely ("tradable" shares), 47% is allocated to the government, and 20% is allocated to insiders who cannot sell ("non-tradable" shares). After privatization, the steel company keeps losing money. Its managers, who have

> political influence, pressure a state bank to finance its losses by buying its bonds, which are commercially unsound.

From China to the Czech Republic, partly privatized companies subsist from soft government loans. In the case of China, their voracious appetite for cash crowds out the bonds of profitable companies in the 2000s that are the engine of China's growth. If the government hardened the soft budget constraint, the bond market would finance growth more effectively.

In some circumstances, every country softens the budget constraint of firms, as shown by the financial crisis that erupted in the fall of 2008, when the U.S. government committed to loaning or giving over $700 billion to financial institutions. Most U.S. economists endorsed massive loans to avoid a depression resembling 1929. The direct beneficiaries were included former business associates of the program's administrator, Secretary of the Treasury Henry Paulson, who earlier profited vastly from dismantling the regulations protecting against such a financial crisis.[8]

The final example contrasts loans and stock markets.

> Ecuadorian Stocks: A family owns a successful shrimp farm in the coastal mangrove swamps on the Gulf of Guayaquil. To grow faster in the 1990s, the business needs more capital, either from borrowing or selling stock. If the family sells stock, investors will receive dividends when shrimp prices rise, and nothing when shrimp prices fall. If the family gets a loan, the lender must receive periodic payments, regardless of whether shrimp prices rise or fall. The small size of the Ecuadorian stock market precludes selling stock, and the family regards a loan as too risky, so it foregoes outside finance and grows more slowly.

When you invest in a company that you do not control, you run the risk that insiders will appropriate your investment. Investment in stocks makes the problem especially hard to solve. Stocks entitle their owners to a share of profits, and a company's managers can make profits disappear by manipulating reports. A stock market cannot flourish

[8] As chief executive of the investment banking firm Goldman Sachs, Paulson advocated "self-regulation" to comply with international banking protocols known as "Basel II." Self-regulation allowed investment banks to sharply increase their ratio of debt to equity ("leverage"). The result was extreme risk-taking, which yielded vast bonuses to executives in the short run and the collapse of the investment banks in the long run. Banks like Goldman Sachs, however, profited from the bailout directly by holding bonds and stocks in companies receiving bailout funds, and also indirectly by using their intimate knowledge of government officials to predict the firms that the government would bail out and invest in them.

unless corporate and securities laws effectively protect non-controlling investors. In contrast, investment in bonds or loans makes the problem easier to solve. Bonds and loans entitle the lender to repayment according to a fixed schedule. Monitoring repayment is relatively easier for courts and other legal officials who have the will to protect lenders. The credit market can flourish under conditions where the stock market languishes. Since borrowing is more risky for an entrepreneur than selling stocks, weak stock markets dampen investment and slow the pace of innovation, as illustrated by the Ecuadorian shrimp farm.

These examples illustrate weaknesses in law that cause poverty in nations by stifling business ventures. Securing property, enforcing contracts, providing financial integrity, and protecting outsiders from the firm's insiders form part of the story of how law promotes growth in developing countries. The rest of the book tells much more of this story.

Why bother to tell the story of growth? Does growth of wealth really matter? Wealth is a means like a hammer, not an end like a family.[9] Wealth can buy tangible goods -- hamburgers, penicillin, houses, cars, books, theater tickets, etc. The tangible goods are means to abstract goods like nutrition, health, comfort, enjoyment, education, culture, and travel. Wealth is also a means to social power that humans and chimpanzees crave. However, wealth is not an end in itself like happiness, goodness, holiness, beauty, love, knowledge, or self-fulfillment. Philosophers and priests warn that treating means as ends perverts values. Does our study of economic growth make wealth into a fetish, like falling in love with a shoe? Is the nation that wins the growth race like the winner of the pie-eating contest whose prize is another pie?

To appreciate wealth's value, consider how economists measure it. Shingles, tractors, word-processors, movies, antibiotics, insurance, and all other goods sold in

[9] The champion of this view in development economics is Amartya Sen, as two quotes suggest. "Economic growth can not be sensibly treated as an end in itself. Development has to be more concerned with enhancing the lives we lead and the freedoms we enjoy." Development as freedom. New York Knopf, 1999 page 14. "The challenge of development… is to improve the quality of life. Especially in the world's poor countries, a better quality of life generally calls for higher incomes —but it involves much more. It encompasses as ends in themselves better education, higher standards of health and nutrition, less poverty, a cleaner environment, more quality of opportunity, greater individual freedom, and a richer cultural life." World Bank, World Development Report, 1991. (New York: Oxford University Press, 1991).

markets have prices. Multiply the market price times the quantity of each good that a nation produces, sum these numbers, and you have a measure of national income. This is the foundation of such familiar measures as gross domestic product (GDP). To apply this measure to innovation and growth, note that shingles repel rain better than thatch, a tractor ploughs faster than a digging stick, a word processor corrects errors easier than a typewriter, a moving picture entertains more than a zoetrope, antibiotics cure infections better than sulfa drugs, and insurance provides more security than gold bricks.

Almost everyone counts changes like these as improvements that enrich a nation, but by how much? Measures of wealth like GDP use market prices to provide an answer. When innovators make better goods, the additional amount that people are willing to pay for them measures the innovation's market value. A simple measure of national income like GDP, however, omits or measures inadequately the value of non-market goods such as national parks, safe streets, clean rivers, public health, graceful buildings, and longevity. The same is true for non-market "bads" like strip-mall ugliness, congestion, global warming, global dimming, high blood pressure, junk food, stupid television shows, empty cathedrals, and intimidating thugs. Inclusive measures of wealth that encompass nonmarket goods come closer than GDP to measuring the quality of life.[10]

Instead of measuring the quality of life, economics could go directly to one of its ends – say, happiness. Does more wealth cause more happiness? Songwriters disagree: Barrett Strong sings "Money don't get everything it's true/What it don't get I can't use"[11] and the Beatles reply, "Money can't buy me love." Using statistics instead of songs, economists have examined the connection between money and happiness. Economists survey people for self-reported happiness: "Is your overall satisfaction with

[10] Note that governments supply many non-market goods, and GDP measures their value by their cost (e.g. salaries paid to civil servants), not by their benefits to the citizens. Cost-benefit analysis can measure some of these non-market values more convincingly. To measure the value of non-market goods, economists try to find out how much people would pay for them if they had to pay, given that they don't have to pay. This can be a measurement maelstrom, so national accounting limits its use of cost-benefit analysis.

[11] Barrett Strong's hit song of 1959.

your life high, medium, or low?" Comparing nations, people report a *little* more happiness on average in richer countries than in poorer countries, but not a lot more. Similarly, within a nation, people with more money report a little more happiness on average than those with less money. On the individual level, increasing someone's wealth immediately causes a large increase in self-reported happiness, but the wealthier person's happiness soon falls back almost to its former level.[12]

Explaining law's effect on growth requires data to compare economic performance in different legal jurisdictions. Comparative data is abundant on narrow measures of wealth like GDP and scarce on the quality of life or happiness. That is why this book mostly presents data on GDP. To find causes, we have to search in the light. Fortunately, the most fundamental laws for business ventures and growth are much the same regardless of wealth's measure. Alternative measures of growth are unlikely to change this book's conclusions.

In any case, GDP matters to people. Almost everyone would prefer the wealth of Belgium rather than the poverty of Bangladesh. Individuals struggle mightily to increase personal wealth, and governments pursue national wealth to secure their popularity and power. A single phrase famously summarizes this book and a complicated U.S. presidential campaign: "It's the economy, stupid."[13]

[12] B. S. Frey and A. Stutter (2002), "What Can Economists Learn from Happiness Research?" Journal of Economic Literature, 40: 402-435.
[13] This phrase is from Clinton's first presidential campaign of 1992.

# Chapter 2

## The Economic Future of the World

Before going into the best laws for growth, lets take a step back and compare how countries have grown. The world's patterns of growth and decline provide necessary background to understand the legal causes of growth. Angus Maddison heroically attempted to measure the wealth of nations over millennia.[1] He calculated that Egypt was the richest country in the world 2000 years ago, with a per capita income 50% higher than in other countries of the Roman Empire, China or India. In the year 1000 c.e. Iran and Iraq under the Abbasids were the economically most advanced countries with a per capita income about 50% higher than in Europe or Asia. In the year 1500 Italy had the lead with a per capita income 50 per cent higher than in the rest of Western Europe, double that of Asia and three times that of Africa. In 1820 Western Europe and the USA had the highest income, twice as much as in Eastern Europe, Latin America and Asia, and three times as much as in Africa.

Moving forward where the data becomes more reliable, the fastest growing nations surged ahead of the laggards, creating a gap between rich and poor nations without historical precedent. In the year 1900 the per capita income of the richest nations was around $4,000 in today's dollars, which is 6 times higher than in the poorest nations. In 2003 the world' richest countries had a per capita income of $24,000 dollars, which is 40 times higher than the poorest nations.

Besides widening the gap between rich and poor, accelerating economic growth also changed the identities of rich and poor countries. A

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[1] A. Maddison *Monitoring the World Economy 1820-1992*, OECD, Paris 1995; *The World Economy: A Millennial Perspective*, OECD Development Centre, Paris 2001; The World Economy: Historical Statistics, OECD Development Centre, Paris 2003.

comparison of four nations – South Korea, Mexico, Turkey, and Senegal -- shows how dramatically income rankings can change over a period of 50 years. In 1950 South Korea's income per capita was slightly lower than the other three countries, although all of them were similarly poor. By 2003, South Korea's income per capita had increased more than 900%, Mexico's and Turkey's increased by more than 300%, and Senegal had declined slightly. In 2008 South Korea's income per capita was more than twice as high as the second in the group (Mexico), and 10 times higher than the last in the group (Senegal).

Many other nations also changed their ranking by wealth. To illustrate, in 1870 Argentina's per capita income was 33 per cent higher than Sweden's, and in 2004 Argentina's per capita income was 43 per cent of Sweden's. In the same period, Argentina's per capita income fell from 82 percent of the USA's to 33 percent.[2]

The gap in wealth between the richest and poorest nations is much larger today than ever before in history. This gap opened because some countries grew rich quickly while other countries stagnated. The poor countries mostly did not get poorer. Also, economic growth by one country does not usually cause economic decline by another country. Today, some poor countries are surging ahead and changing the ranking of countries by wealth, and others are languishing.[3]

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[2] Data for 1870 Data for 2004 Felipe A.M de La Balze (1995), Remaking the Argentine Economy, Council on Foreign Relations Press.
A. Heston, R. Summers and B. Aten, Penn World Table Version 6.2, Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, September 2006.

[3] Some low and high growth countries are depicted in the following table.

| Accumulated Growth of Per Capita GDP in Per Cent for Selected Countries from 1993 to 2003. | | | |
|---|---|---|---|
| Low Growth | | High Growth | |
| Congo, Rep.of | -32.5 | China | 133.2 |
| Sierra Leone | -21.6 | Ireland | 97.8 |
| Zimbabwe | -20.7 | India | 55.4 |
| Ukraine | -11.8 | Korea, Rep. of | 54.4 |
| Uganda | -11.8 | Poland | 50.3 |

If poor nations grow faster than rich ones, peoples will mingle and merge through trade, travel, and talk. Convergent growth unites the human family, like Europe's common market united peoples separated by centuries of warfare. Conversely, if rich nations grow faster than poor ones, their ways of life will separate and sympathy will attenuate, like affluent citizens and shabby illegal immigrants in modern cities. Divergent growth undermines the common sense of humanity and separates the families of man.[4] The surprising power of compound growth will determine whether humanity is one or two.

In recent years, do countries that start poor tend to grow slower and fall farther behind countries that start rich, or do countries that start poor tend to grow faster and overtake countries that start rich? Figure 2.1 depicts the percentage growth rate of income per capita for high-income countries from 1980 to 2008, and also for low and middle-income countries. Like two ballroom dancers, the two curves move up and down together, which shows that all nations are part of a world economy. Economic growth by one group of countries apparently does not cause economic decline by the other group, or else the curves would move in opposite directions. For the first half of the period, the relatively rich countries grew faster, causing living standards to diverge. More recently, the relatively poor countries grew faster, causing living standards to converge. Over the full period, there is no clear tendency for poor countries to grow faster or slower than rich countries. Nor is there a tendency for the rich to get richer by making the poor get poorer.

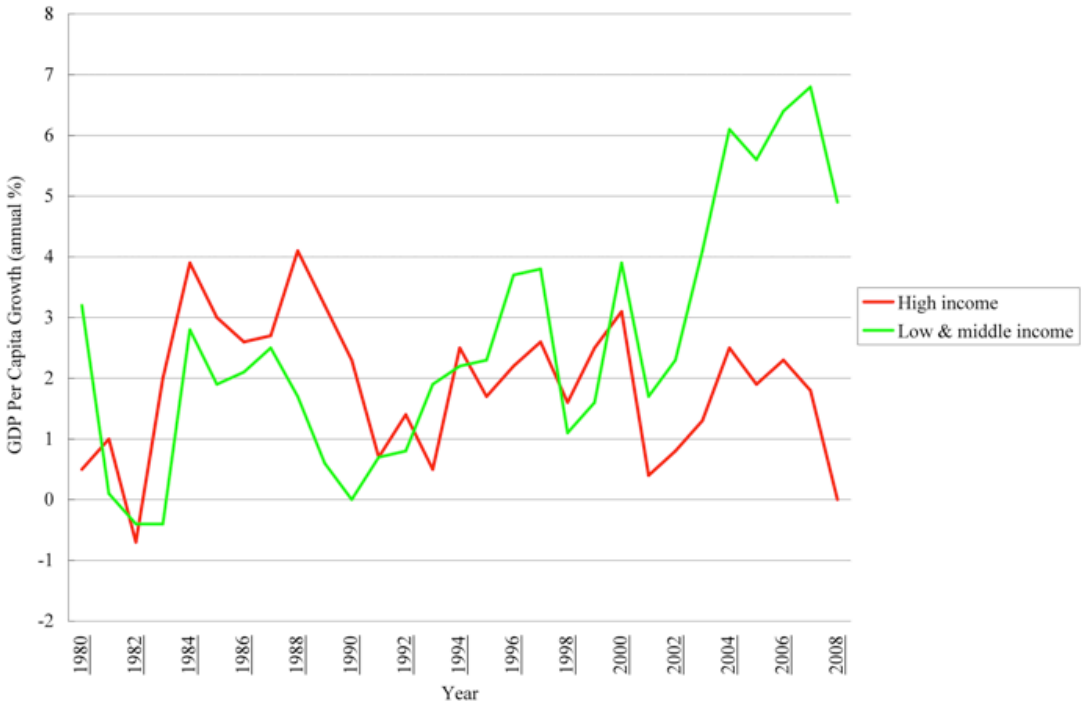
| | | | |
|---|---|---|---|
| Paraguay | -9.9 | Taiwan | 46.9 |
| Niger | -4.2 | Malaysia | 46.6 |
| Argentina | -3.5 | Finland | 41.6 |
| Cote D'Ivoir | -3.2 | Chile | 38.9 |
| Ecuador | -2.6 | Hungary | 36.4 |
| Honduras | -1.3 | Botswana | 38.1 |

* Calculated from Penn World Tables 6.2, 2006.

[4] In economic terms, cultures are equilibria that separate when wealth diverges.

Figure 2.1 Annual Percentage Growth of
Gross Domestic Product (GDP) Per Capita

Calculated from World Development Indicators 2009




Three stylized facts summarize the preceding discussion:

- Rankings of nations by wealth change through history, sometimes dramatically within 50 years.
- The gap in wealth between the richest and poorest countries has greatly increased, but most of the poorer countries have not become poorer.
- Economic growth across nations is uncorrelated with their level of wealth.

The pattern described by these stylized facts would arise if each nation drew a rate of growth at random every few years. By definition, a random draw is uncorrelated with wealth, as stated in the third stylized fact. Starting from a given baseline, the gap would widen between the lucky winners who happen to draw high growth rates in consecutive draws and the unlucky losers who happen to draw low growth rates in consecutive draws, as stated

in the second stylized fact. Since growth compounds so fast, the rankings of nations would change through history, as stated in the first stylized fact.

In reality, however, the pattern does not seem random, as shown by the recent history of the world's regions. Sub-Saharan Africa enjoyed substantial growth in per capita income in the late 1960s and early 1970s. From the mid 1970s, sub-Saharan Africa suffered 20 years of decline in income per capita -- a decline of more than 20% between 1975 and 1995.[5] After the mid 1990s, income resumed increasing. See Figure 2.2. As usual, some countries in a region go against its trends. Thus Botswana's income per capita grew 38% in the decade between 1993 and 2003.[6]

Colonies in sub-Saharan Africa became independent countries in a process that concluded in the 1960s. After the euphoria of freedom subsided, unresolved ethnic and political conflicts too often devolved into anarchy or civil war. Besides ethnic strife, the newly independent countries allegedly suffered increasing corruption and decreasing competence in administration.[7] These factors caused a sharp decline in protection of property and enforcement of contracts in the 1960s and 1970s. The situation gradually improved in the 1990s. These facts might explain the observed pattern in economic growth for sub-Saharan Africa.

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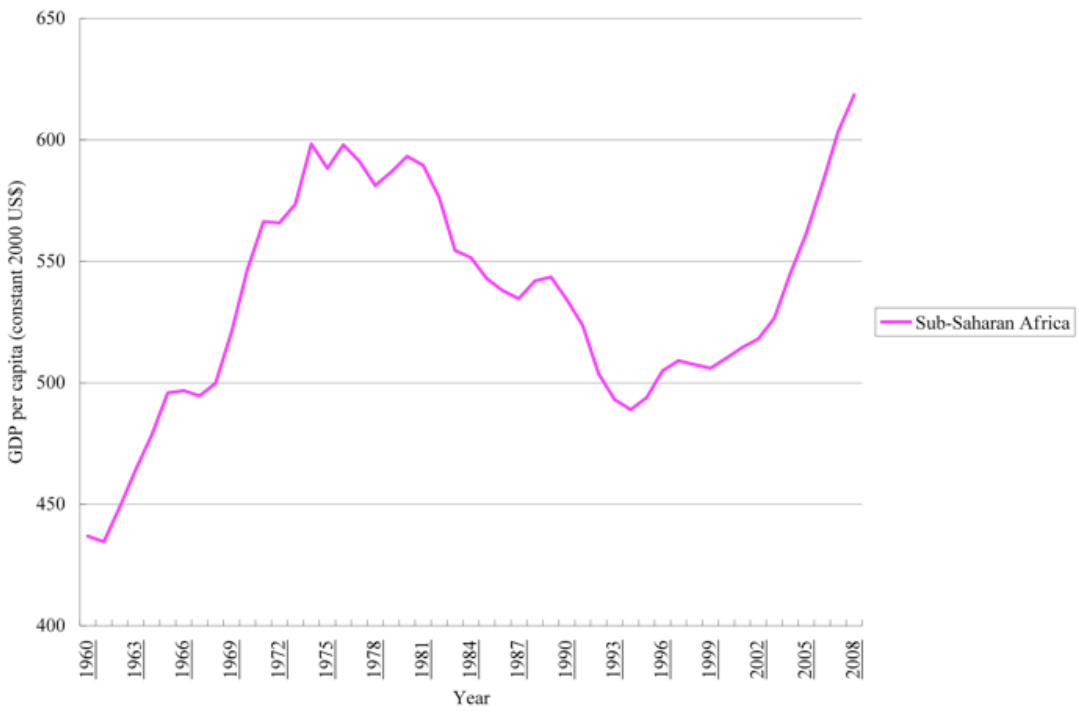
[5] GDP per capita in sub-Saharan Africa has declined since 1974, roughly by the order of 20%. In 1974 it was 600 US Dollars (at constant prices of 2000) per capita. It declined to 470 dollars in 1994 and since then increased slowly to 510 Dollars in 2003. See World Bank, World Development Indicators 2005.

[6] Calculated from the Penn World Tables 6.2, 2006.

[7] These are brilliantly depicted in Chinua Achebe's novels, Things Fall Apart and No Longer at Ease.

Figure 2.2. Income Per Capita in Sub-Saharan Africa

Calculated from World Development Indicators 2009




Central planning, which is the organizing principle of communist economies, collapsed in Eastern Europe after 1989. Two groups of countries responded differently to these traumatic events. Figure 2.3 divides the countries of Eastern Europe into the 8 that became members of the European Union in 2004, and the 12 that did not join the EU.[8] In the aftermath of communism's collapse, income per capita declined from 1990 to 1994 in both groups of countries. The countries that joined the EU, however, recovered in the mid 1990s and grew steadily. By 1995 their income achieved its former

[8] After 1989, some of the formerly communist countries -- Poland, the Czech Republic, Slovakia, Slovenia, Hungary, Latvia, Estonia, and Lithuania -- committed to a path resulting in full membership in the European Union in 2004. More recently, Bulgaria and Rumania completed a similar process and joined the EU. Russia, Belarus, Georgia, Moldova, and Ukraine did not commit to a path leading to EU membership.

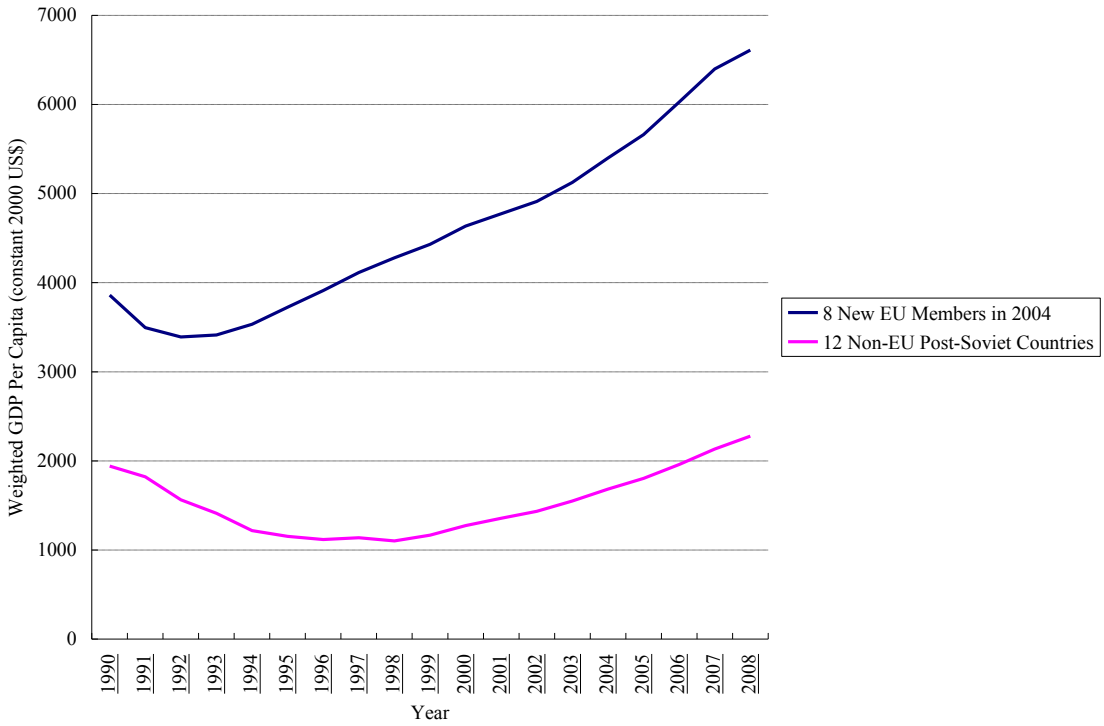
level before communism's collapse, and then increased by roughly 25% from 1994 to 2008. The 12 non-EU economies, however, remained stagnant during the second half of the 1990s. On average, income per capita in 2008 had not recovered to its level in 1990. In the case of Russia, income per capita apparently declined by 42% from 1990 to 1998.[9] After 2000, this group of countries recovered and now are they regaining the level enjoyed in 1988 under communism.[10]

Figure 2.3. Income Per Capita in Eastern Europe (population weighted averages)

Source: World Bank world Development Indicators 2009

[9] This estimate in the World Bank Development Indicators attempts to encompass the illegal, underground economy, which is large and hard to measure. Subsequently, Russia has recovered by becoming more lawful and enjoying rising mineral prices.

[10] The pattern in Figure 2.3 is presumably correct, but the numbers require cautious interpretation. Under communism, producers over-stated production in order to meet the targets set for them by the state. Under capitalism, producers under-state production in order to avoid paying taxes.




Changes in law might explain the economic pattern in Eastern Europe.[11] Under communism, state planning displaced markets, nationalized industries dwarfed private ownership, and public law crowded out private law. Even so, stable bureaucracies gave officials economic power somewhat like property rights, and political bargains created obligations resembling contracts.[12] Communism's collapse after 1989 destabilized these arrangements and production declined as these countries struggled to introduce a market economy. Ten countries committed to a path to full

[11] "The peculiar problem of eastern Europe is that the state of its capital stock by far exceeds the development of its institutional environment." -- Rapaczynski, A. (1996). "The Roles of the State and the Market in Establishing Property Rights." Journal of Economic Perspectives 10: 87-103, at page 91.

[12] A more accurate term than "property rights" is "use-rights" – Soviet officials had stable, predictable powers to use particular resources in particular ways, including socialist firms, although not necessarily the right to sell them. See A. Sajo, "Diffuse Rights in Search of an Agent: A Property Rights Analysis of the Firm in the Socialist Market Economy," International Review of law and Economics 10 (1990): 41-60. In Russia, contracts between enterprises were enforced through "arbitration courts." For a series of empirical papers on them, see Kathryn Henley's publications at http://law.wisc.edu/profiles/pubs.php?iEmployeeID=143.

membership in the European Union.[13] The EU imposed timetables and gave tactical support for eliminating state corruption, creating independent courts, and enforcing civil law. Improvements in the law of property, contracts, and business contributed to vibrant economic growth.

By comparison, the formerly communist countries in Europe that did not join the EU made less progress towards reducing corruption, creating independent courts, and enforcing property and contract rights.[14] The same is true of the non-European countries that formerly belonged to the Soviet Union.[15] Some observers describe the result as "gangster capitalism." In any case, their economic recovery was delayed and did not carry as far. They began to recover after 2000, partly because of improvements in state administration and civil law, among other factors.[16] These changes contributed to the pattern of economic growth depicted in Figure 2.3.

The Latin American region enjoyed robust growth in income per capita from 1965 until roughly 1980. Then growth paused or declined, like Eastern Europe although milder in form. In the 1990s, income per capita resumed its upward path at a modest pace. See Figure 2.4.

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[13] Poland, the Czech Republic, Slovakia, Slovenia, Hungary, Latvia, Estonia, and Lithuania joined in 2004. More recently, Bulgaria and Rumania completed a similar process and joined the EU.

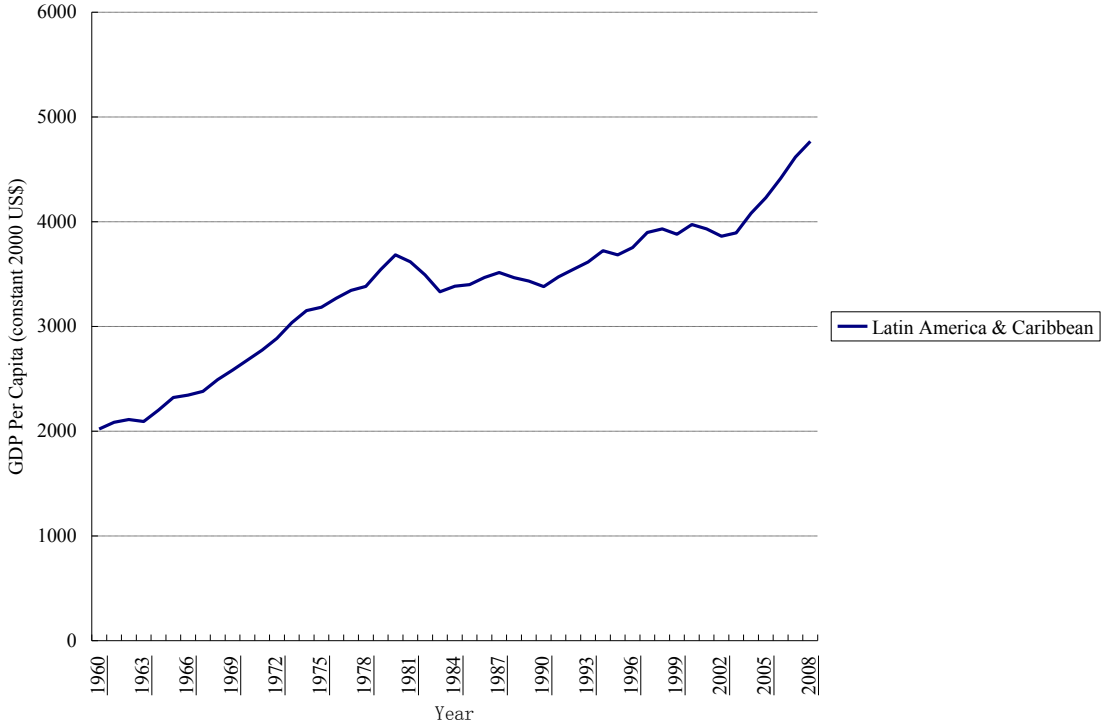
[14] Russia, Belarus, Georgia, Moldova, and Ukraine.

[15] Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

[16] Rising world oil prices were probably the most important factor in Russia, but not in Belarus, Georgia, Moldova, and Ukraine.

Figure 2.4. Income Per Capita in Latin America & Caribbean

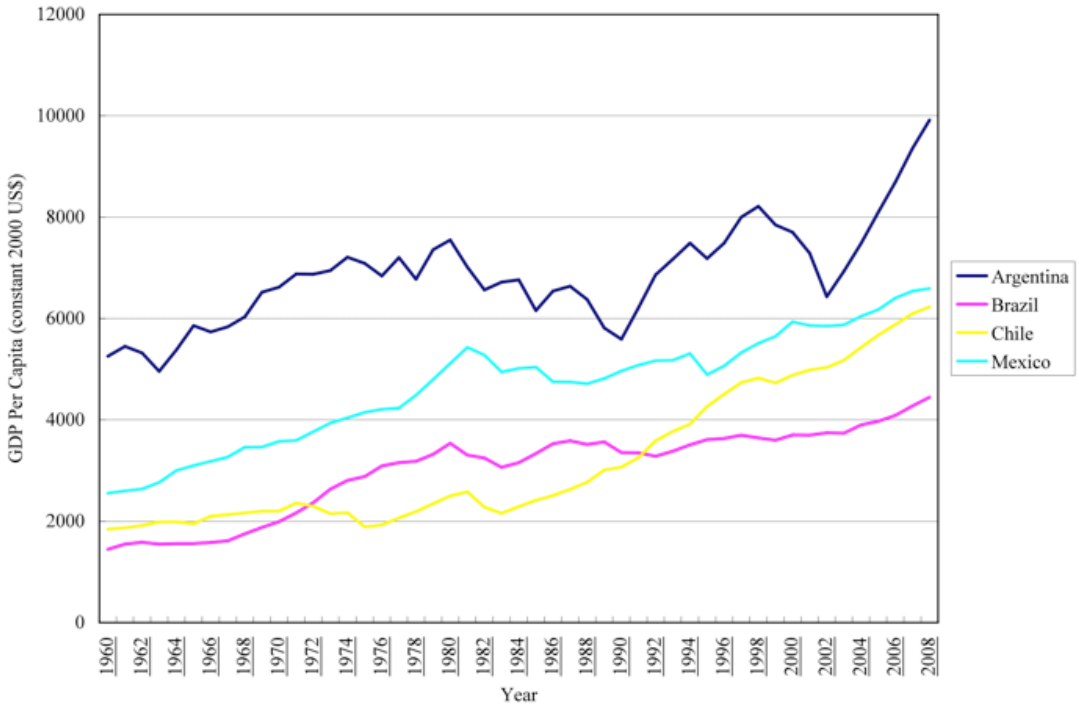
Source: World Bank World Development Indicators 2009




The downturn in the 1980s and recovery in the 1990s were steepest in Argentina. Growth in Brazil and Mexico performed impressively until the 1980s, and then slowed. Chile's growth accelerated after 1985 and remained high. (In each region of the world, exceptional countries like Chile contradict the regional pattern.) See Figure 2.5.

Figure 2.5. Income Per Capita in Four Latin American Countries

Calculated from World Development Indicators 2009

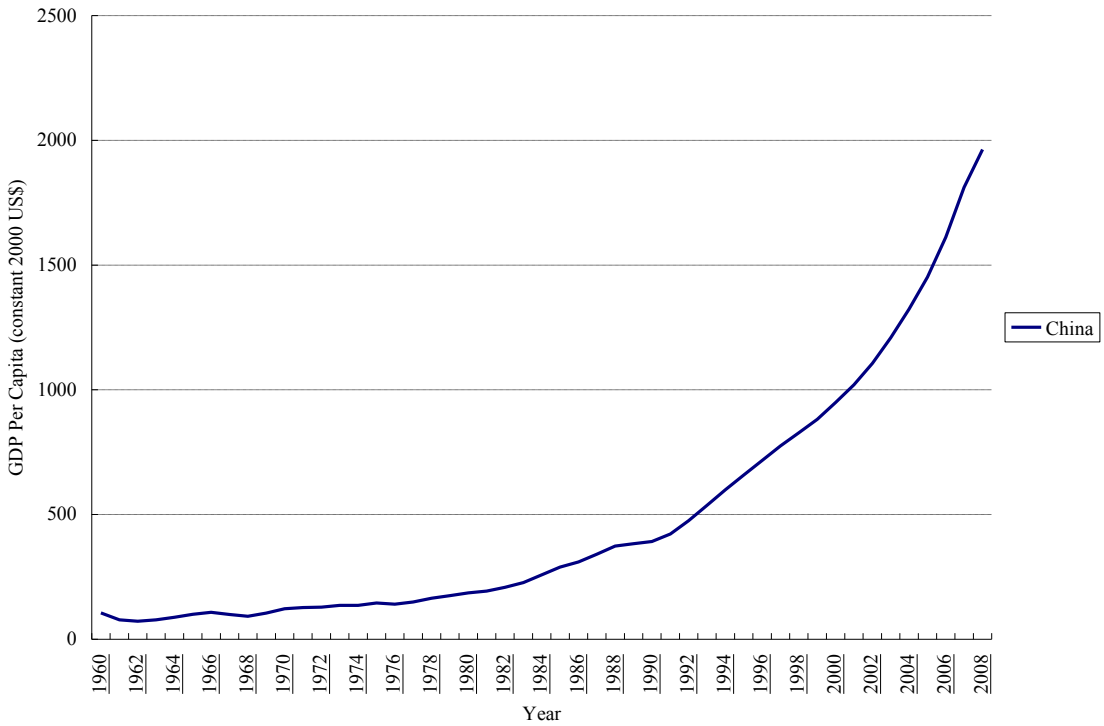



Changes in law might explain this pattern in Latin America. In the late 1970s and early 1980s, almost all countries in Latin America ended state ownership of key industries (privatization), reduced the regulation of private business (deregulation), and removed barriers to international trade (free trade) and finance (free movement of financial capital).[17] The market was liberalized in a context of weak state protection of investors and competitors. Liberalization and privatization in 1990s produced worse economic performance than Latin America had enjoyed in earlier decades, with the remarkable exception of Chile. More stability returned to finance and property law in the 1990s and economic growth resumed. These events resemble a milder form of Russia's transition to markets with weak institutions.

[17] We discuss the "Washington Consensus" and privatization in Chapter 11.

Roughly 20% of the world's population lives in China. Until the mid-1980s, income per capita was low and stagnant. From the mid 1980s through 2008 China enjoyed spectacular growth without pause, as depicted in Figure 2.6. China's performance in lifting so many people out of poverty in the last 20 years has no historical parallel. Sustained growth of roughly 9 per cent per year has drastically reduced absolute poverty from 25 per cent to less than 5 percent of the population, and increased life expectancy from 64 to over 70 years.[18]

Figure 2.6. Income Per Capita in China




Source: Calculated from World Development Report 2009

China's pattern of growth tracks massive changes in law. After the communist revolution triumphed in 1949, the state followed the Russian model of replacing markets with state administration. Officials acquired powers somewhat resembling property rights, and economic bargains among

[18] Yingyi Qian, How Reform Worked in China, UC Berkeley, Discussion Paper, 2001, 1-63

officials somewhat resembled contracts. In the 1960s, however, China's Cultural Revolution attacked the state bureaucracy and the remains of the private sector. Security of property and the enforcement of contracts collapsed, as did the economy. Subsequently, the reforms under Deng Shao Ping in the 1980s dissolved the agricultural communes and restored private businesses. In the 1980s, the Communist Party, the state bureaucracy, and business networks dramatically increased protection of property and enforcement of contracts. In the 1980s, China replaced state-led growth with state protected growth, with spectacular results.

China's GDP surpassed that of Russia, Italy, France, Britain and Germany, and Japan. Many people cannot imagine China with more economic influence in the world than the U.S, but China will soon surpass the U.S. in national income if recent trends continue.[19] The world is becoming multi-polar in economics and business, and the change is happening faster than people can comprehend, especially Americans.

National income per capita roughly measures living standards. Since China's population is 4 to 5 times greater than the U.S., when China's national income equals the U.S., China's income per capita equal between 20% and 25% that of the U.S. If current growth rates continue – which is not at all certain-- China's economic influence will catch up with the U.S. faster than its living standards.

India, whose population is smaller than China's but growing faster, suffered slow growth in income per capita until the 1980s, when growth increased significantly, as Figure 2.7 depicts. The result is a remarkable

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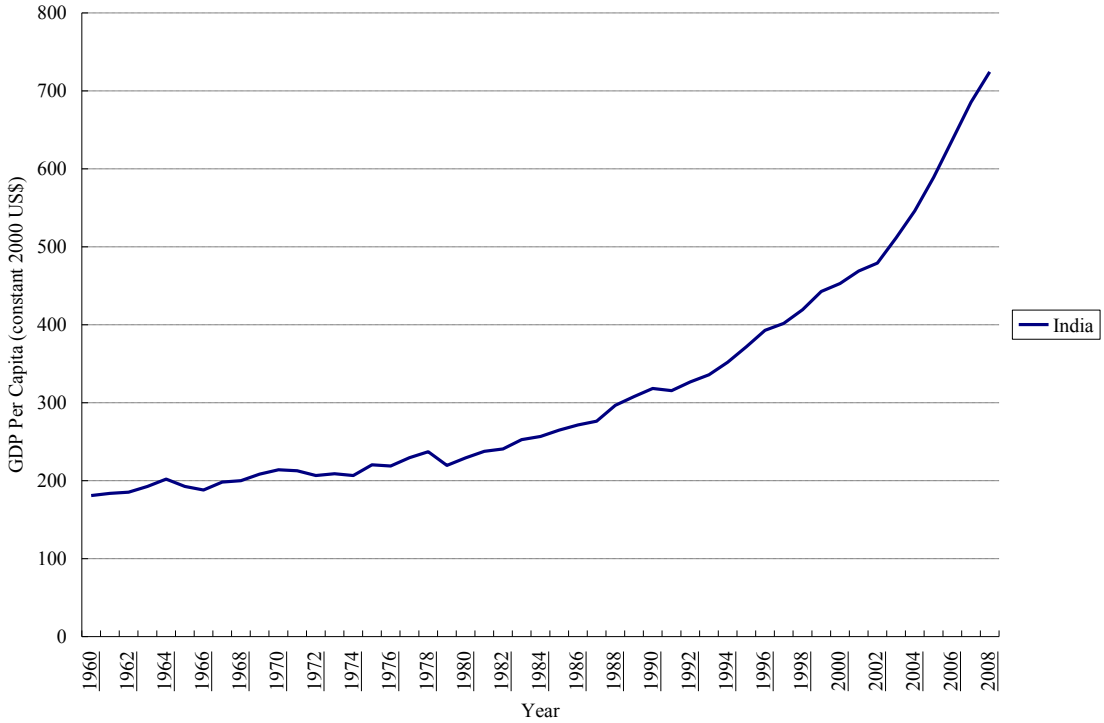
[19] C. J. Dahlman, Luce Professor of International Affairs and Information of Georgetown University, predicted that China would catch up with the U.S. in national income in 2014. The prediction was made at the Chinese Reform Summit, National Development and Reform Commission (NDRC), Beijing Diaoyutai State Guesthouse, July 12th-13th, 2005. Dahlman extended existing trends, allowed for a modest slowing of Chinese growth rates. This prediction compares income of the two nations based on purchasing power parity, not exchange rates, which makes a significant difference.

achievement by historical standards, although less than China's. India started higher than China in 1965 and ended significantly lower in 2008.

Roughly 30% of the world's population lives in China and India. The economic performance of these two economies accounts for much of the world's progress in lifting people out of poverty in recent decades.

Figure 2.7. Income Per Capita in India




Source: World Bank World Development Indicators 2009

The pattern in India looks like a milder form of the pattern in China, with similar causes. After India gained independence from Britain in 1947, state planning gradually crowded out markets, and public law gradually crowded out private law. By 1980 India had a state-led economy like China, but it never devolved into the chaos of China's Cultural Revolution. India remained a democratic state with independent courts and good written laws of property and contracts. After 1980, India gradually dismantled state planning. India

took many small steps towards privatization, deregulation, and free trade. As the state withdrew its economic controls, private property and freedom of contract strengthened. The country enjoyed high growth rates for more than 20 years.

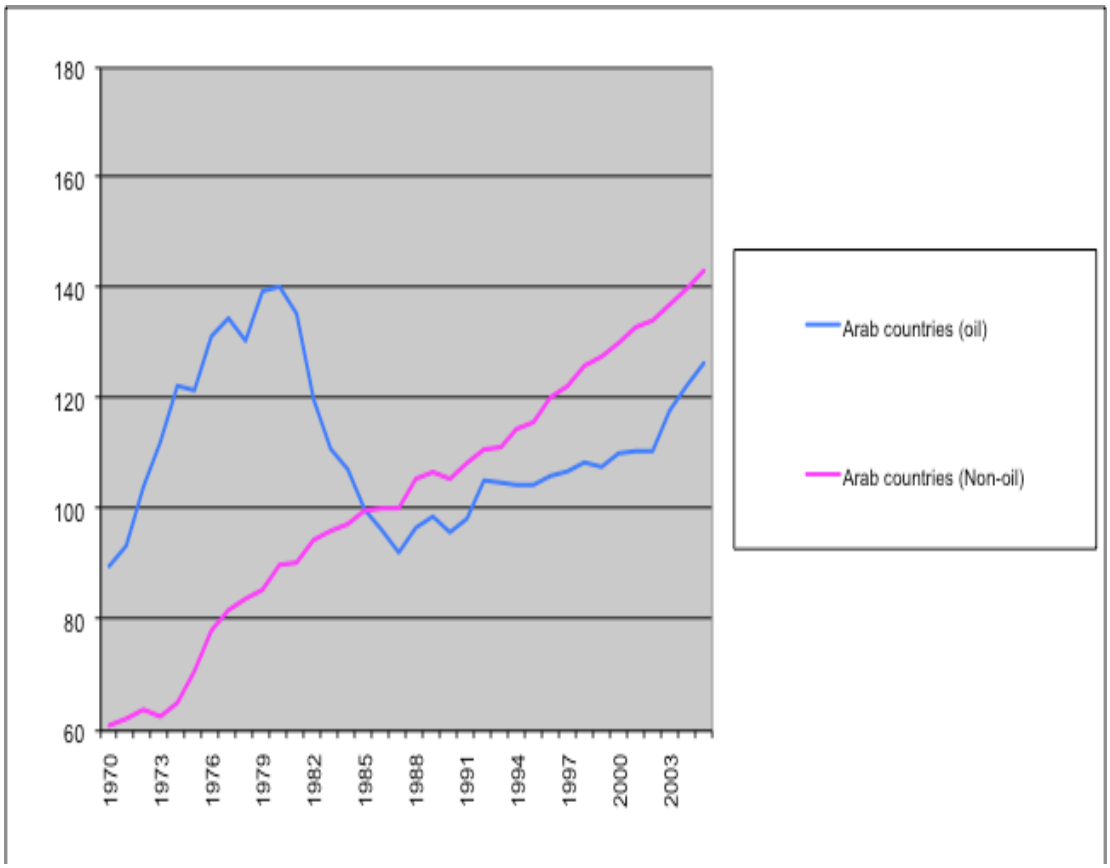
The economic performance of the Arab countries differs dramatically depending on whether or not they have abundant oil. In the Arab oil countries, income per capita rose in the 1970s, declined in the early 1980s, stabilized, and then rose again after the late 1990s. This is exactly the pattern of world oil prices. In the Arab oil countries, changes in the world price of oil overwhelm other effects on the economy, including changes in law.

In contrast, the Arab non-oil countries have far less income per capita than the Arab oil countries. Income per capita in the Arab non-oil countries increased moderately from the mid 1970s, almost at a constant absolute rate per year. (A constant growth in absolute income, however, implies a falling *percentage* growth, just like 5 centimeters is a smaller percentage growth for a teenager than a toddler.[20])

To depict the Arab oil countries and non-oil countries on the same graph, Figure 2.8 uses a convention: It assigns the value "100" to both groups of countries in the baseline year of 1983, even though "100" represents a much higher absolute value for the oil countries than for the non-oil countries. All changes are measured against this baseline year of 1983. As depicted in Figure 2.8, income per capita in the Arab oil countries fluctuated in a pattern corresponding to world oil prices, whereas it grew at a moderate rate in the Arab non-oil countries.

[20] George T. Abed (2003) Unfulfilled Promise, Why the Middle East and North Africa region has lagged in growth and globalization, Finance and Development, Vol. 40, 1.

Fig. 2.8. Index of GNP Per Capita in Arab Countries[21]




In the non-Arab oil countries, trends in law might help to explain growth. Colonies such as Algeria and dependencies such as Jordan gained their independence in a process similar to sub-Saharan Africa that concluded in the 1950s and 1960s. The fully independent countries pursued socialist policies that increased the power of state administrators over the economy. Inefficiency and corruption caused weak protection of property rights and unreliable enforcement of contracts, which undoubtedly hampered economic growth. Until 2011, the regional history lacks abrupt changes in law that might reveal its effects in aggregate economic data. The overthrow of long-ruling dictators in 2011 brings new hopes and fears – as well as new data about how law affects growth.

The following stylized facts summarize the economic performance of the world's regions and its two largest nations:

[21] Calculated from World Development Report 2007.

- *Incomes declined in Africa in the 1980s, and resumed growing after the mid 1990s.*
- *After 1990 incomes declined in central and eastern Europe, and then recovered in the middle of the decade, with faster growth in the 8 countries that joined the EU than in the 12 that did not join.*
- *Income growth paused in Latin America in the 1980s and growth resumed in the 1990s.*
- *After 1980, economic growth accelerated in China and India and remained at spectacularly high levels by historical standards.*
- *The Arab non-oil countries experienced moderate growth since the 1970s, wheras world oil prices overwhelmed other considerations for the Arab oil countries..*

Dramatic events recently demarcated new eras in developing countries -- decolonization in Africa, the collapse of communism in Eastern Europe, expansion of the European Union, privatization and liberalization in Latin America, dissolution of the communes and restoration of private business in China, and dismantling central planning in India. These events caused seismic changes in the protection of property, enforcement of contracts, and effectiveness of business law. The pattern of events suggests that countries surged ahead where improved laws effectively supported innovative business ventures, and countries lagged where law failed to provide this support.

This is an astronaut's view of law and economic development. Like oxygen in the stratosphere, data is too thin for tight proofs of the highest generalizations about law and growth. (Some of our law school colleagues are uncomfortable with generalizing from imperfect data, although they are comfortable with generalizing from no data at all.) After questions are narrowed, however, statistical proofs become possible.[22] Subsequent

[22] The task is to estimate simultaneous equations in several variables. Determining causation requires breaking down aggregate variables like GDP and the Rule of Law Index into smaller components, notably the protection of property, enforcement of contracts, and effective business law. Given small units, the next step is to examine the timing of events and exploit

chapters discuss many such small studies that aggregate to large conclusions.

statistically the fact that causes precede their effects in time. For example, one could compare the dates for the dissolution of communes in different regions of China and the increase in agricultural production. If the former is the cause of the latter, then the former should precede the latter in each region.

# Chapter 3

## The Double Trust Dilemma of Development

Economic growth has many remote causes, such as demography, geography, education, factor mobilization, health, culture, religion, world prices, interest rates, inflation, regulations, and tariffs. Like pregnancy, events with many remote causes often have a single proximate cause. Innovative business ventures proximately cause sustained growth. Launching an innovative business venture requires combining a new idea and capital. To combine them, people need law, especially the law of property, contracts, and business.

Combining ideas and capital confronts a dilemma that we illustrate concisely. An economist who worked at a Boston investment bank received a letter that read: "I know how your bank can make $10 million. If you give me $1 million, I will tell you." The bank does not want to pay for information without first determining its worth, and the innovator fears to disclose information to the bank without first getting paid. The letter captures concisely the problem of financing innovation: A person cannot evaluate an idea until after he knows what it is, and after its disclosure he has little reason to pay for it.[1]

To give another real-life example, a Berkeley mathematician named Richard Niles invented bibliographic software called EndNote that many professors use on their computers. In the early stage of development, he hoped and feared to receive a call from Microsoft. Microsoft would ask for an explanation of EndNote. Once Microsoft understood Endnote, it might buy the company and make him rich, or it might develop its own version of his program and bankrupt him. Niles eventually got a call from Microsoft, which he answered with trembling, but Microsoft was merely trying to sell him

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[1] Economists call this fact "Arrow's paradox of information." A central insight of the economics of information is that one party to a transaction often knows more than the other but cannot authenticate this fact. Thus the seller may know that a good is high quality but proving this fact to the buyer can be problematic. For an early exploration of this problem of asymmetric information, see Arrow, Kenneth J. (1972), The Value of and Demand for Information, in C. B. McGuire and R. Radner (eds.), Decision and Organization, New York: North-Holland, Chapter 6.

its office software. Later Niles got his reward when a large publisher, Thompson, bought EndNote.

The Boston bank and EndNote illustrate that different ventures confront the same economic problem: the separation of ideas from capital, which repel each other like tuxedos and t-shirts. Their opposition obstructs innovation regardless of whether it involves a new market such as insurance in Swaziland, a new organization such as an assembly line in Sichuan, or a new technology such as a faster computer chip in Silicon Valley. Whether the focus is markets, organization, or technology, the innovator must trust the investor not to steal his idea, and the investor must trust the innovator not to steal his capital. This is the *double trust dilemma of innovation* -- a new name for an underdeveloped idea that draws from a rich economics literature.[2]

The double trust dilemma of innovation has some pretty good solutions, like cinching a boat to a dock with Solomon's Knot. None is foolproof. To secure peace in the past between two rival kings, each one gave a valuable hostage to the other. Thus in the 5th century, King Geiserich of the Vandals gave his son as hostage to King Theoderich of the Visigoths, who reciprocated by giving his daughter as hostage.[3] Hostage exchange works best when each side values cooperation more than its hostage. For example, King Geiserich presumably valued getting his own son back alive more than he valued killing the daughter of King Theoderich, and vice versa for King Theoderich.

Establishing trust between parties in a modern business transaction sometimes resembles exchanging hostages. When a buyer in Argentina contracts to purchase machine tools from a seller in Germany, the buyer fears that the seller will keep the

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[2] How can an investor, who puts his money under the control of a manager, write a contract so that the manager profits most when the investor profits most? This is the "principal-agent problem." Much contemporary research in finance builds on an earlier literature addressing this problem. The "double trust dilemma" is a "principal-agent game with double sided moral hazard." (Which name sounds better to you?) For a general discussion of legal incentive involving asymmetrical information, see Edmund W. Kitch, "The Law and Economics of Rights in Valuable Information," J. Legal Studies 9, 683-723 (1980).

[3] The son and daughter were to marry if peace were preserved. Alas, Theoderich allegedly plotted against Geiserich, so Theoderich's daughter was mutilated and sent back to her father.

money without delivering the machines, and the seller fears that the buyer will keep the machines without paying the money. Contract law and banking institutions offer a solution to this problem: The buyer deposits the purchase price at an international bank ("letter of credit"), and the bank releases the money to the seller on presentation of documents proving that the seller delivered the goods to the designated place. The system works because the Argentine buyer values the machine tools more than their purchase price, the German buyer values the purchase price more than the machine tools, and each one can get what he wants only by doing what the contract says.

Like the exchange of hostages between King Theoderich and King Geiserich, or international trade between the German seller and the Argentine buyer, developing an innovation involves reciprocal risks between innovator and financier. In effect, the financier's money and the innovator's ideas are a double bond to guarantee their cooperation. The double bond is effective as long as each side believes that collaborating to develop the innovation is more profitable than any alternative use of the secrets and the money.

Three stages in an innovation's life cycle illustrate three ways that the innovator and financier can establish trust. First, someone has a new idea and obtains capital to develop it. The innovator may form a new firm or work inside an established firm. In the first stage, only a few people in the innovator's inner circle understand the innovation. At this point, the innovation's economic value has not been established. The innovator often has to persuade the investor of its value. Second, the innovator develops the innovation sufficiently to prove its value in the market. When the innovation succeeds economically, the innovator's organization enjoys exceptional profits and it expands faster than its competitors. Third, competitors observe the innovator's success and try to learn what the innovator knows. As competitors emulate the innovator, the innovator's profits fall and its growth slows. (Economic evolution emulates the most fit through profit detection, whereas biological evolution eliminates the least fit through natural selection.)

The three stages in an innovation's life cycle correspond to three phases of finance in Silicon Valley. Each stage secures trust between innovator and financier in a

different way. According to a popular quip, initial funding for startup firms comes from "the 3 Fs": family, friends, and fools. Family and friends have confidence in the innovator, not the innovation. This confidence inspires family and friends to invest without understanding the innovation's market value. The first stage is *relational finance* – investment motivated by personal relationships. In addition, a few fools may invest who think that they can evaluate an innovation without understanding it.

Most innovators have too few personal relationships with wealthy people to finance an innovation's full development, so they must eventually turn to strangers. The second stage of funding comes from "venture capitalists" who are not family, friends, or fools. Unlike relational finance, venture capital is a form of *private finance*. Finance is private because it comes from a small group of investors with expertise in evaluating undeveloped innovations.

Founders and venture capitalists have good reasons for distrusting each other. The creative people who found a company often manage it badly. When the founders prove to be bad managers, the venture capitalists must replace them with good managers. In these circumstances, the venture capitalists seize the firm to increase its profitability. Alternatively, where the founders prove to be competent managers, venture capitalists may seize the firm to avoid sharing profits with the founders. Venture capitalists sometimes want to remove *good* managers who have large claims to the firm's future profits. The initials "v.c." stand for "venture capitalists" and also "vulture capitalists."

Conversely, Silicon Valley innovators sometimes expropriate the investments of their financiers. Thus John P. Rogers convinced some prominent California investors to give him $340 million for a high-tech startup named Pay By Touch, which sought to "transform how America pays its bills" by using "biometric authentication technology" (e.g. fingerprints). In 2008 the company was bankrupt and investors contend in lawsuits that Rogers burned through $8 million per month without producing anything of

value.[4]

Innovators and venture capitalists use various legal devices to overcome their mutual distrust. The founders often commit to performance goals in exchange for financing from venture capitalists. If the founders fail to meet the stated goals, they lose their investment and their jobs. Specifically, the venture capitalists hold preferred shares of stock and the founders hold common shares. The financing contract may say that preferred shareholders can demand repayment of their investment after three years. Such a contract reassures the venture capitalists that the founders will do their utmost to perform as promised. The contract also reassures the founders that the venture capitalists will keep the firm's secrets.

Corporate governance provides another device to solve the double trust problem in Silicon Valley. The firm's bylaws may stipulate that common shareholders (founders) and preferred shareholders (venture capitalists) appoint an equal number of directors to the company's board, plus an independent director accepted by both sides. If the founders and venture capitalists disagree, the independent director holds the decisive vote. Thus the independent director will decide whether or not the venture capitalists can replace the founders with new management.

In the third stage, a successful startup sells itself to the public. The startup may sell directly to the public through an initial public offering of its stock, or it may sell indirectly when a publicly traded company acquires it. In order to sell stock to the public in the U.S., a firm must comply with disclosure rules of the Securities Exchange Commission. Brokers disseminate the firm's disclosed information to the investors whom they advise. Many people understand the innovation sufficiently to decide whether or not to invest in its further development. Because investors in stock markets are a large group of people, we describe the third stage as *public finance*.[5]

Public finance through capital markets tends towards the economist's ideal of a

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[4] Lance Williams, "How a 'visionary' raised - and lost - a fortune," San Francisco Chronicle, December 7, 2008, SF Gate edition, http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2008/12/07/MNIK147QU3.DTL.

[5] For a recent application, see Bernard Black and Ronald Gilson (1999), "Does Venture Capital Require an Active Stock Market?" Journal of Applied Corporate Finance 11:36 – 48 (Winter).

"competitive equilibrium." In a competitive equilibrium, no one has valuable private information and everyone earns the same profit rate ("ordinary rate of return"). As a firm's private information becomes public, the double trust dilemma ameliorates. Like pure contentment, a perfectly competitive equilibrium characterizes a goal that is never quite reached.

Each stage of finance – relational, private, public -- requires different bodies of law to solve the double trust dilemma. Any business venture requires the protection of the firm's property from predators. Without effective property protection, people fear the theft of their wealth, so they hoard instead of investing. Resources flow from makers of wealth to its protectors. Hoodlums, mafias, cheating accountants, Ponzi artists, conniving state regulators, and thieving politicians steal wealth. Families, clans, and gangs can protect property, but an effective state is much more reliable. State protection of property is the legal foundation for investment in the future.

Relational finance can get by without much more legal support from the state than protection of property. When law secures their property secure against outsiders, the firm's member can work together by relying on relationships, not formal contracts. In the first stage, many new firms rely heavily on personal relationships for finance. Effective property protection and strong relationships make participants in a startup firm believe that they will enjoy future rewards from current investments of money and time.

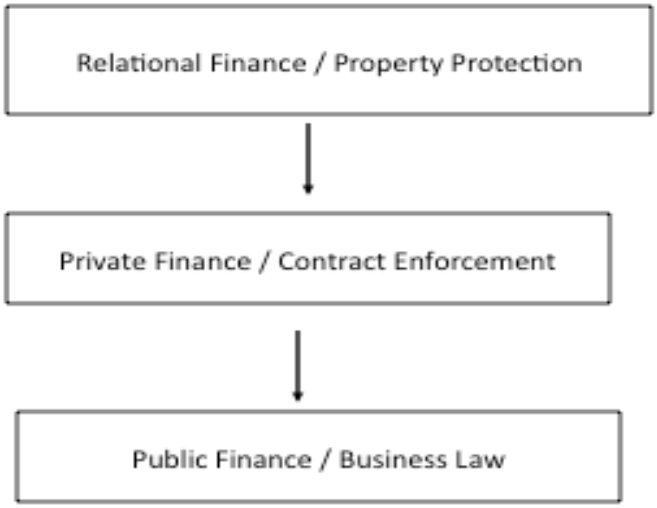
As development proceeds, the startup firm enters its second stage where further development requires finance by strangers, not relatives or close friends. Relationships among strangers are too thin for informal mechanisms to carry the burden of enforcing promises. To cooperate in high-stakes ventures, strangers need formal contracts with effective enforcement. As with protecting property, the state can enforce contracts much more reliably than clans or gangs. In the second stage, the business venture relies mostly on formal contracts with state enforcement. Contract law underpins markets for loans, banks, and direct foreign investment, although flourishing private finance leads to specialized laws for debt collection, bonds, and banking.

With private finance, investors retain substantial control over how firms use their investments. Later we explain that some firms in all countries, and all firms in some countries, never go beyond private finance. In Silicon Valley, however, many firms go to the third stage in which the business venture raises capital from public markets. The venture may raise money directly by selling its own stock to the public ("initial public offering"), or the company may proceed indirectly by selling itself to a larger firm that sells stock and bonds to the public ("acquisition by a public company").

Members of the general public who buy stocks or bonds have no control over how the firm uses their money. Instead, their money comes under the control of the people who manage the firms. These insiders, who have information and power over the firm, have many opportunities to appropriate outsiders' investments. For example, insiders use accounting tricks to convert profits into salaries, thus depriving stockholders of their dividends. If public investors don't like the firm's policies, their recourse is to sell their securities ("exit"). Protecting outsiders from insiders in public companies requires more than securing property and enforcing contracts. For public finance, the additional protection comes from the law of securities, corporations, and bankruptcy, which we call "business law."

In sum, relational finance requires property protection, private finance requires contract enforcement, and public finance requires business law to protect outside investors, as depicted in Figure 3-1. The progression requires more intensive use of law. The law's effectiveness determines the firm's ability to expand from relational to private to public finance. Figure 1 is a usful simplification, but it does not show how bodies of law complement each other, such as the support for bank financing contracts given by corporate law and bankruptcy law. We will discuss complications later.

Figure 3-1. Legal Basis for Three Forms of Finance

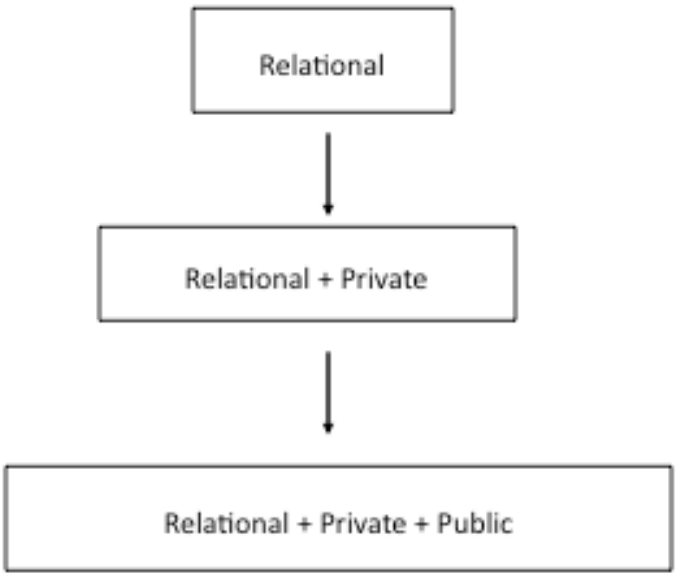



Biologists sometimes say, "Ontogeny recapitulates phylogeny," which means that the development of a single organism from birth to maturity somehow resembles the evolution of the entire species.[6] Similarly, the three stages of finance for a startup in Silicon Valley resemble three stages of historical evolution in capital markets for countries. The industrial revolution in England, which was the world's first, went through these stages. In the early 18th century, inventors mostly relied on their personal assets and loans from family and friends (relational finance). As industrialization proceeded, loans from wealthy investors and banks became available more readily to new industries. Finance of industrial companies by sales of stocks and

[6] Each animal begins life as a single cell containing genetic instructions for how to grow into a complex organism. For animals in different species with a common evolutionary ancestor, the path of individual growth suggests the older, evolutionary forms found in the fossil record. While the pattern of individual growth does not strictly recapitulate the evolution of the species, comparing them provides useful clues about the genes that control the development of individuals and species. For a book that finds the origin of the human foetus in fish, see Neil Shubin (2008), Your Inner Fish: A Journey into the 3.5-Billion-Year History of the Human Body, Pantheon Books, New York, NY.

bonds to the general public came later. The first financing of industrial companies especially concerned infrastructure like canals, docks, and railways, where private business and the state intertwine. As the law became more reliable, public finance spread to manufacturing firms.[7] Figure 3-2 depicts the evolution of finance in these three stages.

Figure 3-2. Stages in Development of Finance




Today the poorest countries have weak capital markets, so businessmen mostly borrow from family and friends. Starting from a condition of lawlessness, imposition of secure property rights can cause a spurt of growth based mostly on relational finance,

[7] See Deane, P. M. (1965). The First Industrial Revolution. Cambridge University Press, summary on pages 166-167. For financing of key 18th century inventions by name, see page165.

as in China's new industries after 1980s. Some peoples, notably the Chinese and the Jews, have family networks that extend business relationships beyond the usual boundaries. However, the conditions of trust among relatives do not reach the scale of modern businesses. Relational finance keeps business small and local. No modern country became wealthy by relying exclusively on relational finance.

To increase the scale of business, an economy must augment relational finance with private finance. As wealth accumulates, however, countries augment relational finance with bank loans and other forms of private finance. In countries where banks dominate, an elite of wealthy insiders often lend to business ventures based on private information. Thus bank finance in some developing countries performs a similar role to venture finance in Silicon Valley.

As countries become affluent, they increasingly augment private finance with public finance, which means selling stocks and bonds to the general public. Stocks and bonds compete with banks and wealthy individuals to finance economic growth. The expansion of finance supplements earlier forms without replacing them. All three forms of finance – relational, private and public – remain important in the richest countries. The extent of public finance varies significantly among countries, including rich countries. Japan and northern Italy have achieved affluence mostly through relational and private finance, with relatively little public finance, whereas the U.S. and Great Britain rely mostly on public finance for mature industries. Germany appears to be shifting from the former to the latter.[8]

Expanding the basis of finance requires effective law that controls behavior, not aspirational law that expresses lofty ideals. What makes a law effective? Not just writing it down. Written law in a poor country often resembles written law in a rich country. Property and contract law-on-the-books in India and Nigeria resemble English common law, and property and contract law-on-the-books in Peru resemble the Spanish civil code. Writing down a law, however, does not make it effective. The written laws are less effective in India, Nigeria, and Peru than in England or Spain.

[8] See Chapter 8 for details on finance in different countries.

A law's effectiveness comes from society and the state. Many laws are obligations backed by sanctions. These obligations are as effective as their supporting sanctions. Foreseeing sanctions, the potential injurer usually obeys the law.[9] The sanction can come from society, as when people threaten to shun their relatives or damage reputations, or it can come from the state, as when one person threatens to sue the other for breach of contract.

Are social sanctions sufficient to make laws effective without state enforcement? Instead of speculating about the "state of nature" from his room in London, Bronislaw Malinowski traveled to the Trobriand Islands in 1914 and observed how people resolve their disputes. He found that when one person harmed another, Trobriand Islanders used social pressure to force the injurer's family to compensate the victim's family.[10] Facts like these persuaded anthropologists that law is much older than the state.

As in the Trobriand Islands in 1914, social sanctions remain important in modern societies. Social sanctions are flexible and cheap, so the victims of wrongdoing in business rely on them first. When a businessman breaches a contract, for example, the victim may stop trading with the injurer (refusal to deal), break promises owed to the injurer (retaliatory breach), sully the injurer's reputation (reputational sanctions), and encourage others not to deal with the injurer (boycott).

Non-state organizations can improve the efficiency of social sanctions. Thus most uncut diamonds are traded without written contracts in a small number of exchanges in cities like Manhattan and Antwerp. The diamond exchanges have merchant courts to resolve disputes without relying on state sanctions. Banishment from the exchange, which ruins a diamond dealer's livelihood, is the ultimate punishment.[11] By making information easier to obtain, the Internet has increased the effectiveness of reputational sanctions, especially by posting buyers' evaluations of sellers' goods. Reputational sanctions on the Internet are so efficient that strangers buy

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[9] To deter a rational person from doing wrong, the expected sanction should equal or exceed the person's gain from wrongdoing. The expected sanction equals the probability of the sanction times its magnitude. A sanction worth $100 applied with probability ½ will deter wrongdoing by a rational person whose gain does not exceed $50. Applying the sanction is seldom necessary.

[10] Malinowski, B. (1926). Crime and Custom in Savage Society. Harcourt Brace & Company, N.Y.

[11] Lisa Bernstein, "Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry," J. Legal Studies 21 (1992): 115-157.

antiques online without examining them. The internet suggests that, instead of decreasing over time, people may rely more on social sanctions in the future.

The effectiveness of social sanctions depends on the stakes. Social sanctions are suffice to prevent wrongdoing in repeated transactions with low stakes, but not in one-time transactions with high stakes. For big deals, social sanctions are insufficient to secure trust, except within tight families. In big deals, people need the state behind contracts much like diplomats need an army behind foreign policy. When buying a car or selling a house, ordinarily moral people can be ruthless, and professional car dealers and real estate agents are notoriously sleazy. Business ventures often resemble buying a house -- a big deal with high stakes. Without judges or bureaucrats to threaten wrongdoers, many business ventures never launch.

The victim of a broken contract may file a civil complaint against the injurer and threaten to sue for compensatory damages. A credible threat of litigation usually resolves conflict like a lion's roar. To be credible, the plaintiff must stand to gain more in damages from the court than his costs of litigating. Keeping litigation costs down increases the credibility of threats to litigate. When courts resolve routine business disputes efficiently, most of them settle out of court on terms favoring the party who would win in court. In contrast, inefficient or corrupt courts decrease the credibility of threats to sue and prevent the party who should win in court from extracting a favorable settlement out of court.

Besides social and court sanctions, civil servants in the state bureaucracy apply administrative sanctions, such as revoking permits, applying regulations, investigating violations, or imposing fines. Autocratic states especially rely on administrative sanctions to protect citizens. Thus the state bureaucracy in contemporary China, and the Communist Party that stands behind it,[12] protect the sources of economic growth by guaranteeing most property rights and enforcing many contracts. Imagine a land dispute involving an industrial enterprise in Guangzhou that wants to expand by taking land from a farm. To mediate the dispute, the parties first appeal to powerful private

[12] China has a dual system of government. For each office in the state – mayor, legislator, judge, administrator – there is a parallel office in the communist party. State officials have discretion in routine affairs, but the communist party official has final say in important matters.

persons. If private mediation fails, they might turn next to a local official in the city government. If one of them rejects the local official's decision, the next appeal might go to a communist party official in Beijing. Many observers believe that threat of social and state sanctions in such a chain of events deters much wrong-doing. Protection of property rights and enforcement of contracts in China is much better than in the past. However, most observers believe that China's bureaucracy performs these tasks far worse than courts in its richer neighbors like Japan or Singapore.

In developed and developing countries, new business ventures begin with secrecy, risk, and high profit expectations. All three decrease as a business venture matures. Sea routes from Europe to Asia were mapped and secured, trade between them becomes commonplace, and the middle class Europeans could buy spices. In Silicon Valley, competitors work around patents and ferret out secrets, thus converting today's technological breakthroughs into tomorrow's commodities. However, a growing economy never settles into a permanent condition without secrecy, risk, or extraordinary profits. The *double trust dilemma of development* is the problem of uniting ideas and capital in business ventures. The dilemma piques in developing countries with relatively ineffective law of property, contracts, and business. To prosper where law is weak, businesses must deal through relationships and self-enforcing private contracts. Improving courts and bureaucracies, and evoking support from citizens for the state, would increase growth by expanding finance for business ventures.[13] With better law, finance expands from relational to private, and from private to public, so more ideas combine with more capital to grow the economy.

# Chapter 4

# Make or Take

In a coral reef, an animal (polyp) creates a hard shell around itself that protects many single-celled plants (zooxanthellae) living within its flesh. The plants produce most of the animal's food and energy. Similarly, the state is needed to protect the makers of society's wealth from the takers. Without protection of property, people hoard their wealth instead of investing in the future. Most rich nations today became wealthy because the state and social norms channeled the efforts of their citizens into making wealth.[1] Conversely, many poor nations stay that way because the state and social norms channel too much effort into taking wealth from others.

All countries have makers and takers of wealth, but the balance between them differs by place and time. In striking the balance, much depends on law. The types of law needed to protect the makers of wealth include property, contracts, crimes, finance, corporations, regulation, antitrust, labor law, taxation, and torts. When law enables creative people who make wealth to keep much of it, the state channels their energies into enriching the nation by enriching themselves. Conversely, when laws allow the strong to take wealth from its makers, the state channels the energies of people into enriching themselves by impoverishing the nation.

We cannot explain how nations grow rich without distinguishing between making and taking wealth. This chapter distinguishes three ways of taking wealth from its makers. We then offer a satellite's view of the productivity of wage earners, capitalists, and innovators. We contrast two classical theories --

[1] A.O. Hirschman argues that intellectuals in the 18th century developed and promoted the ideal of capitalism so that trade might pacify the fierce aristocratic virtue of honor and save the nations from war. In other words, extolling making might cause less taking. See The Passions and the Interests (Princeton: Princeton University Press, 1977).

the labor theory of value and marginal productivity theory -- and we also explain a new theory about entrepreneurs. Oliver Cromwell, the 17th century English revolutionary and dictator, was dug up and beheaded three years after he died. Revisiting the dispute over the labor theory of value may seem like another exhumation to some readers. Instead of being dead, however, this disagreement still engages the deepest political passions between left and right about the market and the state, the rich and the workers. We trespass reluctantly on this contested ground, but we must cross it to get to growth.

## Who Takes Wealth?

Distinguishing wealth-making from wealth-taking is easy when the contrast is stark. In the years before 1220, artisans and merchants in Bukhara on the "Silk Road" enriched their city, but that year it opened its gates to an over-powering army sent by Genghis Khan. Instead of leniency, the invaders took Bukhara's wealth, enslaved the useful population, and reduced the city to a gravel pit. The people who take wealth from others in the modern economy include more subtly than Genghis Khan. They include frauds, autocrats, commissars, cartels, stock manipulators, corrupt unions, bribe-seeking politicians, gangsters and monopolists of many kinds. We will distinguish three ways to take wealth from others: theft and bribes (criminal), subsidies and regulations (political), and cartels and monopolies (market power).

### *Theft and Bribes*

Mineral resources are the most saleable assets in many poor countries. After communism collapsed in Russia in 1989, gangster-capitalists looted the state's mineral resources and sold them abroad. The richest 300 people in the world in 2003, according to Forbes Magazine, included 16 Russians, 11 of whom made their wealth in oil.[2] After oil was discovered in 1995 in Equatorial Guinea,

[2] Mikhail Khodorkovsky, the richest of the gangster capitalists, was arrested in 2005, sentenced to nine years in prison, and the Russian state expropriated his company.

its ruler, Teodoro Obiang, and his government deposited $700 million in private accounts in the Riggs Bank of Washington, D.C. (These facts surfaced when regulators fined the bank for not reporting possible money laundering.) Similarly, Sese Seku Mobutu, Congo's president from 1960-97, held billions of dollars in Swiss Bank accounts that he had ransacked from his country.[3] Forbes magazine makes an annual guess of the world's 10 richest "kings, queens, and dictators." Most people on the list rule oil-rich countries.[4]

Instead of taking wealth from the state, some government officials take it from private citizens. Most constitutions require the state to compensate private owners for taking their property, but some politicians are above the constitution. When power outweighs law, politicians expropriate private citizens without compensation, especially their enemies. In 2000 President Mugabe of Zimbabwe encouraged his political allies to expropriate the farms of white citizens[5] -- with disastrous economic effects.

Rather than stealing oil or land, many corrupt officials extort small sums of money from people who need something from them. The officials may demand a bribe for a license, performance of a duty, over-looking a regulatory violation or tax liability, obtaining a state document, granting a variance, or holding a hearing. The "corruption tax" – the cost that petty bribes impose on business -- slows

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Khodorkovsky's opponents believe that he was correctly convicted for criminal actions related to the privatization of state assets during the 1990s. Khodorkovsky's supporters, however, believe that Vladimir Putin, the Russian President, retaliated against Khodorkovsky for his support of political groups that oppose the government's policies.

[3]For the whereabouts of Mobutu's billions, see Michela Wrong, Mystery of Mobutu's Millions, New Statesman, July 26. 2007,http://www.newstatesman.com/africa/2007/07/wrong-mobutu-congolese.

[4] But not all -- the 2006 list includes the Queen of England and Fidel Castro

[5] The Zimbabwe constitution prohibited the state from taking land without compensation, so Mugabe amended the constitution. The amendment shifted the responsibility for compensating white farmers from Zimbabwe to its former colonial power, Britain. In the end, no one compensated them, most of them were robbed and exiled, and some of them were murdered. For a popular memoir of these events, see Peter Godwin, When a Crocodile Eats the Sun: A memoir of Africa (New York: Little, Brown and company, 2006). For facts about compensation, see Pan, E. (2005). Africa: Mugabe's Zimbabwe. http://www.cfr.org/publication/7723/africa.html, Council on Foreign Relations.

growth like an under-inflated tire slows an automobile. (See Chapter 11 on crimes and corruption.)

### *Subsidies and Regulations*

We discussed illegal ways to take wealth from others, notably stealing and extracting bribes. Alternatively, instead of breaking the law, people can use law to take wealth from others. Politicians direct the state to subsidize various activities. One country or another subsidizes telephones, banking, railroads, electricity, steel manufacturing, farmers, airplane flights, windmills, coal mines, southern industries, northern industries, core industries, export industries, green industries, minority businesses, majority businesses, and so forth. The subsidies often go in opposite directions in different countries -- thus farmers subsidized city workers in Peron's Argentina and Stalin's Russia, whereas city workers subsidize farmers in the U.S.A, the European Union, and Japan.

Tax preferences resemble subsidies in their causes and effects. Lobbyists riddle tax codes with special provisions for influential groups of people. One country or another reduces taxes on income from cattle, oil, internet sales, churches, solar panels, owner-occupied houses, minority businesses, majority businesses, and small businesses. Critics call special tax provisions "loopholes," whereas admirers call them "incentives" for national goals like oil exploration, renewable energy, self-sufficiency in food, national security, small business development, sustainable farming, and home ownership.[6]

Subsidies appear in budgets and tax preferences appear in codes. To reduce visibility, politicians direct money from citizens to supporters by restricting competition. To get rich by restricting competition, obtain an exclusive license to

[6] The same rationales are given for tariffs. In Tanzania protective tariffs kept a company in the business of assembling bicycles from imported components that cost more than importing assembled bicycles. Other studies have found goods assembled in developing countries whose imported components cost more than importing the assembled good. The validity of these results has also been challenged. For a survey see Henry J. Bruton (1998), "A Reconsideration of Import Substitution," Journal of Economic Literature, Vol. XXXVI pages 903–936. Also see our discussion in Chapter 13.

operate cabs at an international airport, sell road signs to a city through closed bidding, own all of a country's electro-magnetic spectrum for mobile phones, or build cars behind tariff walls in a country with two automobile plants. One country or another requires farmers to sell coffee beans exclusively to a state exporter at prices below world market prices, forbids selling aspirin without a pharmaceutical license, prohibits optometrists and lawyers from advertising their prices, requires banks to lend to political favorites at below-market rates, and forbids dry cleaners from locating within a mile of each other.

The shield against competition comes from licenses, charters, permits, restrictions, regulations, orders, variances, privileges, and government contracts. By such devices, administrators and politicians determine where a factory can locate, what goods it can produce, to whom it must sell, and whom it employs. These devices shield the friends of politicians from competition, and the friends repay the politicians with donations, bribes, and electoral support. Political power can restrict competition and create market power for politically favored factions of all kinds – entrepreneurs, unions, the upper class, the working class, the ethnic majority, the ethnic minority, men, women, optometrists, pharmacists, defense contractors, religious schools, state schools, to name a few. The beneficiaries of these state activities justify them in the name of fairness, employment, economic growth, national security, equal opportunity, social justice, public health, consumer protection, pollution abatement, and so on.

Are subsidies, tax preferences, and regulations mostly unjustified transfers of wealth or legitimate state activities? You answer says a lot about your politics. Conflicting ideologies grind against each other like ice in the Arctic Sea. Systematically justifying or condemning subsidies, tax preferences, or regulations requires a general theory relating the state and the market. We will offer no such theory. Rather, we will limit our analysis to effects on innovation and growth.

### *Cartels and Monopolies*

Whenever executives in competing firms talk to each other, consumers are in peril. Talk leads to constraints on trade -- businessmen set prices and

divide territory like Europeans divided Africa in the 19th century. To combat this problem, most countries enacted statutes in the 20th century that prohibit firms from collaborating to set prices or divide territory. If enforced impartially, these statutes can benefit the public, but administering them is often politicized. To limit politization, the simplest and most reliable antitrust policy for many sectors of an economy is free trade, because world markets are so hard to monopolize.

While antitrust law forbids private businesses from organizing cartels, governments routinely do so. The firms in an industry sometimes capture its regulator, who operates a cartel on their behalf. To illustrate, a plane flight from Boston to Washington, which passes over several states, cost about twice as much in 1980 as a flight of similar distance from San Francisco to San Diego, which remains within the state of California. The fact that the federal government regulated air travel between states, and not within California, explains the price difference. On Boston-to-Washington flights that cross state lines, federal law allowed competing airlines to ask their regulator to increase the legal fares charged to passengers. On San-Francisco-to-San-Diego flights, however, the presidents of competing airlines who had such a conversation would violate antitrust law and risk imprisonment.

**Who Makes Wealth?**

We have discussed three ways that people take wealth from each other: illegally through theft and bribes, legally through state subsidies and regulations, and by monopolies and cartels that can be legal or illegal. Some examples of takings are transparent, and others are obscured by the complexity of a modern economy. The division of labor obscures exactly how much most people make in a complex economy. Do entrepreneurs, industrialists, farmers, laborers, shopkeepers, scientists, programmers, teachers, and laborers get more or less than they make? Sorting out their contributions is a fundamental task of economic theory. We will frame the problem and discuss some basic theories.

***Are Workers Exploited?***

A factory in Mumbai (formerly Bombay) makes cloth from Egyptian cotton and German dyes. It sells the cloth to a factory in Kolkata (formerly Calcutta). A seamstress in the Kolkata factory uses the cloth, a pattern, a sewing machine, a building, and electricity to sew jackets. She sews 10 jackets per week and her weekly wages equals 600 rupees. The Kolkata factory sells the jackets to an Italian wholesaler for 2,500 rupees each. Does the factory owner keep most of the wealth that the seamstress makes, or does the factory owner pay most of it to her in wages? .

Before answering, we remark on the meaning of these numbers. In India a person can survive on 600 rupees per week by buying in local markets. For comparing living standards in different countries, wages should be compared according to their local purchasing power. However, we convert rupees to U.S. dollars to make our calculations more transparent for most readers. 600 rupees exchanges roughly for 10 U.S. dollars, which will not buy enough in U.S. markets to survive. Thus the seamstress sews 10 jackets per week, which the factory sells for $50 each. Out of the $500 in revenues, the factory pays the Kolkata seamstress $10 per week.

Does the wage of $10 per week approximately equal the wealth that the seamstress makes, or does the factory owner pay her merely a fraction of it? Two classical theories give opposite answers. The first is due to Karl Marx, who remains an icon in many universities in developing countries (although seldom in their economics departments). Besides being influential, Marxist theory is useful intellectually because of its logical purity. According to Marx's labor theory of value, workers make everything and capitalists keep much of it.[7] To simplify a complicated theory, say the factory owner supplies the seamstress with inputs such as cloth and electricity, and these inputs cost $400 per week. Her week's output of 10 jackets sells for $500. The factory owner pays her $10 per week in

[7]This is the "emiseration hypothesis." Note that Marx also predicted rising production and declining profits. Noting the inconsistency of these prediction, Robert Solow remarked that Marx made one prediction too many.

wages and keeps $90 for himself. According to Marxist theory, the value of her work is closer to $100 per week than to her wage of $10. The difference of $90 measures the extent of her exploitation by the factory owner.

Turning from Marx to microeconomics, its classical theory of wages is marginalism, which parses these numbers differently. Besides buying inputs from others, the factory owns some of the inputs that it supplies to the seamstress, such as the sewing machine and the building where she works. Capital was needed to buy them. The owner could liquidate these assets and invest the money elsewhere. Thus the capital used by the seamstress has an opportunity cost – the cost of the opportunity foregone by not investing the capital elsewhere. If all the relevant markets are competitive, then the $90 that the factory owner keeps from sales revenues equals the opportunity cost of his capital, and the $10 paid to the seamstress equals the value of her contribution to production.

Marxism and marginalism disagree over whether or not the factory exploits workers. In general, Marxists attribute the value of products to the labor that goes into making them, not the capital, management, or marketing. The difference between a product's sale price and the wages paid to make it measures exploitation. In contrast, marginalism holds that competition causes the price of each factor of production (capital, labor, land, and so on) to equal the value of its marginal product. If the workers wage equals her marginal product, then she is not exploited. And if the capitalist's marginal product equals his profits, then he is not an exploiter.

Which theory of wage determination is more nearly correct? Most modern economists think that the answer depends on the structure of labor markets. When employers must compete with each other to hire able workers, they lack the power to pay someone less than the market value of what she makes.[8]

[8] Here is how it works. The employer pays the seamstress her wage and sells her product. If her product exceeds her wage, the employer earns a profit from her labor. Competition will prevent him from doing so. If her employer pays her a wage that is below the value of her product, another employer can profit by inducing her to change jobs at a slightly higher wage.

Competition roughly equates wages and marginal product. Later we review some data showing that in large cities or in countries where people can move and freely choose their working place, marginal productivity theory is approximately correct and the pay of most workers roughly equals the market value of what they produce.

In contrast, keeping wages below marginal productivity requires thwarting competition by cartels, serfdom, bonded labor, and the like.[9] Without competition, employers can exploit workers. Thus millions of people in India, Pakistan and Nepal are trapped in debt bondage and forced to work for an individual employer to repay loans, even though international conventions ban bonded labor.[10] Bonded labor concentrates in villages where competition is weak, but it also exists in big cities ("slum dogs"), including some textile workers. The problem would disappear if effective laws allowed debtors to escape their creditors through bankruptcy.

Earlier distinguished three ways to take wealth from its makers: theft and bribes (criminal), subsidies and regulations (political), and cartels and monopolies (market power). The exploitation of workers, according to the marginalism, mostly occurs by restricting competition in labor markets by legal or illegal means. Marginalism predicts that innovation makes workers more productive and causes their wages to later. Later we present evidence that rising productivity and wages is the main mechanism that lifts nations out poverty.

This mechanism is central to understanding the wealth of nations. The reader, however, should draw inferences cautiously from this simple account of marginalism. Modern labor economics encompasses many departures from marginal productivity theory such as cartels, regulations, tariffs, unions, minimum

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Competition among employers should bid up her wage until it approaches her marginal value product, which is $10 per week.

[9] For a Marxist theory that focuses on monopoly power, see P. A. Baran and P. M. Sweezy, Monopoly capital; an essay on the American economic and social order (New York, Monthly Review Press, 1966).

[10] UN Sub- Commission on the Promotion and Protection of Human Rights, February 2001 The Enslavement of Dalit and Indigenous Communities in India, Nepal and Pakistan through Bondage.

wage legislation, and executive compensation in public companies. It also encompasses a hot political issue in many countries -- discrimination that favors men over women, high caste over low caste, the dominant ethnicity or tribe or religion over the subordinate ones, and so forth.[11] Simplicity is the prelude to complexity, not the conclusion of analysis.

### *Are Entrepreneurs Too Rich?*

We asked, "How much does a worker make and how much does she keep?" Now we ask the same question about an innovator. To answer it, we divide the life-cycle of an innovation into phrases as depicted in Figure 4.2. Before the innovation, the industry is in competitive equilibrium and its firms receive the normal rate of profit. In the first phase of innovation, one firm has a new idea and invests to develop it. In the development phase, money goes out and none comes in. Many innovators try and few succeed. Thus recent U.S. data suggests that 40% of new businesses survive and 60% disappear within four years.[12] If development succeeds, the innovator goes to the second phase and launches the innovation in the market. On launch, the innovator earns extraordinary profits because the product has no competitors. In the third phase, the new idea disseminates to imitators, whose competition causes a fall in the innovator's profits. In the fourth and final phase, the industry settles into equilibrium like the crowd that eventually stops yelling after a goal is scored at a football match. The innovator's profits fall to the normal rate of return, as they were in the beginning.

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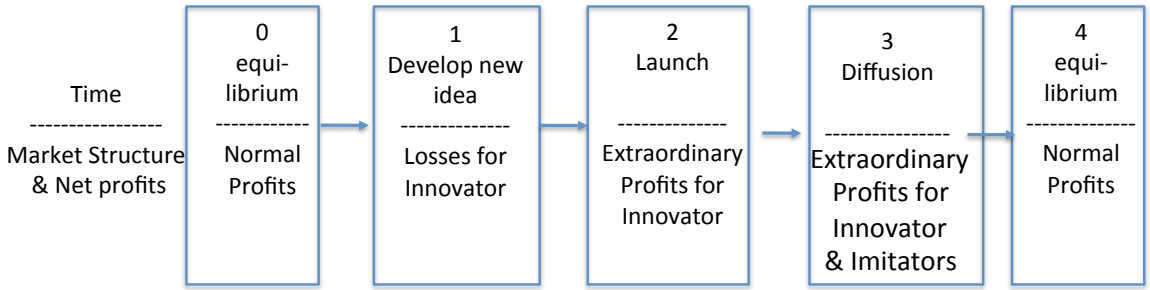
[11] For an summary of economic theories of discrimination as market imperfections, see Chapter 14 of Robert Cooter's The Strategic Constitution (Princeton, 2000),

[12] 44% of U.S. businesses started in the 1990s still existed 4 years afterwards. See Knap, A. E. (2005). "Survival and longevity in the Business Employment Dynamics data." Bureau of Labor Statistics of the U.S. Department of Labor. The number given by Dun and Bradstreet is 37% as cited in "Some of the Reasons Why Business Fail and How to Avoid Them," Entrepreneur Weekly, Issue 36, 3-10-96.

Figure 4.1. Life-Cycle of an Innovation




Averaged over the life-cycle, the successful innovator receives extraordinary profits, which exceed the normal profits earned by non-innovators. However, even the most successful innovator earns much less than the innovation's economic value to society. When the innovator sells the innovative product to buyers, they presumably value it more than they pay for it. Otherwise they would not buy it. The "consumer's surplus" is the difference between an innovation's value to a buyer and the price he pays for it. In addition, as the innovation disseminates, some of its value goes to the imitators as extraordinary profits. Thus the innovation's social value is divided among innovators, imitators, and consumers.

Whenever law and policy creates incentives that cause another innovation, the innovator benefits and so do the imitators and consumers. Law and policy affect the shares of these three groups in the social value of innovations. Is the share of innovator too high or too low? Few people will object

to small producers keeping much of the value of their innovations, like Indian farmers adapting "miracle rice" to local conditions, or Beijing shopkeepers discovering that their customers will buy coffee, or a Malaysian converting a craft shop into a textile factory.

What about rich people? A few stars in the Milky Way are brightest, and a few entrepreneurs are richest. The five richest people in the world in 2008 were, in order, Warren Buffett, Carlos Slim, Bill Gates, Lakshmi Mittal, and Mukesh Ambani. They averaged approximately $50 billion in wealth each.[13] If you invested that much money in no-risk bonds, you would have to spend approximately $3,800 per minute to keep your wealth from growing larger.[14]

Besides great wealth, these five people have something else in common: They did not inherit vast agricultural estates like Indian maharajas in colonial times, or own desert sands that float on oil like Saudi princes, or divert taxes into Swiss bank accounts like African dictators, or collect massive bailouts from taxpayers like American investment bankers. Rather, they created extraordinarily profitable businesses.[15] To become super rich, you should identify companies that will grow fastest and invest in them (Warren Buffett), supply mobile phone service to Mexicans (Carlos Slim), develop a computer operating system that becomes a world standard (Bill Gates), reorganize steel manufacturing in the world's rust belts (Lakshmi Mittal), or develop the Indian petrochemical industry (Mukesh Ambani).

For all five, a significant portion of their wealth apparently came from developing new ideas. As explained in this chapter's prelude, innovation benefits the nation as a whole and causes wealth to accumulate unimaginably quickly. Presumably they also gained from unproductive advantages like natural monopoly, political patronage, or regulatory favoritism. We can only guess at the

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[13] Forbes magazine annually estimates the wealth of the world's richest people and ranks them.

[14] A fund of $50 billion, if managed conservatively like a university endowment, might yield 4% per year or $2 billion. You need to spend $3,815 per minute to use it up in a year.

[15] Three of the five started life relatively poor and made all of their wealth. Two of the five started life with modest wealth and then added vastly to it. Forbes magazine's list of people with at least $1 billion in personal wealth in 2006 consisted of 746 people, most of whom made their money through business.

combination of creative and non-productive sources of their wealth. In any case, their creativity benefitted consumers, producers, and themselves by billions of dollars. Such is the power of innovation and compound growth.

**Conclusion**

Clear thinking about the economy requires skepticism about people. For predictive accuracy, economic theorists since Adam Smith in the 18th century assume that most people want more wealth, and they will devote talent and energy to getting it. Oliver Wendell Holmes, the American legal theorist and Supreme Court Justice, thought that law should aim at bad people who will disobey unless coerced, not good people who obey willingly. Combining Smith and Holmes, law and economics scholars usually assume that most people devote talent and energy to getting more wealth, and law's coercive force must channel and constrain their pursuit of it.

People can acquire wealth by making or taking it. If people mostly get wealth by taking it, then they will devote their energies to taking what others make and protecting what they possess. They will impoverish the nation by trying to enrich themselves. The wages of workers approximately equal the value of what they make in competitive labor markets, whereas legal and illegal practices that thwart competition enable employers to exploit workers. Given workable competition, the wages of workers will rise with their productivity.

Productivity especially increases through innovations made by entrepreneurs. If entrepreneurs mostly get wealth by innovating, then they will devote their energies to enriching the nation by enriching themselves. Securing their property through law will cause faster growth, like feeding a puppy. Conversely, if business people mostly get their wealth by bribes, theft, subsidies, tax preferences, or monopolistic practices, then they burden economic growth like parasites in a puppy's intestines.

Innovators retain a fraction of the wealth that they create for society, and law affects the fraction's size. Would taking less from entrepreneurs benefit the

nation by causing wealth to grow, like catching fewer anchovies would cause the stock of fish to grow in the ocean off Peru.[16] Or would the nation benefit by taking more from entrepreneurs who strike it rich and giving the money to people who need it more, like giving some of a fat puppy's food to a skinny puppy? For an answer, you'll have to read the next chapter.

[16] All the world's fisheries are beyond the maximum sustainable yield. For theory and data, see Tom Tietenberg, Environmental and Natural Resource Economics (3rd: Harper, Collins, New York, NY 1992).

# Chapter 5

## The Property Principle for Innovation

Who benefits from growth? Do wages increase when production increases, or do entrepreneurs enjoy most of the gains? In thinking about these questions, many people focus on details and miss the big picture. In successful modern economies, growth compounds unimaginably fast and almost everyone benefits. Instead of trickling down the social scale, rapid economic growth causes income to cascade like the Blue Nile flowing from Lake Tana. The effects of growth on human welfare quickly overtake other effects.

In a dynamic economy, the contribution of equality to growth usually swamps its intrinsic value. We will present evidence that equality sometimes causes growth. Thus high levels of education and health among workers in Denmark and Korea contribute to their robust economic performance, whereas poor education and health of workers partly explains the economic struggles of the Philippines. Conversely, inequality sometimes causes growth, as in China after 1980. For an economy to grow, according to the preceding chapter, law and policy must channel peoples' pursuit of wealth into making it, not taking it from others. Innovation by entrepreneurs is very risky and very profitable. When innovators can keep much of the wealth that they make, greed overcomes fear, and entrepreneurs enrich the nation by enriching themselves. Thus when China relaxed egalitarian policies in agriculture and industry, incentives for innovation increased, causing more wealth and less equality. Facts about growth require rethinking the value of equality, which is this chapter's purpose.

### Are Innovators Too Rich?

How much of the social value of an innovation should go to the innovator? The property principle for innovation provides a general answer that is vague. To answer more precisely, we must draw on a theorem proved by Cooter and Edlin

(2010) -- the welfare overtaking theorem. Sometimes a change in law or policy increases growth and equality. Such a change advances both policy values. Alternatively, a law or policy that increases growth sometimes decreases equality. In the latter case, which is the hard one for policy makers, growth and equality trade off. What is to be done when they trade off? The theorem proves that the gains in welfare from increasing the rate of sustained growth overtakes any loss from decreased equality, given reasonable preferences for equality that are not extreme. This theorem implies that law and policy concerned with human welfare should aim to maximize sustainable growth.

This conclusion makes sense in light of some numerical examples. Assume that a change in policy allows entrepreneurs to keep 40% more of the social value of innovations than they make than in the past. While entrepreneurs get 40% more, others get 40% less, including consumers. By making the entrepreneurs richer relative to the consumers, the change in policy aggravates inequality. However, assume that the additional payoff to innovators will cause faster growth. Specifically, assume that the sustained growth rate increases from 2% to 10%. Recall that 2% growth compounded over a century increases approximately 7 times, and 10% growth compounded over a century increases approximately 14,000 times. Most people would rather have a smaller proportion of an increase of 14,000 times than a larger proportion of an increase of 7 times. Seeing these numbers, we expect the gain in welfare from faster growth to overtake quickly the loss in welfare from aggravated inequality, which is what the theorem proves.

The overtaking theorem applies to sustainable growth, not convulsive growth than soon collapses on itself like a sprinter attempting a marathon. Sustainable growth builds on itself, using yesterday's new ideas to find today's new ideas. Later we how innovation can cause sustained growth without exhausting non-renewable resources.) Also, the growth that is relevant for human welfare encompasses non-market goods such as clean air, safe streets, handsome buildings, and rural land. The ideal is a comprehensive measure of

consumption and wealth, as discussed in Chapter 1. Narrow measures like GDP are proxies that we must use where data is scarce. Now we can use the welfare-overtaking theorem to restate the property principle for innovation: "Innovators should keep the amount of wealth that maximizes the sustainable rate of growth in a comprehensive measure of consumption." An implication of this principle is that law and policy should not sacrifice growth to gain more equality, but it show pursue equality to the extent that doing so increase growth.

A comparison between China in 1980 and today illustrates this principle. The Cultural Revolution, which ended approximately in 1975, impoverished an already poor country, and it also went far towards equalizing incomes. Beginning roughly in 1980, China began to allow innovators to make wealth and keep much of it. Consequently, China achieved double-digit economic growth, which dramatically increased wages. Growth also increased inequality, because unequal economic creativity causes unequal income.

Economists measure inequality of income in a nation by an index number (the Gini coefficient) that varies between 0 and 1. "0" indicates maximum equality and "1" indicates minimum equality. For comparison, Figure 5.1 gives the Gini coefficients for selected countries. We have no Gini coefficients for China in the 1960s and 1970s, but we presume that the values were low. As late as 1991, more than ten years after the start of the market reforms, the Gini coefficient in China was 0.28. In 2000 the Gini coefficient for China had reached a value of 0.46, which indicates sharply increased inequality. In 1991, China's inequality resembled Scandinavia, and by 2000 it was higher than the USA (the most unequal Western country) and approaching Latin American levels.[1] However, most observers of China agree that the gains from growth overtook the undesirable consequences of more inequality. Only a few years absence are enough to strike returning visitors with the increases in wealth and welfare of ordinary people in China.

[1] OECD, "China in the Global Economy; Income Disparities in China: An OECD Perspective," (Paris: OEC`D, 2004).

**Figure 5.1: Income Equality in Selected Countries**

| High equality | Index* | Medium equality | Index* | Low equality | Index* |
|---|---|---|---|---|---|
| Japan | .25 | India | .33 | Niger | .51 |
| Sweden | .25 | Canada | .33 | Nigeria | .51 |
| Belgium | .25 | France | .33 | Argentina | .52 |
| Denmark | .25 | Poland | .34 | Zambia | .53 |
| Norway | .26 | Indonesia | .34 | El Salvador | .53 |
| Finland | .27 | United Kingdom | .36 | Mexico | .55 |
| Hungary | .27 | Italy | .36 | Panama | .56 |
| Germany | .28 | Turkey | .40 | Chile | .57 |
| Ukraine | .29 | United States | .41 | Colombia | .58 |
| Ethiopia | .30 | Iran | .43 | Paraguay | .58 |
| Russia | .31 | China | .45 | South Africa | .58 |
| South Korea | .32 | Philippines | .46 | Zimbabwe | .57 |
| | | | | Brazil | .59 |
| | | | | Central African Rep. | .61 |
| | | | | Namibia | .71 |

* Gini Coefficient

Source: World Bank, World Development Indicators 2006

A similar analysis applies to communism's collapse in Central and Eastern Europe. Before 1989, the European communist countries had more income equality than any contemporary nation. Specifically, these countries had Gini coefficients around 0.2, which indicates significantly more equality than the countries shown in Figure 5.1, including prosperous capitalist countries. Communist countries achieved equality by central planning, and inequality returned when they restored markets and economic liberty. After the collapse of communism in roughly 1990, the Gini coefficients increased in Central and Eastern Europe to western levels of around 0.3.[2]

What about growth? From the 1930's to the early 1960's, the Soviet Union and the Warsaw pact countries achieved high growth rates. Mark Twain said that reports of his death were premature. Similarly, the proclamations of the Soviet Union's economic superiority were premature. Soviet growth came from

[2] World Development Indicators 2008 and B. Milanovic (1999) Explaining the Increase in Inequality During Transition, in: Economics of Transition, Vol. 7,2 pp. 299-341, esp. p. 319

squeezing more labor and savings out of people, such as sending women and peasants into the industrial work force whether they liked it or not, and diverting expenditures from consumption into building steel mills and sports stadiums. Creativity was as scarce as the western blue jeans that young people craved in centrally planned economies.[3] The growth spurt proved unsustainable because it came from mobilizing more capital and labor, not from innovation. Maximum growth requires creative entrepreneurs to control the flow of capital to industries, not politicians, civil servants, or bureaucrats. As data shows in Chapter 2, growth improved remarkably after 1995 in those formerly communist countries that joined the European Union.

**Equality and Growth**

In general, the property principle for innovation requires law and policy to increase equality when doing so causes more growth, but not otherwise. Does faster growth generally increase or diminish equality? Does more equality increase or diminish growth? Most countries today are not like China in 1980, where allowing more inequality increases growth. On average, equality and growth go together in nations, at least roughly. Figure 5.1 sorts selected countries into low, medium, and high equality. Most low equality countries are also low-income countries in southern Africa and Latin America. Conversely, most high equality countries are high-income countries in Europe and East Asia. Figure 5.1 thus shows that equality correlates roughly – but not perfectly -- with income per capita in nations. Since income per capita is the result of past growth, we conclude that equality in nations also correlates roughly with

[3] P. Krugman, The Myth of Asia's Miracle (1994) Foreign Affairs, Nov./Dec. 1994

sustained growth in income per capita.[4] Econometric studies confirm the correlation found in Figure 5.1.[5]

Equality and sustained growth often go together, but does growth cause equality or does equality cause growth? Many causes in economic life respond to their effects, like a man courting a woman. The feedback between equality and growth is complicated. We have already explained that central planning in communist countries stifled innovation by not rewarding it. Faster growth apparently required more economic freedom and resulted in less equality. Now we consider the opposite – circumstances where equality promotes growth. An example is the education of workers. Better-educated workers are more productive and receive higher wages, which increases equality. Better-educated workers are also more innovative, which increases growth. So better schools for workers cause growth and equality.

Chinese agriculture provides another example where equality apparently caused growth. In the late 1950s, China's communist party forced farmers into communes and diverted much of their labor from agriculture into village industries. Farmers starved in the winters of 1959 and 1960. In the 1980s the communist party reversed itself, dissolved the communes and created family farms.[6] Agricultural production soared. When dissolving the communes, the land was divided roughly equally among families. Economic analysis of

[4]For a survey see P. Honohan (2003) Financial Development, Growth and Poverty, How close are the links Development Research Group and Financial Sector Operations and Policy Department, The World Bank WPS 3203. Also see S. Claessens, E. Perotti (2007) Finance and inequality: Channels and evidence, Journal of Comparative Economics 35 (2007) 748–773.

[5] Empirical studies have borne out negative correlations between growth and inequality. See cross country studies by Alesina, A., and D. Rodrik. (1994). "Distribution Politics and Economic Growth," Quarterly Journal of Economics,109, 465–490. Persson, Torsten and Tabellini, Guido. "Is Inequality Harmful for Growth?" American Economic Review, June 1994, 84(3), pp. 600–21. Perotti, R. (1996). "Growth, Income Distribution, and Democracy: What the Data Say," Journal of Economic Growth 1, 149–187. Hausmann and Gavi (1996). In contrast to these studies, a positive impact of inequality on growth was found by K.J. Forbes (2000), A Reassessment of the Relationship Between Inequality and Growth, AER, 90, 4, 869-887.

[6] The next chapter has more on dissolving China's communes.

incentives suggests that an equal division of the land contributed to soaring productivity.[7]

Antitrust laws that disrupt cartels are another example of promoting growth and equality. Cartels suppress innovation in order to prolong monopoly profits, and monopoly profits aggravate inequality. For example, members of the New York Stock Exchange historically collected large fees for matching the buyers and sellers of stocks. Innovations allowed computers to match electronically. The controlling members of the NYSE, who are very rich, delayed adoption of electronic matching to prolong their monopoly profits. They enjoyed these profits at the expense of everyone who bought and sold stocks, including the pension funds of ordinary workers.

The most destructive cartels are oligarchies in which a few wealthy families hold all state power. When a few families control the state, they can use it to suppress economic competitors and secure monopoly profits.[8] Figure 5.2 estimates the percentage of corporate assets owned by the fifteen richest families in selected Asian countries in 1996. The fifteen richest families owned more than half of the corporate assets in Indonesia, the Philippines, and Thailand. By contrast, the fifteen richest families owned roughly 3% of corporate assets in Japan and the United States.

Figure 5.2. Ownership of company assets by the 15 richest families in selected Asian Countries and USA in 1996.

| Country | Ownership | Country | Ownership |
|---|---|---|---|
| Indonesia | 62% | Singapore | 30% |

[7] Given weak capital markets, Chinese farmers had to invest in their farms from retained earnings. Some economic theory suggests that an equal division of land probably enabled the best farmers to earn and invest more than an unequal division. For the proposition that an equal initial division of property is efficient in the presence of weak capital markets, see Yeon-Koo Che and Ian Gale, "Market versus Non-Market Assignment of Initial Ownership," Berkeley Law and Economics Workshop (2007).

[8] "Inequality of wealth leads to the inequality of influence, which in turn subverts the impartiality of institutions, weakens property rights, and leads finally to reduced growth." Hilton Root, Capital and Collusion: Political Logic of Global Economic Development (Princeton University Press, 2006), at page 33.

| | | | |
|---|---|---|---|
| Philippines | 55% | Malaysia | 28% |
| Thailand | 53% | Taiwan | 20% |
| Korea | 38% | | |
| Hong Kong | 34% | Japan | 3% |
| | | USA | 3% |

Source: Claessens, S., Djankov, S., & Lang, L. 2000. "The separation of ownership and control in East Asian corporations," Journal of Financial Economics 58: 81-112.

Most people want effective state law to protect their property and enforce their contracts. When a few people control the state for years, however, they become the state. For them, wealth translates directly into power and power into wealth. Instead of needing the state to protect their property, they can make law and policy to restrict competition with their businesses or take property from others by more forceful means. Laws that protect property and contracts mostly hinder these activities. These considerations suggest that inequality undermines the rule of law, which partly explains the proven correlation between economic equality and the rule of law index.[9]

Russia in the 1990s provides an example. After the collapse of communism, Russia quickly privatized over fourteen thousand medium and large enterprises. Economic experts hoped that the new owners would secure their property by pressing politicians to create effective property law. This did not happen. Instead, a few tycoons called "the oligarchs" gained control over most of these firms. The oligarchs were so powerful that they did not need property rights to protect them, or so they thought until Vladimir Putin became President

[9] The average value for the rule of law index (a number between -2 and 2) is –0.46 for the 24 counties with the highest income inequality (Gini coefficient higher than 0.5). In contrasts, it is 0.1 for all other 100 countries in the sample. There are only some rare countries, which have combined extreme income inequality with the rule of law, that is Botswana, Namibia, South Africa and Chile. Sources: Rule of Law Index, (year 2002) Kaufmann, D., A. Kraay, and M. Mastruzzi. 2003. Governance Matters III: Governance Indicators for 1996–2002. World Bank, World Bank Policy Research Working Paper 3106, Year: 2002, Gini Coefficient, UNDP, 2005. Human Development Report 2005, various years, 1983-2003. For a valuable analysis of the rule of law in development, see Michael J. Trebilcock and Ronald J. Daniels, Rule of Law Reform and Development: Charting the Fragile Path of Progress (Edward Elgar, 2008).

and used the state to stabilize the economy and dispossess the wealth his enemies.[10]

Extreme economic and political inequality often causes the state to suppress innovation in order to protect existing wealth. To illustrate historically, eighty individuals owned approximately 50% of Iceland's agricultural land in 1700. To protect their power and keep wages low, they required all laborers and servants to reside and work on farmsteads. Surrounded by rich fisheries, poor people starved when crops failed because law prevented them from leaving farms and taking up fishing.[11] As another historical example, Caribbean plantation owners tied workers to their estates, originally by slavery and later by other means. They protected their wealth by obstructing labor markets, keeping labor cheap and workers uneducated. Consequently, they fell behind when new technologies emerged.

Poor health and education of workers apparently slows growth. Some authors assert that extreme inequality in South America explains its slower historical growth rate compared to North America where inequality is less extreme.[12] And the education and health of the workers in Denmark and Korea may partly explain why these countries enjoyed robust economic growth in recent history. Conversely, poor education and health of workers slows growth, which may partly explain the economic struggles of the Philippines.

We have discussed three relationships between equality and growth:

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[10] Hoff, K. and Joseph Stiglitz, J. (2002). "After the Big Bang? Obstacles to the Emergence of the Rule of Law in Post-Communist societies." National Bureau of Economic Research Working Paper 9282.

[11] T. Eggertssen,(2005) Imperfect Institutions, Possibilities and Limits to Reform, Ch. 7. Why Iceland Starved pp. 99, University of Michigan Press

[12] D, Acemoglu and J. A. Robinson (2006) "Persistence of Power, Elites and Institutions," NBER Working Paper no.12108. Engerman, Stanley L. and Kenneth L. Sokoloff (1997) "Factor Endowments, Institutions, and Differential Growth Paths among New World Economies," in Stephen Haber ed. How Latin America Fell Behind, Stanford: Stanford University Press.D. Acemoglu, , S. Johnson, , J.A. Robinson, (2001). The colonial origins of comparative development: an empirical investigation. American Economic Review 91 (5), 1369–1401. See also F. Bourguignon, T. Verdier (2000) , Oligarchy, democracy, inequality and growth, Journal of Development Economics Vol. 62, 2000.285–313. Theses authors model individual political power as a function of individual wealth and education variables.

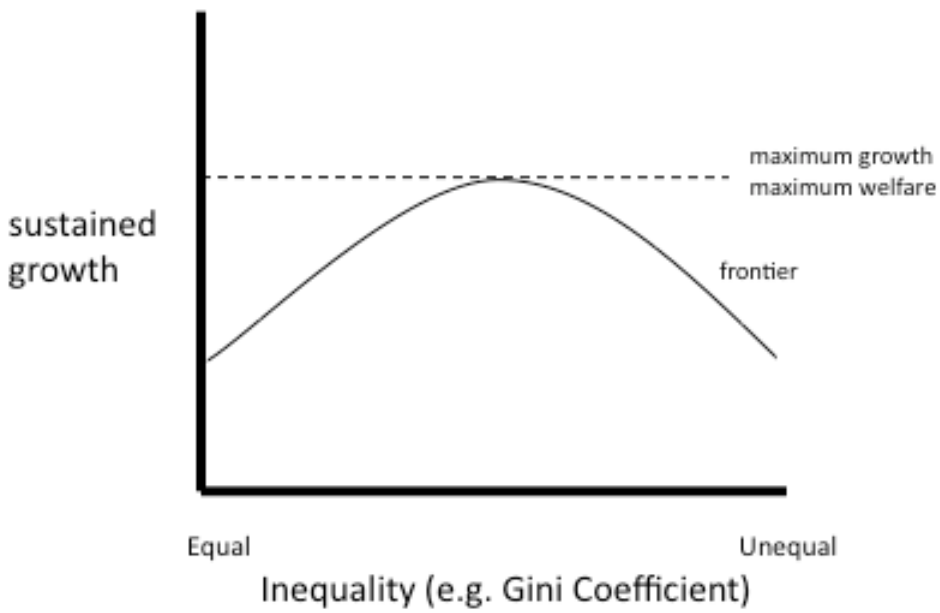
i) Strict equality causes slow growth by weakening incentives to innovate.

ii) Oligarchies, cartels, and uneducated workers cause extreme inequality and slow growth.

iii) Market competition and educated workers promote moderate inequality and fast growth.

These relationships suggest that extreme inequality and strict equality slow growth, whereas moderate inequality maximizes growth, as depicted in Figure 5.3. Furthermore, the welfare-overtaking theorem implies that the growth maximizing level of equality also maximizes the welfare of the nation.

Figure 4.3. Equality, Growth, and Welfare




**Do Wage Earners Benefit from Growth?**

Does growth of national income correlate historically with growth in wages of working people? Historical evidence collected by Robert Allen indicates that

economic growth in Europe raised everyone's wages. Allen collected data on money wages in various trades (masons, farm laborers, building laborers, etc.) in various European countries since the Middle Ages. He also collected data on the prices of staples (bread, clothes, housing, etc.). He combined the data on wages and prices to measure real wages (the purchasing power of nominal wages).[13] Allen found that real wages in European cities were much the same in 1215 and 1800. Real wages doubled and tripled after 1350 as a consequence of the Black Death, which killed up to one third of the European population. And they declined after 1650. But over the whole period there was no clear upward or downward trend. That changed after 1815, when real wages and production per worker began to increase in Europe. The rate of increase accelerated after 1850.[14]

To relate wages to poverty, Allen defined poverty as having just enough money to buy the staples needed for existence. He calculated that construction workers in three European cities – Amsterdam, London, and Paris -- were living in poverty in 1820. Their real wages increased over the 19th century by more than 100% in London and Amsterdam, and by more than 50% in Paris. By World War I, wages had increased to two or three times above the poverty level.[15]

In developing countries with growing economies, today's trends in wages resemble Europe in the 19th century, with real wages and national income rising together. The second column in Figure 5.4 shows the average annual changes in GDP per employed person for selected countries and years. This number roughly measures changes in the average productivity of labor. The third column shows the annual changes in real wages. Changes in the productivity of labor in the second column correlate with changes in real wages in the third column. Thus real wages in China increased by 10% annually or 170% in a

[13] To be precise, he first calculates wages in terms of grams of silver per day, and then deflates by prices of a basket of consumer goods with roughly 70% food (mostly food). He used this consumer basket in 1820 to define the poverty line. Naturally, the data gets much better in the 19th centuries, so we have more confidence in the more recent results.
[14] R. Allen, The Great Divergence in European Wages www.economics.ox.ac.uk/Members/robert.allen/WagesFiles/wagesnew2.pdf (last visited October 2008)
[15] R. Allen (2008) http://www.economics.ox.ac.uk/Members/robert.allen/WagesPrices.htm, July 2008

decade, and real wages in India increased by 2.5% annually or 30% in a decade. (Note, however, that real wages decreased in Brazil in these years at a time when productivity was increasing, which shows that average productivity is not the sole determinant of real wages.[16])

Figure 5.4. Labor Productivity and Real Wage Increases by Country

| Country (time period considered) | Average annual increase of labor productivity (GDP per person employed) in percent[a] | Average annual increase of monthly real wages in percent[b] |
|---|---|---|
| China (1995-2003) | 9,15 | 10,36 |
| Estonia (1995-2004) | 4,99 | 4,66 |
| Hungary (2000-2005) | 4,55 | 3,19 |
| India[c] (1994-2005) | 4,78 | 2,68 |
| Ireland (2000-2005) | 3,97 | 2,47 |
| Korea Rep. (1995-2005) | 3,71 | 3,12 |
| Egypt (1995-2003) | 3,33 | 3,40 |
| Poland (2000-2005) | 3,11 | 1,92 |
| Singapore (1995-2005) | 2,83 | 3,01 |
| UK (1995-2004) | 2,45 | 1,85 |
| USA (1995-2004) | 2,42 | 0,05 |
| Argentina (1995-2004) | 0,95 | - 2,20 |
| Brazil (1995-2003) | 0,94 | - 1,96 |
| Mexico (2000-2005) | 0,06 | 0,98[d] |
| Zimbabwe (1995-2001) | -5,93 | - 1,74 |

[a]Own calculations from World Development Indicators 2008
[b]Own calculations from ILO, Key Indicators of Labor Markets KILM), 5th Ed. 2007 , KILM 15, Manufacturing Wage Indices, KILM 16, Occupational Wage and Earning Indices, http://kilm.ilo.org/2007/register/
[c]Data for India from C,P. Chandrachekar and J. Gosh (2008) Recent Employment Trends in India, real wages are wages of regular male workers at 1993/94 constant prices.
[d]hourly wages.

## Sustainability[17]

For over one hundred years, the United States and other Western capitalist countries have enjoyed sustained growth of two to three percent per year in per capita GDP. Is growth sustainable, or must resource exhaustion stop it eventually? Some physical resources are finite, but that does not mean that

[16] For example, when the business cycle turns down and causes unemployment, the ratio of capital to employed workers rises, so labor productivity can rise. From the three Latin American countries in Figure 4.3, slow growth in the region seems to have affected wages more negatively than other sources of income.
[17] This section is based on Cooter and Edlin, 2010.

growth must stop. To see why, we contrast inexhaustible ideas and scarce resources.

Many people can use products of the mind simultaneously, like theorems, principles, designs, inventions, expressions, and compositions. When one person uses an idea, just as much remains for someone else to use. Economists call this characteristic non-rivalry. Looking into the future, non-rivalry implies non-depletion: When the present generation uses an idea, just as much remains for future generations to use.

In contrast, scarce resources like capital, labor, land, and fuel have rival uses. When one person uses a scarce resource, it is unavailable for others to use. Some scarce resources renew like a forest, a river, or wheat. Use does not necessarily reduce their stock permanently, because the stock can be replenished. Other scarce resources deplete, like oil and iron. As long as we do not know how to replenish them, their use reduces their stock. However, the stock can be depleted continually without ever exhausting it. Depletion is sustainable when its absolute rate always decreases, so exhaustion does not occur in finite time. Thus if the stock of oil falls by 50% in every period, the absolute fall diminishes in every period, and the stock never reaches zero, except in the mathematical limit when an infinite amount of time passes. With sustainable depletion, the stock of exhaustible resources declines each year, but an infinite number of years must pass before it reaches zero. (This is a form of one of Xenophon's paradoxes – if you travel half of the remaining distance to your destination each day, you never arrive.)

Is increased consumption sustainable, or must we eventually freeze in the dark? If producing more consumer goods depletes resources at a constant or increasing rate, then increased consumption hastens resource exhaustion. If innovations enable the production of more consumer goods while depleting resources at a constant or decreasing rate, then increased consumption is sustainable. Innovation can probably sustain increased consumption indefinitely, although we cannot be certain because the path of innovation is uncertain.

Many scholars believe that the world is currently depleting resources at an unsustainable rate. Correcting this dangerous situation requires increasing innovation or reducing consumption. Innovation can conserve scarce resources as when new automobile engines economize on fuel or electronic communication substitutes for paper publishing. Innovations can also substitute renewable resources for exhaustible ones, as when hydropower replaces a coal-fueled electrical plant. Policies that decrease consumption face fierce political resistance, so policies that increase the pace of innovation may be our only long-term hope. Thus China is trying to slow resource depletion and improve the environment, but Chinese consumers are unlikely to accept policies that do so by reducing the level of consumption.

### Fairness and Justice

We have explained that maximizing sustainable growth requires innovators to keep much of what they make. Is this fair and just? Philosophers disagree. A famous book by Robert Nozick argues that fairness requires the people who make wealth to keep *all* of it.[18] People should keep all the wealth that they make, according to Nozick, because it is *theirs*. Taking their wealth away from them is unfair, including taxation for poverty relief or the supply of public goods.

In contrast, theories of social justice usually regard wealth as part of a comprehensive social system that should be fair as a whole. In a fair system, a person is not automatically entitled to keep what he makes. Instead, everyone gets a fair share of what the society makes.[19] Besides productivity, a fair system

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[18] Robert Nozick, Anarchy, State, and Utopia (New York: Basic Books, 1974).

[19] Murphy, L. B. and T. Nagel (2002). The Myth of Ownership: Taxes and Justice. Oxford and New York, Oxford University Press. While we do not agree with the thesis that ownership is a myth, we commend this book for a remarkable interweaving of philosophy and economics. They write

> "…Individual citizens don't own anything except through laws that are enacted and enforced by the state. Therefore, the issues of taxation are not about how the state should appropriate and distribute what its citizens already own, but about how it should allow ownership to be determined."

takes account of needs. According to this view, a person with greater needs may fairly claim part of what someone else makes. For example, John Rawls developed the most influential theory of justice among western philosophers in the second half of the 20th Century.[20] Rawls formulated the principle that a just society should maximize the "primary social goods" enjoyed by its worst off members.[21]

The "maximin principle" (maximizing the minimum wellbeing in society) implies that a just society lets innovators keep what they make to the extent that doing so benefits its poorest members. In contrast, the property principle for innovation asserts that innovators should keep what they make to the extent that doing so maximizes the sustaining growth rate of consumption as measured comprehensively. To what extent do these principles conflict? Does maximizing the minimum wellbeing in society through law and policy come close to maximizing the rate of sustainable growth, or are they far apart?

This is a question about the extent to which the wealth of the poorest citizens increases with the wealth of the nation. We have presented evidence that wage earners broadly participate in the gains from rising national wealth. As workers become more productive, their wages rise and national poverty declines. China's Premier Deng Xiaoping devised a famous motto for the 1980s: "For everyone to get rich, some must get rich first."[22] People can accept others' moving ahead as long as they expect that their turn will come soon, rather like motorists waiting in line to enter a tunnel.[23] With sustained growth, most people get their turn for an increase in income.

But not everyone. Rising wages do not directly benefit people who do not work for money such as children, the elderly, women-at-home, subsistence

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[20] John Rawls, A Theory of Justice (Cambridge: Harvard Univ. Press, 1971).
[21] This is the famous Maximin Principle – maximize the minimum payoff in society.
[22] This formulation of the motto, which is distilled from a longer paragraph, is from Robert Elegant, Pacific Destiny: Inside Asia Today (Crown Publishers, Inc., New York, 1990), page 309.
[23] Albert Hirschman formulated the "tunnel effect" in "The Changing Tolerance for Income Inequality in the Course of Economic Development," in Essays in Trespassing (Cambridge University Press, 1981).

farmers in remote regions, the disabled, the insane, vagabonds, criminals, people who sleep under railway bridges, people who pick through garbage at the dump, and homeless people who shuffle behind shopping carts piled with rags.[24] "Residual poverty" refers to the people left behind as a nation gets rich. In low and middle income countries, approximately 22 percent of all people live in absolute poverty defined as less than one dollar a day.[25] They are the residual poor who still wait to get ahead.

Whereas rising productivity cures national poverty, the cure for residual poverty is efficient redistribution -- sharing in families (relational redistribution), charitable gifts (private redistribution), and state social expenditures (public redistribution).[26] Governments reduce residual poverty by transferring income and services to people who cannot work or who can only do the lowest-paying jobs. In some countries, high social transfers increase personal incomes of the residual poor well above their market wages. Thus higher transfer rates in the Scandinavian countries cause lower poverty rates compared to other countries with similar national income and lower transfers, such as the USA and Ireland.[27]

Faster economic growth increases the tax base from which the state can collect and redistribute income to its poorest members.[28] Indeed, compound

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[24] T. Smeeding, Poor People in Rich Nations: The United States in Comparative Perspective, Journal of Economic Perspectives, Vol. 20, Issue 1, 69-90 (2006).

[25] Table 4.1. Poverty Headcount, percentage of population living from less than 2 dollars a day (2001), World Dev. Ind. (2005).

[26] Social justice theories focus on the state's role in redistribution, not the powerful role of family and charity in alleviating human suffering. Transfers within families, including bequests, exceed all other forms of transfers. In 2006 Warren Buffett committed to giving 85% of his wealth – roughly $37 billion -- to the charity established by Bill Gates, whose mission is "bringing innovations in health and learning to the global community." This fact inspires a thought-thought experiment: Suppose that you wanted to find a cure for malaria, one of the world's great killers. You could either tax 100% of Buffett's $37 billion and give all of it to a government ministry to search for a cure, or you could allow Warren Buffet to organize the search for the cure by donating 85% of his wealth and keeping 15% for himself. Which alternative is more likely to find a cure for malaria?

[27] T. Smeeding Poor People in Rich Nations: The United States in Comparative Perspective, Journal of Economic Perspectives, Vol. 20, Issue 1, 69-90 (2006).

[28] We say "might" because economic growth extends across generations and the theory of Rawls does not encompass justice between different generations of people. Thus theorists quickly realized that innovation creates problems for the maximin principle. With innovation, future generations have an advantage over the present generation. If the present generation is worse

growth causes the income tax base to increase unimaginably quickly. This fact reduces the conflict between the property principle for innovation and principles of fairness that focus on residual poverty. To illustrate numerically, assume that poorest 10% of the population receive transfers equal to 5% of the income taxes collected by the state. If national income grows at 2% for a century and transfers increase at the same rate, then transfers to the poorest 10% of the population would increase 7 times. In contrast, if national income grows at 10% for a century and transfers increase at the same rate, then transfers to the poorest 10% of the population would increase over 14,000 times.

Growth benefits workers through rising wage, and growth benefits the very poor through transfers and social programs. The unimaginable power of sustained growth requires philosophers to rethink the application of theories of social justice to the economy. Any theory of social justice that precludes rapid growth should be modified or abandoned. Given background institutions that sustain transfers and social programs, fairness cannot rule out the property principle of innovation.

**Conclusion**

Economic growth increases the welfare of most people by causing wages to rise, and it increases the welfare of the very poor by increasing tax revenues for transfer payments and social welfare programs. The welfare effects of sustained growth overtake redistribution, so law and policy should not sacrifice growth for the sake of equality. Rather, law and policy should implement the property principle for innovation: "Innovators should keep the amount of wealth that maximizes the sustainable rate of growth in a comprehensive measure of consumption." Redistribution that increases growth should be pursued, whereas

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off than future generations, the maximin authorizes the present generation to consume enough capital to exactly offset the advantage of innovation to future generations. Thus every generation is equal and society never gets richer. For various essays reconsidering Rawls, see E. S. Phelps, edited, Economic Justice: Selected Readings (Harmondsworth, Baltimore, Penguin Education, (1973).

redistribution that slows growth should be abandoned. Much of the remainder of the book applies the property principle of innovation to particular bodies of law.

# Chapter 6

# Keeping What You Make – Property Law

A Brazilian landowner refuses to lease farmland for fear that the tenants will stay permanently without paying rent. A Chinese filmmaker foregoes making a movie for home viewing for fear that graduate students will circulate it freely on the Internet. Ecuadorian investors decline to buy stock issued by a profitable shrimp farm for fear that the managers will steal their money. What do these three examples have in common? In each case the fear that wealth will be taken stops someone from making it. Brazilian landowners need protection from deadbeat tenants in order to make land available for renting. Chinese filmmakers need protection from student-pirates in order to make more films profitable. And Ecuadorian investors need protection from conniving managers in order to finance profitable businesses.

Effective law could assuage these fears -- corporate law to protect investors, land law to protect lessors, and copyright law to protect filmmakers. This chapter concerns how property law helps people to keep what they make. We focus on real property (land and buildings), intellectual property (patents and copyright), and organizational property (corporations and partnerships),

## *A. Land Reform, Squatters, and Dead Capital*

The Peruvian economist, Hernando De Soto, recently estimated that Egypt's working poor own 92 percent of Egypt's asset base in the form of real estate . He calculated that relatively poor people own real estate in Cairo that is six times the value of all savings deposits in Egyptian banks, thirty times the value of the 746 companies registered at the Cairo Stock Exchange, and fifty-five times the value of foreign investments in Egypt until 1996.[1] While people can

[1] See Belgium, H. H. v. (2005). Reviewing Hernando de Soto, 'The Mystery of Capital - Why capitalism triumphs in the West and fails everywhere else'.

dispute these numbers, there is no disputing that land and buildings constitute a large fraction of any nation's wealth, especially in poor countries, and many people own real estate. As we will explain, the size and distribution of real estate gives vibrant real estate markets a special role in encouraging entrepreneurs in developing countries.

## 1. Land Reform

Anything called "reform" sounds good, but, in practice, land reform can be good or bad. The outcome usually depends on the mechanism to change owners. The worst historical example began in 1958 when China's communist government led by Mao Zedong forced peasants off small plots of land and into large communes. The government expected the communes, which were suited for heavy machinery and work groups, to increase agricultural production. The communes had to deliver high quotas of food to the state, even though the government shifted peasant labor from the countryside to cities for break-neck industrialization under the slogan "the Great Leap Forward." Instead of increasing, agricultural production fell disastrously. The government, however, did not acknowledge the problem, seek aid, or import food. As a result, millions of peasants starved, especially in the winters of 1959 and 1960. The best guesses of scholars put deaths at 20 to 30 million people, making it the greatest famine in the history of the world.[2]

In the case of Chinese communes, the government abolished private ownership to obtain unrestricted control over the land. Zimbabwe, which we mentioned in Chapter 3, provides another disastrous example of forced change. In Zimbabwe people of European descent owned prosperous farms that fed the country, employed workers, and earned foreign currency from tobacco exports.

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http://home.worldonline.nl/~sttdc/book_soto.htm, Foundation Teilhard De Chardon -- Netherlands.

[2] "Source List and Detailed Death Tolls for the Twentieth Century Hemoclysm", http://users.erols.com/mwhite28/warstat1.htm. For the history of the communes, see Justin Yifu Lin, "Collectivization and China's Agricultural Crisis 1959-1961," *Journal of Political Economy* 98 (1961): 1228-52.

In 2000 President Mugabe asserted that whites had stolen the land from blacks early in the 20th century, and he announced a program to take land from white farmers and redistribute it to blacks. Mugabe's loyalists seized land, most white farmers fled the country, agricultural production plummeted, food shortages developed, hyperinflation reduced trade to barter, and massive unemployment impoverished already poor people.[3]

Forced redistribution of land by politicians usually causes productivity to fall, sometimes disastrously as in the preceding examples and sometimes moderately. The history of Zimbabwe suggests two general reasons why productivity falls. The British originally conquered the region and distributed land to European setters for farming.[4] Subsequently, many farms were bought and sold in real estate markets, where the highest bidders tended to be the best farmers who could make the most money from farming. Markets continually redistribute land from less productive to more productive owners.[5] Unlike markets, President Mugabe took land from political opponents and gave it to loyal supporters. Loyalty correlates badly with productivity. The first reason why production plummeted in Zimbabwe is that land was taken from buyers and given to loyalists.

Besides being worse farmers on average, the new owners in Zimbabwe were insecure. Fearing that someone else might take the land from them, they were reluctant to plant new crops, dig irrigation channels, or otherwise invest. Forced redistribution generally unsettles property rights, which increases the risk of investing. The second reason why production plummeted in Zimbabwe is that uncertain ownership discouraged investment.

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[3] For economic statistics on the collapse of the economy, see David Coltart, "A Decade of Suffering in Zimbabwe: Economic Collapse and political Repression under Robert Mugabe," Cato Institute, Center for Global Liberty and Prosperity (March 24, 2008).

[4] See S. Berry, Debating the Land Question in Africa, Comparative Studies in Society and History, Vol. 44, No. 4 (Oct., 2002), pp. 638-668 "Specific legislative instruments varied from one colony to another, but they conveyed a common message. From Senegal to Malawi, French and British authorities claimed that "by right of conquest," all "vacant and ownerless land" belonged to the colonial state. Vast tracts of land were often judged "vacant and ownerless" on the basis of cursory inspection or none at all, and then sold to European buyers."

[5] This is an application of the general principle that market transactions move resources to the parties who value them the most.

We have discussed two examples where land reform destroyed markets and caused a sharp fall in agricultural production. In contrast, land reform that creates markets usually causes agricultural production to rise. Again, the most dramatic example comes from China. After Mao Zedong's death in 1976, past policies were gradually reversed and China began to dissolve the communes in 1978. Agricultural production consequently soared in the 1980s. The dissolution of the communes was relatively egalitarian, with each peasant family receiving a small plot of land, so the benefits from the surge in agricultural production were widely shared.[6]

Besides China, creating markets ("marketization") increased agricultural production in other times and places. Removing feudal restrictions on the sale and use of land caused a surge in agricultural production in 18th century Silesia[7] and 19th century Japan.[8] In the 20th century, land reform in East Asia and Latin

[6] Li Ping et al., "Land Reform and Tenure Security in China: History and Current Challenges," in *Legalising Land Rights*, ed. Janine M. Ubink, Andre J. Hoekema, and Willem J. Assies (Leiden University Press, 2009), 409-434.

[7] The Seven Years War of 1756-1763 left many Prussian provinces in ruins, especially Silesia. To hasten reconstruction, Silesia repealed prohibitions against the nobility mortgaging land, and an active credit market quickly emerged. As a result, Silesian agriculture reconstructed quickly, whereas other areas of Germany that retained feudal prohibitions reconstructed slowly. French intellectuals called the "Physiocrats" provided the intellectual basis for the Silesian reforms. In the 18th century, productivity gains in English agriculture outstripped French agriculture, and the Physiocrats explained the difference by better-developed agricultural markets in England compared to France. They attributed the difference in marketization partly to the law – England swept aside feudal constraints and state regulations that kept productivity low in France. For example, the traditional practice of dividing the crop between landlord and tenant according to a fixed percentage ("share cropping") did not allow the party who invested in new capital to receive more of the increase in production. The Physiocrats prescribed a remedy: Create free markets in rural land, labor, and agricultural products by ending state intervention and removing feudal constraints. (Besides favoring markets, the Physiocrats believed in some oddly metaphysical theories about economic growth coming from agriculture and not industry.)

[8] Japan's Land Revision Act of 1873 gave customary owners a secure legal title to land, replaced rice taxes owed to feudal lords with money taxes owed to the central government, and permitted sale, division, annexation, mortgage, and lease of land. Marketizing agriculture caused a surge in productivity that was part of the 19th century "Japanese miracle."Unfortunately, absentee landlords paid lower taxes than independent farmers, so ownership shifted from the latter to the former. See Yamasaki, Y. and R. V. Andelson (2000 December). American Journal of Economics and Sociology. http://www.findarticles.com/p/articles/mi_m0254/is_5_59/ai_70738933.

America attempted achieved mixed results in attempting to dissolve feudal obligations and estates.[9]

In Poland, cooperative and state farms appropriated most agricultural land during the communist period that began in 1945 and ended in 1989. After 1989, the process reversed – privatization instead of socialization. By 1997-98, Poland had privatized 85% of its agricultural land.[10] While successful overall, privatization provoked legal challenges from people with competing claims due to past connections to the land.[11]

Private persons, not the state, must plant most of the nation's crops and build most of its barns, houses, apartments, shops, and factories. For private persons to make these investments, they must feel secure in owning the improvements that they make. A lease can provide this security, provided that the lease is long and easily renewed, even though the state retains ownership.[12] Countries where a communist tradition precludes privatizing land strive to develop long-term leases as a substitute. China, Russia and Vietnam have developed agricultural markets in recent decades based on use-rights, without actually privatizing land. The land in these countries still belongs to "the people" (i.e. the state), but private persons own most of the buildings on top of it -- apartments, houses, shops, barns, and factories.

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[9] Alain de Janvry, "The Role of Land Reform in Economic Development: Policies and Politics," American Journal of Agricultural Economics 63 (1981): 384-392. See Table 2 for characteristics of land reform in twenty countries.

[10] Table 2 in Csaba Csaki and Zvi Lerman, "Structural Change in the Farming Sectors in Central And Eastern Europe," World Bank Technical Paper No. 465 (June 27, 1999), zotero://attachment/653218/.

[11] For example, consider this common sequence of events: A Jewish family owned property in Poland; the Nazis invaded and murdered the owners; after the defeat of the Nazis, non-Jews claimed the property; the communists subsequently took the property for the state. After the collapse of communism, the descends of the Jewish and non-Jewish owners dispute about who is the rightful heir.

[12] With a discount rate of 5%, the present value of $100 to be paid in 100 years is less than a dollar. So the present value of a 100 year lease on land is almost the same as the value of owning the land. Thus a person with a 100 year lease will make almost identical investment decision as if he owned the land. However, to retain equivalence, the lease must be renewed frequently, so that each new buyer of the lease still has close to 100 years of rights to it. Use rights are often complex and change over time. Thus in 2007 China farmers were allowed to sublease, exchange, or transfer their land use rights, but only for agricultural uses and for no longer than 30 years. Thanks to Zhang Wei for providing these details.

Other attempts to privatize land created chaos instead of markets. Most of the land in Papua New Guinea– the authorities say 97% -- is in customary ownership by clans and tribes, who cannot sell it. Beginning under the Australian protectorate and continuing after full independence in 1975, the state tried to convert customary ownership, which does not allow land sales, to individual ownership under English common law, which allows land sales. Conversion had modest success in towns and failed in the countryside. Each clan and tribe claims the maximum land that it controlled in the past. Surveying boundaries and registering title requires resolving difficult disputes similar to deciding who owns Jerusalem.[13] In the 1980s the nation was awash with lawsuits and violence by customary owners seeking compensation or recovery of lost lands. The attempt of the state to create markets for land failed, although illegal markets flourish on the edge of towns.[14]

The desire to preserve a way of life lies behind restricting land sales in Papua New Guinea. Rural land traditionally passed from one generation to another according to fixed inheritance rules, with sales impossible. Allowing land sales raises the possibility that owners will sell the land, break the chain of inheritance, and disrupt the traditional social order. In societies where clans and kin groups still own land, creating lively real estate markets usually means clans die and agricultural production grows. With Papua New Guinea's clans as with Silesia's nobility in the 18th century, preserving the traditional social order seems to require retarding the sale of land.[15]

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[13] "Successful programmes of property rights reform recognise the complexity and uniqueness of existing property environments." Karol Boudreaux and Paul Dragos Aligica, Paths to Property: Approaches to Institutional Change in International Development (London: Institute of Economic Affairs (IEA), 2007) at page 15.

[14] Note that Papua New Guinea has a special class of land courts that may modernize customary ownership much like English common law evolved from family ownership of property in medieval times to individual ownership. As cited above, see R. Cooter, "Inventing Market Property: The Land Courts of Papua New Guinea." Law and Society Review 25: 759-801(1991), and also R. Cooter, Issues in Customary Land Law. Port Moresby, Papua New Guinea, Institute of National Affairs, 1989.

[15] See R. Cooter, "Inventing Market Property: The Land Courts of Papua New Guinea." Law and Society Review **25**: 759-801(1991), and also R. Cooter, Issues in Customary Land Law. Port Moresby, Papua New Guinea, Institute of National Affairs,1989.

Kin groups sometimes obstruct land sales to preserve their way of life. Thus Indian law restricts sales of land in tribal areas to members of the same tribe.[16] Many Indians – tribal or non-tribal – can legally remove their property from the mortgage market by declaring that it belongs to the "undivided Hindu family."[17]

Chapter 3 explained that kinship remains important in the most advanced economies because relational finance often funds the first stage developing a business innovation. The Rothschilds in France, Fiats in Italy, Onassis in Greece, and Birlas in India developed large, profitable family firms. Even in the best circumstances, however, family cooperation is too narrow to make a country rich. Firms must reach out beyond family for investors and managers. On balance, the historical trend, however, runs against clan ownership of land and in favor of markets. In much of Africa, a more individualistic system of ownership is displacing a traditional system based on kin groups. A statistical analysis of Ghana established that more individual property rights cause more investment on improving the land. People apparently invest more to improve land when they share the benefits with fewer kin.[18] (Sharing among kin also provides insurance without insurance markets, which reduces savings.[19])

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[16] T.N. Madan (2008) The Householder Tradition in Hindu Society, The Blackwell companion to Hinduism, 2008 - Wiley-India. R. Mearns (1999) Access to Land in Rural India, Policy Issues and Options, Tribal land in India is often organized as a common and is difficult to sell and transfer but gets often encroached illegally.

[17] Throughout India a couple that marries can choose whether or not the state will apply the law of the to their property. The undivided Hindu family consists in all living members of the husband's bloodline. Opting into the law has tax advantages. However, all members of the undivided Hindu family must agree in order to pledge real estate as security for a loan, so mortgages are rare.

[18] Interestingly, the study also found the converse -- that more investment on the land causes more individual property rights. Individuals who want to invest in the land apparently influence government to strengthen their ownership rights. See T. Besley, (1995). "Property Rights and Investment Incentives: Theory and Evidence from Ghana." J. Political Economy 5: 903-937..

[19] In poor countries with weak states and thin markets, people rely on their families to share wealth in difficult circumstances. Like high taxes, strong sharing discourages the accumulation of wealth. In American Indian reservations, Papua New Guinea, and Africa, clansmen help each other and save little. An American Indian anthropologist, Robert K. Thomas, said to Cooter, "If you are an Indian, you have many relatives, and if you have many relatives, you are not rich." Sharing to overcome temporary hardship insures without relying on insurance markets.

In sum, agricultural land changes owners by market transactions and political fiat. Production usually falls when politicians redistribute land by force to their loyalists, and productivity usually surges in socialist, feudal, or tribal societies when legal reforms create active markets for land. Creating land markets requires quieting disputes over ownership so that people acquire land by buying it, not rousing disputes so that people acquire land by litigating or lobbying.

## 2. Squatters

King Charles II of England gave land encompassing modern state of Pennsylvania to William Penn in 1681 in exchange for two beaver skins per year. Penn, however, had limited ability to survey and divide the land for sale, and even less ability to control or manage it, so squatters quickly occupied much of it. From its colonial beginnings through the 19th century, poor people in the United States seized land illegally from large private owners and the state.[20] Seizures relied on intimidation, lapses in the owners' vigilance, and government officials who looked away.

Similarly, poor people in Latin America, Africa, and Asia squat on others' land and the law catches up later or never.[21] When the poor seize land from the rich, evocative slogans justify the seizures, such as "Land belongs to the people," or "Land belongs to those who farm it." In this spirit, the Brazilian constitution requires land to fulfill its "social function."[22] Landless farmers can petition the state to expropriate "unproductive land" on their behalf. (Ecologists

[20] In 1862 Congress gave railway companies ten square miles of land for every mile of track built on the transcontinental railway. Squatters often established homesteads before acquiring title, which created an economy outside the law's control. American law eventually imposed secure title and effective markets on all of the land, but the long process involved constant tension, occasional violence, spasmodic reversals, and many compromises. See Soto, H. d. (2001). "Citadels of Dead Capital: What the Third World must learn from U.S. history." Reason May 2001, viewable at http://reason.com/0105/fe.hs.citadels.shtml.

[21] Most seizures are by the poor, but wealthy people have also seized land in Latin America, such as the beaches of southern Peru and ranches in the Amazon.

[22] F. Santinoni Vera. (2006). "The Social Function of Property Rights in Brazil." Latin American and Caribbean Law and Economics Association (ALACDE), Annual Meeting. Vera Nascimento, Property Rights and Land Conflicts in Brazil: The Case of Mongangua's Growers Association, Latin American Law and Caribbean Law and Economics Association (ALACDE). Interlegis, Brasilia, 25 May 2007.

deny that land left to nature has no social function.) Or, instead of waiting for the state to act, landless Brazilian farmers can invade. When the signal is given, well-organized invaders occupy part of a large ranch, quickly plant gardens, and erect dwellings. Afterwards, the legal process gets complicated and unpredictable. Perhaps the court immediately issues an eviction order, or perhaps the eviction order comes after several years, or perhaps the state gives title to the invaders and promises to compensate the original owner.[23]

Given legal uncertainty in Brazil, owners who rent agricultural land to others take a big risk. After moving in, a tenant might stop paying rent and declare that the land was not fulfilling its social function. This possibility inhibits Brazil's rental market in rural land. A far smaller proportion of rural land is rented in Brazil as compared to other countries -- under 10% in Brazil as compared to over 40% in the U.S.A., France, and Holland.[24]

Besides the difficulty of renting land, poor Brazilian farmers face unnecessary difficulties when buying it. A constitutional right to housing causes some judges to refuse to evict a homeowner who has fallen behind in mortgage payments. Since courts sometimes shield homeowners from their creditors, banks reluctantly loan for the purchase of homes.[25] Compared to other countries, real estate credit operations in Brazil represent a much smaller percent of gross domestic product -- only 1%.[26]

Land seizures in Brazil have a perverse logic. Thin rental and mortgage markets give many poor farmers few choices for acquiring land except to seize

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[23]We are grateful to Luciano Benetti Timm, a Brazilian law and economics scholar, for information on land seizures, leases, and mortgages in Brazil.

[24] Belgium has over 70%. Thanks to Bruno Salama who found these numbers in the following sources: For countries other than Brazil: J. J. Swinnen, "Private Enforcement Capital and Contract Enforcement in Transition Countries," American Journal of Agricultural Economics, 83(3): 686-690). For Brazil, Brazilian Institute of Geography and Statistics, "Census of 1996." For Brazil rental markets cover 2.43% of land, which is suitable for farming, and 7.13% of all rural properties.

[25] Workers with secure salaries such as state employees can obtain mortgages because debtor's future income is the lender's primary security, not the value of the property purchased with the loan.

[26]J. Saddi (2007). "Creditor-Debtor Law in Brazil," Latin American and Caribbean Law and Economics Association (ALACDE), Annual Conference, Interlegis, Brasilia, Brazil, June 2007.

it.[27] Land seizures, however, are the main reason why real estate markets for poor farmers are thin. By destroying markets, land invasions make themselves necessary. If courts promptly evicted people who seized rural land, and if courts made borrowers repay their debts, then renting and buying land would flourish. Markets easily dominate seizures as a mechanism to redistribute land and raise living standards.

Effective markets in land are attainable in Brazil, but not in Papua New Guinea in the short run. The town of Madang expanded in recent decades where groups of people loosely called "clans" once planted crops, gathered food, and hunted. These clans still live there, encompassed by the town like pebbles in a stream, and the state still nominally recognizes them as owning much of the town's land in customary law. Customary owners cannot legally sell their land to anyone, and they cannot legally rent it to anyone without following prohibitively burdensome procedures. As Madang swells with immigrants from the countryside who need land for homes and gardens, the immigrants cannot legally buy or rent customary land. So the immigrants, who far outnumber the customary owners, seize the land, plant gardens, and build dwellings, as in Brazil. In the current legal situation, Madang's growth depends on seizures to increase the land's productivity and accommodate demographic change.[28]

The security of squatters decisively affects the quality of their dwellings. Squatters live in shanties of cardboard and tin when they feel too insecure to invest in them. An investment might draw the attention of the owners and increase the likelihood of losing everything. Fear of eviction creates some of the world's worst housing conditions. Conversely, when squatters feel secure, they invest time and money to improve their dwellings. To illustrate, the water

[27] Sharecropping is a legal alternative. However, labor courts in Brazil may re-characterize sharecropping as an employment contract, which dramatically increase the taxes and social security payments due from the property's owner. Gabriel Buchmann, Determinantes do Mau Funcionamento do Mercado de Arrendamento de Terras no Brasil, 2006. In addition, legal caps on the amount payable by sharecroppers create uncertainty over whether or not a state official will adjust the terms of the contract after it is made. The remaining alternative for a poor farmer is to sell his labor. Unfortunately, employment contracts are often inefficient in agriculture.

[28] "Inventing Market Property: The Land Courts of Papua New Guinea," 25 Law and Society Review 759 (1991).

authority in southeastern Sao Paulo, Brazil, owns land containing an underground aqua-duct.[29] Squatters built houses illegally on the land over the aqua-duct. The houses are mostly three story brick or cinderblock buildings with plastered walls, bright paint, artistic cement balustrades, ornate ironwork balconies, satellite dishes on the roof, and often a garage with a car on the ground floor. Such investments increased the squatters' security, because the state is less likely to evict them from substantial dwellings than cardboard shacks. Squatters invest not only *because* they feel secure but to *make* themselves secure.[30]

Conversely, the presence of squatters significantly reduces the market value of land to its owner. A real estate agent in Mumbai (Bombay) told Schaefer that flats in high rise buildings in the city center near Yuhu Beach sell for the remarkable price of 1.7 million US dollars per 1,000 square feet (93 qm), even though slums surround these tall buildings. To build a high-rise building, the developer must first secure title and clear off the poor occupants, which is hard to do. Land rights are uncertain and fragmented between the poor occupants and formal owners. Modern apartments are so expensive because the difficulty of securing title constricts their supply.

We have discussed the poor seizing land from the rich or the state. The opposite also occurs -- the rich seize land from the poor. To illustrate, the state owns all land in China and small farmers have use-rights. The state can terminate the use-rights of small farmers and transfer them to large developers for factories, offices, and apartments. The ideology of progress and growth disguises this theft, although international news media sometimes publicize the protests and violence. Allowing large developers to seize land from the poor as in China is the worst way to make people subsidize growth who can least afford to do so.

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[29] Thanks to Dr. Gesner Oliveira and SABESP for organizing Cooter's visit to the "Integrative Park" that SABESP is building on cleared land over the aquaduct.

[30] Even with active real estate markets, however, housing the poor remains problematic. For analysis of housing the residual poor, see K.Deininger, (2005). "Land policies for growth and poverty reduction, A World Bank policy research report." Available at http://econ.worldbank.org/external/default/main?pagePK=64165259&piPK=64165421&theSitePK=469372&menuPK=64216926&entityID=000020439_20070126152021..

### 3. Live and Dead Capital

Chapter 2 explained that innovators borrow money to develop their innovations. When a borrower seeks a loan, the lender usually demands that the borrower offer something valuable as security. If the borrower defaults, the lender will seize the security and sell it to recoup the loan. Lenders prefer "liquid" security, which means a good that is easy to sell in an active market with many buyers. When the borrower can offer a liquid asset as security, the lender will loan on good terms. Loans often pay for business investments. Consequently, liquid assets are "living capital" that finances growth, whereas illiquid assets are "dead capital" that cannot finance growth.

Real estate is the most valuable asset that many people own, especially the lower and middle classes. Furthermore, creditors in poor countries prefer real estate as collateral because land and dwellings are harder to hide than silver bracelets, bonds, or barrels of beer. To obtain a mortgage, which is a loan secured by real estate, the creditor must be able to seize it from a defaulting debtor and sell it to satisfy the debt.[31] The ability to secure loans by real estate significantly affects the finance of innovation and growth.

When seizure and sale is easy, mortgage markets are liquid and real estate is living capital. However, bad laws and policy make much of the world's real estate illiquid. Throughout the world, cities like Cairo pulse with industry and enterprise from countless small businesses. Many families own small businesses, but they cannot use their real estate to secure a loan and grow into a big business. This problem is endemic in poor countries.[32]

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[31] The creditor wants the collateral's value to stay as high as the remaining debt. "... Basically, the bank wants to ensure a rough balance between the value of the debt outstanding and the value remaining in the project, including the value of the collateral, at all times." O. Hart, Firms, contracts, and financial structure. Oxford and New York, Clarendon Press and Oxford University Press, 1995, pages 8-9. With liquid real estate markets, an entrepreneur can mortgage her house or apartment to invest in her business. Or she can borrow money to buy an apartment or house, which frees other funds to invest in her business.

[32] The "spread" refers to the difference between the interest rate on a mortgage and the interest rate on bonds issued by stable companies or governments. When a creditor can easily seize and resell the real estate of a defaulting debtor, the creditor is secure and the spread is small. When seizing the real estate of a defaulting debtor is difficult and expensive, the creditor is insecure and the spread is large. Graphing the spread on the vertical axis for countries of the world and gross

Three obstacles to real estate transactions plague countries with weak property law. First, the buyer in a real estate transaction must ascertain that the seller truly owns the property. Defects in registries increase the risk of mistake or fraud in buying real estate.[33] In Vietnam, the state has not developed a registry of titles for apartments and houses. Some owners have a written document from a local authority acknowledging ownership, and others have no official documents. A statistical analysis of offers to sell real estate in two Vietnamese cities found that owners who claim to have a written document charge more for similar properties. The price increase approximately equals the value of having a telephone, which is less than the value of having a toilet.[34] An efficient registry of title would increase real estate sales in Vietnam.

After a defective registry, the second way that ineffective laws lower the sale value of real estate concerns its use. Besides ascertaining the seller's identity, the buyer must ascertain what he can do with the property. Obtaining a construction permit is so bureaucratic, slow, and costly in many countries that owners bribe officials to turn a blind eye to illegal construction. Height limits on buildings in many Cairo neighborhoods are unrealistic, so owners accommodate growing families by violating regulations and adding additional stories to their buildings. Since almost every owner in Cairo is a violator of one regulation or another, officials can extract bribes from anyone by threatening to enforce the regulations. Buyers face the uncertainty of not knowing exactly how much they will have to pay in bribes to use their new property.

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domestic product per capita shows an unmistakable downard slope, which indicates a smaller spread in richer countries.

[33] Many poor countries do not have registries for ownership of real estate, or the registries are defective due to incompetence or corruption. Land registries for Peru are organized by owner's name and not by location of property, so it is difficult for a potential buyer to find out whether or not more than one person claims the same property. Ravina, R. (2004). Costos de transacción en la transferencia de bienes inmuebles. ALACDE (Latin American and Caribbean Law and Economics Association, Lima, Peru. For evidence that land registration can increase land prices and economic growth, see Frank F.K. Byamugisha, "How Land Registration Affects Financial Development and Economic Growth in Thailand," Policy Research Working Paper #2241, The World Bank, East Asia and acific Region, Rural Development and Natural Resources Sector Unit (1999).

[34] Kim, A. (2005). "North versus South: politics and social norms in the evolution of private property rights in Vietnam." Comparative Law and Economics Forum (CLEF).

Third, the creditor bears the burden of filing a complaint against a defaulting debtor and going forward with legal action. In some countries, the legal process of debt collection costs too much or consumes too much time, so legal debt collection is impractical.[35] In these circumstances, mortgages are unavailable, or only available on unfavorable terms. Conversely, the availability of mortgages increase dramatically when the creditor can obtain immediate control over property from a defaulting debtor without a trial.[36]

In countries where evicting a family is practically impossible, evicting a corporation can be relatively easy. Seizing corporate real estate is relatively easy for creditors in many countries. Thus a recent study of secured loans in 60 developing countries found that corporations secure 70% with mortgages and only 30% with movable capital.[37]

We have explained that much real estate, which constitutes a large proportion of capital in poor countries, is illiquid, which inhibits credit and investment in growing businesses. Next we consider a different problem with property – rampant theft of new creations.

### *B. Creativity and Property*

Humanity almost lost its greatest theatrical legacy because Shakespeare made only a few copies of each play that he wrote.[38] He did not want them

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[35] When the plaintiff's burden of going forward exceeds the stakes in the case, a rational person does not bother to file a legal complaint.

[36] To illustrate, most U.S. states allow a fast procedure called a "non-judicial foreclosure" or "summary judgment." It avoids a trial and gives the creditor immediate control over the property. While the creditor gets immediate control, the creditor may still lose a lot of money.
To illustrate numerically, assume the creditor loaned $100,000, the borrower repaid $10,000, and then the borrower stopped paying. The creditor gets a summary judgment, seizes the property, and sells it for $50,000. Thus the creditor loses $40,000, which is called the "deficiency. To address the deficiency, the creditor must follow a slower procedure called "judicial foreclosure," which allows the creditor to obtain a "deficiency judgment." In the preceding example, the creditor can sell the property for $50,000 and then collect $40,000 from the debtor, assuming the debtor has the ability to pay. However, judicial foreclosure also gives the debtor the right to delay resale of the property by the creditor while the debtor tries to find the money to buy it. This right of the debtor is called "equity of redemption."

[37] *This is true, even though the study found that land counts for only 22% of the value of corporate assets. Safavian/Fleisig/Steinbucks (2006) Unlocking Dead Capita, How Reforming Collateral Laws Improves Access to Finance, Public Polica for the Private Sector.*

[38] Greenblatt, Stephen, Will in the World: How Shakespeare Became Shakespeare. (W. W. Norton & Company, New York, 2004)

published because he did not want others to perform his plays. With ineffective copyright laws, he profited from selling tickets to performances of his plays, not from publications. In contrast, J.K. Rowling sold 8.3 million copies of Harry Potter and the Deathly Hallows on the first day of its publication.[39] A modern author like Rowling uses copyright law to secure ownership of an original expression. With effective copyright, secrecy is unnecessary.

Like an author, a modern scientist uses patent law to secure ownership of an original invention. Copyright and patents are "intellectual property" -- intangible products of the mind that are owned like land and other tangible goods. No one can use another's patio, pants, or patent without the owner's permission. Effective intellectual property law permits sales, leases, and licenses, which reward creativity.

Unlike novels, intellectual property law does not protect the discovery of better ways to organize a business or new markets for goods. An entrepreneur cannot copyright or patent the discovery of a foreign buyer, reorganization of its sales force, or its training methods for quality control. When innovations are unowned, their creators must protect them the same way that Shakespeare protected his plays – by secrecy.[40] Chapter 8 on corporate law analyzes the firm as a way to keep secrets. For now, instead of discussing business secrets, we consider an intense conflict between rich and poor countries over intellectual property.

When two students share a cheese sandwich, each one gets a fraction of it. With most consumer goods like sandwiches, one person's use diminishes what is left for others to use. In contrast, when two students share a digital recording of music, each one gets the whole thing. Furthermore, explicit information is easily stored and retrieved, like the chemical formula for aspirin, the lyrics of the Beatles song "Imagine," and Microsoft's PowerPoint program. By

[39] Motoko Rich, "Record First-Day Sales for Last 'Harry Potter' Book - New York Times," July 22, 2007, http://www.nytimes.com/2007/07/22/books/22cnd-potter.html?_r=1&oref=slogin.

[40] In the U.S., patents have been extended to some types of innovations in business organization, which are called "business method patents." For a proposal to increase the first-mover advantage by extending intellectual property rights to entrepreneurial innovators, see J. F.Duffy and M. Abramawitz (2006), "Intellectual Property for Market Innovation." Berkeley Law and Economics Seminar.

not paying royalties to creators, competition among resellers drives the price of explicit information down to its copying cost. Shops in Hong Kong and Brasilia, consequently, sell American software at little more than the cost of a diskette, much to the consternation of U.S. businessmen and politicians.

If one user of information does not interfere with another, why not permit everyone to copy freely? When people can copy freely, smart businessmen wait for others to create and then imitate the creators. Imitators gain a competitive advantage by escaping the costs of creating, including research and development costs. However, creativity plummets. Thus creativity and breadth of use trade off. Unrestricted copying of creations expands use and slows creativity. Conversely, patent or copyright restrictions expand creativity up to a point and narrow use.[41]

Should officials in China and Brazil try to stop piracy of intellectual property or look the other way? Different countries prefer to balance incentives for use and creativity differently. Creators of intellectual property are disproportionately in countries with more educated people, well-equipped laboratories, and superior universities. These countries tend to favor restrictions on copying. In contrast, countries with many users relative to creators tend to favor free copying and using. Thus India and Latin America historically refused to recognize pharmaceutical patents, so their consumers enjoyed cheap medical drugs that were invented abroad and manufactured locally.

In Brazil, the law compels the owners of pharmaceutical patents to license the drug's manufacture to Brazilian companies. According to a recent study, the foreign manufacturers of AIDS drugs agreed to sell them relatively cheaply to the Brazilian government under the vague threat of compulsory licensing. The

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[41] Innovation builds on prior innovation, so innovators need free access to some prior innovations.
Excessive intellectual property laws slow innovation by raising the cost of access to common resources needed by innovators. In the U.S., excessive legal restrictions on copying apparently slow creativity, whereas socially optimal intellectual property law maximizes the rate of innovation. In various papers and books, Larry Lessig and Mark Lemley have especially developed this important theme in U.S. scholarship on intellectual property laws. Also see Michael Heller, The Gridlock Economy: How Too Much Ownership Wrecks Markets, Stops Innovation, and Costs Lives (Basic Books, New York, 2008).

compulsory licensing law in Brazil lowers the potential profits of Brazilian innovators in pharmaceutical. However, this study concluded that *all* of the potential pharmaceutical innovators are foreigners, not Brazilians. [42]

When users and creators are from different countries, national tensions rise, especially concerning enforcement efforts.[43] Thus American businessmen, politicians, and diplomats scold China, India, and Brazil over lax enforcement of intellectual property rights. Conversely, these countries have fewer creators and more users, so, instead of creating for themselves, they hope to do better by copying American software, Japanese hardware, German pharmaceuticals, and Italian designs.[44]

An implicit bargain between relatively rich creators and relatively poor users ameliorates this tension between them. Poor countries with low labor costs want to export manufactured goods to rich countries with high labor costs. Rich countries with high technical abilities want poor countries to recognize and enforce intellectual property rights. So the two groups make a political bargain. By supporting the applications of poor countries to join the World Trade Organization (WTO), rich countries agree to accept imports from poor countries. In rich countries, these imports benefit consumers and harm workers in impacted

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[42] If Brazil had no compulsory licensing law for pharmaceutical patents, or if the law were clearer and more favorable to patent owners, then Brazil would have to pay significantly more for AIDS drugs. The Brazilian government distributed the drugs to AIDS victims for free. Thus a vague law for compulsory licensing of a patent advantaged AIDS victims and taxpayers in Brazil. Bruno Salama: and Daniel Benoliel. "Patent Bargains in Newly Industrialized Countries (NICs): The Case of Brazil." ALACDE (Latin American and Carribean Law and Economics Association), Annual Conference, Mexico City, May, 2008.

[43] The scope and breadth of intellectual property laws differ from one country to another in their writing. For example, U.S. patents endure for 20 years from the date of the application's filing, whereas "petty patents" in Japan, China, South Korea, Taiwan, and other countries last from 4 to 10 years. However, the difference in effective law between the U.S. and these countries concerns enforcement of laws, not their drafting.

[44] For the argument that developing countries should not have intellectual property laws, see Pasquel, E. (2004). ¿No era la necesidad la madre de la inventiva? Por qué eliminar las patentes y los derechos de autor (Wasn't necessity the mother of invention? Why should we eliminate patents or copyright?), Latin American and Carribean Law and Economics Association's Annual Meeting, Lima, Peru. For empirical evidence that India benefits from manufacturing cheap generic drugs without recognizing the patent or paying royalties to the inventor, see Shubham Chaudhuri, P. K. G., and Panle Jia (2006). "Estimating the Effects of Global Patent Protection in Pharmaceuticals: A Case Study of Quinolones in India." BREAD (Bureau for Research in Economic Analysis of Development) Working Paper No. 125.

industries. In return, the countries that seek admission to the WTO must join the World Intellectual Property Organization (WIPO) and agree to recognize and protect intellectual property rights. When poor countries fail to protect intellectual property, WTO rules allow rich countries to initiate legal proceedings within the WTO and possibly to retaliate by curtailing imports. Thus, after fifteen years of negotiation, the WTO admitted China in 2001 with the support of the U.S. China has historically tolerated piracy of intellectual property belonging to foreign companies, but accession to the WTO raises the risk of continuing this practice.

Diplomacy aside, development causes an economy to shift in a direction that naturally favors better legal protection of creativity. Newly industrializing countries focus on mass production of standardized goods. This kind of production gives a comparative advantage to a country with many uneducated workers who earn low wages. As education and wages increase among workers, the mix shifts towards producing a mix with more quality goods. Finally, with better education of workers and higher wages, the mix shifts towards innovative products, as depicted below:

quantity → quality → creativity.

As a country's mix of production shifts to the right, it produces more creative goods. When creativity increases in importance, the benefits to a nation from effective intellectual property protection also increases. Thus ineffective copyright laws distort and retard the domestic software industry in China and India. Similarly, "Bollywood" in India makes more movies annually than Hollywood in California, and China also has a significant movie industry. Indian and Chinese production of movies would expand if the makers could reduce unauthorized use. Perhaps this fact partly explains the recent newspaper headline: "42 Million Pirated Discs Destroyed in Latest Chinese Anti-Counterfeiting Effort."[45] Unfortunately, theft is much harder to prevent for intellectual property than automobiles or real estate. Even with relatively effective intellectual property laws, Americans and Europeans steal much more software

[45] San Francisco Chronicle, August 12, 2003.

and recorded music than cars or land. For intellectual property, fixing law-on-the-books is easy and fixing law-in-practice is hard.

Acceleration in filings for patents suggests acceleration in the rate of technical innovation in the world as a whole. Residents in rich countries file the most patents by far, but filings from middle and low-income countries are increasing. Chinese and Indian patent filing in the United States have increased dramatically.[46] Creative industries apparently thrive in some countries and languish in others. During the 20-year period between 1980 and 1999, South Korea registered 16,328 patents for inventions in the United States, whereas the nine leading Arab economies registered 370 patents in the U.S. for the same period.[47]

If economic development shrinks the advantage to poor countries of pirating intellectual property, a common interest will emerge for developed and developing countries to find effective ways to enforce intellectual property rights. With more effective intellectual property law, developing countries might participate more fully in the explosion of creativity throughout the world.[48] Because ideas come from ideas, more innovation by developing countries would increase its rate everywhere, including in developing countries. Specific countries may gain an advantage from denying intellectual property rights for particular industries, like Brazil and AIDS drugs, but the world would gain even more from the expansion of creative industries in developing countries. As explained in Chapter 5, welfare gains from faster growth quickly overtake temporary gains from redistribution, including redistribution from creators in rich countries to consumers in poor countries.

Before leaving intellectual property, we mention something different from patents or copyright, namely trademark. Reputation matters in marketing and

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[46] In 1999 the United States granted nearly 150,000 patents of which 2,160 applicants were from India and 7,737 were from China. Patents granted to applicants from China increased by almost 300% from 1999 to 2002.WIPO IP/STAT/1981-2002.

[47] Arab Human Development Report 2003.

[48] Their success is much more likely in computer programming, where development costs are relatively low, as compared to pharmaceuticals, where development costs are very high. With existing technology, proving the safety of a new drug is prohibitively expensive except for most companies.

socializing, because people like to gossip about the quality of products almost as much as the morality of people. Trademark law gives the owner of a brand name the power to build its reputation, which can protect consumers from inferior products. Thus Coke commands a price premium in India over domestic competitors such as Campa Cola and Thumbs Up, partly because "Coke" signals uncontaminated bottles to consumers.[49] Conversely, without branding, consumers confuse goods from different manufacturers, and confusion creates an incentive to save costs by debasing quality. Before the fall of communism in 1988, Moscow stores sold many goods with generic labels such as "milk," "ink pen", and "pants," so Moscow consumers sometimes unknowingly bought adulterated milk, leaky pens, and holey pants.

We discussed examples where effective trademark laws prevent consumers from buying fake goods unknowingly. Conversely, people *knowingly* buy fake Gucci bags, Nike shoes, and Rolex watches in Korea and China. Where a savvy consumer can perceive quality by careful inspection, a good counterfeit provides similar quality and prestige at less cost than the real brand. However, if trademark laws were ineffective everywhere, trademarks would lose their power to signal quality and to convey prestige. Fake goods are like a parasite that dies without a host. Some people who sneer at famous brands would welcome their death. For them, Gucci represents "manipulative fashions", Nike represents "American imperialism", Rolex represents "conspicuous consumption," and all of them represent snobbery. In any case, rich countries pressure poor countries to stop producing the counterfeits that consumers love.

### *C. Organization as Property*

Now we turn from real estate to organizational property. An organization includes offices such as Chairman, Chief Financial Officer, and Vice President. Besides offices, organizations divide labor through roles such as bookkeeper,

[49] This essential reputation for cold drinks was however badly undermined. "Tests conducted by a variety of agencies, including the government of India, confirmed that Coca-Cola products contained high levels of pesticides, and as a result, the Parliament of India has banned the sale of Coca-Cola in its cafeteria".. http://www.indiaresource.org/campaigns/coke/index.html(last visited July 2007)

mechanic, or purchasing agent. Through offices and roles, an organization coordinates its members and pursues goals. With sufficient coordination, the organization acts coherently like a rational person. When several people act like one rational person, we describe their behavior as "corporate." Thus we define an organization as *a structure of offices and roles capable of corporate action.*[50] Conversely, when several people are incapable of acting like one rational person, we describe their behavior as "individual" rather than corporate.

An organization's goals depend partly on whether or not it is *owned*. By "owned" we mean that the organization can be sold, and the acquirer can restructure its offices and roles. Partnerships, corporations, and other kinds of firms can be bought and sold. The owner has rights to the firm's profits and power over its organization. Since the owner of a small firm does with it as he or she wishes, ownership allows for quick decisions at low cost.

In contrast, no one can buy or sell a club, church, cooperative, trust, charity, or the state. These organizations are unowned. An unowned organization can sell its property -- land, buildings, machinery, etc., -- but not itself. Unowned organizations often make decisions collectively, following rules of governance that involve politics. Thus some clubs, churches, cooperatives, and governments proceed by majority rule. Compared to ownership, non-ownership often leads to slow decisions at transaction cost.

Ownership affects an organization's goals. When a firm that is owned underperforms financially, a buyer can purchase it and increase its profits by changing its goals, strategies, personnel, and structure. Expecting higher profits, the buyer should be willing to pay more for the firm than its current owners can earn. Markets for organizations pressures the owners to maximize profits or sell the firm to someone else.[51] Consequently, owned organizations stay more focused on making money.[52] This is good for society in certain conditions

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[50] Chapter 6 discusses in more detail the ability of organizations for coherent action.
[51] Henry Manne is especially responsible for developing the argument that the market for corporations will keep them focused on maximizing the value of the firm's stock. Henry Manne, "Mergers and the Market for Corporate Control, "73 J. Pol. Econ. 110 (1965).
[52] Firms should focus on nothing but making money, according to Milton Friedman's essay, "The Social Responsibility of Business is to Increase its Profits," The New York Times Magazine,

identified by economic theory, notably conditions that approach the ideal of perfect competition.[53] Many consumer goods are, or can be, produced in markets that approximate this ideal. Privately owned firms play the central role in the production of these goods in all of the world's rich countries.

In contrast, since no one can sell an unowned organization, the people who control it escape the pressure to maximize profits. They can pursue other goals – saving the rhinoceros, helping the poor, praising the Lord, organizing bridge tournaments, curing cancer, training graduate students, and so on. Un-owned organizations play the central role in government, religion, education, and social life, where profits are not the organization's main goal.

We have explained that owned organizations tend to focus on making money, whereas unowned organizations pursue more diffuse goals. The difference shows in nationalizing and privatizing firms. Nationalizing a firm eliminates private ownership and usually increases the influence of politicians and other state officials, who broaden its goals. Conversely, privatizing a state enterprise usually refocuses it on profitability.[54] This happened in the 1990s in the formerly communist countries of Europe that joined the European Union. Privatization in these countries refocused firms on profitability and their economies prospered.

For privatization to refocus a firm on profitability, however, laws and policies must provide the foundation for markets. Otherwise privatization can degenerate into looting the state, which is what happened all too often in the 1990s in the formerly communist countries of Europe that did not join the European Union. To illustrate the difference concretely, Ukraine's government agreed to sell the country's largest steel mill in 2004 for $800 million to a consortium that included the son of the country's president, Leonid Kuchma. In 2005, the new president of Ukraine, Viktor Yushchenko, succeeded in undoing

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September 13, 1970. Easterbrook and Fischel agree with Friedman in their influential book, The Economic Structure of Corporate Law (Harvard University Press, 1991). From this viewpoint, corporations should advance the interest of shareholders maximally, and not concern themselves with the interests of stakeholders such as employees, the local community, or charities.

[53] See the discussion of the "invisible hand" in Chapter 3.

[54] Privatizing either involves the sale of a state firm to private buyers, or, when the state enterprise is not organized as a firm, the sale of state assets.

the sale and auctioning the steel mill for $4.8 billion. The price difference between an insider deal and a relatively competitive auction was 600%. The insider deal would have looted approximately $4 billion from Ukraine's treasury.[55]

We have explained that a market for firms keeps owned organizations focused on profitability. This focus contributes to prosperity, innovation, and growth. However, the sale of firms can also be a mechanism for looting them and destroying their productivity. Chapter 8 will explain corporate law's essential role in keeping firms productive and preventing their looting by powerful insiders.

### *D. Conclusion*

This chapter concerns how property law helps people to keep what they make. We focused on real property (land and buildings), intellectual property (patents and copyright), and organizational property (corporations and partnerships). Our analysis identified three economic consequences of effective property rights. First, effective property rights enable the people who can produce the most from the asset to acquire it. Thus we described an active market in farms as continual land reform in favor of the most productive farmers. Similarly, effective markets for corporations continually reorganize firms in favor of the most productive entrepreneurs. Market pressures keep owned organizations focused on profitability, which promotes growth and innovation.

Second, effective property rights give owners the security to invest. Thus squatters improve real estate when they get secure title of it, managers improve firms when they own them, and people strive to innovate when they own their creations.

Third, effective property rights create liquid markets, so assets can serve as collateral for owners to borrow money and make investments.[56] Economists

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[55] Kramer, A. and H. Timmons, "Mittal wins bidding for Ukraine's top steel maker". International Herald Tribune: Oct. 25th, 2005..

[56] A suggestive, but inconclusive, statistical test of these three hypotheses is found in T. Besley (1995), "Property Rights and Investment Incentives: Theory and Evidence from Ghana." 103 Journal of Political Economy 5: 903-937.

from Karl Marx to Milton Friedman agree that capital markets are the core of capitalism.

Besides effective property rights, innovation requires coordinating the efforts of different individuals. People coordinate by saying what they will do and doing what they say. Contract law, which enables people to commit to doing what they say, is the subject of the next chapter.

## Chapter 7: Doing What You Say -- Contracts

The Soviet Commissar needed to cooperate with the Director of the State Steel Combine in Russia in the 1960s. They were also rivals, so the Commissar kept an eye on the Director's movements. One day they met in the Moscow railway station. The Commissar asked the Director, "Where are you going?" The Director replied, "To Leningrad." The Commissar thought to himself, "He says that he is going to Leningrad because he wants me to think that he is going to Minsk, but I know that he really is going to Leningrad." So the Commissar said to the Director, "You're lying!"

This joke depicts the problem of credible communication. To coordinate their behavior, people must say what they will do and do what they say. How do we know when to believe them? Businessmen relentlessly scrutinize the demeanor of others for clues about what they are really thinking. In Warm Springs, Oregon, a painting on the courthouse wall in an Indian reservation shows a witness testifying while holding his fingers in a bowl of water. If his hand trembled and made ripples, then he was presumably lying. The polygraph or "lie detector" used by police works on similar physiological principles. An accomplished deceiver, however, can fool a water bowl or a polygraph. Fortunately, the law invented a superior mechanism to make people tell the truth in business transactions: the contract.

To understand how contracts work, consider what the Chinese philosopher Sun Tzu wrote in the 6th century BCE: "When your army has crossed the border [into hostile territory], you should burn your boats and bridges, in order to make it clear to everybody that you have no hankering after home."[1] Burning the bridges commits the army to attack by foreclosing the opportunity to retreat.

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[1] Sun Tzu, The Art of War (Project Gutenberg, 1910), section XI part 3. Destroying your own ability to retreat is a tactic used by the Greek general Xenophon, the Vandal king Geiseric, and the Mexican conqueror Cortez.

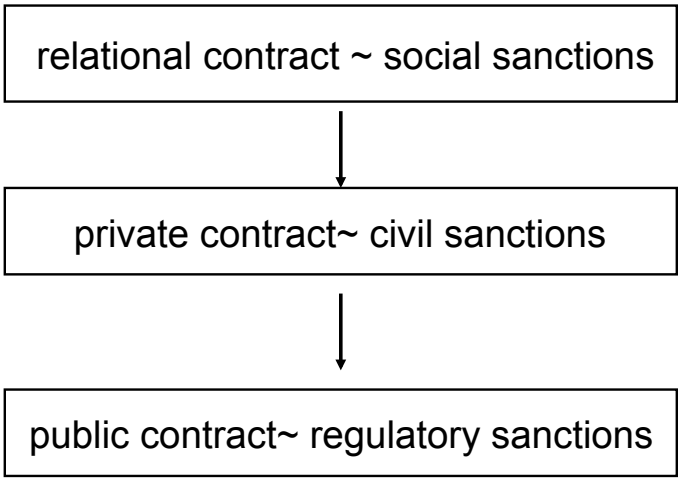
In business as in war, an actor commits to performing an act by raising the cost of not performing it. We use the term "contract" to refer to a promise with material sanctions for breaking it, especially legal sanctions. Like burning bridges, an effective contract commits a person to doing what he says he will do by raising the cost of not doing it. The cost is raised to the extent of the sanction for breaking the promise. When businessmen bargain, they begin with "cheap talk" involving words without commitments or sanctions, and they end with contracts involving enforceable obligations. According to the *contract principle for coordination, the law should enable people to commit to doing what they say.* When this principle is implemented, people can trust each other enough to work together, even though money is at stake.[2]

We will distinguish three types of sanctions for breaking promises based on the three stages of finance described in Chapter 1: relational, private, and public. As a startup firm passes from one stage to another, finance relies increasingly on state law, without abandoning the earlier forms of relational finance. This fact creates an analogy between Silicon Valley and business in a developing country. The same three-way distinction for finance applies to contracts in general, as depicted in Figure 6.1. "Relational contracts" refer to promises among friends and relatives who are embedded in enduring relationships, such as the promise that an uncle makes when hiring his nephew. To enforce relational contracts, the parties rely on social sanctions. We use "private contracts" to refer to promises individually negotiated among non-relatives, such as bank loans. To enforce private contracts, the parties use civil sanctions as well as social sanctions. And "public market contracts," or "public contracts" for short, refer to promises that support exchanges in competitive

[2] In the language of game theory, an effective commitment transforms the payoff matrix of a game with a non-cooperation equilibrium into a game with a cooperative equilibrium that is more productive. See R. Cooter and T. Ulen,, 2007, "Law and Economics", 5th Edition, Boston Mass. et al., Pearson Addison Wesley, Chapter 6. See Schäfer, H.-B. and Ott, C. (2005), "The Economic Analysis of Civil Law", 4th Edition, London, Edward Elgar, Chapter 13.

markets with standardized terms, such as stocks sold in an exchange.[3] To enforce public contracts, the parties rely on regulatory sanctions as well as civil and social sanctions. As a legal system becomes more reliable in a developing country, business shifts towards more law-intensive forms of contracting as indicated by the arrows in Figure 6.1, without abandoning the less law-intensive forms.

Figure 6.1. Three Types of Contracts and Sanctions




[3] "Relational contracts" and "private contracts" are standard terms in legal scholarship that we use in the conventional way. "Public contracts" has no single, standardized meaning. We use the term for contracts with essential terms that the state prescribes and enforces by regulations. In contrast, another possible meaning for the term is a contract in which the state is a party, such as a procurement contract by the military.

### *Relational Contracts and Social Sanctions*

This chapter explains each of the three types of contracts in turn, with emphasis on the distinctiveness of developing countries.[4] Human beings originally lived in small groups of kinsmen and friends who relied on each other. Although tribal life has faded, relatives and friends remain important for economic life, even in big firms and large cities. In northern Italy and Hong Kong, kinship glues together many firms, some of which have grown into business empires like the manufacturer Fiat and the fashion house Prada. In Switzerland and Israel, friendships formed in the army shape industries. And in the 19th century, men who fought beside each other in the United State's civil war subsequently created corporate America.

Where states do not enforce contracts effectively, businesses rely on relationships.[5] In the 11th century, the states around the Mediterranean Sea were fragmented, without effective international laws. Yet Jews based in Egypt traded extensively in the region by contracts among relatives and friends.[6] Much the same is true today among Indian traders in Africa, Chinese merchants in Papua New Guinea, and Vietnamese businessmen.[7]

The scale of modern business necessarily involves interactions with people who are not relatives or friends. In these circumstances, businessmen often rely on a substitute for kinship and friendship: They deal with the same people over and over again. In Japan workers in large companies traditionally enjoyed lifetime employment, manufacturers traditionally preferred to deal with

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[4] For a related theory of how contracts evolve, see Marcel Fafchamps (2002) "Spontaneous Market Emergence. Topics in Theoretical Economics: Vol. 2 : Iss. 1, Article 2 (2002). Available at: http://www.bepress.com/bejte/topics/vol2/iss1/art2Markets, Trust and Reputation.

[5] A. Greif, P. Milgrom, B. Weingast (1994). "Coordination, Commitment and Enforcement: The Case of the Merchant Guild." Journal of Political Economy, Chicago, University of Chicago Press, 102 (3): 745-76. Greif, A. (1997). "Microtheory and Recent Developments in the Study of Economic Institutions through Economic History", in Kreps, D. M./Wallis, K. F. (eds.). "Advances in Economics and Econometrics: Theory and Applications: Seventh World Congress". Cambridge: Cambridge University Vol. II. pp. 79-113

[6] Avner Greif, "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coailtion," American Economic Review 83 (1993): 525-548.

[7] MacMillan, D. and Woodruff, W. (1999). "Dispute Prevention without Courts in Vietnam", *15 J Law & Economic Org.,* Oxford, Oxford University Press, *pp.* 637-658.

one or two suppliers for each input, and companies traditionally financed themselves through one main bank. Outside Japan, repeat transactions dominate some economic sectors in most countries. Thus civil servants worldwide seldom change jobs, many Apple computer users are fiercely loyal, depositors seldom change banks, retailers buy repeatedly from the same wholesaler, and franchisors and franchisees seldom separate their businesses.

How do people use relationships to enforce promises? When chimpanzees groom each other, they apply the principle, "Clean my fur today and I'll clean yours tomorrow." Like a chimpanzee troop, kinship and friendship provide a framework for reciprocity that remains fundamental to social life. In business the principle of reciprocity is, "Create a benefit for me now and I'll create a benefit of similar value for you in the near future." The principle has two elements: the implicit promise to give a future benefit and the commensurability of benefits given and received, which is a matter of fairness. A businessman who breaks his promises to return a favor will be called dishonest, and a businessman who gives a small favor in return for a large one will be called unfair. Whether in markets or organizations, people in repeat transactions reciprocate like grooming chimpanzees. Similarly, laboratory experiments confirm business experience: In repeated games, the form of reciprocity called "tit-for-tat" is the most popular strategy, and often the most profitable.[8]

Earlier we characterized a contract as a promise with material sanctions for breaking it. "Relational contract" refers to a promise made by people in a relationship who can enforce it through sanctions that come from society, not the state.[9] People in relationships can commit to doing what they say by submitting to the threat of social sanctions. If you break your promise to come to family dinner on Sunday evening, your mother can punish you in a thousand small

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[8] In the strategy of "tit-for-tat," a player responds to cooperation with cooperation, and she responds to defection with defection. See Dixit, A. K./Nalebuff, B. J., (1991), "Thinking Strategically", London, Norton

[9] The classic paper on relational contracting is Macaulay, S. (1963). "Non-contractual Relations in Business: A Preliminary Study." American Sociological Review 28: 55-69. To see where the study of relational contracts has gone, look at Goldberg, V. (2007). "Framing Contract law", Cambridge, Mass. et al., Harvard University Press.

ways. The same is true in repeated business transactions. The most common problems of contracting are non-payment of bills, late delivery, and poor performance. For non-payment, a typical reciprocation is suspension of supply; for late delivery, it is delayed payment; and for poor performance, it is partial payment.

With relationships, the parties often make vague promises and adapt their behavior to circumstances as they arise. For example, when you promise your mother to be home in time for dinner, you do not list acceptable excuses for arriving late. Similarly, the parties in repeated business transactions rely heavily on implicit understandings that adapt to changing circumstances. Thus a wholesaler and retailer in a good relationship are flexible about what counts as late delivery of goods and the remedy for it. Flexibility can stop quickly if the relationship deteriorates or ends.[10]

With reciprocity, each person punishes someone who wrongs him. With "generalized reciprocity," people punish someone who wrongs someone else. The main social sanctions are reciprocity, reputation, and ostracism. In business, ostracism usually takes the form of refusing to deal with someone. Families, small towns, firms and networks hum with gossip and ostracism. Gossip provides information (and misinformation) about who wronged whom, and ostracism provides the sanction.

Organizations can enforce reciprocity by formalizing sanctions for wrongdoing. Thus London merchants in the 18th century signed notes promising to repay the named party on presentation of the note. As these notes circulated, other people endorsed them and guaranteed repayment of the debt. Quakers, a small Protestant religious sect, expelled anyone who endorsed a noted and failed to repay. As a result, merchants were especially willing to take notes from Quakers as payment.[11]

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[10] Lisa Bernstein (2001). "Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions," Michigan Law Review 99: 1724-1790.
[11] Max Weber noted this fact in his classic on the ethical foundation of the industrial revolution, called The Protestant Ethic and the Spirit of Capitalism.

As another example, medieval European towns and guilds held their merchants collectively responsible for contracts with outsiders. If merchant $\alpha$ in town A failed to pay debts to merchant $\beta$ in town B, then the merchants in town B could seize and hold any merchant from town A until the debt to merchant $\beta$ was repaid. Foreseeing this fact, the merchants in town A pressured their members repay their debts. Collective responsibility facilitated trade over long distances. As we will explain in the next chapter, collective responsibility remains important today for lending to the poor.[12]

We mentioned that business relies on relational sanctions to enforce contracts when state law is ineffective. Even where states enforce contract law effectively, however, businesses prefer to avoid state enforcement. Relational enforcement is so much cheaper and quicker, if it works. To avoid relying on state law to enforce contracts, people cultivate "relationships" or "connections," which Chinese call "guanxi." Besides cultivating relationships, businesses avoid state enforcement by writing good contracts. The art of writing good contracts includes reducing a large exchange into a series of small, reciprocal exchanges. Social sanctions may be enough to enforce each of the small exchanges, but not enough to deter cheating in one large exchange.

To illustrate, when I buy a sausage at a street fair, I pay and I get the sausage simultaneously. Simultaneous exchange does not require promises. In contrast, when I pay you now for the promise of future delivery of a good, a gap in time allows promise breaking to slip in. A good contract divides the large exchange into a series of small exchanges. Thus a contract to construct an office building that takes a year to complete usually provides for small, periodic payments for completing each stage in the project. The ultimate goal is a "self-enforcing contract" in which each party expects to gain more at each stage by keeping his promises than breaking them. Good contracts are drafted to come

[12] Greif, A. (1989). "Reputation and Coalitions in Medieval Trade: Evidence on the Maghribi. Traders.", Journal of Economic History, Cambridge University Press 49 (4): 857-882.

as close to self-enforcement as possible, but perfect self-enforcement is usually impossible without the threat of state enforcement.[13]

Innovative businesses need talented lawyers who can write contracts that accurately express the parties' commitments in language that judges can easily interpret and apply. With good contracts, judges and other officials help the parties to achieve their business purposes by interpreting the contracts as written. However, contracts often fail to address precisely the circumstances that give rise to a legal dispute. When courts must enforce terms in a relational contract, judges disagree about the extent to which they should enforce the terms as written, or impose the remedy most likely to repair the relationship.[14]

Having discussed the strengths of relational contracts, we turn to their characteristic weakness. To sustain a business relationship, a person must deal with someone for reasons of history and sentiment, instead of dealing with the cheapest seller, richest buyer, hardest worker, or best creator. In brief, relational contracting increases trust by reducing competition. To illustrate, a cooperative factory in the city of Palampur, India, burns coal to roast tea. The cooperative buys coal at the beginning of the tea harvest and stores enough on its grounds to

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[13] Self-enforcing mechanisms analyzed by economists have exotic names such as hostage exchange, bonding, vertical integration, efficiency wages, co-ownership, and franchising. Self-enforcing devices for markets and hierarchies are discussed in O. Williamson, The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting (New York: Free Press (1985) and O. Williamson, Comparative Economic Organization: The Analysis of Discrete Structural Alternatives, Administrative Science Quarterly, Vol. 36, No. 2. (Jun., 1991), pp. 269-296.

[14] The dispute often concerns what to do when an explicit contract term violates a custom in trade. To illustrate, contracts in the Memphis cotton exchange specify that the buyer must weigh cotton when taking delivery from a seller, but the usual custom is for the buyer to accept the seller's representation of the weight. Lisa Bernstein argued that the custom in the trade applies to successful relationships, whereas the contract refers to failing relationships – buyer stops accepting the seller's reputation of the weight when their relationship is failing. So she favors enforcing such terms as written. See Lisa Bernstein, Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions, 99 *Mich. L. Rev.* 1724 (2001) pp. 1724-1790 Robert Scott has extended these arguments in a series of papers, including Robert Scott & Alan Schwartz, Contract Theory and the Limits of Contract Law, 113 Yale L. J. 541 (2004). In contrast, Mel Eisenberg stresses that enforcing written terms that violate generally accepted ideas of fairness can increase distrust in business relations and make contracting more difficult. See Melvin Eisenberg, Why There Is No Law of Relational Contracts, 94 Northwestern University Law Review (2000), pp. 805-822. The alternative dispute resolution movement stresses that resolving a dispute in a relationship requires repairing it, not merely remedying the breach that is the cause of legal action. This approach was taken by early feminist scholars, including Laura Nader.

burn over several months. Keeping a large inventory of coal ties up scarce capital. Instead of storing coal, the cooperative could develop a relationship with one reliable seller to deliver coal as needed. A relationship with one seller, however, would preclude buying from a cheaper seller. Buying from the cheapest seller apparently saves enough money to pay for storing coal.[15]

If the state enforced contracts more effectively in Palampur, the tea cooperative could seek bids for future delivery of coal. A future contract allows competitive pricing without the need for inventories. In general, statistical research shows that companies in poor countries with ineffective contract law keep larger inventories than equivalent businesses in rich countries with effective contract law. Comparable enterprises like cement factories or breweries keep 30% to 50% higher inventories in countries with ineffective contract law.[16]

Ineffective state law channels transactions into long run relationships and away from the best deals. Thus a survey asked businessmen in Peru how much the price of an input would have to fall to induce them to switch from their current supplier to a new supplier. The average answer was 30%. They explained their reluctance to change by ineffective contract enforcement. In Peru, the security provided by a long run relationship with a supplier is worth roughly 30% of the cost of the supplies.[17]

We have explained that relational contracting has the disadvantage of reducing competition. Besides this economic cost, relational contracting facilitates discrimination and distrust among groups of people. Insiders often give lower prices, higher wages, and fairer terms to each other than to outsiders,

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[15] Schaefer observed this tea cooperative.

[16] Schaefer's observation of the tea factory at Palampur prompted statistical research that proved this result. See Raja, A. /Schaefer, H.-B. (2007) "Are Inventories a Buffer against Weak Legal Systems? A Cross Coutry Study", Kyklos, Malden, Mass. et al., Blackwell Publishing, Vol. 60, No. 3, pp. 415-439. Fafchamps et.al (2000) show firms in Zimbabwe reduce contract risk by increased inventory holdings Fafchamps, M./ Gunning, J. W./Oostendorp, R. (2000). "Inventories and Risk in African Manufacturing", *Economic Journal,* Malden Mass. et al., Blackwell Publishing.. Vol. 110, pp. 861- 893

[17] Eyzaguirre, H. (2004), "*El impacto del Poder Judicial en la inversión privada (Impact of Power of Judiciary in the private investment*)", University of California, Berkeley Berkeley Program in Law & Economics, Annual Papers to ALACDE - Latin American and Caribbean Law and Economics Association, Lima, Peru.

who often exaggerate their mistreatment. These abuses can aggravate the natural vulnerability of a wealthy, inward-looking minority to racism and scapegoating. Thus in the 1960s many African countries drove out merchants of Indian descent, and Indonesian politicians episodically unleashed mobs on Chinese shopkeepers.

Besides the economic and social disadvantages of reduced competition, relational contracting has another problem: Sometimes it is impractical or impossible. Most people do not buy enough cars, houses, or corporations to deal repeatedly with the same seller. One-time transactions yield an immediate payoff to unscrupulous behavior, without significant future costs such as damaged reputation. Only a naïve buyer would rely on the representations of a car salesman, real estate agent, or financier in most countries.

Our final example of the limits of relational contracts concerns proximity.[18] Nearness strengthens relationships. Thus a clothes wholesaler in Dar es Salaam, Tanzania, has strong relationships with retailers in shops around the city and delivers goods to them on credit. The wholesaler in Dar es Salaam would like to supply retailers in Mwanza in northern Tanzania, but relationship with them is too thin to rely on credit. Local business can flourish in spite of ineffective state enforcement of contracts, but distance attenuates relationships. Ironically, the merchant in Dar es Salaam may be able to deal on credit with London by using letters of credit enforceable in English courts. In some countries, transactions are easy locally due to relational contracts, difficult nationally due to ineffective domestic law, and easy internationally due to effective foreign law.[19]

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[18] Thanks to Kenneth Leonard for this example, which is inspired by Marcel Fafchamps, Market Institutions in Sub--Saharan Africa: Theory and Evidence (MIT Press, 2005). Especially see page 59.

[19] Thus local business flourishes, national business stagnates, and international business flourishes. See Dixit, A. K. (2004), “Lawlessness and Society, Alternative Modes of Government”, Princeton, N. J. et al., Princeton University Press. pp. 125. Also, the World Summit 2005, High level Plenary meeting 14-16 September 2005, Tunis, Building Momentum to End Poverty characterizes developing countries as being “crippled by weak internal markets”.

Relational contracting at a distance creates profitable opportunities for "middlemen" to complete the sales chain.[20] Thus the merchant in Dar es Salaam in the preceding example may find a relative in Mwanza to serve as middleman for local retailers. By establishing enduring relationships with buyers and sellers, middlemen can trade over distances without enforceable contracts, as shown by studies of Ghana,[21] South East Asia[22], and overseas Chinese.[23]

Middlemen perform a valuable service by moving goods from people who value them less to people who value them more.[24] However the public, which does not appreciate this fact, asks "How can they get wealthy without making anything? They must be up to something crooked!" In weak legal systems, middlemen often belong to relatively small, ethnic minorities, like Indians in black Africa, Arabs in Mexico, and Chinese in Papua New Guinea. As middlemen, such a group builds trust among its members and provokes distrust among outsiders.

### *Private Contracts and Civil Sanctions*

No one has enough relatives, friends, or repeat customers to achieve the scale of economic activity required for affluence. Relational contracting narrows the scale of cooperation, reduces competition, and fails altogether in one-time transactions or high-value transactions. Rather than just relying on social sanctions, people need the state's help to commit to keeping their promises.

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[20] E. Z. Gabre-Madhin (2003), Of Markets and Middlemen: Transaction Costs and Institutions in the Ethiopian Grain Market, the World Bank, Working Paper, pp. 1-39.

[21] Fafchamps, F. (1996). "The Enforcement of Commercial Contracts in Ghana". World Development, Elsevier Science, Vol. 24, No. 3, pp.427-448 (22*)*

[22] Redding, G. (1990). "*The Spirit of Chinese Capitalism".* Berlin, de Gruyter.

[23] (Bayly 1983) Fafchamps, M./ Gunning, J. W./Oostendorp, R. (2000). "Inventories and Risk in African Manufactoring", Malden Mass. et. al., Blackwell Publishing, *Economic Journal.* Vol. 110: 861- 893. J.T. Landa (1981) A Theory of the Ethnically Homogenous Middleman Group: an Institutional Alternative to Contract Law, The Journal of Legal Studies 1981,10,2, pp. 349, Chicago.

[24] Here's an example: Li, who lives in a small town near Wuhan, has a Xiali automobile in good repair. The pleasure of owning and driving the car is worth $3,000 to Li. Wu, who has been coveting the car, inherits some money and decides to try to buy the car from Li. After inspecting the car, Wu decides that the pleasure of owning and driving it is worth $4000 to her. A sale will transfer the automobile from Li who values it at $3,000 to Wu who values it at $4,000. The gain of $1,000 is surplus from the exchange. In general, voluntary exchange creates a surplus by moving a resource from a lower valued use to a higher valued use.

Economic development must extend the sphere of cooperation beyond relationships to encompass strangers.[25] When dealing with strangers, social sanctions are not enough protection from unreliable, careless, unlucky, mistaken, confused, or misleading promises, as well as from dissemblers, liars, rationalizers, frauds, and cheats.

We use "private contract" to refer to those promises where the victim of breach can obtain a remedy from the promise-breaker in a state court or similar body.[26] Unlike relational contracts, the remedy for breach of a private contract is a state sanction, not just a social sanction. Effective private contracts enable strangers to commit to doing what they say, so strangers can cooperate even when significant money is at stake. Conversely, private contracts are ineffective when the threat of a state sanction does not give most self-interested people sufficient incentive to perform as promised. We will describe some defects in the law of private contracts that especially afflict poor countries and inhibit cooperation in business.

Written contract law in developing countries mostly resembles written contract law in developed countries. For contract law-on-the-books, Mexico and Columbia resemble Spain and France, India and Nigeria resemble England, and Taiwan, China, and Korea resemble Germany. The writing is more similar than

[25] This is a central theme in Douglas North's many influential writings on develop economics and institutions. For example, see Douglas North, Structure and Change in Economic History (New York: Norton 1981); Douglas North, Institut

ions, Institutional Change and Economic Performance (Cambridge: Cambridge University Press 1990).

[26] Our usages is consistent with the meaning of "private law," which traditionally refers to those bodies of law that enable individuals who suffer harm to obtain a remedy from the injurer in a state court or similar body.

its application. Application of law causes the most important differences in the effectiveness of contract law in different countries.

Before becoming Germany's greatest poet, Johann Wolfgang von Goethe worked as a lawyer at the Imperial Court in 1771 where he saw "a monstrous chaos of papers lay swelled up and increased every year." Some legal cases remained on the docket for more than 100 years, and one case filed in 1459 was still awaiting a decision in 1734".[27] When someone breaks a contract and the victim seeks a state remedy, delays can occur at each stage in the legal process – filing a legal complaint, discovering the facts, settling or litigating, appealing a decision, and enforcing a judgment against the defendant. Slow, uncertain legal processes cause a rational person to discount the court's remedy, like a ten-year junk bond.

For example, assume that a Mexican borrows 10,000 pesos from a bank and promises to repay 1,000 each month for 12 months. Having received the loan, the borrower makes 8 monthly payments and then stops paying when he still owes 4,000. The bank must go through legal proceedings to collect it. If the legal process is too slow and uncertain, the bank may give up without trying. Foreseeing the outcome, banks stop making such loans.[28] With deep discounting of remedies, state law cannot empower people to commit to keeping their promises.

Is this hypothetical example typical? Using survey data collected by the World Bank, Figure 6.2 ranks countries according to the number of days required to enforce a contract by means of a lawsuit. Interpreting this data requires caution.[29] The data apparently show large differences around the world that correlate roughly with per capita income. The countries in the first column with

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[27] See World Bank/Djankow, S./Klein, M. U./International Finance Corporation (2004 ), "Doing Business (2004)", New York, World Bank and Oxford University Press, World Bank Publications, p. 65.

[28] Debt collection was the first topic of discussion raised by members of the Mexican Supreme Court with Cooter in 2002.

[29] The first reason for caution is that the measure of speed in the survey is imperfect. Some countries like the USA or the UK have small claims courts with a streamlined and swift procedure, and only large claims go to the ordinary courts. The second reason is that speed of resolution says nothing about its quality. A court can decide a case in no time by flipping a coin.

enforcement delays of less than 415 days are disproportionately high-income countries (except for some misleading cases[30]). Conversely, the countries in the third column with long delays exceeding 590 days are disproportionately low-income countries.

**Figure 6.2. Time in Days to Enforce a Contract By Means of a Suit**

| Short Delays | | Medium Delays | | Long Delays | |
|---|---|---|---|---|---|
| **Country** | **Days** | **Country** | **Days** | **Country** | **Days** |
| Singapore | 150 | Turkey | 420 | Bolivia | 591 |
| New Zealand | 216 | Peru | 428 | South Africa | 600 |
| Belarus | 225 | Nigeria | 457 | Czech Rep | 611 |
| Korea | 230 | Kenya | 465 | Morocco | 615 |
| Hong Kong | 280 | Chile | 480 | Brazil | 616 |
| Russia | 281 | Belgium | 505 | Ethiopia | 620 |
| Vietnam | 295 | Sweden | 508 | Algeria | 630 |
| USA | 300 | Venezuela | 510 | Botswana | 687 |
| France | 331 | Taiwan | 510 | Uruguay | 720 |
| Ukraine | 345 | Romania | 512 | Greece | 819 |
| Japan | 360 | Netherlands | 514 | Poland | 830 |
| Finland | 375 | Ireland | 515 | Philippines | 842 |
| Denmark | 380 | Spain | 515 | Israel | 890 |
| Germany | 394 | Iran | 520 | Pakistan | 976 |
| Australia | 395 | Portugal | 547 | Egypt | 1010 |
| Hungary | 395 | Rep. Congo | 560 | Italy | 1210 |
| Austria | 397 | Bulgaria | 564 | Colombia | 1346 |
| UK | 399 | Canada | 570 | India | 1420 |
| China | 406 | Indonesia | 570 | Bangladesh | 1442 |
| Switzerland | 410 | Malaysia | 585 | | |
| Mexico | 415 | Argentina | 590 | | |

Source: Doing Business Data, World Bank, 2010.

Besides delays, another defect is vague laws with unpredictable consequences. Art. 7 of the Chinese Civil Code stipulates that

> ”In concluding or performing a contract, the parties shall abide by the relevant laws and administrative regulations, as well as observe social ethics, and may not disrupt social and economic order or harm the public interests”.

[30] The misleading cases are China, Vietnam, Russia, and Belarus. These cases are misleading because central planning traditionally required courts to meet their quota of decisions, just like farms and factories had to meet their production quotas. Because of this tradition, cases are decided quickly in these countries, which is admirable. However, the quality of the decisions is allegedly low, much like the quality of goods supplied to meet production quotas.

Is there any private activity that some official would not construe as violating Art.7? If you are the victim of breach of contract, instead of suing, you might prefer to keep your head down and hope the authorities do not scrutinize your business to see whether your activities harm ethics, social order, or the public interest. Indian law does better. Section 23 of the Indian Contract Act regards any contract as void if it "would defeat any provision of law… or the Court regards it as. …opposed to public policy."[31] Although open ended, at least this proposition refers to laws and policies, rather than ethics, social order, or public interest.

The problem of legal vagueness has no simple cure. Like most bodies of law, the law of contracts navigates between precise rules that have the advantage of predictability, and imprecise principles that have the advantage of flexibility. Thus an imprecise contract principle in civil law is "good faith" (bona fides) and it's opposite "bad faith" (exceptio doli generalis). Acceptance of the good faith rule has spread across civil law countries in recent decades.[32] Using "good faith," German judges can alter almost any aspect of a contract that they regard as dishonest, unfair, unreasonable, or bad for business. They can impose an obligation not stipulated in the contract, set damages to under-compensate the victim, set damages to over-compensate the victim, fix specific levels of due care, create a duty to disclose information, or render a contract void. (In some other countries, the judges use the principle of good faith more cautiously.[33])

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[31] See Pratapchand Nopaji vs. Kotrike Venkatta Setty & Sons and Ors, *Civil Appeal Nos.* 2382-2384 of 1968, decided on 12.12. 1974. Note that this is consistent with the common law tradition of courts refusing to enforce promises to perform criminal acts or promises by a citizen to pay a state official for performing his official duties.

[32] The "good faith" principle is part of Holland's new Civil Code of 1992. It was also introduced in Canada. Ejan, M./Leblanc, V./Kost-de Sèvres, N./Darankoum, E. (2003), « L'économie de la bonne foi contractuelle », in: *Pineau,J./* Moore, B. (ed.), 2003, « Mélanges Jean Pineau « Montréal, Éditions Thémis, 421-459. The so-called Lando Principles, a European model contract law, include "good faith". The USA included "good faith" in the Uniform Commercial Code in 1981 and in the Restatement of Contracts (second). The United Nations Convention on Contracts for the International Sale of Goods (CISG) of 1980 introduced it in Art.7. The same applies for the private international law of merchants, the UNIDROIT principles. Brazil included it into contract law in a legal reform of 1990.

[33] See examples in Zimmermann, R./Whittaker, S. (ed.), 2000, "Surveying the legal landscape in Good Faith in European Contract Law" Cambridge (et al.), *Cambridge University Press*.

At the polar opposite from Germany, English judges follow the common law tradition and reject the principle of good faith.[34] They defer more strictly to the explicit terms written into the contract.[35] This fact marks a difference between contract litigation in Frankfurt and London. Recent papers in development economics get the difference backwards.[36] These influential papers characterize civil law as formalistic and inflexible, and common law as informal and flexible. This characterization will surprise German judges in Frankfurt who apply the civil law principle of good faith so flexibly, and it will surprise English judges in London who reject the principle of good faith and interpret contracts literally. As the principle of good faith diffuses to developing countries, we cannot detect a difference in its acceptance that depends on the country's civil or common-law origins.[37] We believe that formality and flexibility depend on the way a nation has developed its legal heritage, not whether it began with civil or common law.

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[34] Note, however, that "good faith" was introduced in Britain through the back door by the European directive on unfair terms in consumer contracts.

[35] In Walford v. Miles, the British House of Lords rejected the principle as being inconsistent with the adversarial position of the parties Miles, W. v.(1992), 2 W.L.R. 174, at 181 (H.L.). English judges favor more specific rules like "implied terms", "misrepresentation", "fraud", "custom" and "usage. The difference between German and English interpretation of contracts affect their length. Frankfurt bankers write short contracts that refer to the principle of good faith. Longer contracts are unnecessary because German judges interpret the terms flexibly. In contrast, London bankers write long contracts because English judges interpret the terms literally, so the contract must provide explicitly for all contingencies.

[36] La Porta, R./Shleifer, A./Vishny, R. W./Lopez De Silames, F. (1998), „Law and Finance", Journal of Political Economy, Chicago, University of Chicago Press, Vol. 106, No. 6

[37] The Russian Supreme Court seems reluctant to develop civil law along general principles of fairness. See Kozlov, V. B. (1996), "The New Russian Civil Code of 1994", Rome *http://w3.uniroma1.it/idc/centro/publications/21kozlov.pdf., pp.* 1-30. Kozlow writes about abstract priciples of justice: "These principles are not expressly mentioned in the Civil Code and the Russian judiciary has in great many cases demonstrated its unwillingness to apply and develop them in Russia., ibid. p. 25.

In contrast, the Chinese Contract Law of 1999 recognizes the "good faith" principle, but Chinese courts have not yet applied this new principle. Zheng, Q. (2000), "A Comparative Study on the Good Faith Principle of Contract Law", *Unusuniversus*, 38-65. http://www.iolaw.org.cn/en/art2.asp.

Brazil adopted "good faith" in a reform of 1990, but a survey for Brazil indicates "excessive formalism" as one of the main causes for distrust in courts, which suggests that the principle of good faith has not been used very well. Dakolias, M. (1999), "Court Performance around the World", *World Bank Technical Paper*, Washington D. C., World Bank, 1-72.

In India, the Supreme Court used the good faith principle 731 times from 1950 to March 2007, according to the Manupatra data base.

Vague, flexible principles like "good Faith" can be compared to a Lamborghini automobile -- the fastest car demands the best driver, or else expect a crash. High quality judges have good educations, understand business, refuse bribes, and resist political influence. They can make good use of discretion by interpreting contracts flexibility. Conversely, when judges fall short on quality and independence, formalistic rules will work better than flexible rules. Indian law apparently recognizes this fact. The judges in India's Supreme Court and the High Court, who are well educated and independent, have authority to use the principle of good faith to develop law. In contrast, the lower courts judges, who are poorly educated and too often corrupt, are not allowed to use the principle of good faith to develop law.[38] Formality insulates Indian litigants against the quirks of lower court judges. Formality can also insulate judges against political pressure. Making the courts follow formal laws has an advantage in states like Russia where politicians interfere with judges in private disputes.

Next we consider a special problem in developing countries concerning remedies for breach of private contracts. The usual court remedy for breaking a contract is money damages.[39] Collecting money damages from poor people, however, is often impractical -- they cannot pay, or they have no bank account to garnish wages, or their wages are unrecorded and improvable, or their wealth is hidden, or their property is inseparable from their relatives' property. According to a recent estimate, roughly eleven per cent of the population is in this situation in rich countries, and the proportion is much higher in poor countries.[40] The

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[38] Article 141 of the Constitution of India "The law declared by the Supreme Court shall be binding on all courts within the territory of India". A similar solution giving more but not full authority to lower courts could allow a lower court judge to present the case to the Supreme Court, if the judge believes, that the law contradicts the principle of good faith. Referral is the procedure in the European Union where every national court can refer a case to the European Court of Justice.

[39] The economic analysis of contract law has taken great pains to work out differences in the incentive effects of alternative measures of damages. For an overview, see Cooter, R./Ulen, T. (2007), "Law and Economics", 5th edition, Boston Mass. (et al.), Pearson Addison-Wesley, chapters 6 and 7, or see Schaefer, H.-B./Ott, C. (2004) "The Economic analysis of Civil Law", 1st edition, London, Eward Elgar,, chapter 13

[40] In rich OECD countries 11 percent can be regarded as judgment-proof because they receive an income that is half the median income or lower. Förster, M./ d'Ercole, M. M. (2005) "Income Distribution and Poverty in OECD Countries in the Second Half of the 1990s", OECD Social Employment and Migration Working Paper No. 22, OECD Directorate for Employment, Labour and Social Affairs, Paris. The proportion of people living in absolute poverty, defined as less than

inability to collect money damages from poor people stops them from making legally effective contracts, which erodes their ability to cooperate with strangers. In some countries, courts aggravate the problem by deciding contract disputes in favor of the poorer party, regardless of the case's merits. Thus Brazilian courts sometimes use the constitution doctrine of the "social function of contract law" to refuse enforcement of contractual obligations of poor people.[41] This practice inhibits people from contracting with those who are richer than themselves. It is a sharp punishment disguised as a reward, like contaminated cream.

Besides poor defendants, money damages require pricing broken promises, which can be difficult or impossible. To illustrate, assume that someone pays her neighbor for a used refrigerator and the seller fails to deliver it. To award money damages, the court will have to determine the used refrigerator's market value. The quality of used refrigerators varies and the court cannot inspect it. Or, even worse, perhaps price controls, import licenses, multiple exchange rates, and buying privileges cause people to queue for refrigerators. When meaningful prices are not public, courts have difficulty getting the information needed to assess money damages. (Money damages have other problems that we will not discuss.[42])

These difficulties with money damages suggest that courts in poor countries should look for an alternative remedy for breach of contract. What other remedies are there? The other leading remedy is a court order requiring the defendant to perform as promised ("specific performance").[43] Defendants

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1.25 Dollars a day, averaged 23% in low and middle income countries (in 2005), and these people are certainly judgment-proof. World bank, World Development Indicators (2009)

[41] Luciano Benetti Timm, "The Social Function of Contract Law in Brazilian Civil Code: Distributive Justice Versus Efficiency," presentation at the Annual Meeting, Latin American and Caribbean Law and Economics Association (ALACDE), Pompeu Fabra University, June 16, 2009.

[42] Another problem concerns corruption. The judge can vary damages continuously, which helps to disguise corruption and bribes. Thus the defendant might pay the judge a bribe equal to ten percent of the stakes in the case and the judge might reduce damages by twenty percent. In general, money damages facilitate corruption of courts. Compared to money damages, specific performance makes disguising corruption harder. We thank Henrik Lando for this insight.

[43] According to legal theory, the basic remedy in civil law countries for breach of contracts is specific performance, and the basic remedy in common law countries is expectation damages, but one legal system almost always apply the same remedy as the other in the same circumstances.

usually comply with court orders because defying them can ripen into the crime of contempt of court. In some circumstances, however, performance is infeasible. To illustrate, a contractor cannot meet a deadline that has already passed, and a seller cannot deliver a refrigerator that it already shipped to someone else. When performance is impossible as in these examples, a court order to perform is pointless.

However, cases often arise in which specific performance has fewer problems than the damage remedy. If the court orders the defendant to perform as promised, the court obviously does not have to collect money from the defendant or determine the market value of performance. In the refrigerator case, the court can order the seller to give the refrigerator to the buyer as promised. To execute this order, a policeman may need to find the refrigerator, which is probably easier than finding the money paid for it.

We have explained that poor defendants and thin markets tilt the preferred remedy for breach of contract towards specific performance when it is possible, and away from money damages. Thus legal scholars in communist countries where markets were thin associated "socialist contract law" with specific performance, whereas money compensation belonged to "capitalist contract law."[44] Conversely, as an economy becomes more commercialized and monetized, thicker markets and liberalized prices tilt the preferred remedy for breach of contract towards money damages. Thus European countries that replaced communism with capitalism after 1989 moved towards money damages and away from specific performance, and China has apparently done the same.[45]

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[44] In the planned economies of socialist countries, stores sold goods at official prices, but the goods were in short supply. A person with money might not be able to find anyone willing to sell a good at its official price. People got into the end of a line to buy things in Soviet Russia, according to many jokes, without knowing what was for sale at the front of the line. Little wonder that, instead of compensation at official prices, communist enterprises preferred specific performance as the remedy for broken contracts. Yu, Y. (1986), "The Evolution of Contract Law in China: Comparisons with the West and the Soviet Union", *Studies In Comparative Communism*, Guildford, Butterworths, Vol. 19, Issues 3-4, 193-212.

[45] The traditional rule was specific performance. The contract law reform of 1999 includes damages and specific performance and leaves the choice at the discretion of the plaintiff. Zhu, N. (2005), "A Case Study of Legal Transplant: The Possibility of Efficient Breach in China", Georgetown Journal of International Law, Washington D. C., Law Center, Vol. 36, p. 1145.

### *Public Contracts and Regulatory Sanctions*

We have explained that private contracts enable strangers to cooperate by making commitments to do what they say. Private contracts widen the scale of cooperation compared to relational contracting. Sometimes, however, people gain by going beyond private bargains and exchanging on public markets. Thus grocers in Old Delhi bazaars compete vigorously to sell rice, wheat, peas, nuts, spices, fruits, cookies, bottled drinks, and other foods. Traditional Indians do not trust the quality of pre-packaged food. A bag of rice might contain stones to increase its weight, a bag of peas might contain rat feces, or fruit might be old. Food is sold in open bags or piled on counters so buyers see and taste it.

Instead of seeing and tasting the food, repeat dealings with the same sellers could protect buyers against hidden defects. To build loyalty, sellers would not sell impure, unclean, or spoiled food to their repeat customers. Instead of repeat dealings, however, most consumers in Old Delhi apparently prefer to buy from the seller who offers the best price that day.

Unlike Old Delhi, supermarkets sell pre-packaged and pre-weighed foods. Regulators punish sales of impure, unsafe, unhealthy, falsely labeled, or under-weighed food. To avoid complaints to regulators, many sellers give disgruntled consumers a replacement or their money back. When regulations sustain the purity, safety, health, truthfulness, and accuracy of weights and measures, buyers can focus more on getting the best price, not on who is making the offer.

Failed regulations for food can have tragic consequences as Chinese consumers recently experienced. At least 13,000 Chinese children were hospitalized and 4 died in 2008 because Chinese regulators closed their eyes to adulterated baby food, milk, and yoghurt. Consumers of imported food in Taiwan, Japan and Singapore were also affected.[46] After such an experience,

[46] See www.msnbc.msn.com/id/26901721/ last visited Sept. 30 2008.

how long will parents wait before they trust these sellers enough to buy from them again?

We have discussed foods where sellers know more about quality than buyers. The gap in information between sellers and buyers is wider and harder to close for complicated contracts like insurance, loans, mortgages, and employment. People who buy health insurance must trust that their insurer will reimburse reasonable claims, lenders must trust that borrowers will repay their loans, stockholders must trust that firms have honest audits, and employees must trust managers of their pension plan. (Note that important advances in economic theory in recent decades explain how differences in the information of buyers and sellers affect markets.[47])

Regulators can increase competition in these markets by enforcing standardized terms. When law standardizes terms, one seller cannot mean something different from another who says that a basket contains 2 kilograms of rice, and one company cannot mean something different from another who tells an investor that the company's books have been audited. With standardization, buyers can easily compare offers from many sellers. Thus buyers purchase stocks from the cheapest seller on the Singapore stock exchange. Without standardization, buyers and sellers need to negotiate, as often happens when a Singapore business borrows from a local bank.

We have explained that standardized contract terms and regulations can increase competition by reducing the information gap between buyers and sellers. More trust by buyers enables them to focus on getting the best price, not on who is making the offer as in relational contracting, and not on differences in non-price terms as in private contracts. When the legal system strengthens,

[47] The Nobel Prize committee acknowledged this fact in 2001 by awarding the prize jointly to three pioneers of information economics -- George A. Akerlof, A. Michael Spence, and Joseph E. Stiglitz.

people buy more packaged food, health insurance, stocks, refrigerators on credit, and so forth.[48]

Markets approximate the model of "perfect competition" when buyers and sellers compete over price. To focus on price competition, the quality of the goods must be uniform in the market. Thus firms can compete over the price of coal more easily when buyers correctly believe that all coal sold as "grade A" has the same quality. Most goods, however, differ in quality. They are naturally heterogeneous. Inducing a high level of price competition requires standardizing the quality of the goods that affect the non-price terms of contracts, such as weight, color, freshness, promptness, guarantees, warranties, risks, insurance, liabilities, services, and so forth.

When non-price terms are standardized, buyers and sellers can focus on competing over price. Conversely, unique non-price terms blunt price competition. Markets for unique goods are "illiquid" because they are not readily sold. To illustrate concretely, financial institutions in New York created idiosyncratic bundles of mortgages called "derivatives" with individually negotiated prices. When the U.S. financial system collapsed in the fall of 2008, banks that suddenly needed cash to pay their debts could not readily sell their derivatives. The illiquidity of derivatives tightened the credit squeeze on financial institutions that needed to raise cash quickly. Without public prices, the banks did not even know how much value their derivatives had lost.

The phrase "public market" usually refers to markets where many people freely buy and sell goods at known prices. Price competition and liquidity characterize public markets. Our concern is with the legal pre-requisites for price competition and liquidity. The legal prerequisites include standardized non-price terms in contracts. Sustaining standardization requires` legal support, including

[48] For access to health insurance see WHO, World Health Report (2005) Statistical appendix. For access to banking data are scattered and depend on household surveys. For access to formal banking see S. Claessens (2005) Access to Financial Services:A Review of the Issues and Public Policy Objectives, World Bank Policy Research Working Paper Series No. 3589.pp. 1-38. In the USA this quota of banked persons was 91 per cent (2001), in India 47 per cent (2003), in China 42 per cent (1997) in Brazil (urban areas) 43 per cent (2003) and in Pakistan 12 per cent (1991), See Statistical. Appendix , Table 1.

mandatory legal rules and some regulations policed by judges and administrators. We refer to the contracts that sustain public markets as "public-market contracts" or simply "public contracts." (These terms have other meanings that we pass over.[49])

### *Gray Contracts*

We have explained how regulations contribute to the legal foundation of competitive markets. Now we turn to the opposite – choice-choking regulations that retard contracting. In Great Britain in the 1960s, running the trains required disobeying many regulations. The railroad unions, consequently, could shut down the rail system for a few days by following all of its rules. "Work-to-rule," as it was called, was a mini-strike that paralyzed the railroad system. Similarly, businessmen and workers must violate many regulations in order to get things done, especially in poor countries. Thus a builder in Cairo violates building restrictions, a worker and employer in Brazil evade employment taxes, and a manufacturer in Russia runs a factory without a permit to do business.

Throughout the world, much of the economy operates in the "grey market" between the "white market" of legality and the "black market" of criminality, especially in developing countries. A survey of 145 countries estimated that gray markets activities produce between 30% and 40% of GNP (gross domestic product).[50] The gray market's share of total employment is even higher than its share of GNP.[51] The gray market would be even larger if legal uncertainty were reduced for gray contracts. Judges in some developing countries believe that legal doctrines require them to refuse to enforce gray contracts.[52] Even when

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[49] Another usage of "private" and "public" contrasts non-state and state activity. Thus a "public contract" might refer to a procurement contract with the government . In Germany the phrase "public contract" also refers to a very special kind of contract in which an official government body contracts with a private person on a subject of public law, such as relaxing a regulation. The German phrase is "oeffentlich-rechtlicher Vertrag."

[50] Schneider, _F. (2005) "The Size of Shadow Economies in 145 Countries from 1999 to 2003", IZA, Discussion Paper No. 1431

[51] This follows from the fact that the informal sector produces less per worker than the formal sector.

[52] One such doctrine is the principle of void for illegality. See See Hay, J. R./Shleiffer, A./Vishny, R. W. (1995), "Toward a Theory of Legal Reform",

judges will enforce gray market contracts, the parties may be unwilling to sue in public courts. When a gray market business goes to court, officials may notice that some of its operations violate regulations. The plaintiff often loses more by bringing himself to the attention of government regulators than he can win in a civil suit. Gray-market businesses shun civil courts because their contract might be void and the state may prosecute them for regulatory violations.[53]

Unlike many developing countries, German legal doctrine and practice avoid this result. German regulatory violations seldom void contracts, and German prosecutors seldom act on regulatory violations revealed in a civil trial. Thus a gardener in the German gray market who does not pay taxes can sue an employer for unpaid wages without fear of triggering an investigation by tax collectors. And a customer who buys a restaurant meal at an hour when law requires the closing of restaurants still has to pay his credit card bill. The same applies to a construction contract that violates zoning regulations, or a credit contract that violates banking regulations. Although seldom discussed in constitutional law, separating the civil courts from the regulators and police is an important part of the separation of powers, especially in countries with a large gray market.

### *Conclusion*

The last two chapters concern property and contract law, which provide the legal foundation for markets. The chapter formulated the property principle for innovation: People who create wealth can keep most of it. Successful implementation of the property principle gives people motivation to make wealth, not to take it. Besides motivation, making wealth requires coordinating the efforts

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*http://post.economics.harvard.edu/faculty/shleifer/papers/TheoryLegalReform.pdf*, pp. 1-13. Another such doctrine is "ultra vires" -- e.g. the doctrine is void unless firm's corporate charter authorizes the activity in question. In the gray market, the firm has no charter, or it has a charter that deliberate makes no reference to its gray market activities, or the state deliberately issues charters that do not encompass all of the company's foreseeable activities. Thus the manufacturer of a cement mixer may be unable to enforce a sales contract with a fitness studio because the latter's charter does not encompass mixing cement.

[53] Hay, J. R./Shleiffer, A./Vishny, R. W. (1995), "Toward a Theory of Legal Reform", *http://post.economics.harvard.edu/faculty/shleifer/papers/TheoryLegalReform.pdf*, pp. 1-13.

of different people. This chapter concerns the contract principle for economic cooperation: The law should enable people to commit to doing what they say. When this principle is implemented, people can trust each other enough to work together, even when money is at stake.

Taken together, the property principle and the contract principle provide motivation and coordination for economic activities. Innovation is the central economic activity for sustained growth. Developing a new idea requires innovator and investor to overcome their distrust, which we called the double trust dilemma. In the first stage of finance in Silicon Valley, immeasurable risk[54] and unobservable activity are so great that explicit contracts are infeasible, so relational contracting dominates. As development of the innovation proceeds in the second stage, risk falls, cooperation extends to more strangers, and the parties rely more on private contracts with explicitly negotiated terms. Finally, when the innovation diffuses in the third stage, finance encompasses a broader public, which requires more standardization and regulation of contracts as with stocks and bonds.

The three stages in a startup firm resemble stages in a nation's development of effective contract law. More effective laws shift the proportion of activities from relational contracts to private bargains, and from private bargains to public markets. The shift towards more law-intensive forms of exchange widens the sphere of cooperation, which quickens the pace of creating and assimilating innovations.

[54] Uncertainty was defined as immeasurable risk in F. Knight's classic, Risk, Uncertainty, and Profit (New York: Houghton-Mifflin, 1921).

# Chapter 8

# Giving Credit to Credit – Finance and Banking

In Afghanistan the wives of Pashtu herdsmen traditionally wear heavy silver bracelets to show off their beauty and to store the family's savings. Robbing a woman provokes clan revenge feared by thieves, so women are good protectors of wealth. In India poor people developed another way to save — the "chit fund." A small group of friends, say 12 of them, agree to meet each month for a year. At the first meeting in January, each one contributes $10 into a pot, receives a chit, one chit is drawn at random, and the winner gets the pot of $120. In February the 12 people repeat this process, except January's winner is ineligible to win. The process repeats itself each month until December, so everyone wins $120 exactly once. The monthly winner uses the money for a relatively large purchase – a bicycle, seed corn, a refrigerator, a television, or a wedding.

How do silver bracelets and chit funds differ? The silver bracelets do not produce anything, like gold buried under the floor. In contrast the chit fund produces something. To see why, suppose each of the 12 individuals buried $10 under the floor each month. At the year's end, all 12 of them would have $120. In contrast, by forming a chit fund, 11 people get $120 before the end of the year and 1 person gets $120 at the year's end. So the chit fund makes 11 people better off and 1 person no worse off than burying the money.[1] The chit fund creates credit, which enables its members to spend sooner rather than later.

Some of the money that they spend goes to investment. Perhaps someone in the chit fund buys "miracle rice" for a better harvest, or a refrigerator to sell kebabs on the street, or a bicycle for a messenger service. So credit can create more rice, kebab, and messages. The chit fund's capital is economically alive, whereas capital in bracelets is economically dead

[1] In economic jargon, this is a "Pareto improvement."

Given the profitability of lending, why would anyone bury wealth instead of loaning it? Loans risk non-payment. Thus the person who wins the chit fund's pot of $120 in January may refuse to contribute the $10 that he owes in February. Members of the chit fund trust each other enough to take this risk. Perhaps the Pashtu herdsman has no such group of people who trust each other enough to form a chit fund. In any case, financial organizations from a village chit fund to the Deutsche Bank finance investment by collecting savings, creating credit, and loaning or investing the money. These are core activities of banks. How important are they to economic growth? A famous economist named Joan Robinson said, "Where investment leads, finance follows." This phrase suggests that financiers will find their way to innovators like ants find a picnic. Influenced by this thought, most textbooks on development economics neglect finance and financial law,[2] which does not give credit to credit. In fact, investors come to innovative ideas like a man and a woman come to marriage – with caution and fear. Risk is great because the stakes are high: The investor fears losing his money and the innovator fears losing her idea. This is the "double trust dilemma" as explained in Chapter 3.

The tectonic plates of the world economy shifted twice in the last fifty years: Once when central planning collapsed after 1990 in the former Soviet Union, and once in 2008 with the near-collapse of the world's financial system. The after-shocks of the financial crisis continue, notably in the Euro-crisis that began in 2010. Banks do not just make a few people rich by moving paper money around in obscure ways. When the financial system works, economies grow, and when the financial system fails, economies decline. With competition and a good regulatory framework, banks search relentlessly for the most profitable investments. With little competition or a bad regulatory framework, banks fail to finance profitable innovations, or, even worse, banks destabilize the economy. The efficiency and creativity of the banks in a developing

[2] For a review, see R. Levine (1997), "Financial Development and Economic Growth." Journal of Economic Literature, 35(2), 688-726. Also see Rajan, R. and L. Zingales (1998a), "Financial Dependence and Growth", American Economic Review, 88, pp.559-586; Rajan, R. and L. Zingales (2001), "Financial Systems, Industrial Structure, and Growth", Oxford Review of Economic Policy, 17, pp.457-466; Mark J. Manning, "Finance Causes Growth: Can We Be so Sure?," Contributions to Macroeconomics: Vol. 3, Article 12 (2003).

country significantly affect its rate of economic growth.[3] We will review evidence about why banking organizations are so necessary to growth and then explain their legal underpinnings.

### *Relational Banking*

Chit funds, cooperative banks, and similar organizations played an important historical role in rich countries and they continue to play that role in poor countries. More than 20% of the people in poor countries live from less than a $1 per day and more than 50% live on less than $2 dollars per day.[4] If these people had the ability to borrow money, some of them would invest in agriculture, small business, or education, where the rate of return is high.[5] The poorest people, however, cannot borrow from a bank because they have no regular income and they own nothing to pledge as security.[6] They live outside the formal banking system. According to a recent estimate, between 50% and 85% of Latin America Americans live outside the banking system and lack access to bank credit.[7]

For credit, the poorest people must rely on informal organizations like the chit fund.[8] Chit funds originally developed spontaneously among friends and relatives without state approval, encouragement, or subsidies. Social norms originally controlled

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[3] Bank development and stock market liquidity are good predictors of future economic growth in a developing country. See Robert King & Ross Levine, Finance and Growth: Schumpeter Might Be Right,108 Quarterly Journal of Economics 717-737 (1993), Raghuram Rajan & Luigi Zingales, Financial Dependence and Growth, 88 American Economic Review, 559-586 (1998).]

[4] World Bank, World Development Indicators, 2005, Table 2.5.

[5] Empirical evidence on the rate of return for credits given to the poor is still scanty, but shows high average rates. A field survey based on 133 credits to small peasants in the Philippines found an average rate of return of 117 percent. Financing of mobile phones yields a very high return. M.Hossain/C.P.Diaz (1999) Reaching the Poor with Effective Microcredit: Evaluation of a Grameen Bank Replication in the Phillipines (working paper). Investment in schooling in poor countries yields a higher private rate of return than the historical average for investment in the stock market.

[6] "Money says the proverb, makes money. When you have got a little, it is often easy to get more. The problem is to get that little" Adam Smith (1776), The Wealth of Nations, reprinted 1983, p. 195

[7] Figures for the quota of unbanked adults at the turn of the century were Brasil 57,2%,Colombia 58,8%,Ecuador 66%,México 75, Perú 80%, F.P. Sanz,(2007)

[8] A general name for these organizations is "rotating savings and credit associations" or "roscas." Specific names vary from one country to another. For example, for Palestineans the name is "jam'eyah" (جمعية), and for Koreans the name is "gae."

them, not state law. These organizations use personal relationships and group responsibility to collect debts. Unregistered chit funds that serve the poorest people remain uncounted and unregulated by Indian state law. Chit funds at this early stage resemble relational finance in Silicon Valley as described in Chapter 2.

To create more credit, chit funds in India evolved and stretched beyond friends to encompass acquaintances, which increases the risk of nonpayment. To contain risk, members form a club and screen applicants for trustworthiness before allowing them to join. The club may hire a professional to organize and operate the chit fund in exchange for a commission. Dealings with a professional manager require contracts. The expansion of chit funds from friends to clubs resembles the movement in Silicon Valley from relational to private finance described in Chapter 2.

The evolution of chit funds, however, did not stop with clubs. Indian companies that organize chit funds have become so large that they resemble commercial banks. They offer different chit funds with different terms, evaluate the credit-worthiness of applicants, charge commissions, and assume responsibility for non-paying members.[9] After chit funds evolved to include strangers, laws were enacted to regulate them. Large chit funds must register and comply with state regulations. The movement among chit funds from clubs to regulated markets resembles the movement in Silicon Valley from private to public finance described in Chapter 2. Regulations ideally improve chit funds by suppressing fraud and increasing the trust that consumers have in them. In 2005, non-banking financial institutions in India accounted for 6.5 percent of total assets in the financial sector, and registered chit funds are prominent among them.[10]

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[9] As they grew, chit funds adopted a better method than a random draw to choose the winner of the pot to buy cars and houses. Some chit funds auction the pot, like a bank offering a loan to the person who pays the highest rate of interest. To illustrate, if the pot is $120 in January, members can bid to for it by offering to take less than $120, and the lowest bidder wins. The winner in January might offer to take $108, in which case $12 remains in the pot, which can be divided among the members with each receiving $1, like interest on a loan. India's Chit Fund Act of 1982 set a limit of 30% on the amount that could be bid for the pot, like a prohibition on usury. See Eeckhout, J. and K. Munshi (2002). "Institutional Change in the Non-Market Economy: Endogenous Matching in Chennai's Chit Fund Auctions." Working Paper, University Pennsylvania, Department of Economics.

[10] India nationalized many of its banks in 1969 and 1980, which caused a surge in non-bank financial institutions like chit funds. In recent years, banking activity has shifted from non-banks to banks in response to less regulation and more privatization of banks. Reserve Bank of India (2005) Non Banking Financial Institutions, Part 1, http//www.rbi.org.in/scripts/PublicationsView.

Much like chit funds, small cooperative banks developed in 19th century Europe to pool funds, finance development, and share responsibility. One of the most successful cooperatives was the Raiffeisen Bank in Germany in the late 19th century and early 20th century. Friedrich Raiffeisen was a conservative Catholic who became the mayor of several villages in Prussia. In the winter of 1846-47 famine struck the region including his village of Weyerbusch. In response, Raiffeisen founded a bread cooperative with money from a charity. Later he transformed this organization into a cooperative bank, which became a runaway success. Starting from several hundred in 1885, they grew into a network of 14,500 affiliated banks in rural Germany in 1910. Many of them still exist today.

Here is how it worked. Each Raiffeisen bank was organized as a cooperative in which old members picked new members. The members bought shares in the bank, made a deposit, and then they were entitled to borrow. Individual members were liable for all of the bank's debt if it failed. Group responsibility for debts and shared profits made each member screen applications for membership and monitor loan-making and debt-collection.[11] The central Raiffeisen bank pooled funds of the member banks, served as lender of last resort, and supplied an outside professional to supervise and audit the member banks.

To grow into a large network, the Raiffeisen banks needed two legal innovations. The first innovation allowed charities to accept deposits and lend money against interest to poor people. This innovation shifted activity away from poor relief and towards commercial lending. The second innovation concerned liability. Originally each of the members was liable for the debts of the group ("unlimited joint and several liability"). The second innovation replaced group liability for everything with individual liability for part of the whole.[12]

Cooperation banking depends on group responsibility, as do chit funds and most forms of relational lending. Raiffeisen banks succeeded in German villages and rural

[11] A. Hollis, A. Sweetman (1989) Microcredit, What Can we Learn from the Past, World Development, 26,10, 1875-91, esp. pp.1882

[12] Specifically, each each member's liability to a multiple of his share value. Thus a member's liability depended on how much he invested in the bank, not on the total amount of his wealth.

areas where enduring relationships made group responsibility feasible, and they mostly failed in German towns where people have more anonymity and mobility. Raiffeisen banks were transplanted to Holland, the Austrian-Hungarian Empire, Switzerland, and Italy, but they failed in Ireland and India in the early 1900s.[13] In the 1960s and 1970s development agencies tried to transplant cooperative banking to developing countries, but they mostly failed due to corruption, especially loans to politicians and the families of managers.

Many development experts regard cooperative banking as an outdated model.[14] As an alternative, many developing countries set up rural development banks run by the state. For example, Indian commercial banks are legally obliged to channel some of their liquid assets into rural development banks that give credits to small farmers. However, the borrowers often regard the loans as gifts for political loyalty that they need not repay.[15] Rural development banks in most of the world are not commercially viable and their lending is political, unlike chit funds or Raiffeisen banks. Chit funds never received subsidies, so they were commercially viable from the beginning. The Raiffeisen banks began as charities and became commercially viable within 25 years of their founding.

Next we turn to another form of group responsibility called micro lending that has multiplied faster than the rabbit in Australia. In 1976 Muhammad Yunus, an economics professor in Bangladesh, left his university office and began a project to help the poor that grew into the Grameen Bank of Bangladesh ("gram" + the word for "village"). It reported in 2006 that it has 6.23 million borrowers in 2121 branches serving 67,670 villages covering 99.51 percent of the total villages in Bangladesh.[16] His efforts won him the Nobel Peace Prize in 2006. The Grameen Bank continues to expand geographically (e.g. projects in Bosnia-Herzegovina) and functionally (e.g. new program of loans to

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[13] M.Ghatak, T.W. Guinnane (1999), The Economics of Lending with Joint liability: Theory and Practice, Journal of Development Economics, 60, 1, 195-221.

[14] We owe this information to Klaus Glaubitt, Director for micro-finance at the Kreditanstalt fuer Wiederaufbau, the German development agency for capital transfers.

[15] These problems have been extensively discussed in the Narashimham report. This report shows how gradual improvement is possible. It proposes to restrict obligatory lending to rural development banks to a fixed and moderate quota of total saving accounts of commercial banks and to end the political influence to finance sick corporations.

[16] Grameen Bank of Bangladesh (2006). Report. http://www.grameen-info.org/bank/index.html.

beggars). Similar micro-credit organizations include the Banco Sol in Bolivia and Bank Rakyat in Indonesia.

The Grameen Bank works roughly as follows. A bank employee, who believes in the Bank's philosophy, attracts members from poor people, each of whom buys a share for approximately $2 and receives a loan. A typical loan might equal $75 and extend for 1 year at 20% interest, with repayment in weekly installments. The loan might go for fertilizer on a farm or handicraft materials for a small business. Early in its history, the Grameen Bank found that women repay debts more reliably than men, so it mostly recruits women as members. In 2006 the Grameen Bank proclaimed that 97 percent of its borrowers were women.

The members are organized into groups of 5. The bank employee works intensively with the group to assure prudent use of loans and timely repayment. Each borrower is individually liable to repay her debt. Individuals, however, are not liable to repay the debts of others. If someone in the group fails to repay, however, the bank will not loan to anyone in the group in the future. Thus the Grameen Bank principle is individual liability and group responsibility.

Is the Grameen Bank commercially viable, like chit funds and Raiffeisen banks? A study commissioned by the Grameen Bank in the late 1980s calculated that its subsidy on operations was between 39% and 51%.[17] A more recent study calculated that, for the period 1983-1997, loans are subsidized at 22%. In recent years its annual reports claim a modest profit (although not in 1996 when it went bankrupt), but this claim is misleading because it is heavily financed through development aid.[18] Organizations like the International Fund for Agricultural Development give it credits at below market rates. Apparently, Grameen Bank loans are partly commercial and partly charitable.

Politicians often pressure state banks and private banks to make charitable loans. This pressure contributed to the wave of bank failures in the USA in 2008.[19] Instead of

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[17] Hossain, M. (1988). "Credit for Alleviation of Rural Poverty: The Grameen Bank in Bangladesh." Research Report 65, International Food Policy Research Institute and the Bangladesh Institute of Development Studies.

[18] J. Morduch (1999). "The Microfinance Promise," Journal of Economic Literature, 37 (4) 1569-1615

[19] Two massive quasi-government banks (Fannie Mae and Freddy Mac) bought mortgages from private banks. During the 1990s, politicians pressured them to buy mortgages made to poor people who could

pressuring banks to make charitable loans, subsidized lending through organizations like the Grameen Bank is probably a better way to extend credit to the poor.[20] The Grameen Bank, however, is an improbable way to eliminate poverty. Micro-finance supposedly makes the poor into micro-capitalists. The philosophy of micro-capitalism is, "Give them credit and they will invest their way out of poverty." If this picture were true, then developing countries like Bangladesh would follow a completely different path out of poverty than the one taken by countries as different as Sweden, Brazil, and Taiwan. In these countries, workers moved out of agriculture and handicrafts into factory and service jobs, which also reduced self-employment.[21] They did not become micro-capitalists. Instead, rising wages lifted them out of poverty A recent study found that the 20 richest countries have a self-employment rate of 14 per cent and the 20 poorest countries a rate of 43 per cent.[22] In the future developing countries will presumably lift themselves out of poverty by the same path as taken by successful countries in the past.

Statistical studies have yet to show that providing credit to the very poor reduces poverty.[23] Specifically, the Grameen Bank's effect on reducing national poverty is unproved statistically. During the rise of the Grameen bank, absolute poverty in

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not qualify by commercial standards of credit. In October of 2008, these two quasi-government banks failed because tso many poor people defaulted on their mortgages.

[20] A recent study concluded dryly that, for Grameen Bank lending, "…..the consumer surplus probably exceeds the subsidy...[so Grameen Bank subsidies are] probably a worthwhile social investment". Schreiner, M. (2003). "A Cost-Effectiveness Analysis of the Grameen Bank of Bangladesh." Development Policy Review, 21(3): 357-382.

[21] In Sweden the proportion of the self-employed to all working people declined from 26 per cent in the year 1850 to 12 per cent in the year 2000R. Edvinsson (2005): Growth, Accumulation, Crisis: With New Macroeconomic Data for Sweden 1800-2000, Stockholm. In the Netherlands the proportion fell from more than 20 to less than10 percent over roughly the same period. F. de Goey (2004) Economic Structure and Self Employment in the 20th Century, Working Paper, fig. 6. Today, self-employment is 7.3 per cent in the USA, 10.9 per cent in Germany, 23.5 per cent in Portugal, and 27.8 per cent in Turkey. Source: Eurostat 2008, data of 2007. The data also show a slight increase in self employment for OECD countries since the 1980ies. The causes are still much debated.

[22] D. Gollin (2002). "Getting Income Shares Right," Journal of Political Economy, 110(2) April 2002: 458-474, figures are for the 1990s.

[23] S. Claessens, E. Perotti (2007 ) op. cit. p. 756. J. Morduch (1999). "The Microfinance Promise," Journal of Economic Literature, 37 (4) 1569-1615. "It is hard to maintain hope that chronic poverty can be reduced appreciably by credit-based interventions. Chronic poverty is not typically due to 'market failure' in credit or other markets, but to low factor productivity, and to low endowments-per-person of non-labor factors. If these conditions prevail, even perfect responses of all factor, product and credit markets may leave substantial chronic poverty." Michael Lipton maintains that absolute poverty declines if wages rise for unskilled workers rise, landless laborers get land as property, and children of poor people get access to school. M. Lipton, M. Ravaillon, Poverty and Policy Handbook of Development Economics (1995), Volume III, Edited by J. Behrman and T.N. Srinivasan, pp.2553-2657, esp. p. 2630.

Bangladesh increased substantially according to some statistics and decreased moderately according to others.[24] Without the Grameen bank or anything like it, China reduced absolute poverty from almost 60% in 1980 to less than 20% in 2005.[25] Viewed statistically, poverty reduction goes with rising productivity and wages, and less self-employment.

Instead of making poor people into micro-capitalists, another philosophy seeks out the small fraction of poor people who can grow tiny businesses into larger ones. Lending money to the entrepreneurial poor may grow new businesses that will employ other poor people and raise their productivity and wages. Instead of creating a not-for-profit organization like the Grameen Bank or Pro Mujer in Bolivia, the alternative approach creates for-profit organizations that loan to poor entrepreneurs. Acción International, the Omidyar Network, Citigroup, Kiva, and some high tech billionaires from Google have implemented this approach in developing countries.[26] Whereas the Grameen Bank prides itself on a high rate of loan repayment, a bank loaning to poor entrepreneurs must expect mostly failures and a few spectacular successes, as with all innovations. A recent magazine article contrasted the two approaches as "not-for-profit-do-gooders" and "for-profit-do-gooders." The world needs more contests in which the winner is the one who does the most to reduce poverty.

From the newest fashion of microfinance, we turn to the world's second oldest profession -- the village moneylender. In rural villages or poor urban districts around the world, lenders live among their borrowers, so they know who is thrifty and who is profligate, who works regularly and who works episodically, who keeps his word and who breaks his promises. With this information they can make loans to people who lack collateral or steady income. They can also extend loans in response to misfortune, thus acting as insurers as well as lenders. Moneylenders generally provide loans and insurance based on local knowledge.

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[24] Compare World Bank Development Indicators 2007. More recent figures, World Bank Development Indicators 2009 maintain that poverty actually decreased during the same period

[25] See World development indicators 2007

[26] Bruck, C. (2006). "Millions for Millions," New Yorker Magazine, October 30, 2006: 62-73.

Moneylenders profit most when reliable people stay in debt. Instead of helping customers to pay off their loans, they prefer for people to pay only the interest on their loans, and to pay it forever. Some borrowers fall farther and farther into debt.[27] As long as they continue paying interest, lenders profit from their distress. Moneylenders behave like modern credit card companies that push loans at poor people.[28] Whether in Bangladesh or Baltimore, lending to the poor and collecting their debts is a heartless business. Modern social critics describe moneylenders in scathing terms, like Christians described Jewish bankers in medieval Europe. For each defaulting debtor in India whom a moneylender throws into the street, however, how many people avoid being thrown into the street by such a loan? For every debtor whose interest payments grow and grow, how many successful businesses began by borrowing from a moneylender? The scathing critics whose rhetoric is one-sided have no information on these points, and neither do we.

Development economists increasingly believe that modern finance should encompass moneylenders who extend credit to poor people whom banks cannot reach.[29] Compared to banks, moneylenders have superior information on their debtors; more flexible terms of repayment; and they use social networks to enforce debt collection. Instead of suppressing money lending, the state should make moneylenders obey the law. Thus the state should suppress strong-arm debt collection, allow consumers to escape their creditors through bankruptcy, and protect consumers from fraud. Most important, the state should facilitate competition with moneylenders through chit funds, cooperative banks, and micro lending.

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[27] For a model of immizerisation by money-lenders, see Ligon, E. (2004). Formal Markets and Informal Insurance. International Review of Law and Economics 25:75-88.

[28] The bank credit card was an innovation by the Bank of America. Its inventor told Cooter that bankers were amazed to discover that, instead of paying promptly, consumers would carry credit card balances month after month and pay the maximum legal interest rate.

[29] For a survey of the literature see A. K. Garg and N. Pandey (2006), Making money work for the poor in India: Inclusive finance through bank-moneylender linkages, working paper, 2006, 1-38 dlc.dlib.indiana.edu ; See also Hoff, K. and J. E. Stiglitz. 1998. Moneylenders and bankers: price-increasing subsidies in a monopolistically competitive market. Journal of Development Economics 55(2): 485-518.

### *Expanding the Circle*

Now we turn from relational lending to three formal banking activities that differ according to the sources and uses of funds. Commercial bankers take deposits and make loans secured by collateral. Investment bankers use money from the sale of the bank's stocks and bonds to invest in other companies. Finally, brokers receive and execute orders to buy and sell stocks and bonds on commission. See Figure 7.1.[30] We will explain the legal foundations of these banking activities. Bear in mind that a single bank can perform all of these activities as in Germany's "universal banks," or the law can confine different activities to different kinds of banks such as separating commercial and investment banks. [31]

Figure 7.1. Banking Activities

| | **Source of funds** | **Use of funds** |
|---|---|---|
| **Commercial banking** | deposits | secured loans |
| **Investment banking** | bank's stocks and bonds | risky investments |
| **Brokering** | client's orders | execute orders |

#### Commercial Banking

With effective state law, finance can expand beyond relationships to encompass strangers. Instead of social sanctions, private banking relies heavily on state law to make debtors repay. We first focus on a particular form of private banking that serves most households and businesses. People deposit money in commercial banks in order to store wealth and transact conveniently. Commercial banks use deposits to make low-risk loans. To reduce risk, commercial banks mostly require collateral from the borrower, such as land and buildings, machines, inventories, or financial claims. If the borrower defaults, the lender seizes the collateral and sells it to satisfy the debt.

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[30]Beside banking and brokerage, financial services also include insurance and payments instruments (credit cards, checks, electronic funds transfers, notes). In recent years, the financial services industry has found lucrative new ways to package risk, such as derivatives, swaps, letters of credit, and mortgage-backed securities.

[31] The U.S. enacted regulations in the 1930s, notably the Glass-Steagall Act, that confined commercial and investment activities to separate firms, and other countries like Japan adopted this model. The separation has eroded in small ways by new laws and court decisions in the U.S. The financial collapse of 2008 has renewed pressure to separate commercial and investment banking.

Commercial banks also make personal loans without security to borrowers with a steady income like a government job.

Commercial banks mostly secure their business loans with the specific assets of the borrower, especially capital goods that the borrower buys with the loan such as machines or buildings. The bank is confident of being repaid as long as the collateral retains its value.[32] Chapter 1 explained that innovation creates a double trust dilemma: The innovator is afraid that the investor will steal his idea, and the investor is afraid that the innovator will steal his capital. Collateral thus halves the double trust dilemma -- the bank monitors collateral to assure that the borrower does not steal the money, but the bank does not need to know the borrower's trade secrets or business plan.

A legal problem plagues commercial banking in developing countries, as captured by this historical example. In early 19th century France, the Emperor Napoleon possessed almost absolute power. Since he could cancel his own debts, he could not commit to repaying others, so his subjects would not buy his bonds. The British king, in contrast, had less power – he shared it with Parliament – and he had to repay his debts. His subjects would buy his bonds, and he sold them in London to finance his wars. The British king thus outspent Napoleon, England won the war with France, and Britain's debt grew to more than two times the British national income.[33]

Like Napoleon, some people in developing countries do not have to repay their debts. The World Bank identified 40 countries where legal devices allow debtors to drag out the process of seizing collateral.[34] In Brazil the law forbids a creditor from seizing the debtor's collateral without first obtaining a valid court order, which makes debt collection costly. In contrast, a creditor in Germany can repossess the debtor's collateral within weeks of default without a court proceeding. Peru has more than 20 different

[32] To assure that the borrower is not diminishing the collateral's value, the bank may require an annual audit of the borrower by an independent accountant. The loan agreement may also require the borrower to open a checking account with the bank for its everyday transactions, and to maintain a stipulated balance. The bank stays informed about the borrower's financial health by monitoring the transactions in its checking account.

[33] N. Ferguson (1999), Wars, Revolutions and The International Bond Market from the Napoleonic Wars to the First World War, Discussion Paper http://icf.som.yale.edu/pdf/NF.pdf, p. 13, and F. Mc Donald, Is Public Indebtedness Essential to Democracy and Freedom? GMU History News Network, 1-19-04.

[34] World Bank, Doing Business around the World (2005), p. 44. India has revised its law to accept credit agreements on the repossession of movable collateral without court involvement. The Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act (SARFAESI Act, 2002).

registries for different types of collateral (one registry for collateral of farmers, another registry for collateral of industrialists, etc.), and the registries in one part of the country are unconnected to those in another part of the country.[35] Besides obstacles to seizing collateral, laws sometimes create obstacles to pledging it. Thus civil law doctrines sometimes prevent pledging a herd of cattle or the stock in a warehouse as security.[36] People who do not have to repay their debts cannot borrow money, or they can only borrow on unfavorable terms. Obstacles to debt collection shrink the pool of commercial loans in developing countries.

When laws and institutions pose obstacles to debt collection, the rewards are great for overcoming them. One of Mexico's richest businessmen, Ricardo Salinas, first built his fortune by finding an economical way to collect consumer debts. His "Elektra" stores, which now number over 600, sell televisions, refrigerators, washers, and other household appliances. Many of the buyers are poor people who purchase on credit. When deciding whether or not to make a loan, the account manager in the store obtains the names of the borrower's relatives. If the borrower subsequently falls behind in his monthly payments, the account manager will enlist the help of relatives to collect the debt. This approach to debt collection relies on reputation and group responsibility,

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[35] *Salaverry, F. C. (2004). Accesso al credito mediante la reforma de la legislacion sobre garantias reales. ALACDE (Latin American and Carribean Law and Economics Association, Lima, Peru.*

[36] Assume that a farmer wants to offer a herd of 100 cattle worth $100,000 as collateral for a loan. In Uruguay the court will refuse the pledge as collateral unless the farmer lists each of the cows and the list is continuously updated. In Kansas, in contrast, the rancher can pledge a herd of cattle worth $100,000, even though the identity of the cows changes continuously. Similarly, in Uruguay a dealer in wool can only pledge the particular wool in the warehouse, so the collateral will dissipate as the wool in the warehouse turns over through sales. In Wyoming a dealer in wool can pledge wool worth $100,000 in a warehouse, and the pledge remains good as the particular wool in the warehouse turns over through sales. "The fallacy of concreteness" is the name given to the impractical requirements for offering movables as collateral in some civil law countries like Uruguay. See H. Fleisig (1996) Secured Transactions, The Power of Collateral, Finance and Development, Vol.33,2 pp.44-46. Similarly, according to a civil law tradition, the pledge of a movable good requires the creditor to take possession of it. If a shop in Germany sells a television on credit and lets the buyer take it home with him, the shop cannot have the television as collateral for the loan. (To circumvent this problem, the shop in Germany would retain title of the television until the debt is paid.)

similar to a Raiffeisen bank or Grameen bank.[37] Similarly, banks in Ghana are more willing to make business loans when family members of the debtor own houses, which increase the bank's power to harass the defaulting debtor.[38]

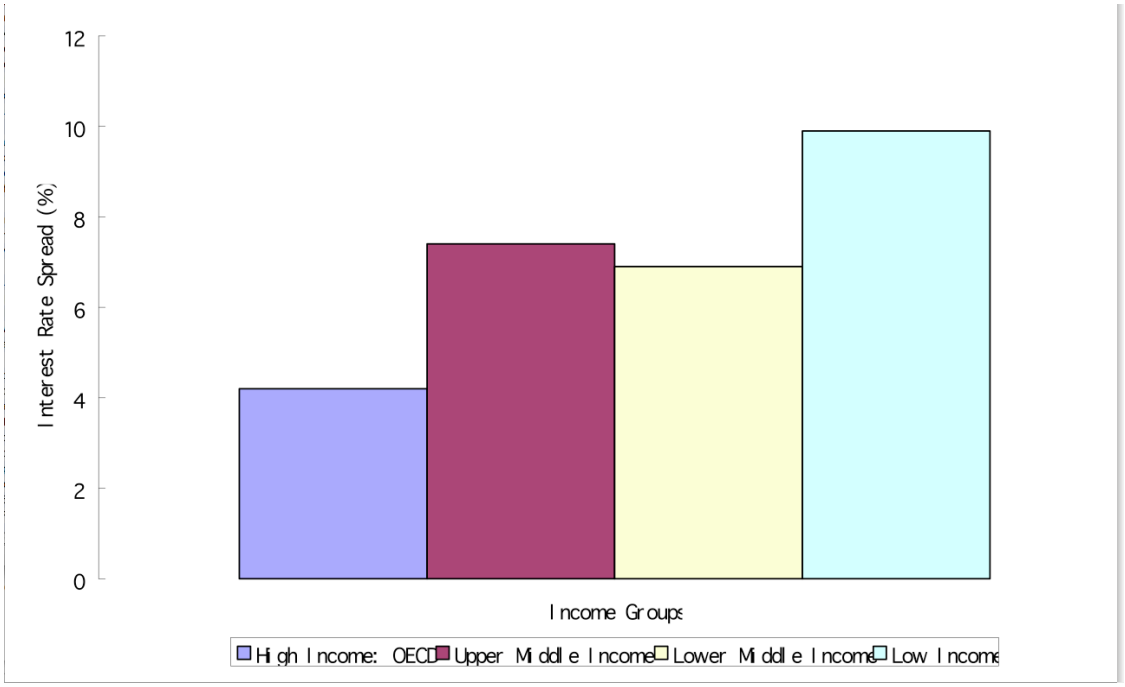
Data shows that obstacles to making loans and collecting debts raise the cost of borrowing money. The "spread" is the difference between the interest rate that the bank charges to borrowers and the interest rate that it pays to depositors. (Commercial banks make much of their profits from the spread.) Inefficient debt collection raises the bank's cost of loaning money, which increases the spread. Figure 7.2 summarizes the facts about the interest rate spread in groups of countries. The difference between borrowing and lending rates by banks is roughly three times higher in developing countries than developed countries, which suggest a big difference in the efficiency of bank collections. (Other causes also matter.[39])

[37] Ricardo Salinas explained these facts to Cooter.

[38] Marcel Fafchamps (1996). "The Enforcement of Commercial Contracts in Ghana," World Development, Vol. 24, No. 3, pp. 427-448.

[39] L. Rochas-Suarez, Rating Banks in Emerging Markets (2001), Working Paper, www.iie.com/publications/wp/01-6.pdf. Note, however, that low spreads do not necessarily reflect low risk and a better institutional environment. They can be found in banks in crisis, in politically influenced banks, and in banks that can count on a bailout from the state. And high spreads can reflect monopoly power of banks rather than undeveloped creditor's rights.

Figure 7.2 Interest Rate Spread (banks lending rate minus deposit rate, average from 1980 to 2008)




Source: World Development Indicator 2009

Improving debt collection is easy legally and hard politically. The public naturally sympathizes with the poor debtor, not rich lenders. The public also sympathizes more with a particular debtor who defaults than with unidentified future loan future applicants. So the public wants a poor debtor excused from repaying his debt, without thinking about the resulting loan denials to poor people in the future. In a highly disputed legal case that the media characterized as "Mexico vs. the bankers", Mexican banks charged interest on the total debt owed to them by consumers, including interest on unpaid interest. When this fact was publicized, nine million debtors refused to pay, and it took years until the Supreme Court decided in favor of the banks.[40]

[40] Ejecutoria de la Contradiccion de Tesis 31/ 98 and Ejecutoria de la Contradiccion de Tesis 32/98 (7th of October, 1998).

Religion poses another obstacle to commercial banking in some countries. Both Christianity and Islam traditionally objected to their members charging interest on a loan. Among Christians the ban against interest disintegrated over centuries, although its language persists in "usury" laws that impose legal caps on interest rates.[41] In Muslim countries, the ban on interest mostly remains in form but not substance. To preserve form and not substance, some Arab banks re-characterize interest as profits.[42] This makes modern banking legally possible, while enraging some devout Muslims.

### *Investment Banking*

From commercial banking, we turn to investment banking. Financial organizations that engage in investment banking activities may be called "banks" or something else such as venture capitalists, hedge funds, wealth managers, or private equity.[43] Instead of names, we focus on activities. Whereas commercial banks take deposits that are easily withdrawn, investment banks mostly obtain funds by selling their own bonds and stock. Investment bankers use their funds to invest in risky ventures by giving credits, making loans, buying bonds, or purchasing stock. The parties bargain to decide the terms of the bank's participation in the firm, such as holding a seat on its board of directors.

Investment banks share the borrower's risk of failure in exchange for a share of its gains from success. To assess the risk, the investment bank needs to know the borrower's secrets. The entrepreneur must disclose his secrets to get the investment banker's money. The investment bank must trust the borrower with the money, and the

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[41] Noonan, J. T. (1957). The Scholastic Analysis of Usury. Cambridge, Harvard University Press.

[42] Person A wants to borrow $1 form person B and repay $1.5 in one year. Here is how they can disguise the interest of .5 on the loan. A has goods that he is sure not to use until next year. A sells the goods to B for $1, and they agree that A will repurchase the goods from B for $1.5 in one year. During the year, B agrees to leave the goods in A's possession. The net result is that A receives $1 immediately from B and A promises to pay $1.5 to B in one year, just as with the loan. To make the disguise less transparent, the two parties often involve a third party in the transaction. This ploy was explained by H. Hamidi in a lecture, "You Say You Want a Revolution: Deviationist Doctrine, Interpretive Communities and the Origins of Islamic Finance," Berkeley Faculty Seminar, 2007.

[43] "Investment bank" refers to a narrower group of organizations in New York than in Frankfurt. New Yorkers said that the U.S. had only five "investment banks" (Goldman-Sachs, Morgan Stanley, Lehman Brothers, Bear Stearns and Merrill Lynch), and all of which were transformed or disappeared in the financial meltdown of 2008. The activity of investment banking did not disappear forever, so the future of the phrase "investment bank" is uncertain in New York.

borrower must trust the investment bank with its secrets. In investment banking, the trust problem is often double-sided. (In contrast, commercial banks secure their business loans, which makes the trust problem single-sided.[44])

As explained in Chapter 2, investment banking solves the double trust dilemma primarily by aligning the interests of banker and entrepreneur. In Silicon Valley the founders of a startup company expect to gain much more from its success than they could gain by stealing the money that others invested in it. Complicated contracts create these expectations by using preferred stock, options to buy, options to sell, and other financial instruments. In general, a successful firm is more valuable than its assets,[45] so a person who steals the assets of a successful firm gains less than the firm's value. This fact provides a way to deter managers from stealing a firm's assets. If the managers stand to gain a significant share of the value of a successful firm, then they may gain more by making it succeed than by looting it.

If managers gain most by making a firm succeed, then investors may be able to trust managers enough to loan them money. Contracts and business law induce the alignment of interests between investors and managers. Thus an obvious way to protect investors is make them into insiders so they participate in management by holding board seats, designating officers, or controlling the compensation committee. As insiders, bankers can detect slight-of-hand and protect their interests much better than outsiders.

Conversely, ineffective contract and business law plagues investment banking and slows growth. In a Las Vegas magic show, slight-of-hand makes a beautiful woman disappear before your eyes. With ineffective law, the same thing happens to business profits. After 1989 gangster capitalists in Russia made profits disappear from the books of state companies and reappear in their own pockets. They used tactics like this: Seize control of a state company with mineral assets, sell the minerals to your privately

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[44] Thus if a firm secures a commercial loan by the value of its inventory, the lender may monitor to make sure that the firm does not deplete its inventory, but the lender does not have to know the borrower's business plan or its other secrets.

[45] The firm's market value is measured by how much a buyer will pay for it, including its name, reputation, good will, contracts, roles, and relationships. In contrast, the market value of its assets equals the sum of its parts when sold piecemeal, such as machines, buildings, materials, and accounts receivable.

owned corporation at low prices, and then resell the minerals on the world market at high prices. When corporations can make their profits magically disappear and reappear, investors face massive risks.

Chapter 3 described three general ways to create trust between investors and the insiders who manage an enterprise: relationships, private contracts, and public markets. Most countries finance growth by combining relational finance and private agreements. Thus in India stocks are often sold through informal networks to people with long-run relationships.[46] In Japan and Germany each manufacturer traditionally had a "main bank" or "house bank" that provided most of its finance. The main bank might arrange for a manufacturer and one of its suppliers – say, a car manufacturer and a supplier of specialty steel -- to deal exclusively with each other instead of trading on the open market. To seal the agreement, the bank arranges for them to exchange their stock. "In Japan the companies choose who will buy their stock," observers say, "and in Britain the buyers choose which stock they will buy."

Foreign investors without political protectors face especially severe risks in many countries. Worshippers at shrines in East Asia give the gods play money and ask them to repay in real money. Similarly, in joint ventures with foreigners, Chinese entrepreneurs sometimes give paper rights to foreign investors who pay with real money. The assets of the project disappear through connivance between local partners and state officials.[47] In general, outsiders are reluctant to buy stocks in a company unless corporate insiders can give a credible guarantee that they will not divert the company's assets into their own pockets. Statistical analysis shows that when ineffective laws make outside investors insecure, they will not invest, so a greater proportion of companies must finance themselves internally.[48]

Effective legal reforms to protect minority shareholders can significantly increase the value of companies. To conform to requirements for joining the European Union,

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[46] Cobham, D. and R. A. J. Subramaniam (1998). "Corporate finance in developing countries: new evidence for India." Working Paper, University of St Andrews, St. Andrews, UK Asian Development Bank, Manila, Philippines

[47] A friend of Cooter's consulted on an aviation deal in which Europeans invested over $40 million, their Chinese partners took all of it, and the Europeans eventually wrote off the loss and abandoned the project.

[48] Demirguc-Kunt, A. and V. Maksimovic (1998). "Law, Finance and Firm Growth." Journal of Finance 53: 2107-2137.

Bulgaria introduced dramatic reforms in 2002 to protect minority shareholders against dilution (distributing shares to insiders at prices below market value) and freeze-out (involuntary purchase of minority shares or de-listing of the company). A statistical analysis showed that these reforms caused an equally dramatic increase in various financial measures of the value of companies to minority shareholders, such as price-earnings ratio.[49]

Another kind of financial problem concerns the political vulnerability of banks. The state can direct bank loans towards large conglomerates as in South Korea, channel credits into sick industries as in India, create a military-industrial complex as in Germany and Japan prior to World War II, extract wealth to benefit the ruling family as in Suharto's Indonesia, or give credits to banker-friends of the Secretary of Treasury as in the U.S.A. in 2008. Soft budget constrains are an endemic form of political manipulation of banks throughout the world. In business, sports, and war, leaders who fail lose their power. Business has a formal legal procedure to dispossess a failed leader: Bankruptcy. Bankruptcy quickly transfers resources from failed managers to new managers. The budget constraint is hard. Unlike private businesses, the public sector has a soft budget constraint. Governments have no procedure like bankruptcy to strip power automatically from officials who fail to perform.[50] When a very large firm runs out of money, it may negotiate for more, again and again, like the American banks in 2009.

Here is how soft budget constraints work in China. The dinosaurs in the old industrial core – heavy industries like steel – were re-organized after the demise of central planning as companies that issue stocks. The government owns enough shares to retain control over these enterprises.[51] When these enterprises lose money, as they inevitably do, the government makes state-controlled banks provide fresh loans to cover

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[49] Bernard Black et al., "How Does Law Affect Finance? An Examination of Financial Tunneling in an Emerging Market," Berkeley Law and Economics Workshop (2007).

[50] To our knowledge, the closest is the procedure to bankruptcy in the public sector operates in some American school districts that close public schools if they repeatedly fail to meet targets for standardized test score by their students.

[51] These companies currently have four classes of stock:
Non-tradable shares held owned by the state.
Non-tradable shares with non-state owners (e.g. state officials in their capacity as private persons).
Tradable shares on domestic exchanges. (Chinese citizens can own them).
Tradable shares on foreign exchanges. (Chinese citizens cannot own them.)

the losses. In a summit meeting for China's top economic officials in 2005, several speakers identified the soft budget constraints on state enterprises as China's biggest economic problem.[52]

China's startling economic growth has occurred in export industries outside of its old industrial core. Many of these new enterprises are privately owned, and others involve a partnership between private businessmen and local government officials, especially in China's many "village enterprises". In dealing with village enterprises, the Chinese government shows remarkable toughness: Succeed or fail, they cannot expect subsidies from the central government. The old industrial core, however, receives subsidized loans. Ironically, China's failing enterprises in the old industrial core pay a lower price for capital than China's innovative new enterprises.

Similarly, India nationalized its banks in the 1970s, and now they suffer from bureaucratic sclerosis and political intrusion. Many other developing countries nationalized banks with the same results. As in China, state banks soften the budget constraint for state owned enterprises and other politically preferred borrowers. Instead of losing power, managers in failed enterprises go to state banks for more loans.

When factories close, employees lose their jobs, which is painful.[53] The large firms in China's industrial core are not just factories that supply jobs. They are also social centers that supply housing, schooling, recreation, and medical care to their workers. Closing these enterprises endanger a system of social support, not just jobs. Even so, other citizens may eventually tire of subsidizing old industries. To hasten the end, the government could make the subsidies overt instead of covert. If the subsidies appeared in the state budget as expenditures, people would recognize them more easily and weigh the alternatives.[54]

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[52] This was the theme of a speech by Raghuram Rajan, Economic Counselor and Director of Research of the International Monetary Fund, and also a speech by Charles Goodhart of the London School of Economic. Proceeds of the NDRC Economic Summit, Beijing, China, 11 July 2005.

[53] Econometrics from survey data has proved what people know intuitively: Unemployment makes people very unhappy and damages their self-esteem. Frey, B. S. and A. Stutzer (2000). "Happiness, Economy and Institutions," 110 Economic Journal 918-938. Frey, B. S. and A. Stutzer (2002 ). "What Can Economists Learn from Happiness Research?" 40 Journal of Economic Literature 402-435.

[54] Here are three steps to harden the bankruptcy constraint:

1. Prohibit state banks from making loans to failing enterprises. Put state banks on a commercial basis.

In much of the world, the budget constraints on commercial banks are soft. Banks make risky investments in which they win or the taxpayer else loses. In the 1980s U.S. regulators in the Reagan Administration allowed government-insured banks called "Savings and Loans" to try to gamble their way out of bankruptcy. If their highly risky investments succeeded, the bankers would win, and if they failed, the taxpayers would lose. This gamble delayed the collapse of these banks until after President Reagan left office, when massive failures in these banks triggered the government's liability as insurer of the depositors. The federal government apparently lost more money in reorganizing these banks than in any other bailout or financial scandal in U.S. history, until 2008 when the U.S. government began lending vastly more billions of dollars on failed banks than ever before.

***Brokers***

From investment bankers, we turn to financial brokers. Customers pay commissions for brokers to act as intermediaries in buying and selling securities. Brokers also purchase securities for their clients on credit and hold the securities as collateral. To flourish, brokers need public securities markets with high volumes of sales. Brokers contribute to innovation and growth by helping to create these markets.

In Silicon Valley, after an innovation has proved its profitability, the founders often sell securities to the public directly in an initial public offering of stock or indirectly though acquisition by a public company. Public markets thus enable the founders of a company to diversify their portfolio and exit from the business that they started. The possibility of eventual exit through public sales provides incentives for entrepreneurs to create startup firms and for venture capitalists to finance development of new ideas. Conversely, small or illiquid public stock markets inhibit venture capitalism.

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2. If state bank stops loaning to state owned enterprise, central or local officials can decide to pay the subsidies
3. Create a reorganization procedure for failing state enterprise similar to bankruptcy under Chapter 11 in the U.S.
Goodhart, C. (2005). "Remarks on Chinese Bank Debt." China Reform Summit: Promoting Further Economic Restructuring by Focusing on Administrative Reform," Organized by National Development and Reform Commission, P.R. China, Assisted by USB, July 12-13, Beijing, China.

Public markets require protecting a broad group of outside investors, who play a passive role in managing a company, against the firm's insiders. The owners of only a few shares in a company are the most vulnerable outside investors. After 1989 Russia and the Czech Republic privatized state companies by distributing shares equally among the public, but the insiders quickly appropriated the public shareholders. Instead of equality, the result was cynicism. In a popular joke, the wife says to her husband, "Play cards if you must, dear. At least you win sometimes. But don't buy any more stocks."

Since private finance requires less effective law than public finance, weak law tilts finance towards private deals by banks and away from public markets.[55] Conversely, public stock markets play a more decisive role when the legal system strengthens. Econometric analysis concludes that better banking law leads to more activity on bond and stock markets.[56] Figure 7.3 shows decisively that stocks are traded far more in rich countries than in low or middle-income countries.

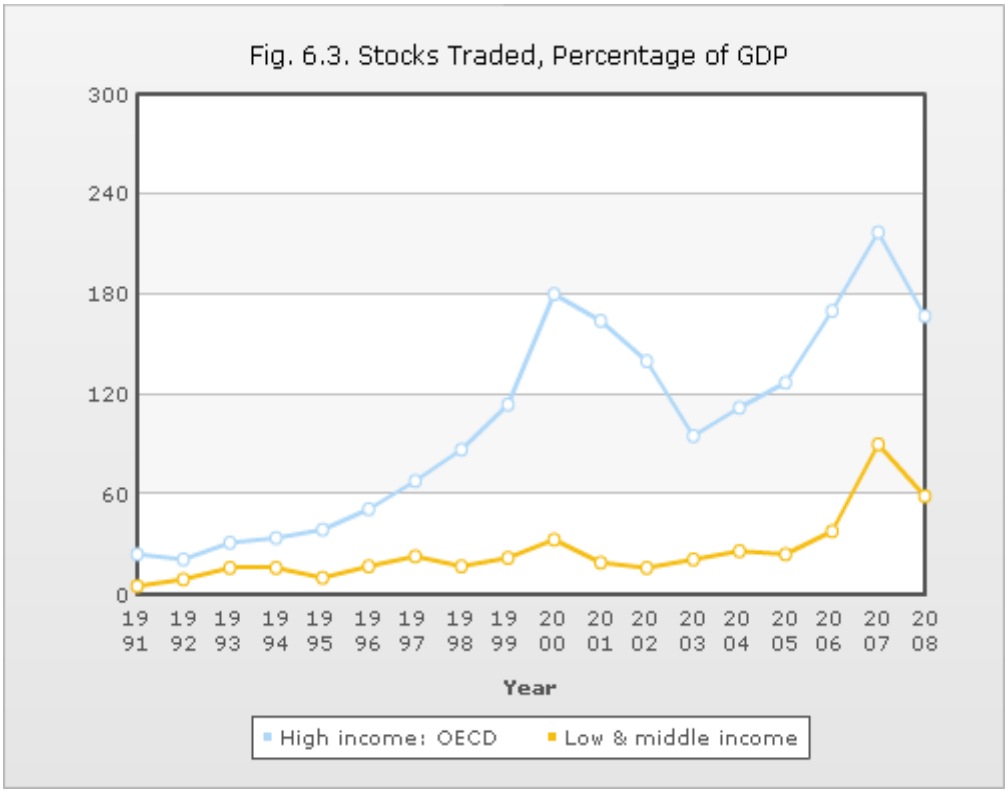
Protecting diffuse stockholders against insiders is so difficult that few countries succeed. Recent empirical research shows that firms with dispersed ownership play almost no role in developing countries, and even in rich countries they dominate only in the USA and the UK.[57] Instead of being widely held, most corporations in the world are closely held by a few people with a controlling share of stock. Although closely held, these companies often sell some stock to outsiders, especially as law strengthens. Statistical evidence indicates that bank finance has a relative advantage over capital

[55] The proposition that weak legal systems tilt finance away from stock and towards bank bonds seems to contradict an important theorem in finance whose discovery won Nobel prizes for Modigliani and Miller. This theorem asserts that changing the proportion of stocks and bonds used to finance a firm cannot change its value. To understand their theorem, assume that a firm issues additional stock and uses all of the money to pay back some of its bonds. The amount of capital available for the firm to invest in developing its business remains unchanged. If the firm's investment remains unchanged, its stream of future profits is also unchanged. Under certain assumptions (e.g. tax neutrality and risk discounting), the firm's stream of future profits equals the firm's value as measured by the market value of its stocks. The Modigliani and Miller theory implicitly assumes that a strong legal system stops insiders from making profits disappear from the firm and reappear in their pockets. An analysis of developing countries cannot assume a strong legal system for finance.

[56] Demirguc-Kunt, A. and R. Levine (1999), Bank-Based and Market-Based Financial Systems: Cross-Country Comparisons, World Bank Policy Research Working Paper 2143. Data available for 57 countries.

[57] La Porta et al, (1999). "Corporate Ownership Around the World," 54 Journal of Finance, pp.471-517.

markets in poor countries, and that securities markets surpass the importance of banks when the economy gets rich.[58]

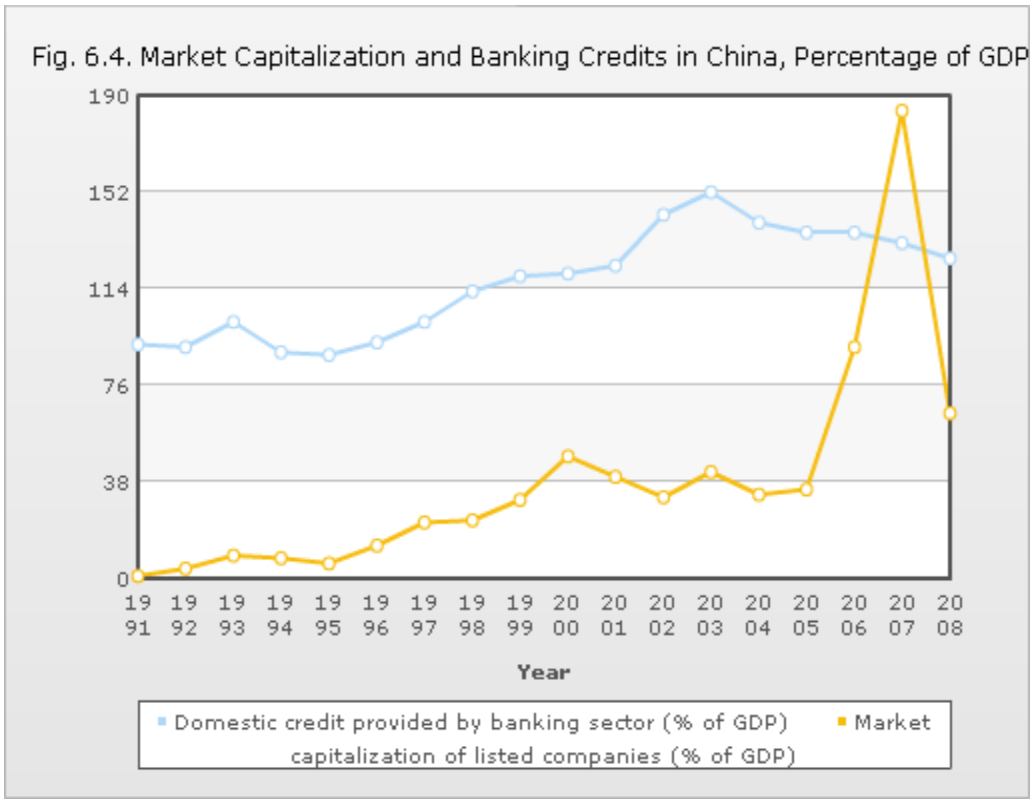



[58]Demirguz-Kunt and Levin have constructed an index to measure the extent to which bank loans or capital markets provides more finance. Their analysis shows a tendency for more market based systems in richer countries. In the sample of 57 countries with a GNP per capita of more than $10,000 dollars, 7 out of 17 countries are more market based than bank based. In countries with GNP per capita of less than $10,000, only 11 of 40 counties are more market based than bank based. See Demirgüc-Kunt, Asi, Levine, Ross (1999) Bank-Based and Market-Based Financial System, Cross Country Comparisons, World Bank Policy Research Paper 2143.

When a country goes through a period of rapid industrialization, the law of contracts, corporations, and finance is usually weak, so bank finance should predominate. Thus bank credits played the pivotal role during industrialization in Germany.[59] Until recently the stock market played an insignificant role in financing China's explosive growth. Thus Figure 7.4 compares total bank credits to the total market value of the stock of all Chinese companies ("market capitalization"). The total market value of the stock of all companies depends on the number of public firms[60] and the price of their stock. Until 2004, the ratio was large, which shows that bank loans were much more important than the sale of stock in financing China's economic growth. In 2004 the situation changed as stock prices rose and then fell.

[59] Alexander Gerschenkron drew this conclusion in a 1962 book comparing these three countries. During Germany's rapid industrialization from 1895 to 1913,the ratio of bank deposits to shares of stock increased in value from 1.5 to 3.4. His explanation, however, was not based on law, but rather on differences in human capital. He thought that a few large banks could economize better on scarce expertise in the area of finance, whereas markets would require more people with expertise. Gerschemkron, Alexander (1962). Economic Backwardness in Historical Perspective. Cambridge, MA: Harvard University Press.

[60] Public firms sell stock in markets where prices are recorded publicly, whereas private firms ofteb sell stock privately to selected individuals in transactions a undisclosed prices.




Source: World Development Indicators 2009

A tilt in finance towards bank credits and away from stocks, which is a natural result of ineffective law, imposes a heavy economic cost: It dampens risk-taking and slows innovation. To see why, assume that an entrepreneur uses his own money to start a company and then obtains additional funds from bank credits. If revenues do not flow into the business fast enough to redeem the credits, the business will go bankrupt and the entrepreneur will lose his entire investment. In contrast, if he were able to obtain funds by selling stock, he would not need to make fixed payments, so a downturn would not jeopardize his business. With stock financing, the entrepreneur could grow the company faster with less personal risk.

In exceptional cases where laws are strong, public finance predominates. Thus stock markets in the United States and Great Britain financed industrialization in the 19th century more than banks. In Japan, the pattern was more complicated. Finance was not bank based when industrialization exploded in early 20th century; bank finance became

predominant in the 1930s when regulation favored it; and in recent years, large Japanese firms have increasingly sold shares on public markets.[61]

### *Conclusion*

When property protection is uncertain and promises are not enforced, savings flow to the best protector, but when property protection is certain and promises are enforced, savings flow to investors who use money creatively. To go from savers to investors, money mostly passes through financial intermediaries. Financial intermediaries do not merely move paper money around in obscure ways that baffle ordinary people and enrich bankers. Rather, banks collects savings, magnify them by credit, and invest. Creative investments drive innovation and growth.

To produce innovations, money and ideas must come together like the rings in Solomon's knot. Different financial organizations solve the double trust dilemma of innovation in different ways. From chit funds to hedge funds, the borrower who gives a promise to the lender in exchange for money must be able to commit to doing what he says. In relational lending, social sanctions and group responsibility constrain the borrower to keep his promises. In commercial banking, the lender must be able to seize the defaulting borrower's collateral at low cost, whether it is a car, a building, a paycheck or a company. In investment banking, if the borrower promises a future share of profits, the lender must be able to force the borrower to perform. Similarly, in brokerage, outsiders who hold bonds or stocks in a firm must be able to get their share of the money away from the firm's insiders. As financial law strengthens, group responsibility is supplemented by individual responsibility, relational lending is supplemented by private lending, bonds are supplemented by stocks, and private banks are supplemented by public markets.

Any discussion of finance must mention financial crises, including the collapse that began in 2008 in the United States. A reporter asked a prolific American bank robber named Willie Sutton why he robbed banks, and he allegedly replied, "because

[61] Hoshi, Takeo, and Anil Kashyap (2001). Corporate Financing and Governance in Japan. Cambridge,MA: MIT Press.

that's where the money is." Ingeneous people dedicated to getting rich will always be drawn to banks because that's where the money is. Their creativity can make an economy hum or bring it crashing down. Like roads, much of the modern economy runs on banks. Commercial banks make deposits and loans to each other, so the bankruptcy of one threatens the solvency of others. With a string of bank failures, an economy can slow down like traffic when an interstate highway closes.

What is to be done? Almost every country regulates banking to guarantee solvency, as well as to control fraud, manipulation, and recklessness. Bank regulators especially focus on the ratio of bonds to stock issued by a bank.[62] Issuing bonds is risky to the bank, because the bank must repay the creditors as the bonds mature. If profits fail to materialize, the bank may be unable to redeem its maturing bonds. Alternatively, issuing stocks is not risky to the bank because it gets money without a fixed obligation to repay. Thus the ratio of bonds to stocks ("leverage") simply measures an investment bank's risk.

In the prelude to 2008, American investment banks vastly increased their leverage. To redeem their maturing bonds, investment banks needed to issue new bonds. When real estate prices turned down and the economic outlook darkened, investment banks had difficulty issuing new bonds to meet their obligations on maturing bonds. Other factors aggravated the problem -- derivatives,[63] risky investments,[64]

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[62] Ironically, an international agreement ("Basel II") that intended to increase the stability of banks actually contributed to the financial disaster of 2008. To implement the international agreement in 2002, the administration of President Bush repealed a mandatory cap on the ratio of bonds to stock ("leverage") and allowed the five American investment banks to "self-regulate" by judging their own stability. The banks judged themselves very stable and sharply increased their leverage. These events remind Cooter of a headline he saw in a newspaper called the Sacramento Bee that read: "How good are Sacramental doctors? Local physicians rate them highly."

[63] Breaking a loan into its parts and selling the parts separately "derives" new securities from the original loan. Thus a lender receives a stream of interest payments from the borrower unless the borrower defaults. The lender can sell the rights to the stream of interest payments to one party, and also pay an insurer to bear the risk of default, thus deriving two kinds of financial securities from one. Derivatives are written in non-standard contracts, which increase the risk of cash-flow bankruptcy by making them hard to sell quickly for cash. Insuring against default was how the American Insurance Group (AIG) accumulated the largest losses in the history of any financial institution in 2009, which the American taxpayers assumed. Banks also divide their loans into groups and resell them as securities. With securitization, bank assets become liquid, so a bank can quickly sell its portfolio of loans and obtain cash when depositors want to withdraw their funds. In the financial crisis of 2008, however, bank sold their low-risk

panicky depositors,[65] and lax regulators,[66] to name a few. Ideally, investors would have prevented the crisis by selling bank stocks and bonds much earlier, thus forcing banks to invest more conservatively. The market failed. Regulators could have prevented the crisis by limiting leveraging and constraining risk-taking. The regulators failed. So banks failed, the taxpayers paid many of their bills, and the economic downturn threw people out of work.

In developing countries as in the U.S.A, banking crises undermine economic growth.[67] The best way to avoid them unclear. Banking regulation differs from one country to another. No country, it seems, has created a superior regulatory structure that easily transfers to other nations. International agreements to regulate banking induce participation by some countries, with mixed results.[68] The topic of bank stability is too large and too far from innovation for this book to say more about it.

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loans as securities, but they often continued holding their high-risk securities. Selling low-risk loans and holding high-risk loans caused many bank failures.

[64] Market value of the portfolio of loans held by a bank can rise or fall with market conditions. A bank whose portfolio of loans is worth less than its deposits has negative net value at market rates. It is "balance sheet bankrupt." Banks increase this risk by increasing the proportion of their risky loans.

[65] As explained, commercial banking obtains its funds from depositors and loans the money to borrowers. Depositors can usually withdraw their funds freely at any time, whereas the bank receives interest payments from its borrowers according to a fixed schedule that often extends over years, such as a fifteen year mortgage on a house. If a large fraction of depositors abruptly wants to withdraw their money, a commercial bank needs a lot of cash. This is a bank run, usually caused by panic. To raise cash to pay back depositors, the bank may try to sell its portfolio of loans. A bank that cannot liquidate its loan portfolio fast enough cannot satisfy its legal obligation to allow depositors to withdraw their money. It is "cash-flow bankrupt."

[66] Ordinary households that deposit money in commercial banks cannot assess the bank's risk of bankruptcy. This failure assures that the market for commercial banking cannot regulate itself. The state often corrects the failure by supplying deposit insurance or guarantees similar to it. State regulators need to police commercial banks for the risk of bankruptcy. Unfortunately, the state often aggravates the risk. Thus part of the mortgage crisis in U.S. banking in 2008 was caused by unsound state operation of two massive state-owned banks known as "fannie mae" and "freddie mac" that repurchased bank mortgages, especially for loans made to relatively poor borrowers.

[67] Here are some examples, which involve central bank mismanagement: In Argentina in the 1980s, inflation undermined the economy. Conversely, in Argentina in the 1990s, a stable but over-valued currency destroyed exports and caused unemployment. Mishandling of exchange rates in Thailand in 1997 caused an economic slump that spread throughout East Asia. Abrupt devaluation of the Mexican peso in 1994 caused an economic downturn that affected most Latin American countries ("peso crisis"). Russia defaulted on its debts in 1998 and the ruble plummeted, which increased the country's economic distress. If the central bank must finance excessive government deficits, the sale of government bonds can crowd out private credits, so growth slows in the private sector.

[68] The Asian crisis of 1997 led to the Basel core principles of banking and credit regulation proposed by the World Bank and the IMF. These principles emphasize minimal capital requirements and risk assessment of credits. Under the "Basel II agreements," banks should retain capital equal to 8% of

liabilities or else submit to an "internal rating basis" that requires disclosing their credit evaluations of their debtors to bank regulators. See Hertig, G. (2005). "Basel II to Facilitate Access to Finance: Fostering the Disclosure of Internal Credit Ratings." Law and economic Workshop, Hamburg University Law and Economics Center. The Basel Committee on Banking Supervision is an arm of the Bank for International Settlements whose rules apply to the banking regulators in each of 13 participating countries. Additional countries may voluntarily sign on. Implementation of Basel II for US investment banks allowed them to increase their leverage through self-regulation. In October 2008, all five of the major US investment banks reorganized or went bankrupt.

# Chapter 9
# Financing Secrets – Corporations

How did the corporation become the dominant form of business organization? To answer this question, recall Chapter 1's example of the spice trade between Europe and Asia in the 17th century: In a port such as London, a bold ship's captain would propose that investors finance a voyage to Asia to obtain spices. The investors had to provide capital for a voyage lasting at least two years, and the ship's captain had to share secrets about how to get to Asia and where to go when he arrived. When the voyage succeeded or failed decisively, the captain and investors usually ended this collaboration. Exit after success occurred through a general court at the dock. Similarly, in 20th century Silicon Valley, a bold innovator would propose that venture capitalists finance a new technology. The investors had to provide capital for development lasting at least two years, had to share many secrets about the new technology and his business plan. When the venture succeeded or failed decisively, the innovator and investors usually ended their collaboration. Exit after success occurred through the sale of the startup firm to an established company or an initial public offering of its stock.

In the 17th century spice trade and 21st century Silicon Valley, capital and secrets combine in a risky venture. The investors fear losing their wealth and the innovators fear losing their secrets – the "double trust dilemma." To solve it, 17th century firms in the spice trade developed the modern corporation, which they called the "joint stock company." Three hundred years later, firms in Silicon Valley still use this form of organization. In general, business ventures face a dilemma in joining capital and ideas, and, with the right background conditions, the joint stock company is the best solution anyone has devised. A corporation that issues stock can reliably guarantee its owners a share of the firm's profits. Profit sharing incentivizes the innovators to use the investors' money for the venture, and profit sharing incentivizes the investors to preserve the innovator's

secrets. Being marketable, shares enable both parties to exit from the deal as soon as it succeeds or fails decisively. The secret of growth is financing secrets, and the corporation provides the best organizational form for doing so. This is the corporation's decisive advantage, as explained in this chapter.

### *Organizations and Markets*

We begin by distinguishing between business organizations and the markets that surround them. Organizations generally have a structure of offices created by contract and law, such as Chairman, Treasurer, or Ombudsman. While some members of organizations have offices, all members have roles to play. Standardization in the division of labor creates roles like bookkeeper, mechanic, or purchasing agent. By supplying a structure of offices and roles, organizations coordinate the behavior of its members.

When the behavior of different people is tightly coordinated, observers speak as if the group has goals, purposes, intentions, strategies, interests, wishes, and acts. These are the mental attributes of a person. An organization can be described as a *personified* group of individuals. The structure of offices and roles in an organization makes its individual members capable of corporate action. Its members coordinate their behavior to pursue common goals, as with a football team, symphony orchestra, church, army, partnership, or corporation. In the case of a corporation, the organization is personified in law: It is a legal person who can own assets, make contracts, sue, and be sued.

As coordination and discipline tighten in a group of people, they become an organization. Conversely, as coordination and discipline loosen in a group of individuals, an organization dissolves into a collection of individuals, like voters in an election or competitors in piano recital. Markets are organized, but they are not organizations. Markets have causes and effects, but they do not have goals, purposes, intentions, interests, or wishes, or corporate action, except metaphorically. Participants in markets often have legal contracts with each other, but the market is not a legal person. A nexus of contracts often sustains

an organization, but an organization is not just a nexus of contracts.[1] Organizations buy their inputs and sell their outputs in markets that surround them, but organizations are not markets.

What kind of organization is a corporation? Lets converge on a definition. Many organizations own property. A club, church, cooperative, trust, charity, or the state can buy and sell property such as land, buildings, and machinery. However, no one can buy or sell these organizations because they are unowned. In contrast, some organizations like corporations and partnerships *are* property -- they can be bought and sold. Chapter 6 explained that a market for organizations keeps them focused on making money, so owned organizations play the central role in economic life. In contrast, unowned organizations that focus on goals other than making money play the central role in government, religion, and social life.

What distinguishes the corporation from other owned organizations? As the state's creation, a corporation has whatever legal powers the state gives it.[2] Different legal traditions give different legal powers to different kinds of corporations, such as the joint stock company, the public limited liability company (Aktiengesellschaft), the private limited liability company (Gesellschaft mit begrenzter Haftung), the non-profit corporation, the S corporation, the banking corporation, the co-determined corporation, and the cooperative corporation. When people speak of "the corporation," they usually have in mind a joint stock,

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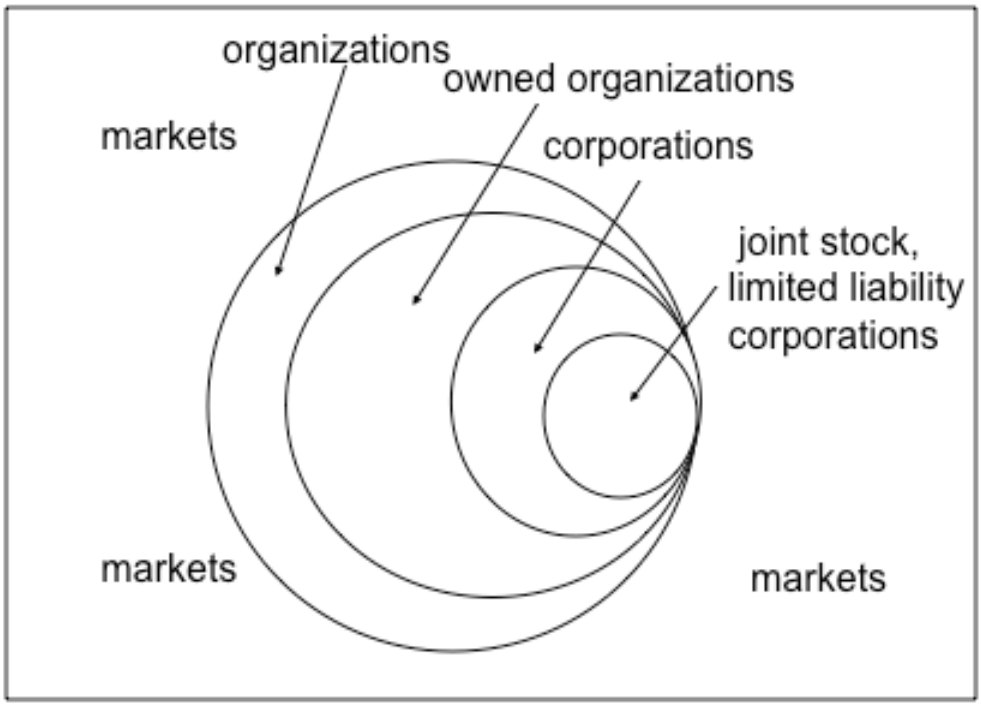
[1] Theorists who want to efface the difference between markets and firms say that firms are a nexus of contracts. But this fact cannot define a firm, since most large organizations that are not firms are also a nexus of contracts (e.g. a university, a symphony orchestra, or the department of highways). Also, some non-organizations form a nexus of contracts such as a middle eastern bazaar or the California bar. For the firm as a nexus of contracts, see Michael C. Jensen and Willima H. Meckling, "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure," *J.Fin.Econ.* 3 (1976): 305-360; Frank Easterbrook and William Fischel, *The Economic Structure of Corporate Law* (Harvard University Press, 1991)

[2] Some organizations like a partnership, church, club, or family have an existence apart from the state. They exist in fact, whether or not the state recognizes them in law. Other organizations like a corporation, trust, the bar, or the Department of Commerce, come into existence through law. Without going through steps prescribed in law, a corporation seldom exists in fact. (There are some exceptions, notably informal investment schemes that look a lot like a corporation without having a legal existence.)

limited liability corporation, which is our focus. Figure 9.1 puts this kind of corporation in the perspective of markets and organizations.

Figure 9.1. Perspective on Corporations




We will list some traits of a joint stock, limited liability corporation. In its traditional form, investors own stock that entitles them to a share of the profits and a voice in governance. In company elections, shareholders have votes in proportion to their investments (one stock, one vote), so they control the organization jointly and unequally. In most companies, a small block of shareholders – the "control block" – owns enough shares with voting rights to control the company. Each investor can sell his shares to another person without obtaining the consent of other shareholders. The corporation, not its shareholders, is liable for its debts. The corporation's creditors cannot reach into the personal property of its owners. The corporation pays taxes on the profits that it earns. When it distributes profits to its investors, the investors also pay personal income taxes on these dividends.

The joint stock, limited liability corporation contrasts with a personal organization ("sole proprietorship"). A personal organization is the owner's

property like his clothes and furniture, not a distinct legal person like a corporation. It cannot own property, contract, sue, or be sued. Its income is his income and its liabilities are his liabilities. The owner has complete power to sell the organization or reorganize it. Unlike a corporation, its creditors can reach into the owner's personal property to recover their debt, and its profits are taxed as part of the owner's personal income.

A corporation also contrasts with a partnership ("general partnership"). Like a corporation, a legal partnership is a person in law, distinct from the partners in it. It can own property, contract, and sue or be sued. Power among partners is negotiated when they form a legal organization by drafting a partnership agreement, which specifies its governance. In the simplest form of governance, the partners vote equally on fundamental matters affecting the partnership. Unlike a corporation, partners traditionally have unlimited liability for the partnership's debts, although this law is evolving. The partners usually want control over who can join them. Consequently, the partnership agreement usually restricts the ability of a partner to sell his membership to another person, which makes exit from a partnership more difficult than from a corporation. Unlike a corporation, the partnership traditionally does not pay taxes directly. Instead, its profits are attributed to the partners, who pay personal taxes on their income from the partnership.

Figure 9.2 summarizes these broad generalizations about the traits of three fundamental types of firms: a (joint stock, limited liability) corporation, personal organization (sole proprietorship), and a partnership.

Figure 9.2. Characteristics of Three Types of Firms

| | **Corporation** | **Personal** | **Partnership** |
|---|---|---|---|
| **Legal person** | Yes | No | Yes |
| **Power** | Controlling shareholders | Individual owner | Partners negotiate |
| **Liability** | Limited | Unlimited | Unlimited |
| **Tax Basis** | Corporation and stockholders | Individual owner | Partners |

Markets and different types of organizations have a place in modern economies. Among organizations, however, corporations dominate. According to the theory of this book, innovative ventures confront the double trust dilemma. Solving it requires organizations with tight coordination and discipline. The corporation dominates other forms of economic organization because it solves the double trust dilemma the best. We sketched how it does so in comparing ventures in Silicon Valley and the 17th century spice trade. The corporation is a decisive improvement in financing innovation because investors receive a *marketable share of future profits*. In contrast, a personal organization provides no mechanism to guarantee investors a fraction of its future profits, and a partner's rights in a firm are not freely marketable.

***How Big?***

We have explained the distinctive advantage of corporations that has enabled them to grow faster than other firms and to dominate the modern economy. Next we ask the question, "What determines a particular firm's size?" To appreciate the problem, contrast two Indian examples of small and large firms. Shopper's Stop is a department store in Mumbai that sells much the same goods as the Connaught Place market in New Delhi, but in a very different way. Shopper's Stop is a one massive store with hundreds of employees selling goods in different departments. In contrast, hundreds of small, independent shops rent space in an underground structure at Connaught Place. Why doesn't Shopper's Stop dismiss its employees, divest its departments, and rent space to many small sellers as in Connaught Place? Conversely, why don't the small firms in Connaught Place merge to form one large firm like Shopper's Stop?[3]

In general, two firms can merge to make one, or one firm can divest to make two. This is the "merge-or-divest" question. Similarly, consider a choice faced by Kia, a Korean car manufacturer. It needs tires for the cars that it

[3] Connaught Place is publically owned, so mergers and acquisitions by its leasees would have political implications.

makes. If it makes tires in a subsidiary, then Kia becomes that much bigger. If it buys tires from another firm, then Kia remains that much smaller. This is the "make-or-buy" decision. These two decisions -- merge-or-divest and make-or-buy -- are examples of choices by which firms grow or shrink. To understand what determines the size of a particular firm, we need to know how they make such decisions.

Competition drives a firm towards its most profitable size. If a smaller firm is more profitable, then the firm will divest and buy inputs. If a larger firm is more profitable, then the firm will merge and make inputs. In "The Nature of the Firm" (1936), the Nobel Prize winner Ronald Coase argued that the more profitable choice depends on *transaction costs*. Manufacturing tires requires KIA to contract with employees and supervise them. These are transaction costs of *making* a product. Buying tires requires KIA to contract with sellers and monitor the quality of the tires. These are transaction costs of *buying* a product. Similarly, merging two companies requires supervising both of them, and divesting a line of production ends the firm's supervision of it. Competitive pressure should cause firms to choose the cheaper alternative between buying and making inputs, or merging firms and divesting activities.[4]

Generalizing, Coase's theory implies that competition should cause firms to adjust their size (large or small) and form (sole proprietorships, partnerships, corporation) to minimize transaction costs. A firm combines private information and capital in an organization. This book emphasizes two costs of transacting: diffusion of information and appropriation of capital. The investor risks losing his capital and the innovator risks losing her ideas -- the double trust dilemma – and

[4] Other types of transactions costs analyzed by economists include agency problems, risk spreading, hold-up, flexicility, and tax avoidance. The "agency problem" refers to the problem of managers controlling employees when contracts are incomplete. See Margret Blair and Lynn Stout, "A Team Production Theory of Corporate Law," 85 Va. L. Rev. 247 (1999). On team production. Risk spreading refers to such things as avoiding liability in tort. Richard R. W. Brooks, "Liability and Organizational Choice," *J. Law and Economics* 45 (2002): 91-121. Hold-up involves specific capital investment. See Oliver E. Williamson, *Hierarchies, markets, and power in the economy : an economic perspective*, Business & public policy working paper ; BPP-59 (Berkeley, CA: Produced and distributed by Center for Research in Management, 1994). Flexibility involves the relative ease of ending a contract and the legal difficulties of firing an employee. Tax avoidance involves various techniques to allocate profits among associated corporations.

these risks are "transaction costs" in Coase's terms. Following Coase, we say, "The corporation achieved its dominant position by reducing the cost of preventing the diffusion of innovative ideas and the appropriation of investors' money."

We will discuss each of these advantages in turn. Before doing so, however, we briefly mention non-market economies. Innovation and growth determine the size of firms in a market economy, but not in a non-market economy. Socialism replaces capital markets with politics. Under central planning, firms throughout the communist world grew vastly larger than under capitalism, like the Nowa Huta steel plant in Poland. Transaction costs theory suggests why this happened. Political influence determined the central plan, which allocated capital for firms to grow. In many institutional settings, one large firm has more political influence than two smaller firms. When political influence increases more than proportionately with a firm's size (increasing returns to scale of lobbying), large firms beat out small firms. Thus a politicized economy under socialism helped large firms to grow larger.[5] This explanation of gigantic firms under socialism also explains the large size of firms that sell mostly to the central government in a mixed economy, such as military suppliers.

### *Keeping Secrets*

Now we explain how the corporation reduces the cost of preventing the diffusion of innovative ideas. In the 1950s socialist countries around the world built gigantic steel plants like Nowa Huta in Poland. By the 1980s they were losing vast amounts of money and they seemed destined to die a slow death by rust. Lakshmi Mittal, who led the international operation of an Indian steel business built by his father, believed that these industrial dinosaurs could flourish in the age of mammals. In the late 1980s he used family money to buy ailing

[5] Sajo, A. (1990). "Diffuse Rights in Search of an Agent: A Property Rights Analysis of the Firm in the Socialist Market Economy." International Review of law and Economics 10: 41-60. In general, large firms can overcome the free-rider problem of political lobbying, as explained by Mancur Olson in his classic, he Logic of Collective Action: Public Goods and the Theory of Groups (Harvard University Press, 1965).

steel companies in Indonesia, Mexico and Kazakhstan. More acquisitions followed, including Nowa Huta in 2003. He had novel ideas about making them profitable by shrinking and reorganizing them, and he thought that the Asian construction boom would lift world steel prices. He proved right on both counts. In 2005, Forbes rated him as the third richest person in the world.

What do entrepreneurs like Mittal know that others don't know? First, they know how to organize a business. Reorganizing gigantic steel mills to make them smaller and more profitable requires massive changes in offices, roles, and the people who fill them. Second, entrepreneurs like Mittal know better than others what prices the future will bring, so they know which lines of business to expand and which to contract. Knowledge of organization and future prices convey a decisive advantage over competitors.

Since Mittal knew things about organization and future prices that his competitors did not know, economists say that he had "private information." The discovery of private information begins the life cycle of innovation described in Chapter 3. At the start, the innovator and investor need to combine the new idea with capital, thus solving the double trust dilemma. Solving it requires an organization, and the corporation is usually the best organization to solve it. Given effective law, the parties can structure the corporation so that investors make more money by keeping the firm's secrets than by sharing them with others, and entrepreneurs make more by developing the business than by appropriating the investors' money. After developing an innovation and bringing it to market, the innovation conveys a competitive advantage and yields extraordinary profits. When the entrepreneur succeeds, however, competitors smell money and try to emulate the innovator. The innovator tries to prolong extraordinary profits as long as possible by withholding the information needed by the emulators.

The longer an innovative firm can delay competitors from understanding or improving on what it knows, the more it profits and the larger it grows. Once the firm's private information stops being innovative, it loses its competitive

advantage and stops growing. A firm should conserve the value of its private information, which often requires keeping its secret. The firm protects its secrets partly by using legal devices such as non-disclosure agreements, non-competition clauses, and trade secrets laws. These devices have a little value in countries with strong state law, and no value elsewhere. Thus when technology firms negotiate in Silicon Valley they usually sign non-disclosure agreements, which might be enforceable. In contrast, when technology firms negotiate in India, they seldom sign non-disclosure agreements, which are certainly unenforceable.[6] Much the same contrast between Silicon Valley and India applies to suing employees or trading partners who disclose trade secrets.

The main way to protect business secrets, however, is through organization. Compared to other forms of organization, a corporation provides a superior incentive structure for keeping secrets from emulators. Since the corporation usually provides the best solution to the double trust dilemma, corporations have grown faster than other forms of economic organization and they dominate the modern economy. We propose this general principle: "Secrets are easier to preserve when interactions that require sharing them occur inside a firm rather than outside of it."[7] Consequently, a firm should internalize production that utilizes its secrets.

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[6] Mitu Gulati provided this information in a personal communication, based on his research into contract practices in India. However, international technology firms operating in India apparently use non-disclosure agreements.

[7] We explain the boundaries of the firm by the need to protect market power by keeping innovations secret. In contrast, a celebrated analysis by Oliver Hart explains the boundaries of the firm as conserving decision-making power. He writes
"...firm boundaries are chosen to allocate power optimally among the various parties to a transaction. I argue that power is a scarce resource that should never be wasted. One implication of the theory is that a merger between firms with highly complementary assets is value-enhancing, and a merger between firms with independent assets is value-reducing. The reason is as follows. If two highly complementary firms have *different* owners, then neither owner has real power since neither can do anything without the other. It is then better to give all the power to one of the owners through a merger. On the other hand, if two firms with independent assets merge, then the acquiring firm's owner gains little useful power, since the acquired firm's assets do not enhance his activities, but the acquired firm's owner loses useful power, since she no longer has authority over the assets she works with. In this case, it is better to divide the power between the owners by keeping the firms separate." Firms, contracts, and financial structure. Oxford and New York, Clarendon Press and Oxford University Press, 1995, page 8.

Applied to the merge-or-divest decision, this principle implies that firms that need to share secrets can keep them better by merging. Applied to the make-or-buy decision, this principle implies that firms can keep secrets about an input better by making it than buying it. The same logic extends to many other decisions. Consider whether to hire an employee or buy a service. If performing a task requires understanding a firm's secrets, the firm should hire an employee to perform the task. Conversely, if performing the task does not require understanding a firm's secrets, the firm can buy the service from an outside contractor.[8] Or consider whether to sell a service or the product that produces it. A firm invents a computer program to perform an accounting task. If a firm owns effect intellectual property, it can sell the program to others to use. Conversely, if it does not own an effective patent, it should sell the accounting service to others and keep the program secret. Or consider whether to buy a product or buy the firm that makes it. Special know-how imbedded in a successful firm's routines, organization, and culture gives it a competitive advantage, sometimes called its "core competence." If one firm wants the information imbedded in another firm, it should buy the other firm. Conversely, if a firm does *not* want information imbedded in another firm, it can buy the other firm's assets, products, services, patents, and so forth.

Figure 9.3 summarizes these decisions and the criteria for making them.

Figure 9.3: Organizational Decisions and Informational Criteria

| Decision | Criterion |
|---|---|
| Merge or divest? | Does the activity require sharing secrets? |
| Make or buy an input? | Does the firm have secrets about the input? |
| Hire an employee or buy a service? | Does worker need to know firm's secrets? |
| Sell a product or sell a service? | Can a product's user appropriate its secrets? |
| Buy a firm or its product? | Do you want the target's imbedded information? |

Chapter 7 explained the difference between relational and private contracting. When state law is ineffective, businesses organize on the basis of

[8] Joke.
*Board member: "Why did you fire our accountant?"*
*CEO: "He called me an idiot."*
*Board member: "He* should *be fired. Employees can't disclose company secrets."*

relationships. The firm provides a framework for relational contracting. Concentrated ownership tightens relationships among the most powerful people in a firm. Conversely, when state law is effective, firms organize more impersonally. The law provides a framework for formal contracting. Ownership disperses.

Empirical evidence in Figure 9.4 confirms the prediction that loose state law for business concentrates ownership, and tight state law disperses ownership. The figure divides large firms with publicly traded stock into three types: (i) closely held -- controlled directly or indirectly by one person, a family, or a small group; (ii) widely held -- controlled by professional managers; or (iii) state owned. Countries are arranged in descending order by the proportion of closely held companies. Thus the first row indicates that all Mexican companies in the sample were closely held, and none were publicly held or controlled by the state. At the other extreme, all large U.K. companies in the sample in Figure 9.4 were publicly held. According to Figure 9.4, the widely held corporation represents less than half of large publicly trade firms in Mexico, Hong Kong, Argentina, Singapore, and Italy, and more than half of large publicly trade corporations in South Korea, France, U.S.A., Germany, and the U.K.[9]

[9]Other studies confirms the general pattern of Figure 6.4. Erica Gorga cites data that 90% of the firms in a large sample from the Brazilian stock exchange have a single stockholder owning more that 50% of shares. Only a few companies are controlled by a coalition of blockholders. See Gorga, E. (2007). Analysis of the Efficiency of Corporate Law. Latin American Law and Caribbean Law and Economics Association (ALACDE). Interlegis, Brasilia, Brazil.

*Figure 9.4. Control of large publicly traded corporations in Selected Countries (in percent), 1995).*

| | Closely held* | Widely held | State |
|---|---|---|---|
| **Mexico** | 100 | 0 | 0 |
| **Hong Kong** | 70 | 10 | 5 |
| **Argentina** | 65 | 0 | 15 |
| **Singapore** | 30 | 15 | 45 |
| **South Korea** | 20 | 55 | 15 |
| **France** | 20 | 60 | 15 |
| **USA** | 20 | 80 | 0 |
| **Italy** | 15 | 20 | 40 |
| **Germany** | 10 | 50 | 25 |
| **UK** | 0 | 100 | 0 |

**Source:** La Porta/Lopes-de Silanes/Shleifer, Corporate Ownership Around the World, 1998, Table II. [10]

## Financing Inside and Out

The corporation achieved its dominant position by reducing the cost of preventing the diffusion of innovative ideas and the appropriation of investors' money. Having discussed keeping secrets, we turn to investor protection. Outsiders demand much legal protection to invest in companies controlled by insiders, whereas insiders who control the firm can protect themselves. To illustrate, after the collapse of communism in 1989, Czechoslovakia privatized state firms. To implement wide ownership, the state gave the stock in newly privatized firms to large mutual funds, and the state distributed vouchers to citizens entitling them to obtain shares in the mutual funds at little or no cost. However, weak law could not stop insiders from grabbing profits from the privatized firms and diverting them to insiders. Without effective legal protection, individual citizens correctly placed little value on the vouchers, so public prices plummeted, insiders snatched up shares at bargain prices, and widely held firms collapsed into closely held firms. The Czechoslovakian state tried and failed to achieve broad ownership of privatized firms. Voucher privatization, which

[10] We thank Florencio Lopez-de-Silanes for help interpreting this table.

western economists recommended, also failed miserably in Russia during the transition from communism to capitalism after 1991.[11]

Investor protection generally affects stock prices. A stock yields a stream of future dividends to its owner.[12] Without effective investor protection, insiders grab a disproportionate share of a firm's earnings and little is left to pay dividends. A few shares in such a company has little value, but a controlling block of shares has much value. If insiders sell the controlling block of shares, the buyers become the new insiders who control the company. The price per share that people will pay for a controlling block of shares is larger than the price per share that they will pay for a small number of shares. The difference in price per share for the control block and individual shares is called the *control premium*. To illustrate, if insiders are willing to sell the controlling block for $1.50 per share, whereas outsiders are willing to pay $1 per share for individual shares, then the control premium is $.50 per share.

The control premium is especially large when insiders can divert profits to themselves rather than sharing them with outside investors. Conversely, the control premium is small when effective law gives outsiders their fair share of profits. Nenova calculated the control premium in different countries. In the Czech republic, a controlling block of shares commands a premium of 58% relative to the stock market price. In the Republic of Korea the premium is 47%. In France and Italy -- countries with a strong legal system but weak minority shareholder protection -- it is 28%. In Brazil and Chile it is 23%. In Germany and the United Kingdom, it is 10%. In the Scandinavian countries, the USA, and Canada it is less than 5%. Nenova then showed the statistical connection between the control premium and index of strength of law in a country (the "rule

[11] Konstantin Magin, "Reforms With No Place to Stand" (PhD dissertation, University of California, Economics, 200_).
[12] The exception is a growth firm whose owners expect it to be acquired before it ever pays dividends. Here the price of stocks is determined by the expected future sale price of the firm, not by the present value of the stream of future dividends.

of law index"). As predicted, the control premium falls when the rule of law strengthens.[13]

Better investor protection should cause an increase in the stock market value of firms, or their "market capitalization." [14] To test this proposition, economists compare the market capitalization of firms in different countries. Firms are the main source of national income in most countries. Consequently, better investor protection should cause an increase in the ratio of market capitalization to gross domestic product for a country. Empirical research confirms this prediction. The ratio of total market capitalization to GDP is roughly twice as large in high-income countries compared to low-income countries. Furthermore, the ratio of total market capitalization to GDP increases with improved investor protection, as measured by an index of shareholder rights[15] or an index of public disclosure.[16]

## Reform

How can better law increase the pace of economic growth? The preceding analysis suggests an answer: Improve the laws for joint stock, limited liability corporations. We will explain the reforms in law that facilitated this form of organization in Europe and the U.S., and we will relate these reforms to developing countries today.

### *Cheap Freedom*

To become the dominant form of economic organization, the joint stock company had to extend from the spice trade to manufacturing. This extension

[13] Other empirical evidence also supports the conclusion that the control premium falls when outside investors enjoy better legal protection. Thus Nenova obtained the same negative correlation using a more specific index of minority protection of shareholders, instead of the rule of law index. Also see Dyck and Zingales as discussed in Erica Gorga.
Dyck, A. and L. Zingales (2004). "Benefits of Private Control", NBER Working Papers No. 8711.
[14] Improved investor protection cause an increase in total market capitalizatioin in two distinct ways. First, outside investors bid the stock price up. Second, some strictly private firms offer shares to the public for the fist time.
[15] Cite World Bank Development Indicators.
[16] Note that market captialization as a percentage of GDP increases with an index of public disclosure of company news, as shown by the World Bank Development Indicators 2005.

required dismantling restrictive rules by which the state controlled the economy. In the 17th and18th century, British monarchs created monopolies for privileged subjects in exchange for loyalty and money. A patent or license gave the holder an exclusive right to engage in a certain line of business. Thus the Hudson's Bay Company was incorporated in 1670 with a charter from King Charles II granting a monopoly over trading with Indian tribes in much of northern Canada. Local patents were given for many small businesses like brewing beer. Adam Smith's famous critique of mercantilism claimed that these monopolies enriched the king and his friends and impoverished the nation.

In the 18th and 19th centuries, British law changed under the influence of thinkers like Adam Smith. Important changes included routine incorporation (incorporation by anyone using simples laws, not by a grant of executive privilege to a political favorite), and broadening the range of businesses that a corporation can enter (general incorporation instead of incorporation for a single line of business). Entrepreneurs gradually acquired the right to form a corporation for almost any business purpose without a special license, patent, or grant of royal privilege. In the modern world, some contemporary countries still require a separate license for pharmaceuticals, securities, cable television, exports, restaurants, real estate, hotels, haircuts, opticians, and so forth. Some of these restrictions provide justifiable protection of consumer against incompetence and fraud. However, many of these restrictions reserve some lines of business for politically privileged groups. In every country, restrictive licensing shields privileged firms from competition, and they reciprocate with bribes, contributions, and other forms of support for politicians.

Like 19th century Britain, most developing countries today have a general corporate form for entering many lines of business. This development increases liberty by allowing people to organize and exchange without special permission from the state. The law should provide entrepreneurs with a menu of legal forms for organizing the firm's governance. By removing prohibitions and allowing choice over organizational forms, economic liberty releases the energies of entrepreneurs and sends innovation on its creative, unpredictable path.

According to the *principle of organizational liberty, people should be free to organize firms to pursue business opportunities as they see fit and to select a form of governance from a menu of legal alternatives*.

The law imposes a price for exercising economic freedom, which varies from country to country. The price includes fees for licenses and registration, bribes paid to expedite processing or relax rules, minimum capital requirements for establishing a company, business taxes, and many restrictions involving employees. The World Bank survey reported in Figure 9.6 gives the number of days and procedures needed to establish a new business in various countries. According to Figure 9.6, the regulatory burden on new businesses varies from one country to another, and the burden is especially heavy in developing countries.[17] (The general pattern in Figure 9.6 is convincing, but the numbers contain measurement errors, so comparisons between any two countries must be treated with caution.) Innovation would increase if business freedom were cheaper to exercise.

[17] In OECD countries the number of procedures to register property was 4.7 in the average in 2004, whereas it was 6.6 in middle and low-income countries (World Bank, World Development Indicators, 2005). Also see Enterprise Directorate General of the European Commission (January 2002), "Benchmarking the Administration of Business Startups," Centre for Strategy and Evaluation Services. This study found that setting up a new company took 7 days in the UK and 35 days in Italy.

Figure 9.6. Legal Barriers to Establishing a New Business

| | Time (days) | Number of Procedures |
|---|---|---|
| Venezuela | 141 | 16 |
| Brazil | 120 | 16 |
| Indonesia | 60 | 9 |
| Vietnam | 50 | 11 |
| China | 37 | 14 |
| Kenya | 34 | 12 |
| Poland | 32 | 6 |
| Nigeria | 31 | 8 |
| India | 30 | 13 |
| Russian Federation | 30 | 9 |
| Argentina | 27 | 15 |
| Chile | 27 | 9 |
| Pakistan | 20 | 10 |
| Czech Republic | 15 | 8 |
| Mexico | 13 | 8 |
| Malaysia | 11 | 9 |
| Iran | 9 | 7 |
| Egypt | 7 | 6 |
| Turkey | 6 | 6 |
| USA | 6 | 6 |
| Canada | 5 | 1 |

Source: World Bank, Doing Business 2010.

### *Partitioning Assets*

Having discussed dismantling restrictive rules, we turn to innovations in law and institutions that broadened the basis of corporate finance. Broad finance requires a firm to attract investors from outside the inner circle of people who control it. The outsiders must trust the representations of the insiders. Special features of the 17th century voyages from Europe to Asia made stockholders relatively easy to protect. As a matter of practical necessity, the ship usually needed to return with its cargo to the port of embarkation, where investors could see the firm's wealth and divide it. In contrast, a factory yields a stream of production over time, so insiders can disguise profits and divert them relatively easily. The preceding chapter explained that investors in innovative ventures need a share of profits to compensate for risk. The legal power to guarantee

outside investors their share of profits was necessary for the corporation to dominate manufacturing.

The problem was solved through many small improvements in law and institutions in the U.S. and Europe in the 18th and 19th centuries. Improvements that helped to extend stock financing to manufacturing include better accounting techniques, limited liability, reporting requirements, and banking regulations. These improvements mostly have a single purpose: To separate the company's assets and liabilities from those belonging to other legal persons. Separation prevents insiders from converting the company's assets into their personal wealth, and separation prevents the company's creditors from converting its debts into the personal debts of its investors.[18]

Improvements in partitioning assets enabled the corporation to spread in the 19th century. The corporations that first attracted outside investors especially concentrated on infrastructure and utilities – roads, canals, railroads, water, and so forth. These firms reassured outside investors by securing state participation and supervision. Gradually the stock market in the U.S. spread from infrastructure and utilities into manufacturing. Legal and nonlegal improvements in partitioning assets probably contributed as much to the industrial revolution as factors usually cited like scientific progress, capital accumulation, and labor mobilization.[19]

Econometric evidence shows that improvements in corporate law can increase the value of firms today. Before 1947, India was a British colony, so its rules of corporate governance were British. From independence in 1947 until roughly 1999, socialist policies made firms increasingly dependent on state finance. Nationalized banks crowded out private financing of large firms. In the

[18] Hansmann and Kraakman, "The End of History for Corporate Law," 89 Georgetown Law Journal 439 (2001).
[19] Page 1 of Phyllis Deane's pioneering economic history, The First Industrial Revolution (1965, Cambridge Univeristy Press), lists seven "changes in the methods and characteristics of economic organization which, taken together, constitute a development of the kind which we would describe as an industrial revolution." The modern corporate form, or the extension of the joint stock company to manufacturing, is not among them.

1990s, however, socialist policies were reversed and private investing recovered. In 1999, India adopted major reforms in the law of corporate governance, known as Clause 49, which protect outside investors against wrongdoing by corporate insiders. Provisions include mandatory disclosure, stricter accounting, and managerial responsibility for reporting. Clause 49 reforms applied immediately to large firms and gradually to smaller firms. The difference in timing permitted Black and Khanna to estimate the effect of these laws on stock values. Regression analysis concluded that the laws caused the stock prices of affected firms to increase by four to five percent.[20]

Another econometric test of the effect of corporate legal reform on stock prices comes from Korea. In 1999 Korea enacted new laws on corporate governance that became effective in 2000. Under the new law, large firms were required to appoint independent directors, create an audit committee, and create a nomination committee. The result as shown by Black and Kim was a measurable increase in the stock value of affected firms.[21] Apparently these legal reforms made outsiders more secure about investing in Korean firms, all of which are closely held by insiders.

Even with ineffective state laws, a firm can take steps to make outside investors more secure. The firm can voluntarily introduce transparent reporting, hire reputable accountants, and offer seats on the board of directors to minority shareholders. Empirical studies from East Asian countries suggest that such measures taken by firms protected outsiders to some extent during the financial crisis of 1997, but better protection would improve the region's economies.[22]

Summarizing a decade of econometric research on economic development, Lopez de Silanes concludes, "Investor protection explains the

[20] The faster growing, midsize firms benefited most. The increase in stock prices was especially due to an increase in investment by foreigners.Black, B. S. and V. Khanna (2007). Can Corporate Governanc Reform Increase Firms' Market Values? Evidence from India. American Law and Economics Association, Annual Meeting. Harvard Law School.

[21] Black, B. S. and W. Kim (2007). The Effect of Board Structure on Firm Value in an Emerging Market: IV, DiD, and Firm Fixed Effects Evience from Korea. American Law and Economics Association, Annual Meeting. Harvard Law School.

[22] CITE Johnson et al..

development of financial markets." He favors laws requiring full disclose to outside shareholders of self-dealing by insiders, with effective private enforcement of this right. He stresses that private enforcement of investors' rights is more effective than public enforcement.[23]

This chapter described the firm as a repository of private information, whose dissemination reduces its profits and increases the productivity of others. Direct foreign investment is the quickest way to diffuse innovations in markets and organizations from developed to developing countries. A foreign firm that operates in a developing country transfers capital and innovative ideas to the host-country, which increases productivity and wages. Obstructing foreign investment deprives a country of valuable ideas, especially unpatentable ideas about organizations and markets.

### *Rent a Regulator*

We have explained that firms benefit from outside financing, but outsiders fear that the legal system will not protect them against insiders. Improving a country's courts can take years. In the mean time, a firm can reassure outside investors by bringing itself under the jurisdiction of foreign courts. Cross listing companies on more than one stock exchange makes the firm comply with foreign regulations policed by foreign regulators, which can signal that the firm wants its shareholders protected better than its own legal system provides. In effect, firms gain access to outside investors by renting a regulator.[24]

To illustrate, the Russian gas company Gazprom resembled Exxon in its size and scope of operations, but the market value of Gazprom's stock ("market capitalization") in 2001 was 10% of Exxon's. This difference in value mainly

[23] Lopez de Silanes, F. (2007). Legal Origins and Corporate Finance. Annual Meeting of Latin American and Carribean Law and Economics Association (ALACDE). Interlegis, Brasilia, Brazil.
[24] Reese, W. A., Weisbach, M.S. (2000) Protection of Minority Shareholder Interests, Cross-listing in the United States and Subsequent Equity Offerings, mimeo, Tulane University of Illinois, January. Mimeo. S. Claessens, D. Klingebiel, S. Schmukler, (2002) Explaining the Migration of Stocks from Exchanges in Emerging economies to International Centers, Worldbank Discussion Paper 3301. A.Karolyi (1998) Why Do Companies List Shares Abroad? NYU Salomon Brothers Center Monograph Series, Vol7 No. 1, New York University Press p.1-60.

reflected the difference in the protection of minority shareholders in Russia and the USA. In 2005 Russia removed restrictions against foreign investors in Gazprom, its biggest state owned company. Gazprom promptly applied to list its stock in the New York Stock Exchanges, as well as in London. To list on the New York Stock Exchange, Gazprom must comply with its rules and also the rules of the U.S. Securities and Exchange Commission.[25] In general, empirical evidence from various countries shows that cross listing a stock increases its price.[26]

Beyond cross listing, a firm can try to relocate its corporate charter in another jurisdiction. The U.S.A. allows its firms to incorporate under the laws of any one of the fifty states, without regard to the location of their operations. Thus a company whose business operates entirely in Nebraska can incorporate in Delaware, so Delaware law would control most corporate disputes involving the company. Empirical evidence from the U.S. suggests that competition for corporate charters among states probably improved the quality of corporate law.[27] Similarly, the European Court of Justice allowed firms to incorporate in any EU country, regardless of where they operate. Thus Germans established

[25] The rules include generally Accepted Accounting Rules (GAAP) and reporting rules. P. Didenko (2005), Compliance with the Sarbanes-Oxley Act of 2002, Challenges for Russian Corporate Governance, Discussion paper. Short of listing its stock, a foreign company can gain indirect access to the New York Stock Exchange or other American capital markets by using an "American Depository Receipt" or ADR. In effect, the company deposit stock with an American bank that then sells certifcates (ADRs) entitling the owner to most of the benefits of a stockholder. The ADRs are traded in American capital markets. The foreign firm can choose the extent to which it will conform to American securities regulation. The level of conformity determines the breadth of the markets in which American law allows the ADRs to be sold.

[26] *Stulz, Doidge and Karolyi* examined stock prices for 712 cross-listed firms and 4,078 that were not cross-listed in 1997. They found that "cross-listed stocks were worth 16.5 percent more on average than comparable firms that were not cross-listed. This cross-listing premium was even more dramatic for firms listed on NYSE, where it was 37 percent on average.". *R.M. Stulz, C. Doidge, and G.A. Karolyi, "Why Are Foreign Firms Listed in the U.S. Worth More?" NBER Working Paper No. 8538, October 2001, and Journal of Financial Economics, 71(2), 2004, pp. 205-38.*

[27] Roberta Romano, "The State Competition Debate in Corporate Law," *Cardozo Law Review* 8, no. No. 4 (1987): 709-757; Lucian Arye Bebchuk, "Federalism and the Corporation: The Desirable Limits on State Competition in Corporate Law," *Harvard Law Review* 105 (1992): 1437-1510; Oren Bar-Gill, Michal Barzuza and Lucian Bebchuk, The Market for Corporate Law, 162 Journal of Institutional and Theoretical Economics 134 (2006).

many firms under English law that will operate mostly in Germany. This example shows that courts can facilitate or impede cross-listing and foreign chartering.[28]

### *Conclusion*

The (joint stock, limited liability) corporation is the best organization to combine capital and innovative ideas. In the right circumstances, the corporation can contain business secrets and use investors' money to develop innovations. After development, a successful innovation yields extraordinary profits temporarily. These venture profits drive economic growth by rewarding innovators. Thus the corporation's social justification is much the same as the justification of patent: Consumers pay more to give entrepreneurs the extraordinary profits that drive growth.

Like the fairest youth, the most vigorous corporation eventually dies. When a person dies, an effective will disposes of his assets. When a corporation dies, effective bankruptcy law redeploys its assets, which is the subject of our next chapter.

[28] Cross-listing and foreign chartering lead to disputes that domestic courts should decide by using foreign laws. Also, cross-listing and foreign chartering leads to damage awards by foreign courts against domestic firms that domestic courts should enforce. By enforcing foreign laws and damage awards, domestic courts maintain the credibility of the firm's submission to foreign laws, which attracts more investments in domestic firms.

## Chapter 10: Hold or Fold -- Financial Distress

In Silicon Valley startups, the World Cup, and the elk rut, some win and many lose. Success and failure are two sides of risk-taking in sports, business, and biology. The previous chapters concerned how law unites capital and ideas to create winning firms. This chapter concerns how law resolves financial distress in failing firms. Firms owe money to commercial banks that make loans, investment banks that buy bonds or preferred shares, suppliers who deliver goods on credit, consumers who pay for goods before their delivery, employees with unpaid wages, accident victims awarded compensation, etc. When a firm loses money for long enough, it cannot service its debts. If losses are temporary, the firm can eventually repay its creditors when it returns to profitability. Such a firm needs temporary financial relief. Refinancing temporary failures preserves firms with good ideas and management. However, if the losses are permanent and the firm can never return to profitability, it needs liquidation. Quickly liquidating permanent failures redeploys capital to better ideas and management. The first problem of bankruptcy law is distinguishing between temporary distress and permanent failure. When gambling with cards, according to a popular song, "You got to know when to hold 'em, know when to fold 'em".[1]

The resolution of financial distress alters the status and wealth of its stakeholders. The firm's main stakeholders are its managers, employees, stockholders, and creditors; other stakeholders include consumers, politicians, and communities. In a distressed firm, they have different aims: Managers and employees want to keep their jobs, shareholders want a high stock price, creditors want full repayment of debts, etc. Different stakeholders have different powers, and they often bargain with each other in an attempt to agree on how to resolve the firm's distress.

Their bargaining power partly depends on the terms of a resolution that judges or other state officials will impose if the stakeholders cannot agree. The laws affecting a state-imposed resolution include bankruptcy, contracts, finance, corporations,

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[1] For the full lyrics to this riveting song, browse the internet for Kenny Rogers, "The Gambler."

employment, and consumer protection. The formal law, however, is less effective in many poor countries than in rich countries. In some developing countries, bankruptcy law is so ineffective and costly that firms never use it to resolve their distress. Furthermore, politics pervades the resolution of financial distress in some countries. The problems of distressed firms, consequently, differ significantly in developed and developing countries. We will explain some general principles about distressed firms and then focus on the special problems of developing countries.

### Causes and Cures of Financial Distress

A firm combines capital and ideas under managers. Failure in capital, ideas, or managers can cause financial distress. First, consider distress caused by inadequate capital in a firm with good ideas and managers. Even good managers often miscalculate the timing of the firm's revenues and costs. Thus start-ups in Silicon Valley often underestimate how long they will lose money before turning profitable. Similarly, a downturn in the business cycle sometimes causes a temporary cash crisis in a successful firm. Or a successful firm may experience an unanticipated shock that demands immediate cash, as when OPEC increases oil prices. If capital runs short in a firm with good ideas and good managers, the firm should refinance by seeking additional funds or restructuring its debt to slow repayment.

Second, consider distress caused by bad management of a firm with adequate capital and good ideas. If management falters, even a firm with adequate capital and good ideas can turn unprofitable and experience financial distress. In these circumstances, the owners should replace the managers and reorganize the firm. To illustrate, the creative people who found firms in Silicon Valley often manage them badly, so venture capitalists must replace the founders with new executives. The board of directors may replace the managers and hire new ones, or the board may sell the firm and let the buyer replace the managers.

Third, consider distress caused by bad ideas in a firm with good managers and adequate capital. Many firms build around a few activities that they do best, sometimes called the firm's "core competence." In a mature company, the core activity may become obsolete and lose its value. In a startup, development of the firm's core idea

often exposes fatal weaknesses in it. In either case, if a firm's core idea is unprofitable and managers cannot reinvent the firm, the owners should liquidate it. Liquidating a firm involves selling its assets, paying its creditors, and dissolving the firm. The general principle for liquidating a firm has the same basis as the decision to start a firm: "Start firms with positive expected profits, and liquidate firms with negative expected profits."

Figure 10.1 summarizes these general causes and cures of financial distress in firms.

Figure 10.1. Causes and Cures of Financial Distress

| Cause | Cure |
|---|---|
| insufficient capital | refinance |
| bad management | reorganize |
| unprofitable core idea | liquidate |

***Bargains and Quarrels***

Earlier chapters explained that the prospect of mutual gain aligns the interests of stakeholders in a successful firm and encourages cooperation among them. Similarly, the prospect of mutual losses encourages stakeholders in an unsuccessful firm to cooperate with each other in minimizing their losses. In principle, the same spirit of cooperation can persist in a distressed firm as in a successful firm. In order to cooperate, the stakeholders bargain towards an agreement on the best resolution among bad alternatives. The best resolution imposes the least total costs on the firm's stakeholders. Costs include reduced salaries of managers, lost wages of employees, lower prices of stock, and incomplete or delayed repayment of debts. For example, refinancing a good firm in temporary distress creates more wealth than liquidating it, and quickly liquidating a bad firm in permanent failure creates more wealth than refinancing it.

Cooperation among stakeholders comes from give-and-take. For example, creditors might offer to refinance the firm in exchange for preferred shares and an agreement by the workers to accept lower wages. After identifying the cost-minimizing

solution, the best resolution distributes the costs so that all of the stakeholders benefit relative to the alternatives.[2] The extent of the benefit to each one depends on the terms of the bargain that they reach. In economic theory, a bargaining situation exists when parties can create a surplus by agreeing on its distribution. This is true when selling a used car, settling a liability claim out of court, or resolving financial distress.

In practice, however, the spirit of cooperation often breaks down in a distressed firm and the stakeholders quarrel. The quarrels usually follow predictable lines as depicted in Figure 10.2. The managers and employees, who want to keep their jobs, prefer to refinance the firm and retain its current organization. The shareholders, who want a high stock price, prefer to reorganize the firm, or else to sell it and let the acquirer reorganize it. The creditors, who want repayment of debts as fully as possible, prefer to sell the firm or liquidate its assets.

Figure 10.2. Typical Alignment of Stakeholders in Distressed Firm

| Stakeholder | Preferred Remedy |
|---|---|
| managers & employees | refinance |
| shareholders | reorganize |
| creditors | sell or liquidate |

Earlier chapters explained that bargaining is more likely to overcome disagreement when the parties have clear legal rights. The rights are clear when everyone can predict what will happen if they fail to agree. Absent agreement, the state often imposes a resolution by judges or other officials. The relevant law may concern bankruptcy, contracts, finance, corporations, employment, and consumer protection.

[2] In a world without transactions costs, a state bankruptcy procedure would not be necessary. Corporations would conclude fully specified credit contracts with clauses for the assignment of rights and duties to creditors, owners and managers in case of financial distress. This is an application of the "Coase Theorem," which is fundamental for law and economics. In a world with transactions costs, however, bankruptcy law can help to verify assets and liabilities, improve coordination among claimholders, protect third party claimants, maintain the asset value and remove liquidity constraints during the procedure.D.C. Smith and P. Strömberg, 2004, Maximizing the Value of Distressed Assets, Bankruptcy and the Reorganisation of Firms, *Discussion Paper*, 42.

Clear rights come from predictability in the application of the underlying contracts and legal rules, and the institutions that enforce them.

Contracts and laws favor some stakeholders more than others. Where law unduly favors managers, failed executives retain control of a distressed firm for too long and deplete its assets. The executives keep the firm going to retain their jobs, while the depletion of assets reduces the creditors chances of repayment. Similarly, where law unduly favors stockholders, a firm with bad core ideas goes on for too long and depletes its assets. The stockholders keep hoping that fortuitous events will raise the stock's price, while the depletion of assets reduces the creditors chances of repayment. The problem of failed firms going on too long allegedly afflicts bankruptcy law in the United States, or it used to.[3]

Conversely, where law unduly favors creditors, the opposite occurs: Able executives with good ideas lose control of distressed firms too quickly. They lose control because the creditors sell or liquidate the firm in order to avoid any risk of depleting its assets, even though a small risk of loss might yield profits with high probability. This problem allegedly afflicts bankruptcy law in Germany.[4] (Some observers believe that the Swedish bankruptcy code solves these problems better than the U.S. or Germany by making better use of market prices for valuing the failed firm and its assets.[5])

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[3] In the recent past, scholars believed that Chapter 11 bankruptcy-reorganization allowed failed management to retain control over U.S. firm for too long and deplete its capital. To illustrate, when Eastern Airlines filed for bankruptcy under Chapter 11, the company lost a billion dollars as its managers and trustees attempted to reorganize it. Success would have repaid creditors in full, but delays from reorganizing caused many creditors to receive nothing. However, better contracts for refinancing have mostly solved this problem. See Jagdeep Bhandari, S. Lawrence , and A. Weiss, "The Untenable Case for Chapter 11: A Review of the Evidence," 67 American Bankruptcy Journal 131 (1993).

[4] A spectacular example is the Borgward bankruptcy, one of the most successful producers of motor vehicles in its time. After a liquidity crisis in 1963, large banks succeeded in liquidating the company and recovering their loans to it. Liquidation revealed that the market value of the firm's assets exceeded the total value of its bank loans. The banks apparently wanted to take no risks when it came to repaying themselves. They also wanted to tilt competition in favor of other automobile manufacturers. See G. Cestone and L. White, 2002, Anti-Competitive Financial Contracting: The Design of Financial Claims, *CEPR Discussion Papers*, (RePEc:cpr:ceprdp:3182).

[5] Swedish laws apparently use market prices more fully than other legal systems. In Sweden the bankruptcy trustee must offer the whole firm for sale, and he also must offer to sell its assets separately. If the bids for the firm are higher than the bids for its assets, the trustee sells the firm to the highest bidder. Conversely, if the bids for the firm are smaller than the bids for its assets, the trustee liquidates the firm and sells its assets to the highest bidders. Thus the bankruptcy trustee must compare the sale and liquidation value of the firm. When applying these rules, the Swedish trustee uses market values. He

### *Some creditors are more equal than others*

We have been discussing creditors as if they were alike. In fact, they differ in two ways that matter to bankruptcy law. First, the law distinguishes between secured and unsecured creditors. To illustrate, a firm's assets may consist in cash and a cement truck. The firm offers the cement truck as security for a loan. If the firm subsequently goes bankrupt, the secured creditor can sell the cement truck to repay himself. In contrast, the unsecured creditors must divide the cash in the same proportion as the firm's debt to them.[6] When a firm fails, its assets are worth less than its outstanding debts. Like ten vultures on one dead rabbit, there is not enough to satisfy the unsecured creditors.

Securing a debt by a cement truck or something similar obviously reduces the creditor's risk. Besides reducing risk, security also simplifies the creditor's monitoring of the debtor. In the preceding example, the secured creditor must monitor the cement truck, which is relatively easy. In contrast, the unsecured creditors must monitor the firm's cash, which is relatively difficult. With less risk and lower monitoring costs, secured creditors can make loans at lower interest rates.

In recent decades, the creation of new securities revolutionized finance in the U.S. Instead of securing a loan by something tangible like a cement truck, loans were secured by intangibles like accounts receivable (a firm's uncollected bills), a farmer's unplanted crop, and the interest owed on home mortgages. In the last decade, new securities helped to finance an explosion in corporate debt in the U.S. High levels of

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does not have to use valuations by stakeholders to make his own valuation of the firm. Most economists believe that prices in competitive markets value assets more accurately than state officials. Note that the Swedish system cannot work without a robust market for firms to generate bids for the distressed company.

Scholars have proposed visionary legal reforms to improve the bankruptcy process that go beyond the Swedish model in using market valuations. Thus Bebchuk proposed that courts organize an auction for a distressed firm, in which groups of people could present plans to repay the firm's creditors. The highest bidder would win th firm, unless no one bid enough to repay the creditors, in which case the firm would be liquidated.

[6] To illustrate numerically, assume that A loans 10 to a firm and secures the loan by the firm's cement truck. B loans 15 to the firm without security. C loans 5 without security. The firm goes bankrupt and defaults on its loans. Its net assets consist of 6 in cash and a cement truck worth 12. Firm A seized and sells the cement truck for 12 to satisfy its debt of 10, and returns 2 to the firm. Now the firm has a total of 8 in cash, but it owes 20. B and C will each get repaid 8/20 = 40% of what they are owed. Specifically, B gets 6 and C gets 2.

debt are inherently risky, especially when the underlying securities are unsound as were mortgage-backed securities in the U.S. The worst case materialized in the financial crisis that began in 2008. However, that is another story.

Next we turn to the second difference among creditors that matters to bankruptcy law. Besides security, some creditors have priority. Creditors with higher priority must be repaid fully before creditors with lower priority get repaid anything. Thus a firm might borrow money to buy a building using a loan secured by the building – a "first mortgage." Later the firm might borrow more money secured by another loan on the building with lower priority -- a "second mortgage." If the firm goes bankrupt, the first mortgage gets repaid in full before any repayment of the second mortgage.[7]

Financial contracts between the firm and its creditors give some of them security and priority. Thus a financial contract might stipulate that a particular borrower has the exclusive right to sell the firm's cement truck to satisfy its unpaid loan. Or the contract might specify that a preferred shareholder must get repaid in full before any dividends are paid to other shareholders. In general, financial contracts that include priority or security for one party preclude it for others. Consequently, contracts giving security or priority must hurdle an information obstacle. How does the new lender know whether or not the firm has already pledged the cement truck to someone else? To illustrate, assume that a distressed firm seeks a new loan and the lender demands that the firm pledge its cement truck as security. The firm has legal power to make this pledge only if it has not previously pledged the cement truck to a prior lender. The new lender must struggle to find the facts.

Some states hurdle this information obstacle by maintaining a registry to record security and priority. By checking the registry, the new lender can find out whether or not the firm already pledged its cement truck to someone else, just like a purchaser of real property in most countries can check the real estate registry for "liens" on the

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[7] To illustrate, assume that a firm that a store for 100 by using a first mortgage of 60 and a second mortgage of 40. The mortgage documents stipulate that the first creditor has priority over the second creditor. The firm goes bankrupt, the store is its only asset, and the store sells for 80. The holder of the first mortgage gets repaid 60 and the holder of the second mortgage gets repaid 20.

property.[8] Most European states have registers for real estate, ships, and airplanes, but not for trucks. Without state registries or similar mechanism, lenders must rely on criminal prohibitions against fraud to preclude the borrower from making false representations about security and priority.

Security and priority make creditors unequal. Is this justifiable? Chapter 5 explained that state enforcement of contracts generally increases prosperity and growth. This principle applies to financial contracts that grant security and priority to lenders. Enforcing contracts for security and priority increase the volume of loans to finance economic growth. Some numbers show why. Assume that a startup firm needs 100 to develop its new business. Family and friends loan the founders 40 and they need to borrow 60 from outsiders. Insiders have more information and influence over the borrower than outsiders. Consequently, an outside lender may reasonably insist on priority of his loan over loans from family and friends. If the law were to deny priority and insist on equality among creditors, then the firm could not borrow the 60 it needs to start. In these circumstances, everyone – founders, family and friends, and outsiders -- wants the law to enforce the contract's terms giving outside creditors priority over insiders.

To promote economic growth, the state should enforce contracts giving security or priority, and the state should facilitate access to information about them. Instead of enforcing contracts giving security and priority, however, the law sometimes treats all classes of creditors equally. The principle of equality among creditors is prescribed in Roman law,[9] whose remnants survive today in some countries. To illustrate, Italians cannot buy a house by using a first mortgage and also a second mortgage.[10] Short of strict equality, the law sometimes limits inequality. Thus developing countries whose

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[8] A real estate registry answers the question, "How does the buyer know that the seller of a house actually owns it?" The real estate registry also includes liens on the house created by giving it as security for a loan.

[9] P*ar condicio omnium creditorum.*

[10] The first lender fears that the court might give equality to the second lender. Consequently, the contract with the original lender will preclude a second mortgage. Some numbers clairfy the point. Assume that person with 15 of his own money needs to borrow 85 in order to buy a house costing 100. In the U.S., a bank might offer a first mortgage of 80. In addition, the buyer might borrow 5 by using a second mortgage. If the buyer defaults and the house is worth 50, a U.S. court gives the bank 50 and the second lender gets 0. If, however, an Italian court applied principle of equality, the bank gets repaid 50/85 x 80, and the second lender gets 50/85 x 5.

bankruptcy law follows the French tradition may guarantee unsecured creditors a minimum percentage of the firm's liquidation value.[11] Mandatory equality among creditors has some advantages,[12] but it usually reduces the supply of loans that fuel economic growth,[13] because creditors lend less money on worse terms when denied security or priority.[14]

**Three Ways to Implement a Cure**

Implementing the cures depicted in Figure 10.1 can proceed in the three ways described in previous chapters: relational, private, and public. Reorganization, refinance, or liquidation of businesses owned by families often occurs internally, with little regard to state law. Thus creditors of distressed family-based firms in Asia prefer private workouts rather than in-court procedures.[15] Similarly, contractual workouts are common in central and Eastern Europe.[16] Defaulting debtors who belong to merchants'

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[11] In numbers, assume that A loans 10 to a firm secured by the firm's cement truck, and B loans 20 to the firm without security. The firm goes bankrupt and its only asset is the cement truck, which sells for 12. If the court enforces the security term in the financial contrat, then A gets repaid 10 and B gets repaid 2. Alternatively, if the court applies a mandatory law guaranteeing the unsecured creditors at least 1/3 of the bankrupt firm's liquidation value then, A gets repaid 8 and B gets repaid 4.

[12]To illustrate, the pyramiding of loans through second mortgages, or even third mortgages, contributed to the financial disaster in the U.S. in 2008. With equality among creditors, the contract with lenders for the first mortgage will preclude a second mortgage. Thus equality among creditors sometimes suppresses high-risk chicanery in lending as occurred in U.S. housing markets after 2000.

Note another advantage of equality: The interests of lenders converge, so they can agree more easily on how to resolve a firm's financial distress. Conversely, distinctions among creditors by security and priority cause their interests to diverge, so they disagree over how to resolve the firm's financial distress. Thus secured creditors want the firm to maintain the value of the specific assets securing the loan, and unsecured creditors want the firm to preserve the assets of the firm as a whole.

[13] Here is a numerical example: A firm wants to buy a new cement truck for 10. The firm would like to pay 2 of its own money and borrow 8 from a bank. The cement truck's resale value is 8, so the truck can fully secure the loan. The bank, however, will not make the loan unless the law will fully enforce the security term. In contrast, assume that the law contains a mandatory rule that, in the event of bankruptcy, only half of the cement truck's resale value can go to the bank and the other half must go to unsecured lenders. As a result of this mandatory rule, the bank may to refuse the loan, or demand more burdensome terms.

[14] The terms may be worse in several ways: smaller loan, more security, higher interest, or more costly disclosure. Note that banks frequently require a borrower to conduct its daily transactions through an account at the bank. By monitoring the transaction account, the bank can obtain advanced warning if the firm descends into financial distress, in which case the bank can demand immediate repayment of its loan in full ("acceleration") before the other creditors appreciate the danger.

[15] Claessens/Djankov/Klapper, 1999, Resolution of Corporate Distress, Evidence from East Asia's Financial Crisis, *World Bank Policy Research Working Paper,* 2133.

[16] William Pyle (2006), "Resolutions, Recoveries and Relationships: The evolution of payment disputes in Central and Eastern Europe," Journal of Comparative Economics, Volume 34, Issue 2, June 2006, pp. 317-337

associations often try to resolve financial distress without loss of reputation.[17] "Relational bankruptcy," to coin a term, minimizes the needs for participation by state officials, including judges.

In contrast, private resolution of financial distress relies on contracts to refinance, reorganize, or liquidate a firm. Ideally, private markets resolve financial distress before it deepens, as when a successful firm acquires a distressed firm in a friendly or hostile takeover.[18] Financial contracts between the firm and its investors often prescribe how to resolve financial distress, or who has the power to resolve it. Thus the financing arrangements for startup firms in Silicon Valley often allow preferred shareholders to seize control over a failing firm to replace executives, redirect its activities, or liquidate it. When Silicon Valley startups fail, as they often do, these financial agreements substitute for formal proceedings prescribed in bankruptcy law that firms seldom use.

In England, private contracts to resolve financial distress coalesced into something called the "London Approach" -- a set of standardized private bankruptcy contracts used by banks and firms. The London Approach includes a "standstill" of all creditors (no debt collection for a prescribed period of time), refinancing with "super-priority" for the new lenders (they get paid ahead of all other creditors), a sharing rule for future gains or losses, creation of a creditors' committee to make decisions, and a requirement of unanimity among creditors to change the standard terms in their contracts.[19]

Having discussed relational and private bankruptcy, we turn to public bankruptcy. In public bankruptcy, the court applies bankruptcy law that is not necessarily prescribed in financial contracts. Public resolution of financial distress requires courts, or state organizations like courts, to supervise refinancing, reorganizing, or liquidating the firm.

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[17] William Pyle (2006), "Resolutions, Recoveries and Relationships: The evolution of payment disputes in Central and Eastern Europe," op. cit.

[18] A takeover is friendly or hostile depending on whether or not the management of the agrees that the target firm be acquired. In a hostile takeover, an outsider buys enough of a firm's stock to gain control over the board of directors and fire the managers. To succeed, hostile takeovers require background laws. Instead of supporting takeovers, most countries suppress them by law and tradition. Consequently, hostile takeovers are common in the U.S.A. and United Kingdom, and rare in other countries.

[19] J.Armour and S. Deakin (1999), Norms in Private Insovency Procedures the'London Approach' to Financial Distress, ESRC, Center for Business Research, University of Cambridge,*Working paper No. 173*, 2.

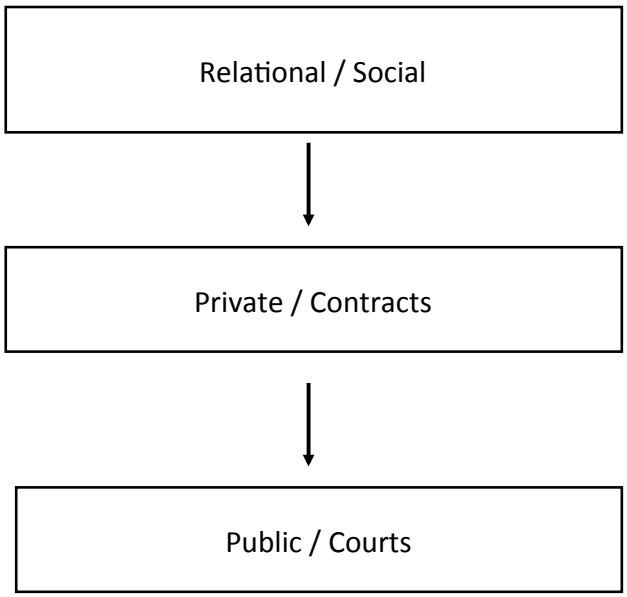
The bankruptcy procedure usually suspends collection of debts for a period of time, which stops creditors from breaking up the firm immediately, and allows it to reorganize.

A firm that suffers financial distress often refinances on terms that give the new investors complete control in the event that the firm fails to return to profitability. Chapter 11 of the US bankruptcy code thus allows a firm to suspend repaying its debts while it develops a plan to resolve its distress. It presents the plan to a court appointed trustee, who supervises the firm during the resolution of its distress.[20] The plan may propose to acquire fresh capital by giving a new investor a seat on the board of directors and priority over old investors in collecting its debt. Alternatively, instead of refinancing and reorganizing under Chapter 11, the firm may liquidate as prescribed under Chapter 7 of the bankruptcy code. In liquidation, a court-appointed trustee auctions the firm's assets.

We have explained that relational procedures for resolving financial distress require little from the state; private resolution requires the state to enforce the terms of contracts to refinance, reorganize, or liquidate the firm; and public resolution requires courts to approve a plan of action by the creditors or develop a state plan. Figure 10.3 depicts the increasing involvement of the state in movement from relational to private to public bankruptcy.

[20] When a U.S. firm applies for bankruptcy-reorganization under Chapter 11 of the Uniform Commercial Code, the judge must approve its plans and assure fair treatment for each class of creditors. Managers and large creditors generally know a lot more about a distressed firm than a judge or trustee. By requiring stakeholders to propose plans for the distressed firm, the legal process allows them to apply their superior knowledge. By requiring approval of the judge, the court tries to assure fairness towards the parties.

Figure 10.3. Processes to Resolve Financial Distress




**Bankruptcy in Developing Countries**

Earlier chapters distinguished between private finance through bank loans and public finance through markets for stocks and bonds. Similarly, this chapter distinguished between private and public resolution of financial distress. Empirical research shows that developing countries that rely on bank financing also rely on private resolution of financial distress.[21] This makes sense since banks have much knowledge and control over firms. When distress hits the firm, the banks can help themselves by

[21] Private workouts dominate in Bangladesh, Ghana, Mauritania,Belarus, Guatemala, Mozambique, Bolivia. Indonesia, Pakistan,Brazil, Iran, Panama,, Costa Rica, Jamaica, Portugal,Egypt, Malaysia, Turkey,
Georgia, Mali, Uruguay; see World Bank, Doing Business around the World (2004), p. 79. Also see Stijn Claessens, Leora F. Klapper (2005) Bankruptcy around the World: Explanations of its Relative Use, American Law and Economics Review, 2005 7(1):253-283.

private workouts and contracting, without relying on the state. Conversely, ownership of stock and bonds by a broad group of outsiders increases the transaction costs of negotiating agreements among the firm's creditors. Public finance thus leads to more reliance on public bankruptcy procedures.

The law ideally promotes economic growth by helping stakeholders to resolve the financial distress of firms. In practice, however, the law often fails in this task in several predictable ways. Distress demands quick resolution before the firm's assets disappear. With distressed firms, justice delayed is justice denied.[22] If the public bankruptcy procedure is too slow, creditors will not use it. The bankruptcy procedure varies in duration by country, such as several months in Singapore and Finland, 1.9 years in Taiwan, 4 years in Brazil, and 7 years in India.[23]

In addition to delays, insolvency proceedings are expensive, which discourages their use. Firms use bankruptcy proceedings less to resolve their disputes as the proceeding become more costly. The World Bank collected data on the average cost of insolvency proceedings as a percentage of the value of the bankrupt's assets. Countries were arranged into three groups as shown in Figure 10.4. The number in parenthesis indicates the average cost of bankruptcy proceedings as a percentage of the estate in bankruptcy.

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[22] This phrase is attributed to William Gladstone, 19th century British Prime Minister.
[23] Insert cite, probably to World Bank, Doing Business (2010). http://www.doingbusiness.org/ExploreTopics/ClosingBusiness/

Figure 10.4. Average Cost of Insolvency Proceedings As a Percentage of the Estate

| Low Cost | Medium Cost | High cost |
|---|---|---|
| Norway (1) | Argentina (12) | China (22) |
| Singapore (1) | Brazil (12) | Egypt (22) |
| Canada (4) | Bolivia (15) | Ghana (22) |
| Japan (4) | Chile (15) | Italy (22) |
| Netherlands (4) | Hungary (15) | Kenya (22) |
| South Korea (4) | Spain (15) | Nigeria (22) |
| Taiwan, China (4) | Turkey (15) | Tanzania (22) |
| United Kingdom (6) | Vietnam (15) | Thailand (36) |
| Algeria (7) | Indonesia (18) | Philippines (38) |
| United States (7) | Mexico (18) | Venezuela (38) |
| Uruguay (7) | South Africa (18) | Ukraine (42) |
| Australia (8) | Poland (20) | |
| Germany (8) | | |
| France (9) | | |
| India (9) | | |
| Russia (9) | | |
| Sweden (9) | | |

Source: World Bank, Doing Business 2010, Stat. Appendix (cost as % of estate in parentheses)

Why are insolvency proceedings more costly in some countries than others? Many economists believe that pro-debtor laws are the cause. Chapter 6 provided the example of Brazil's legal obstacles to repossessing land and dwellings from defaulting homeowners, which sharply reduces the supply of mortgages. In general, overly generous legal treatment of current debtors reduces credit for future borrowers, which reduces investment and stifles growth.

Some economists try to trace pro-debtor laws back to the origins of private law. A study ranked bankruptcy laws in different countries, compared them according to their legal origins, and concluded that countries with a French civil law tradition are relatively pro-debtor, whereas countries with a British common law tradition are relatively pro-

creditor.[24] If this explanation is correct, then developing countries with bankruptcy laws modeled on Britain have a distinct advantage over those modeled on France.

Another study finds that powerful judges raise the cost of insolvency proceedings. In some countries, the law assigns all power to the judge -- the court appoints and replaces the bankruptcy administrator without restrictions, the trustee reports exclusively to the court and not to the creditors, and the court alone can decide on a plan for restructuring the company. In other countries, the stakeholders have more say. Data suggests that the average cost of insolvency proceedings correlates positively with the power of courts over the bankruptcy process. Conversely, the average cost of insolvency proceedings correlates negatively with the power of stakeholders over the bankruptcy process. The facts suggest (but do not prove) that judges with much power over the bankruptcy process increase its costs.[25]

### *Politics of Bankruptcy*

Politics intrudes into bankruptcy proceedings of private firms in two distinct ways, as we will explain. First, politicians sometimes use bankruptcy procedures to

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[24] C. Wihlborg, S. Gangopadhyay, Infrastructure Requirements in the Area of Bankruptcy Law, Wharton School Center for Financial Institutions, University of Pennsylvania, Center for Financial Institutions Working Papers No. 01-09 (2001) p.50. Also see Philip R. Wood (1995), "Principles of International Insolvency", London Sweet & Maxwell. The following figure summarizes the results.

| Ranking | Countries |
|---|---|
| 1=most pro-creditor | Former British colonies except S. Africa and Zimbabwe |
| 2 | England, Australia, Ireland |
| 3 | Germany, Netherlands, Indonesia, Sweden, Switzerland, Poland |
| 4 | Scotland, Japan, Korea, New Zealand, Norway |
| 5 | United States, Canada except Quebec |
| 6 | Austria, Denmark, Czech and Slovak Republics, S. Africa, Botswana; Zimbabwe (last three Dutch-based) |
| 7 | Italy |
| 8 | Greece, Portugal, Spain, most Latin American countries |
| 9 | Former French colonies, Egypt, Belgium and Zaire |
| 10=most pro-debtor | France |
| | |
| No insolvency law | Liberia, many Arab countries |
| Unclassified | Russia, Belarus, Ukraine, Khazakstan |

[25] Hart/Nenova/Shleifer, 2003, Efficiency in Bankruptcy, *working paper*, Department of Economics, Harvard University.

expropriate firms. The most notorious example involved Russia's largest private oil company, Yukos. Like many natural resource exporters in Russia during the 1990s, Yukos engaged in various practices of doubtful legality. The state eventually charged Yukos with tax evasion, which reduced the company to near bankruptcy, and then the state bought it at its depressed price. The state also charged its biggest shareholder and chief executive, Michail Khodorkhovsky, with fraud and corruption. He was convicted and sentenced to 8 years in prison. Khodorkhovsky was an outspoken opponent of the Russia's President Putin. Was the state's deepest motive to get a criminal out of business or to transfer wealth to political insiders and punish the President's political opponents? Experts disagree.

Yukos exemplifies a general practice of the Russian state after 2000 to re-establish state ownership of firms that were privatized in the 1990s. Here is how it worked. Under communism, firms systematically overstated their production in order to meet the quotas assigned to them by central planners. After communism collapsed in approximately 1990, the situation reversed: Firms systematically understated their revenues to avoid paying taxes, which were often set at unrealistically high rates. For many Russian firms, evading taxes was a business necessity, not just a crime. In Western Europe private creditors initiate most bankruptcy proceedings, not tax authorities. In Russia and other eastern European countries, however, the tax authorities initiated most bankruptcy proceedings during the transition from communism to capitalism.[26] By threatening an investigation for tax evasion, the authorities raised the possibility of bankrupting the firm and imprisoning its management. Under this threat, firms readily agreed to reorganize and change their management as demanded by the state, or sell their stock to the government at bargain prices. With so many firms owing taxes, the tax authorities could pick and choose decide which ones to threaten. As with Yukos, who can say how they chose?

Having explained how politicians use bankruptcy to expropriate firms, we turn to the opposite -- how politicians use bankruptcy to subsidize firms. When a politically

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[26] K. Pistor, 2005, Who is tolling the bells to firms? Tales from Transition Economies, *Comparative Law and Economics Forum* (CLEF).

powerful organization runs out of money, it lobbies politicians to get more. With such a soft budget constraint, efficiency-oriented bankruptcy procedures become unworkable. Thus India's "Sick Industry Act" of 1985 aims to resurrect failing firms by giving low priced credits to existing management. Some countries constrain the influence of politics on financial distress to very large firms, such as big banks whose failure can destabilize the national economy. Very large firms are sometimes "too big to fail" – their political clout forces the state to rescue them from financial distress.[27] Debtors lobby politicians to ease the terms of repayment, as in mortgage crisis of 2008 in the U.S.A.[28] In other countries, however, politics pervades the resolution of financial distress in routine cases, whether or not their bankruptcy would endanger the economy.

National identity can affect the politics of bankruptcy. In developing countries, domestic firms often borrow from foreign lenders. In bankruptcy, the foreigners are the creditors and nationals are the debtors. Politicians often favor their domestic supporters and disfavor foreign investors.[29] Foreseeing this fact, foreigners are reluctant to invest in domestic firms.[30] To overcome this reluctance, governments in developing countries sometimes guarantee foreign lenders against default by domestic borrowers.

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[27] Political clout may come from interdependencies that ripple through industries and endanger the economy, as happened in the financial meltdown in New York in 2008. Or political clout may come because the firm employs many workers and provides them with social services such as health, schooling, and housing. When such a firm goes bankrupt, its workers lose more than their jobs. In this respect, gigantic socialist firms resemble the "company towns" built by private firms in the early stages of the industrial revolution in the United States and elsewhere. Under socialism or capitalism, company towns have a gigantic disadvantage for workers: Failure in the core industrial enterprise endangers a worker's job and his housing, health, schooling, etc. In contrast, failure of a small firm endangers a worker's job but not necessarily his social support system. In company towns, loss of employment correlates with loss of social services, which is very risky in a dynamic, changing society. (A similar disability characterizes worker-owned firms.) The correlation of employment and social services increases the motivation of employees in gigantic firms to mobilize politically and protect themselves from disruptive innovations.

[28] Political agitation for debt relief has a long history in the U.S.A. In the early part of the 19th century, debtors tried to block the creation of a national bank, and in the later part of the 19th century debtors wanted the paper dollar backed by silver as well as gold ("bimetalism"), not just gold ("gold standard").

[29] This happened in the aftermath of the Asian crisis in Indonesia. In some of the largest Indonesian firms with outstanding debts in the billion dollars managers and blockholders still controlled the firm at the expense of outsiders after years of bankruptcy procedure. See R. Tomasic, 2001, Some Challenges of Indonesian Bankruptcy Reform in Indonesia (Forum for Asian Insolvency Reform, Bali - Indonesia, 7-8 February 2001), 19.

[30] To solve this problem some developing countries enacted investor-friendly laws in the 1990s, but defects in legal institutions frustrated their application. See Gelfer/Pistor/Raiser, 2000, Law and Finance in Transition Countries, *Economics of Transition*, Vol. 8, 2.

To illustrate, when a German bank loans to a Tanzanian developer, the Tanzanian government may guarantee the loan's repayment. A government guarantee enables the domestic firm to borrow from foreigners at a lower interest rate. The German bank's interest rate reflects the risk of the *government's default*, not the *debtor's default*. The lender, the borrower, and the politicians benefit from the guarantee. The loser is the taxpayer, who must repay the loan if the debtor defaults.

Government guarantees for loans are insidious because ordinary citizens know nothing about them, unless a crisis forces citizens to confront their potential tax liabilities as with the mortgage meltdown of 2008 in the U.S.A. [31] In fact, new research has shown that interest payments on international loans by over-indebted developing countries crowd out public social spending and investment, which impacts economic growth, life expectancy, and poverty.[32]

***Bankrupt States and Odious Debt***

Like a firm, a state can become financially distressed. "Sovereign bankruptcy" occurs when a state declares itself unable to repay its debts. Unlike a firm, however, the state cannot resolve its financial distress by selling or liquidating itself. Instead, a bankrupt state must reorganize its debts or renounce them. States reorganize their debt by one of three procedures. First, the distressed state may negotiate an ad hoc agreement with other states, like negotiating an international treaty.[33] Second, the distressed state may negotiate with other states by following pre-established procedures, such as the procedures of the "Paris Club."[34] Third, the distressed state may ask for relief from the International Monetary Fund. The IMF, which includes almost all of the world's nations, loans money to financially distressed member-states.

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[31] We know of no country whose national accounts include the cost of risk from government guarantees of private loan repayment. Potential liability can mount with no effect on the budget until the risk materializes.

[32] For a survey of this research see Loko/Mlachila/Nallari/Kalonji, 2003, The Impact of External Indebtedness on Poverty in Low-Income Countries, *IMF Working Paper 03/61*.

[33] An example is the London debt contract of 1953, in which the Allied countries excused 50% of Germany's internation prewar debt.

[34] The Paris Club is a small group of rich OECD countries that lends to other states. Its members are officials who represent their national governments and take orders from them. The loans include public and publicly guaranteed debts.

We regard the IMF as a financial fire department: It hoses down the flames of financial distress in states. Fire departments are necessary, although they increase the incentive to play with matches. Earlier we explained that government loans to financially distressed firms create a "soft budget constraint," which makes the firms inefficient and reckless. The same is true of IMF loans to financially distressed nations. To counteract this effect, IMF loans often impose conditions to stabilize the currency, increase exports, reduce imports, and constrain government spending. The IMF's stated goal is macroeconomic stabilization, but empirical research finds little stabilizing effects from its loans and much protection of large private lenders, notably American and European banks.[35] For example, the IMF applied this policy during the financial crisis in Greece, which led to a bailout package of 135 billion Euros in May 2010. The bailout transferred all risks and costs of adjustment exclusively on the IMF, the European taxpayer, and on the Greek people. The holders of Greek government bonds obtained high interest rates for buying risky assets and then the bailout reduced their risk.[36] Thus the beneficiaries were banks or bondholders.

We reject the conclusion that the IMF should stop lending to poor countries altogether,[37] but we accept the conclusion that it should reform its practices.[38] Banks

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[35]Present evidence suggests that the severity of financial crises has changed little in emerging markets from the pre-1914 era to the present. A with-without comparison of countries receiving IMF assistance during crises in the period 1973–98 with countries in the same region not receiving assistance suggests that the real performance of the former group was possibly worse than the latter. M.D. Bordo and A.J. Schwartz, 2000, Measuring real economic effects of bailouts: historical perspectives on how countries in financial distress have fared with and without bailouts, *Carnegie-Rochester Conference Series on Public Policy*, Vol. 53, Issue 1, 81-160. Also see See J. Frankel and N. Roubini, NBER Working Paper No. 8634 (2001), The Role of Industrial Country Policies in Emerging Market Crisis.

[36] www.spiegel.de/wirtschaft/soziales/0,1518,691847,00.html

[37] A. Meltzer, 1998, Asian Problems and the IMF, Testimony Prepared for the Joint Economic Committee, US Congress.

[38] One proposal would restrict IMF loans to a level where the debt is sustainable. Implementing this proposal requires defining benchmarks for non-sustainable debt. See International Monetary Fund and International Development Association, Debt Sustainability in Low-Income Countries—Proposal for an Operational Framework and Policy Implications, Prepared by the Staffs of the IMF and the World Bank, Approved by M.Allen and G. Nankani, February 3, 2004.

A second proposal advocates a formal bankruptcy procedure for sovereign credits. In 2001, Anne Krueger, the first deputy managing director of the International Monetary Fund, proposed a statutory bankruptcy procedure for sovereign debt. The IMF has not accepted this proposal as yet. However, sovereign bankruptcy law continues to develop through standardized terms in financing contracts such as the London Approach. A current debate concerns whether nations need statutory bankruptcy provisions from the IMF articles or whether a procedure should evolve by market forces and private contracts.

extend loans recklessly when they can rely on the IMF to bail out the debtor. To improve incentives, the IMF should make loans to a state contingent on rescheduling its debts to private creditors, thus obliging banks and bondholders to take more responsibility in large rescue operations. Under this proposal, private banks would help the IMF to save distressed states, instead of the IMF helping the distressed states to save private banks.

Government debt can take a morally troubling form called "odious debt."[39] Under international law, a dictator can borrow for his country without the citizens' consent and spend the money without benefitting the nation, yet international law does not allow a subsequent government to renounce national debts of a dictator, no matter how odious. To illustrate, the unelected dictator of Iraq, Saddam Hussein, borrowed money internationally in the 1990s, especially from Russia and France. After the United States invaded and overthrew him in 2003, the Iraqi nation remained liable under international law for the national debts contracted by Saddam Hussein, even though he terrorized the citizens and plundered the nation.[40]

Reformers want to change international law by recognizing the principle that an odious government cannot create national debt owed its citizens.[41] Implementing this principle requires defining "odious debt." Some precedent exists in international practice and law for defining this term.[42] The hardest question, however, is not the definition but

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A third proposal, discussed briefly in this chapter, would make IMF loans contingent on the state rescheduling its debts to private creditors. Under this proposal, private banks would help the IMF to save distressed states, instead of the IMF helping the distressed states to save private banks.
See M.White, 2002, Sovereigns in Distress: Do They Need Bankruptcy?, Brookings Papers on Economic Activity, 1, 287-319.

[39] We benefitted from reading Yvonne Wong's Berkeley PhD dissertation on odious debt and Stefanie Bonilla's Hamburg doctoral thesis.

[40] Although not required by law, the Paris Club cancelled most debts that Iraq owed to its members in November 2004, which amounted to 80 percent of Iraq's state-to-state debts of $37 billion. The IMF report for the Paris Club says that it cancelled Iraq's debts for concern about their long-term sustainability, not their odiousness. This rationale is not credible for a country with the second highest oil reserves in the world.

[41] P. Adams, 1991, Odious Debts: Loose Lending, Corruption, and the Third World's Environmental Legacy, London, Earthscan.

[42] The USA used these ideas to cancel debts contracted by the slave-holding states that attempted to secede in its Civil War. The 14th amendment to the U.S. constitution states that ". . . neither the United States nor any State shall assume or pay any debt or obligation incurred in aid of insurrection or rebellion against the United States . . . all such debts, obligations and claims shall be held illegal and void." After the war against Spain (1898), the USA employed the doctrine of Unconscionability to cancel Cuba's debts

who will apply it and decide whether a debt is odious.[43] Most proposals want an international body to decide, such as an international court set up by the United Nations, the IMF, or the WTO. Alas, these organizations have the usual frailties and susceptibilities of political bodies.[44] A more realistic view concludes that odious debt must be a political concept that acknowledges the power of different nations, not a purely legal concept. The odiousness of a debt and its forgiveness should be decided through political bargaining among creditors. The aim is to save us from hell, not to get us to heaven.[45]

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owed to Spain, because "they were imposed upon the people of Cuba without their consent and by force of arms". The treaty of Versailles (1919) used the same principle to relieve the Poland from all debts owed to Germany and Russia, who had divided and occupied Poland for more than a century. In the 1920s an arbitration court repudiated Costa Rica's debt because its dictator had used the loan for private purposes and the lender had not acted in good faith. Chief Justice Taft of the US Supreme Court used two tests when he arbitrated a dispute over Costa Rica's debts in 1923: exploitation and good faith. He used the exploitative test to determine the percentage of the debts that were squandered or used for illegal purpose. He used the good faith test to check whether or not the creditor knew this. In the 1920s Alexander Sack, professor in Paris and a former czarist minister, developed the concept of "dettes odieuses" to justify the cancellation of Russia's foreign debts after the Russian Revolution.

The principle of odious debt could be grounded in contract principles such as unconscionability, good faith, free consent, fair dealing, and "exceptio doli generalis." However, any definition is fraught with difficulties. To illustrate, following Chief Justice Taft, international law might focus on an exploitation test: "Did international borrowing benefit the citizens of the debtor nation?' However, the exploitation test seems unworkable because *many* governments squander money without benefitting their citizens, including democratic governments.

[43] Two alternative implementations are a sanctions approach and a contract approach. See S. Jayachandran and M. Kremer, 2005, Odious Debts Discussion Paper, 1-20. Under a sanctions approach, an international authority could declare contracts void that provide *future* loans to a particular country. Under this approach, creditors know for certain whether or not a government is odious when they loan it money. Alternatively, under a contract law approach, a new government can ask a court to determine whether or not the previous government's debts are odious. Under this approach, creditors do not know for certain whether or not international law will enforce a government's debt until after a new government succeeds it and brings suit. Either approach should sharply curtail lending to governments that are odious. In 1997 the International monetary Fund as well as Western countries broke off economic relations In Croatia,but banks continued lending 2 billion dollars. A declaration that this government was odious might have curtailed such loans.

[44] Thus a recent study on the International Court of Justice concluded:
"The data suggest that national bias has an important influence on the decision making of the I.C.J. Judges vote for their home states about 90 percent of the time. When their home states are not involved, judges vote for states that are similar to their home states—along the dimensions of wealth, culture, and political regime."
See E.A. Posner, 2004, Is the International Court of Justice Biased? *John M. Olin Law and Economics Working Paper,* 234 (2D Series).

[45] Winston Churchill allegedly said, "The U.N. was set up not to get us to Heaven but only to save us from Hell."

## Conclusion: Recycling Capital

"To win a war, promote officers who win battles and demote officers who lose battles," according to a prescription attributed to Winston Churchill.[46] How else can the head of state tell good officers from bad ones except by their victories and defeats? Similarly, an economy must put resources under the control of the best entrepreneurs, and the best way to identify them is by how much money they make. Profitability reveals itself over time, albeit with random errors. In innovative economies, some firms succeed spectacularly and many fail. To speed innovation, capital must recycle quickly from failures to successes.

Formal law is less effective in many poor countries than in rich countries. In some developing countries, bankruptcy law is so ineffective and costly that firms never use it to resolve their distress. Instead they work out a firm's distress through relationships among the parties. As law becomes more effective and cheaper to use, relational bankruptcy is supplemented by private bankruptcy. The best laws for financial distress in firms enforce the private agreements among stakeholders so that entrepreneurs quickly recycle capital.

Unlike recycling metal scraps, recycling capital among firms alters peoples' status and wealth. People do not lose their status and wealth passively. The firm's stakeholders systematically disagree about how to resolve financial distress according to their roles as managers, employees, stockholders, general creditors, secured creditors, or politicians. When stakeholders cannot agree on a private plan to resolve a firm's financial distress, they fall back on the prescriptions of public law. State bankruptcy law should resolve financial distress quickly, and it should apply transparent rules that assign clear rights to each group of stakeholders. Ideally, the assignment of rights should minimize the loss from the stakeholders' inability to cooperate.[47] Unfortunately, politics pervades the resolution of financial distress in some countries. Favoring debtors over creditors dries up business loans; favoring unsecured over secured creditors

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[46] Did he say this? We could not find out for sure. Nelson Polsby stated the general difficulty: "Great sayings migrate to the mouths of great people."

[47] Minimizing the loss from non-cooperation is called the "normative Hobbes theorem" in Cooter and Ulen, Law and Economics (5th edition), Chapter 4.

reduces high-risk loans; favoring insiders over outsiders discourages outside investors; and favoring managers and employers over taxpayers perpetuates business failures.

# Chapter 11
# Termites in the Foundation – Corruption

In the Georgian Soviet Socialist Republic of the 1970s, patients bribed medical doctors for better treatment in state hospitals, high school students bribed teachers for higher grades, farmers bribed policemen to sell in town markets, and builders bribed inspectors to overlook inferior construction. Citizens generally expected to bribe state officials for permits, licenses, services, exemptions, and favorable decisions. Many corrupt results were sinister: low quality goods, high prices, uneven public services, unsafe buildings, environmental degradation, and slow growth. Some corrupt results were comic, as when officials permitted construction of a synagogue provided its sign read, "A meeting hall where prayer is forbidden."[1]

"Corruption" often refers to improper influence of state officials. Improper influence is sometimes illegal such as bribing a procurement officer, and improper influence is sometimes legal such as contributing to the political party controlling the procurement office. This chapter focuses on illegal corruption, especially bribery. Some officials in every country, and most officials in some countries, take bribes. We described Georgia in the 1970s because, having passed into history, its corruption is documented. Many contemporary countries resemble it, but documentation is difficult because corruption hides from view. Lawbreakers fear prosecution and officials who fear publicity suppress the facts. Thus the World Bank originally did not discuss the bribery that afflicts many of its biggest aid projects. Such a discussion was thought to violate the Bank's prohibition against interfering in the politics of recipient countries.

Susan Rose-Ackerman estimated that the world's bribe payments per year approximately equal three percent of global GDP, or roughly one trillion dollars.[2] This is too big to hide. In 1996, the World Bank's president, James Wolfensohn, violated the

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[1] These facts are vividly detailed in D. Levy (2007)," Price adjustment under the table: Evidence on efficiency-enhancing corruption," European Journal of Political Economy, Volume 23, Issue 2, June 2007, pp. 423-447. A famous American comedian, Will Rogers, said, "It's easy being a humorist when you've got the whole government working for you."

[2] Cited in J. Svensson, 2005. Eight Questions about Corruption. *Journal of Economic, Perspectives* 19(3):19-42.

organization's taboo by referring to the "cancer of corruption" in developing countries. Two years later, the bank published an influential paper, 'Assessing Aid', which argued that aid is ineffective unless given to countries with honest government.[3] As this story suggests, the world's toleration of corruption has diminished with increased appreciation of its costs to society.[4]

Although hidden, pervasive corruption weakens the legal, physical, and social foundation of economic development, like termites in the foundation of a house. Scholars and citizens increasingly appreciate the importance of combating corruption. This chapter draws on a rich economics literature to explain how corruption slows economic growth and to suggests strategies for dealing with it.[5] Before analyzing corruption, however, we describe some basic facts.

## Facts

How can we estimate hidden corruption? An organization called Transparency International surveys the opinions of experienced people. Using these surveys, it publishes an index of the extent of corruption that observers perceive in their country's public sector. In 2009 the index ranked 180 countries by perceived public sector corruption. The following figure gives a sample of countries ranked from low to high. According to the figure, New Zealand is perceived as the least corrupt country in the survey (ranked 1), and Somalia is perceived as the most corrupt country (ranked 180).

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[3] Cassidy, J. (2007). The Next Crusade. The New Yorker: 36-51. Jan van Dijk finds a substantial negative effect of corruption on nation wealth. Jan van Dijk (2007) The World of Crime, Breaking the Silence on Problems of Security, Justice and Development Across the World, Pine Forge Press, ch.12.

[4] In a remarkable break with past practice, the U.S. President Barak Obam visited Ghana in 2009 and said in a speech that good governance "…has been missing in far too many places for far too long…That is the change that can unlock Africa's potential and that is a responsibility that can be met only by Africans."-- speech in Ghana, July 11, 2009, as reported by Peter Baker, "In Ghana, Obama Preaches Tough Love - NYTimes.com," July 2009, http://www.nytimes.com/2009/07/12/world/africa/12prexy.html?_r=1&hp.

[5] For surveys on corruption and economics, see Aidt (2003 Economic Analysis of Corruption: A Survey, 113 The Economic Journal, F632-F652 (2003), J. C. Andvig The Economics of Corruption: A Survey, 43 Studi Economici 57-94 (1991), P. Bardhan Corruption and Development: A Review of Issues, 35 Journal of Economic Literature, 1320-1346 (1997), S. Rose-Ackerman Corruption and Government: Causes, Consequences and Reform, Cambridge University Press, Cambridge (1999), and Jain (2001) Corruption: A Review, in S. Sayer Issues in New Political Economy (Surveys of Recent Research in Economics) von Blackwell Publ. Ch. 9 PP.241-292.

Figure 10.1. Corruption Perception Index, Transparency International, 2009.
Ranking from Least to Most Corrupt for Selected Countries

| | | | | | |
|---|---|---|---|---|---|
| 1 | New Zealand | 55 | Namibia | 106 | Argentina |
| 2 | Denmark | 63 | Italy | 111 | Indonesia |
| 3 | Singapore | 69 | Ghana | 146 | Russia |
| 14 | Germany | 75 | Brazil | 158 | Cambodia |
| 17 | Japan | 79 | China | 162 | Venezuela |
| 19 | U.S.A. | 84 | India | 168 | Iran |
| 25 | Chile | 89 | Mexico | 180 | Somalia |

On average, observers tend to perceive low corruption in high-income countries, medium corruption in middle-income countries, and high corruption in low-income countries. By our calculation, the simple correlation between a country's ranking on the corruption perception index and its ranking on income per capita in 2009 is 0.75.[6] This correlation is imperfect, with some wealthy countries like Italy being perceived as more corrupt than some poor countries like Namibia. Also, in states where perceived corruption is high overall, important sectors are uncorrupt. Thus observers agree that Indian elections are as clean as in Western countries; the Indian Supreme Court (APEX) enjoys a reputation for honest judges; and India's space agency (OSRA) launches rockets and satellites that require honest administration. However, experts estimate that up to two thirds of the Indian government's expenditure on cheap food for the poor gets diverted through corruption.[7] Also some countries that deal harshly with domestic corruption tolerate its firms paying bribes in foreign countries. This hypocritical practice has become more difficult in recent years.[8]

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[6] Spearman rank correlation, 175 countries, 2 tailed critical value, 1 per cent: 0.81. ,

[7] E. Luce (2006) In Spite of the Gods, The Strange Rise of Modern India, Abacus pp. 87

[8] Transparency International also publishes a "bribe payers index," which ranks the world's wealthiest and economically dominant countries by the likelihood of their firms to bribe abroad. It is based on the informed observations of several thousand senior business executives in developing and developed countries. In Germany bribes were tax deductible until this practice was abolished after protests from developing countries like India. V. von Nell (2006), Korruption- individuelles Handeln im Zeichen der Globalisierung, p. 17, in: Von Nell, Schwitzgebel, Vollet, Deutscher Universitätsverlag. The Organization for Economic Cooperation and Development (OECD) has issued a code of conduct, but it has no teeth. K. Gordon (2001), The OECD Guidelines and other Corporate Responsibility Instruments: A Comparison, OECD Working Papers on International Investment, Number 2001/5. Real progress is the UNAC (United Nations Convention Against Curruption) of 2005, which obliges all signatory states to punish bribery of "foreign public officials" as a criminal offense. In 2009 about 135 states had ratified this convention. United Nations Convention against Corruption, www.unodc.org/pdf/crime/convention_corruption/signing/Convention-e.pdf.

What is the relationship between *perceived* and *actual* corruption? We have little meaningful data comparing corruption internationally. Various inferences have been made to solve the problem indirectly.[9] We will make some inferences from reported crimes. The United Nations and other international organizations collect data on reported crimes, which they receive from national justice departments. Most reported crime data is useless for international comparisons. To illustrate, combining all reported crimes from shoplifting to murder, Germany and New Zealand are the countries with the highest crime rates per 100,000 people, whereas Russia and India are among the lowest. Would anyone actually feel safer walking down a street in Moscow or Kolkata rather than Frankfurt or Auckland?[10] This data reflects differences in crime reporting, not crime committing.[11]

In contrast, statistics on homicide are somewhat reliable,[12] so we use them to gain perspective illegal activities. The following figure shows reported homicide rates for selected countries, where some patterns are discernable. Many middle-income countries in Central and South America have high homicide rates. In Asia, we find poor and middle-income countries with low homicide rates similar to rich countries in Europe. The homicide rate in the U.S.A. is lower than in Central or South America, but much higher than in Europe. In general, homicide does not concentrate in poor countries, nor does more wealth correlate closely with lower homicide rates. The correlation between poverty and murder across nations is 0.43[13], which is weaker than the correlation with perceived corruption.

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[9] The currency approach provides an example of an indirect measure: If we know the quantity of money and its rate of circulation, then we can calculate the total monetary value of all transactions. Subtracting from it the value of taxed transactions, we have an estimate of the size of the untaxed transactions. In many tax systems, the untaxed transactions are black market or gray market activities. For estimates using Swiss and international data, see Torgler, B. and F. Schneider (2007). "Shadow Economy: Tax Morale, Governance and Institutional Quality: A Panel Analysis." Berkeley Law and economic Workshop.

[10] United Nations Surveys on Crime Trends and the Operations of Criminal Justice Systems.

[11] Data collection begins with victim's reports to the police. However, people in different countries have different attitudes about the advantages and disadvantages of reporting a crime. Where police are dishonest, a crime report can cause trouble for the victim. Where police are incompetent or overburdened, a crime report is a waste of time. In addition, the police have administrative and political incentives to distort the reports to make them look better than they appear, or to disguise the fact that they are worse than they appear.

[12] This crime is usually reported to the authorities. Even so, authorities differ in how they classify the causes of death, especially in countries with domestic uprisings or civil wars.

[13] Pearson rank correlation, 133 countries, 2 tailed critical value, 1 per cent: 0.232

Figure 10.2 Reported homicides per 100,000 inhabitants in selected countries in 2008.

| Country | 2008 | Country | 2008 | Country | 2008 |
|---|---|---|---|---|---|
| Venezuela | 39.5 | Iran | 2.93 | Australia | 1.45 |
| South Africa | 38.6 | India | 2.82 | Poland | 1.28 |
| Colombia | 33 | Bangladesh | 2.64 | Niger | 1.28 (1996) |
| Brazil | 25.7 | China | 2.36 | Syria | 1.14 |
| Russia | 16.5 | Malaysia | 2.31 | Vietnam | 1.08 |
| Mexico | 10 | South Korea | 2.18 | Italy | 1.06 |
| Pakistan | 6.86 | United Kingdom | 2.03 | Indonesia | 1.05 |
| Turkey | 6.23 | Chile | 1.9 | Saudi Arabia | 0.92 |
| United States | 6.8 | Israel | 1.87 | Germany | 0.88 |
| Kenya | 5.72 | Canada | 1.80 | Algeria | 0.64 |
| Ethiopia | 5.48 | Jordan | 1.75 | Japan | 0.44 |
| Argentina | 5.27 | France | 1.59 | Singapore | 0.39 |

Some crimes such as drug dealing, prostitution, and extortion usually involve cooperation by several criminals, which requires organization. In a comprehensive cross-country study, Jan van Dijk constructed an index of organized crime based on data from 2005. Countries are rated from 0 to 100, with a higher number indicating less organized crime. The numbers in the following figure indicate that organized crime tends to be lower in richer countries, with notable exceptions. Thus Italy has high organized crime for a rich country, and Gambia has low organized crime for a poor country. The correlation is -0.7 between the organized crime index in the figure and income per capita.[14]

[14] Pearson rank correlation, 112 countries, 2 tailed critical value, 1 per cent: 0.232.

Figure 10.3. Organized Crime Index (2005) by Jan van Dijk[15]

| | | | | | |
|---|---|---|---|---|---|
| Iceland | 100.0 | United States | 76.4 | Vietnam | 36.3 |
| Sweden | 98.1 | Taiwan | 72.6 | Algeria | 31.8 |
| Malta | 96.2 | South Korea | 70.7 | Brazil | 31.2 |
| Australia | 94.9 | Korea, Rep. | 68.2 | Mexico | 30.6 |
| Switzerland | 94.3 | Japan | 65.0 | Paraguay | 24.2 |
| Norway | 93.6 | Israel | 64.3 | South Africa | 18.5 |
| Germany | 90.4 | Ghana | 62.4 | Indonesia | 17.4 |
| United Kingdom | 89.2 | Tanzania | 61.1 | Philippines | 16.6 |
| Gambia | 88.5 | Morocco | 54.1 | Bangladesh | 14.6 |
| Belgium | 87.3 | Italy | 51.6 | Kenya | 12.7 |
| Netherlands | 86.6 | India | 51.0 | Nigeria | 10.8 |
| Canada | 86.0 | Turkey | 47.1 | Russia | 9.6 |
| Tunisia | 85.4 | Poland | 43.9 | Venezuela, RB | 8.9 |
| Chile | 82.2 | China | 38.9 | Ukraine | 7.6 |
| France | 77.1 | Argentina | 38.2 | Haiti | 3.8 |

Using international data, we found a rough negative correlation between national wealth and perceived corruption, reported homicide, and organized crime. Does corruption cause poverty or does poverty cause corruption? Previous chapters explained that effective laws for property, contract, and business cause economic growth. Corruption makes these laws less effective, which contributes to national poverty. By this means, corruption causes national poverty. However, a simple economic theory suggests that causation also runs in the opposite direction: As people get wealthier, they spend more to clean up corruption just as they spend more to clean up the air. In general, rising incomes increase the demand for public goods, including honest administration.[16]

[15] Jan van Dijk (2007) The World of Crime, Breaking the Silence on Problems of Security, Justice and Development Across the World, Pine Forge Press, ch.12.

[16] Our brief discussion omits many important variables affecting the relationship between national wealth and corruption. Wealth increases the opportunities and rewards for corruption, so corruption may increase in spite of spending more to prevent it. This situation is analogous to industrialization causing pollution to increase in spite of rising expenditures on abatement. People have more to steal and rich owners may be less vigilant about losing small amounts. However, the opportunity cost of becoming a criminal is higher in countries with greater rewards for legitimate work. Wealth distribution also plays a role. If a very poor country starts to grow, growth often concentrates in particular regions and sectors. That makes some people very rich very quickly and leaves the incomes of many others unaffected. This concentration of wealth also attracts more crimes. As you can see, the argument gets complicated fast.

## Corruption With Strong and Weak Governments

We have explained that corruption and national poverty feed back on each other, and this vicious circle may sustain the rough correlation between them. However, the data also shows that some countries in every region defy this correlation, and so do some sectors in every country. How do we explain countries that counter the general trend? We start by considering how the structure of political power affects corruption. A modern state consists of politicians at the top (the "government") and administrators below (the "civil service"). Bribery is centralized when top politicians control it, not the administrators. Conversely, bribery is decentralized when administrators control it, not top politicians. Centralization and decentralization make a big difference to corruption, as we will explain.

The top politicians who control bribes can collect them from firms by two different means. First, top politicians can take bribes directly from firms. Direct bribery works best when a few top politicians work with a few large firms. In a centralized industry with a few large firms, top politicians maximize their bribes by preventing lower level administrators from collecting bribes. Thus a large firm might have to bribe a cabinet minister, who subsequently protects it from extortion by lower officials. This is a system of political corruption and honest administration -- politicians can take bribes and administrators cannot. South Korea under Park Chung-hee illustrates a strong authoritarian state with corrupt politicians at the top and mostly honest administration. Similarly, in the Soviet Union under communism, corruption was widespread but tightly controlled from above.[17]

Second, instead of collecting bribes directly, top politicians can use administrators as their agents to collect bribes. The top politicians need administrators to collect bribes when small firms produce much of the nation's wealth. In a decentralized industry with many firms, top politicians maximize their bribes by encouraging administrators to collect them and sharing the proceeds, like a large firm that maximizes its sales by employing

[17] A. Shleiffer and R. W. Vishny, Corruption, 108 Quarterly Journal of Economics 599-617 (1993). The collapse of communism in the 1990s caused decentralization of corruption in Russia and led to the redistribution of the country's wealth to managers and oligarchs. Other possible Asian cases include the Philippines under Marcos and Indonesia under Suharto, although the top politicians in these countries also tolerated lower level corruption.

salesmen on commission. Thus a small firm might bribe a low-level administrator who kicks back most of the bribe to the minister. The minister then protects the small firm from further extortion by others. This is a system of delegated corruption.[18]

Delegation may be necessary to harvest bribes in states where politicians require extensive support of voters.[19] In the Philippines, contractors pay up to a third of the value of the contract as a bribe to state development agencies.[20] Senior police and anti-narcotics staff at the provincial level in Afghanistan are reported to pay up to 150,000 USD to the politicians who appoint them.[21] Authoritarian governments require intensive loyalty by the army and police. Politicians, consequently, demand loyalty and overlook corruption, as in contemporary Russia.[22]

We have explained that the top politicians may collect bribes directly and forbid civil servants from doing so, or the top politicians may use civil servants as their agents for collecting bribes. The direct approach may prevail in one country or industry, especially if the economy is centralized and direct collection is easy. The indirect approach may prevail in another country or industry, especially if the economy is decentralized and direct collection is difficult.

Whether bribe collection is direct or indirect, the burden on the economy will remain moderate if top politicians who extract bribes feel secure enough to take a long-run viewpoint. They can collect more bribes in the long run from thriving businesses than from failing ones. For businesses to thrive, the politicians must extort moderate bribes, not confiscatory bribes. Top politicians must act like godfathers, not bandits. To keep bribes moderate, top politicians must discipline civil servants so they do not

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[18] In game theory, this is a "principal-agent problem. Cohen, James. "The Application of Principal-Agent Theory to Security Sector Reform in Fragile States". Geneva: IUHEID, (2008).

[19] Root argues that democracy requires more extensive support than dictatorship, so democratic politicians will spread largess broadly to gain a lot of votes, whereas dictators will focus largess more intensively to gain greater loyalty from fewer people. See Hilton Root, Capital and Collusion: The Political Logic of Global Economic Development . 2005.

[20] See inquirer.net, http://opinion.inquirer.net/inquireropinion/columns/view/20090522-206417/Pork-barrel-is-root-cause-of-corruption last visited March 2010

[21] Anthony Loyd: 'Corruption, bribes and trafficking: a cancer that is engulfing Afghanistan' The Times, November 24th 2007

[22] "International research organizations rank Russia as having the world's most corrupt large economy, in part because of bribery linked to law enforcement personnel. But senior Russian officials have long seemed to view the loyalty of police officers as more important than their integrity." -- Clifford Levy, "Videos Rouse Russian Anger Toward Police," *New York Times*, July 28, 2010, sec. Europe.

compete with each other and extort too much. Business investment in a stable state with centralized corruption resembles commerce on the Rhine River in the 19th century. The emergence of nation-states enabled a small number of officials to replace many barons collected tolls from ships on the Rhine, so commerce soared.

Conversely, when a state is unstable and politicians feel insecure, they may take a short-run viewpoint. Unstable politics shrinks the time-horizon for officials and they extort confiscatory bribes that destroy productive firms. The state acts like a bandit, not a godfather. Thus Mobutu in Congo and Mugabe in Zimbabwe prolonged their failing dictatorships by allowing their loyalists to steal the nation's wealth from its producers.

Similarly, weak central authority provides an opportunity for corruption to proliferate among minor officials. To operate a manufacturing business, a firm might have to bribe the officials who register companies, license production, collective taxes and tariffs, and impose environmental regulations, as well as the police officer, the electricity company, the water supplier, etc. When a firm needs help from many different officials, business activity resembles commerce on the Rhine River in medieval times when barons collected tolls from each ship that passed by. Even highly productive ventures may never launch, like the many ships that never sailed down the Rhine.[23]

Here are some contemporary examples. Silicon Valley attracts engineers from many countries and they often outsource production to their homeland, especially China and India. An Egyptian engineer whom we know manages an investment fund for other Egyptians in Silicon Valley. He is unwilling to outsource to Egypt for fear that Egyptian officials would demand confiscatory bribes. African nations provide more examples of weak states with decentralized corruption. In Kenya businesses were regulated by a multiple licensing system that required separate approval for each line of business.[24] In India, to run a small business like a tea stall or to become a street hawker or a cycle-rickshaw puller or to work as a railway porter requires a license. Shah and Sane found

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[23] See Michael Heller, The Gridlock Economy: How Too Much Ownership Wrecks Markets, Stops Innovation, and Costs Lives (Basic Books, 2008).

[24] C. Abuodha, R. Bowles (2000), Business licence reform in Kenya and its impact on small enterprises, Small Enterrprise Development, Volume 11, Number 3, September 2000 , pp. 16-24

that, even after liberalization, more than 80 percent of the approximately 500,000 cycle-rickshaws in Delhi are illegal. Licensing requirements are so difficult to meet that their only rationale seems to be the extraction of bribes for inspectors and the police.[25]

Modern countries obtained honest administration partly by developing the civil service system. The civil service guards the state administration from improper influence within (cronyism), above (political interference), or outside (firms and citizens). To avoid improper influence, the civil service reduces personal influence and replaces it with bureaucracy. In hiring and promotions, the civil service relies maximally on exams, seniority, and performance ratings. Civil servants are difficult to fire. General rules make detecting improper influence easier for outside observers. Thus when promotion follows the principle of seniority, a political crony is easily detected if he gets promoted ahead of his time.

Besides general rules, the civil service has other methods to reduce corruption. We already explained that bribes require trust that often develops through enduring relationships. To undermine trust, the civil service often rotates civil servants in and out of sensitive positions. Or civil servants must act in teams whose members can monitor each other. High salaries for civil servants also increase leverage against bribery. Some states like Singapore have wiped out bribes almost completely among judges by paying them princely wages.[26]

How did high pay eliminate judicial corruption in Singapore? Not because rich people are less corrupt than poor people. Rather, high pay makes an official hesitate to take a bribe that might cause him to lose his job. Dismissing a civil servant for suspicion of accepting a bribe is much easier than convicting him of the crime. Thus a high relative

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[25] Shah, Parth J. and Renuka Sane. 2008. India: The Elephant in the Age of Liberation, in Benjamin W. Powell, ed., *Making Poor Countries Rich: Entrepreneurship and the Process of Economic Development*. Stanford: Stanford Economics and Finance and The Independent Institute, pp. 309-341, here p. 324

[26] The Judges Remumeration Act of 1994 fixed the yearly salary of a Judge of Appeal at 253.000 Singapore Dollars, which was then 166 000 US Dollars. In 1997 "High court judges (received) A$835,020, besides other perks and privileges, like a motor car, a government bungalow at economic rent. The chief justice received A$1,260,000 (equivalent to 700.000 US dollars) per annum, besides an official residence (or an housing allowance in lieu thereof), a chauffeur-driven car, among other handsome perks and privileges of office. Indeed, he received more than the combined stipends of the Lord Chancellor of England, the Chief Justices of the United States, Canada and Australia", F. T. Seow, former solicitor general of Singapore. "The politics of judicial institutions in Singapore lecture" given in Sydney, Australia in early 1997. While judges do not take bribes, they allegedly take instruction from politicians in some cases.

wage inside the civil service provides a powerful deterrent against accepting bribes, especially when combined with a policy of dismissing employees for improprieties. However, increasing the wages of judges does not reduce bribery when they have no fear of being fired, as experience in Indonesia suggests.[27]

We explained that a stable group of top politicians who collect bribes (directly or indirectly) have an interest in keeping exactions moderate so that business flourishes. To keep bribes moderate, they must suppress competition for bribes and discipline lower officials. Conversely, unstable politics at the top or undisciplined officials at the bottom cause destructive competition and confiscatory bribes that destroy businesses. There are, however, circumstances under which competition for bribes reduces the burden on business, instead of increasing it. To understand the difference, we must distinguish conjunctive and disjunctive licenses.

Permission to act is *conjunctive* when licenses must come from officials A and B and C and D and ... With conjunctive permission, acting requires the consent of many officials. Any one of them can hold up the entire project, so each one of them can demand a bribe. Also, firms that want to stop competitors from entering the market only need to bribe one official. These conditions will paralyze business activity unless central authorities discipline lower officials to assure that extortion remains moderate rather than confiscatory.

Alternatively, permission to act is *disjunctive* when permission can come from officials A or B or C or D or… With disjunctive permission, acting requires only one of many officials to consent, whereas stopping someone from acting requires bribing many officials not to consent. In the disjunctive case, competition among officials drives the cost of bribes to a low level and the burden of bribes on business is low.[28] Thus an investor might have to bribe an official to register his firm, but he can choose the official who demands the lowest bribe.[29] Federal systems of government like Brazil, Canada, or India create regulatory competition, which allows a firm to locate in a relatively low-bribe

[27] Thus Indonesia reformed bankruptcy law and introduced special commercial courts in 1998. The newly appointed judges received special training and improved pay, but accusations of incompetency and corruption persist. R. Tomasic, 2001, Some Challenges of Indonesian Bankruptcy Reform (Bali), 19.

[28] Several authors have proposed to eliminate some types of corruption by allowing competition between offices.Rose Ackerman**, op. cit. F.N. 4**

[29] Bardhan, Journal of Economic Literature op.cit FN. 4

state. In a cross-country study, corruption correlates negatively with a proxy for regulatory competition.[30] Similarly, international competition pressures national governments to hold down bribes. Thus cross country analysis shows that the level of corruption decreases significantly with imported goods as per cent of GNP,[31] and small countries tend to be less corrupt than big countries because they have more open economies.[32]

The distinction between conjunctive and disjunctive permissions suggests a strategy for suppressing corruption. Create competition among officials to license beneficial acts, as with the chartering of corporations by states in the USA and the EU,[33] or the creation of trusts in London.[34] Conversely, require permission from multiple officials to engage in harmful acts, as with environmentally damaging practices. Unfortunately, however, most regulated activities can be beneficial or harmful. To illustrate, issuing a passport is beneficial when the traveler is a legitimate businessman and harmful when the traveler is an arms dealer. Approving a new medicine is beneficial if it is properly tested and harmful if untested. When an activity can be beneficial or harmful, regulatory competition can be good or bad. Adequate exploration of this problem requires a more detailed theory of centralization and decentralization than we can develop here.[35]

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[30]The proxy is the fraction of government expenditures by state and local governments. R. Fizman, R.Gatti (2002), Decentralization and Corruption: A Cross Country Analysis, Journal of Public Economics, Vol 83, pp. 325-345

[31] A. Ades and R. Di Tella (1999) Rents, Competition, and Corruption, AER, Vol.89, No.4 pp. 982-993

[32]Transparency International Data for 2008.

[33] A firm can incorporate in any state in the United States, regardless of the location of its headquarters or business activity. This fact created a chartering competition mostly won by Delaware. Many scholars believe the competition was benign on the whole. See Roberto Romano….

[34] The trust exists in common law, but not in civil law. With the creation of the European Union, many Europeans in civil law countries have gone to London to create trusts, which has put pressure on bankers in Frankfurt and Paris to develop instruments under civil that substitute for the trust. See Hansmann and Mattei..

[35] For a more complete sketch of the theory of centralization and decentralization of the state, see Robert Cooter," Part III: The Optimal Number of Governments," The Strategic Constitution (Princeton University Press, 2000) and Robert Inman and Daniel L. Rubinfeld, "Rethinking Federalism," *J. Economic Perspectives* 11 (1997): 43-64.

## Optimal Corruption?

Having sketched some facts about corruption and its complicated causes, we turn to strategies to combat it. First we describe some of corruption's costs and benefits. Many laws and policies support business such as property, contracts, and corporate law, or provide infrastructure like airports and harbors, or supply social goods like health, education, security, and environmental protection. Effective administration of these laws increases the nation's wealth, whereas corruption has the opposite effect. The state should use its resources to prevent the corruption of good laws and policies.

However, the state also makes bad laws that impede the economy. Laws that retard business include restrictive licenses to suppress competition, non-competitive bidding for state contracts, most cross-subsidies, and confiscatory taxes. Ideally, the state should repeal or reform bad laws that retard the economy. After repeal or reform, people no longer need to bribe officials for permits, licenses, exemptions, cross-subsidies, etc. However, repeal is often politically impossible. Politicians create bad laws to reward loyalty[36] by redistributing wealth to their followers. To reward their friends, politicians impose restraints on competition, enact subsidies, restrict supply below demand so that buying is a privilege, create queues to jump, etc.[37] Also, officials create bad laws to make productive businesses pay bribes in order to get things done. Bad law is good politics in many countries.[38]

Absent repeal, a bribe to subvert a bad law can help to get things done. Such bribes are sometimes called "speed money" because they allow business to go faster. In a study by the team of Hernando de Soto in Lima, the researchers tried to open a garment factory legally, without paying bribes. They found that "a person of modest means must spend 289 days on bureaucratic procedures" to fulfill the requirements.[39] In

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[36] "... Bad policy is good politics for the incumbent if it frees resources to invest in loyalty."-- Hilton Root, Capital and Collusion: Political Logic of Global Economic Development (Princeton University Press, 2006) at page 36.

[37] V. Tanzi (1998) Corruption Around the World, Causes, Consequences, Scope and Cures, IMF Staff Papers, Vol. 95/4 pp. 559

[38] This phrase is from Hilton Root, Capital and Collusion: The Political Logic of Global Economic Development . 2005.. Root argues that redistribution to political allies builds committed loyalists.

[39] De Soto, Hernando. 1989. *The Other Path*. New York: Basic Books.p.151

general, data shows that the regulatory hurdles for doing business vary greatly from one country to another.[40]

In addition, a substantial proportion of production occurs in gray markets that survive by bribing officials to overlook their existence. Taxes, labor law, health and safety regulations, corporate law, and banking law are ineffective in gray markets. Because these producers have no legal existence, they belong to the "informal sector," like unlicensed street vendors. In poor countries, the informal sector occupies a larger fraction of the economy than in rich countries.[41] According to one estimate, the informal section produces less than 17% of GDP in the richest countries, and it produces between 25% and 40% in poorer countries. The gray market's share of total employment is even higher than its share of GNP. The informal sector apparently employs three-quarters of the non-agricultural labor force in Sub-Saharan Africa, and two-thirds in a selection of important Asian countries.[42]

Freedom from regulation comes at a terrible price: Producers in the informal sector hesitate to draw the state's attention to themselves by seeking its protection. They must use private means to protect property, enforce contracts, and collect debts. Organized crime protects and preys on them. Thus the Sicilian mafias originated partly to protect small farmers from crime;[43] drug cartels in Columbia protect small farmers who

[40] The following table from the World Bank "Doing Business" data (2010) shows the differences in the number of procedures and costs across regions for opening a business for up to 50 employees. The data should be treated skeptically because of high aggregation and unclear definitions.

| Region or Economy | Procedures (number) | Cost (% of income per capita) |
|---|---|---|
| East Asia & Pacific | 8.2 | 25.8 |
| Eastern Europe & Central Asia | 6.7 | 8.3 |
| Latin America & Caribbean | 9.5 | 36.6 |
| Middle East & North Africa | 7.9 | 34.1 |
| OECD* | 5.7 | 4.7 |
| South Asia | 7.3 | 27.0 |
| Sub-Saharan Africa | 9.4 | 99.7 |

*The Organization for Economic Cooperation and Development (OECD).

[41] See Delhi Group on Informal Sector Statistics, Geneva 28-30 August 2000, The Contribution of Informal Sector to GDP in Developing Countries, Assessment, Estimates, Methods, Orientations for the Future. Also see Edgar L. Feige, Defining and estimating underground and informal economies: The new institutional economics approach, World Development, Volume 18, Issue 7, July 1990, pp. 989-1002

[42] William E. Cole, Bichaka Fayissa, "The urban subsistence labor force: Toward a policy-oriented and empirically accessible taxonomy" World Development, Volume 19, Issue 7, July 1991, Pages 779-78.

[43] Bandiera has shown this for the rise of the Sicilian mafia. During Nalopeonic times the kingdom of Naples abolished the feudal system and distributed land to small famers. Stealing and robbery during harvest times

grow coca; criminal gangs are heavily involved in debt collection in many countries, including Russia, [44] Indonesia,[45] and Ghana;[46] and Japan's bankruptcy law prescribes sufficiently unworkable procedures that gangsters play a role in the resolution of financial distress.[47] Criminal enforcement substitutes for legal enforcement in weak states, but it is an ugly substitute.[48] Productivity in the informal sector would increase sharply if the state recognized the firms in it, protected their property, and enforced their contracts. Luring firms out of the gray market and into the white market requires reducing burdensome taxes and regulations.

As a firm gets larger, hiding from the law gets harder. Most large firms, consequently, belong to the formal sector, which is expensive. They must pay taxes and conform to regulations such as licensing laws and labor laws. In return, firms in the formal sector enjoy more advantages of law such as protection of property, enforcement of contracts, and banking services. The following figure summarizes the characteristics of the formal and informal sectors.

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became a much bigger problem than before, as the large farm holdings required less policing. As the police force was not increased with the land reform the small farmers took refuge in the evolving mafia, which assessed fees to protect their property. See O. Bandiera (2003), Land reform, the Market of Protection and the Origins of the Sicilian Mafia, Journal of Law, Economics and Organization 19(1), 218-44.

[44] J. O. Finckenauer and Y. A.Voronin (2001) US Department of Justice (2001) The Threat of Russian Organized Crime, National Institute of Justice, http://www.ojp.usdoj.gov/nij.

[45] S. Christiansen (2003)Violent Youth Groups in Indonesia: The Cases of Yogyakarta and Nusa Tenggara Barat. Journal of Social Issues in Southeast Asia, Vol. 18, 2003

[46] M. Fafchamps (1996) The Enforcement of Commercial Contract in Ghana, World Development, Vol. 34, No. 3. pp. 427-448

[47]The Japanese Bar association estimated that more than a thousand illegal "fixers" provided their services in bankruptcy procedures in 1995. "Fixers" (Seiriya) can paralyse or speed up foreclosure, intimidate debtor or debt collectors, or evict tenants whom the law tries to protect. See C. J. Milhaupt, M. D. West (2000) The Dark Side of Private Ordering: An Institutional and Empirical Analysis of Organized Crime, University of Chicago Law Review, Vol. 67, p. 41, 2000.

[48] See Geneva Declaration "The Global Burden of Armed Violence, Geneva, Sept. 2008. The underlying theoretical problem concerns natural monopoly and public goods. Effective protection of property and enforcement of contracts requires an organization with more power than any competing organization. Thus a gang cannot protect property effectively unless it is more powerful than any rival within its territory. Instead of diminishing returns, there are increasing returns to power in protecting property and enforcing contracts. Besides the characteristics of a natural monopoly, these enforcement activities also have the characteristics of a public good. To illustrate, the police who make a street safe protect everyone on it, regardless of whether or not they have paid their taxes. Since people benefit without paying, protection activities are difficult to finance voluntarily. The state finances protection activities through taxes, whereas the mafia finances protection activities by extortion. Extortion and gang warfare are much cruder than courts and taxes as ways to capture economies of scale and solve the public goods problem of protecting property and enforcing contracts.

Figure 10.4, Characteristics of Formal and Informal Firms

| | Formal sector | Informal sector |
|---|---|---|
| **Firm size** | Large | Small |
| **Legal status** | Registered | Unregistered |
| **Ownership** | Corporate | family, partnership |
| **Government role** | Promote, protect | Unprotected |

The division between small firms in the informal sector, and large firms in the formal sector, changes the pattern in growth in poor countries as compared to rich countries. In Western countries a firm often starts as a small business and fails within a few years, but a few grow to be very large firms. In developing countries, however, small firms have difficulty crossing from the informal to the formal sector. Small companies have almost no access to formal credit. Informality deprives them of finance and limits their growth. Instead of starting as small firms in the informal sector, most large firms in poor countries start as relatively large firms in the formal sector,[49] especially in Sub Saharan Africa.[50]

We have explained that bribes destroy wealth by subverting the administration of good laws, and bribes also create wealth by subverting the administration of bad laws that resist repeal.[51] Some economic terminology will sharpen this argument. The two

[49]See J. van Biesebroeck (2005) Firm Size Matters , op. cit. p. 546 and G. Ranis, (1988). "Analytics of Development: Dualism." In *Handbook of Development Economics*, vol. 1, ed. H. Chenery and T. Srinivasan. New York: North-Holland. Also note that large companies seldom go public. The number of stock listed companies in Africa (except South Africa) is extremely low compared to other regions in the world.

[50]: Growth and Productivity Growth, in African Manufacturing, Economic Development and Cultural Change (*Economic Development and Cultural Change*, volume 53 , 545–583. Remarkable counterexamples do exist for some family enterprises. Thus the Ndegwa Group in Kenya and the Mukwano Group in Uganda developed out of tiny enterprises. Also, the number of stock listed companies in Africa (except South Africa) is extremely low compared to other regions in the world. In 2004 the number of listed firms per Million of population was 1,2 in Ghana, 1,8 in Kenia, 1,5 in Nigeria 0,1 in Uganda and 12,0 in South Africa. The World Average was 27,7. See S. Djankow (2005), The Law and Economics of Self Dealing, World Bank Research Papers 1-80l

[51] Osterfeld distinguishes between corruption that increases output and corruption that decreases it. D. Osterfeld. Prosperity versus Planning: How Government Stifles Economics Growth (Oxford University Press, 1992). For empirical application of this distinction, see Douglas A. Houston, "Can corruption Ever Improve an Economy," 27 Cato Journal 325 (2007), and Mushfiq us Swaleheen and Dean Stansel, "Economic Freedom, corruption, and Growth," 27 Cato Journal 343 (2007). Ineffective administration of laws that retard business increase the nation's wealth. To illustrate, the International Trade Commission allows the state to subsidize domestic producers facing unfair competition from foreigners. Sykes argues that the law should be repealed. If not repealed , then he favors an incoherent test for unfair competition in order to make the law ineffective. See Alan O. Sykes, (1996), The Economics of Injury in Antidumping and Countervailing Duty Cases ,

main elements of the cost of corruption are the harm that it does from subverting good laws and the cost of preventing it. The main benefit of corruption is the subversion of bad laws that resist appeal. Combining these three elements provides a simple measure of corruption's net cost to society:

$$\text{(net social cost of corruption)} = \text{(harm)} + \text{(prevention)} - \text{(benefit)}.$$

When laws and public policies minimize this sum, economists say that corruption is "optimal." This odd-sounding phrase underlines the inescapable fact that preventing corruption is costly and limited resources are available for police, prosecutors, judges, prison guards, reform commissions, ombudsmen, etc.

The formula for optimality provides guidance for allocating scarce resources to preventing corruption. Efforts to combat corruption should be targeted where they will reduce social costs the most. Resources spent on preventing bribes should focus on improving administration of laws that promote economic growth, such as registering property, enforcing contracts, collecting debts, incorporating businesses, liquidating bankrupt firms, inviting competitive bids on government contracts, and supplying passports. Also, expenditures on preventing bribes should focus on improving administration of laws that retard harmful activities, such as protecting property against theft or trespass, withholding an occupancy permit from an unsafe building, prosecuting fraud in contracts and stocks, blocking a merger that creates a monopoly, seizing illegal drugs and weapons, and taxing polluters.

Conversely, expenditures on preventing bribes should *not* focus on improving administration of bad laws that resist repeal, such as laws granting exclusive licenses that restrict competition, or regulations that help cartels to coordinate their prices. Also, expenditures on preventing bribes should *not* focus on improving the administration of laws that promote harmful activities, such as subsidies for strip mines that destroy the environment, or payments to farmers for not growing wheat.

Should authorities go further and tolerate bribes that undermine harmful regulations and activities? Is the legal system worse if you can pay a bribe to compete with the friend of a politician, or if you cannot compete with the friend of a politician no

matter how much you pay? Tolerating bribes brings the law into disrepute, and so does enforcing bad laws. We cannot say which is worse in general. Repeal or reform is best, and any other policy is problematic, like suppressing a black market for penicillin.

## Sowing Distrust

Any state with the will to suppress bribery can do so by sowing distrust.[52] Most contracts involve exchange that is consecutive, not simultaneous. Perhaps the buyer pays now for the seller's promise of future performance, or perhaps the seller performs now for the buyer's promise of future payment. With consecutive exchange, the parties need to trust each other. Contract law enables them to make legal commitments to do what they say, which provides a basis for trust. Like contracts, many bribes are consecutive and not simultaneous. Perhaps a builder pays now for promise of a future permit, or perhaps an official delivers a permit now for promise of future payment. Bribes, however, are illegal, so the state will not enforce the promises that the parties make. Furthermore, bribes provide opportunities for the parties to abuse each other – perhaps an official extorts a bribe for a building permit and later extorts another bribe for an occupancy permit, or perhaps one of the parties extorts the other with the threat of going to the police.

Since bribes create an especially difficult trust problem, a basic strategy for disrupting bribery is to aggravate distrust.[53] Distrust is the subject of the "prisoner's dilemma," one of the first and most famous applications of game theory. Two people who jointly commit a crime are arrested and interrogated separately. Each one knows that if neither of them confesses, they cannot be convicted. Each one also knows that if only one of them confesses, he will receive a lenient punishment and the other one will receive a severe punishment. Thus the separate interrogation of the prisoners creates a dilemma of trust. If they trust each other sufficiently, neither will confess. If they distrust each other, both will confess.

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[52] For an overview, see Johann Graf Lambsdorff, The Institutional Econmics of Corruption and Reform: Theory, Evidence,and Policy (Cambridge University Press, 2007).

[53] Our discussion of aggravating distrust to prevent bribes is based on a working paper by *Cooter, Robert und Garoupa, Nuno* The Virtuous Circle of Distrust: A Mechanism to Deter Bribes and Other Cooperative Games, Berkley Olin Programm in Law & Economics, Working Paper Series, 2000, http://repostitories.cdlib.org/blewp/32

This logic applies to bribes. The citizen who gives a bribe and the official who receives it both benefit from the bribe, provided that neither of them reports it. Like the prisoners, each one must trust the other not to confess. To disrupt bribery, the state can reward officials for reporting attempted bribery. To get incentives right, the reward should exceed the official's gain from accepting the bribe. Thus an official might receive a reward of $125 for a report that convicts a citizen who offered to pay the official $100 for an illegal driving license. Foreseeing such incentives, not many citizens will attempt to bribe officials.

If the law of contracts, corporations, labor, and crimes can solve the double trust problem of business ventures, reversing the incentives provided by these laws can sew distrust that precludes most corruption.[54] Officials can pursue the strategy of sowing distrust in various ways. Thus the law can give immunity and a reward to the first person who reports giving or receiving a bribe. The citizen giving a bribe and the official receiving it would fear that the other one would sprint to the police with a report as soon as the bribe is paid. Faced with such incentives, few people will give or receive bribes.[55] Actual legal systems use rewards to combat corruption, although not precisely this kind. An especially interesting example is a legal institution called "Qui Tam," which the United States extended to reduce rampant corruption in provisioning its army during the civil war of 1861-1865. Qui tam allows a private person to initiate a suite to recover

[54] See especially Fiorentini G., and Peltzman, S., (1995), The Economics of Organized Crime, Cambridge, University Press, Cambridge, and CEPR, 1-30; Aubert, C., Kovacic, W., and Rey P. (2006), The Impact of Leniencyand Whistleblowing Programs on Cartels, International Journal of Industrial Organization, 24: 1241-1266; Spagnolo, G. (2003), Optimal Deterrence Mechanisms against Cartels and Organized Crime, mimeo, Mannheim. We cannot discuss other reasons for organized crimes. E.g. Criminal organization can reduce aggregate punishments by assigning crimes to the member of the gang who expects the most lenient treatment. Beside reducing aggregate punishment, criminal organizations can spread it among the members, rather like insurance spreads the costs of accidents. See N. Garoupa, "The Economics of Organized Crime and Optimal Law Enforcement," Economic Inquiry, Vol. 38, 2000, pp. 278-288.

[55] To illustrate numerically, a citizen who pays an official $100 for an illegal driving permit should be able to report the crime, hand over the illegal permit and other evidence to convict the official, and receive immunity plus a reward of $125. Similarly, the official who received the bribe should be able to report the crime, hand over the money and other evidence to convict the citizen, and receive immunity plus a reward of $125. The first one to file a successful report would receive immunity and the reward, and the other one would get prosecuted and convicted. Besides severely disrupting trust, this approach reduces the problem of proof. A report of an attempted bribe will often lack adequate proof. Tangible proof often comes from completing the attempt. The law overcomes this problem by giving immunity and a reward to the first party who reports that he gave or received a bribe.

damages against someone who defrauded the government. If the suit succeeds, the government pays part of the recovery to the private person who initiated the suit.

For example, an employee of a contractor who defrauded the government of $10 million might initiate a successful suit against his employer and receive $2 million from the recovery of $10 million.[56] Qui Tam is a useful supplement to traditional oversight of officials for reducing corruption.[57] By rewarding private parties to do much of the prosecutorial work, qui tam allows officials to accomplish more with limited resources. Qui Tam especially succeeds when combined with statutes allowing "whistleblowers" to enjoy anonymity, immunity, protection against retaliatory firing, and the right to disclose government information to the media. Disgruntled employees provide a lot of information on wrongdoing in firms.

Similarly, the police often reward gangsters who report on their organizations by giving them immunity or reduced punishment, as well as helping them to relocate and change their identities. Introducing an accomplice-witness program helped to increase the number of prosecutions and to reduce the number of Mafia killings in Italy from about 700 in 1991 to about 200 in 2007.[58] Sustaining more serious crimes often requires support by less serious crimes. Informants can often help authorities to end the more serious crimes by prosecuting the less serious ones, such as tax evasion and money laundering.[59]

Chapter 7 explained how contract law creates trust so that people can coordinate their behavior. In states with ineffective contract law, people must find a different basis for trust. Ineffective contract law channels transactions into repeat dealing among

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[56] David Kwok, a student of Robert Cooter, is currently writing a PhD dissertation on Qui Tam. For preliminary results, see David Kwok, "Coordinated Private and Public Enforcement of Law: Deterrence under Qui Tam," Annual Meeting, American Law and Economics Association, May 7-8,2010.

[57] Oversight discourages corruption in the civil service, as demonstrated by a field experiment in Indonesia, where increased government audits of village road projects significantly reduced missing expenditures.Olken, Benjamin A. "Monitoring Corruption: Evidence from a Field Experiment in Indonesia," 115 Journal of Political Economy 200-249 (2007).

[58] Antonio Acconciay, Giovanni Immordinoz, Salvatore Piccolo, Patrick Rey (2009), Accomplice-Witnesses and Organized Crime: Theory and Evidence from Italy, Discussion Paper

[59] A jurimetric study of 107 countries show the effectiveness of assets forfeiture programs for combating organized crime.Buscaglia, Edgardo (2008) "The Paradox of Expected Punishment: Legal and Economic Factors Determining Success and Failure in the Fight against Organized Crime," Review of Law & Economics: Vol. 4 : Iss. 1, Article 14. DOI: 10.2202/1555-5879.1206 Available at: http://www.bepress.com/rle/vol4/iss1/art14.

people with enduring relationships. Similarly, the illegality of bribes channels them into relational transactions. Within small groups, people can establish the trust necessary to give and receive bribes. Relationships bring the very definition of a bribe into question. Assume that a policeman stops a speeding car and the driver presents his license to the policeman with a $20 bill under it. This is clearly a bribe. Instead of attaching $20 to his license, assume the driver proposes to donate $20 to the policeman's church. Or the driver says that he recently obtained a building permit for the policeman's cousin. Or the driver remarks that they served together in the same army unit. Or the driver asks how the policeman enjoyed his Christmas gift of a bottle of fine wine. People can agree about hard-edged bribes, but donations, favors, gifts, and appeals to solidarity dull a bribe's sharp edge. When does reciprocity become bribery? Since the moral obligation of loyalty can trump other moral obligations, corruption especially involves kinship, caste, ethnicity, and friendship.[60] Suppressing bribery by sowing distrust is much harder for the state to accomplish among people with enduring ties.

Chapter 9 explained that firms lower transaction costs, especially the costs of keeping secrets. People are especially vigilant to keep their crimes secret. Like termites, bribery withers in daylight. Since people love to read about crime, telling about it profits a free press. A secure, independent media will shine a spotlight on corruption, especially if it can protect its sources by not divulging them.61 According to our calculations, the corruption perception index (Transparency International) for countries has a strong negative correlation (-0.72) with the freedom of the press rating.62

Corrupt officials often flee from light into darkness by modifying their tasks. Kickbacks in public procurement are easier to disguise for specialized, idiosyncratic, or novel goods without market prices, as opposed to standardized goods with market prices. Corrupt officials, consequently, prefer an irrigation project involving a gigantic dam rather than many small wells, or a school project involving a new building rather than uniforms for the children, or a military project requiring a battleship instead of more

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[60] Christopher Kingston (2007) Parochial corruption,
Journal of Economic Behavior & Organization, Volume 63, Issue 1, pp. 73-87

[61] A.Brunetti, B. Weder A free press is bad news for corruption, Journal of Public Economics, Volume 87, Issues 7-8, August 2003, Pages 1801-1824.

[62] This result was calculated with logarithmic values. As usual, there are outliers, such as Singapore that has no perceived corruption and limited freedom of press.

rifles. To constrain these tactics, laws require more precise standards and fewer vague principles.

## Culture and Corruption

Some states suppress all corruption as in Sweden where civil servants are as clean as the voice of the celebrated soprano Anne Sofie von Otter. Other states like India have widespread corruption but suppress it in some activities such as elections. Some observers think that differences in culture cause differences in corruption. Thus American businessmen sometimes see the giving of gifts as bribery, whereas Japanese see the same acts as cementing loyalty. In addition to affecting perception, culture apparently affects behavior. Prior to 2002, diplomatic immunity protected United Nations officials from parking enforcement in New York City. Although every diplomat was equally immune, a survey found that diplomats from high-corruption countries accumulated significantly more unpaid parking violations than those from low-corruption countries.[63] Old habits reappear in new places.

Is corruption a recalcitrant cultural trait or a malleable practice? Corruption has a remarkably jagged distribution of corruption across countries and sectors – high in one country or sector, and low in another. Thus Jordan, unlike other Arab countries, has a corruption rate similar to France. The same applies to Botswana, where corruption is dramatically lower than in the rest of Africa, and to Chile where it is dramatically lower than in the rest of the Latin America. And Protestant Lithuania has corruption similar to Catholic Poland and Moslem Turkey. Recently Singapore overcame history and became one of the world's "cleanest" states, comparable to the Scandinavian countries.

We know of no theory that adequately explains these ups and downs. The economic analysis of social norms, however, suggests conditions that can yield such results. Small differences sometimes have large consequences, like the last person who jumps on an overcrowded boat and causes it to sink. If small differences in history

[63] Raymond Fisman and Edward Miguel, "Corruption, Norms, and legal Enforcement: Evidence from Diplomatic Parking Tickets," Journal of Political Economy 115 (2007): 1020.

cause large differences in corruption, then these differences could generate the jagged distribution of corruption across countries.

To see why, assume that most civil servants expect each other to be honest. To gain approval from their peers, they will shame and report those who accept bribes. Foreseeing this fact, fear stops civil servants from extorting bribes and bribery disappears. Thus the country has an honest civil service because its officials expect others to be honest. Conversely, assume that most civil servants expect each other to be dishonest. To gain the approval of their peers, they will *not* shame or report those who accept bribes. Foreseeing this fact, civil servants do not fear punishment, so they extort bribes and bribery proliferates. Thus the country has a dishonest civil service because its officials expect others to be dishonest. In general, when an expectation fulfills itself, small accidents in history can have large effects that produce jagged distributions, as with corruption. Making a large change to eliminate corruption as in Singapore requires creating expectations that civil servants will report on those who take bribes.[64]

## Conclusion

Like termites in a house, corruption undermines the foundation of economic growth formed by property, contracts, and business law. Weak growth results in low expenditures to combat corruption. So corruption and national poverty form a vicious circle. The circle, however, is not so tight as to prevent all escapes: Some poor countries have corruption comparable to rich countries, and vice versa.

When top politicians are secure, they may take a long run view towards corruption and extract moderate bribes that allow firms to flourish. They must, however, discipline lower officials from competing to extract confiscatory bribes. When top politicians are insecure, or when they cannot discipline lower officials, confiscatory bribes may stifle the economy. To discipline lower officials, modern states rely on a civil service that follows bureaucratic rules.

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[64] Multiple equilibria characterize models of social norms. See R. Cooter, "Three Effects of Social Norms on law: Expression, Deterrence, and Internalization," 79 Oregon Law Review pages 1-22 (2000). For the application of this idea to corruption, See P. Bardhan Corruption and Development: A Review of Issues, 35 Journal of Economic Literature, 1320-1346 (1997),

Efforts to combat corruption should focus on improving administration of laws that promote economic growth and retard harmful activities. Conversely, expenditures on preventing bribes should *not* focus on improving administration of bad laws that resist repeal. Corruption often requires trust between the giver and taker of bribes, since both are vulnerable to criminal prosecution. Policies to prevent corruption should aggravate the natural distrust between them, especially by rewarding one party for information that convicts the other.

Some observers think that culture causes differences in corruption across nations. The economic analysis of social norms suggests that these differences may turn on the expectations of civil servants. A country has a dishonest civil service because its officials correctly expect others to be dishonest, and a country has an honest civil service because its officials correctly expect others to be honest. When an expectation fulfills itself, a change in behavior requires a change in expectations that proves accurate. Such changes are difficult because they require many policy reforms, but they are also possible, as Singapore demonstrates.

# Chapter 12
# Poverty is Dangerous -- Accidents and Liability

Steel nets protect the road against rockslides from Torino to Basel in the Alps, but not from Kabul to Peshawar in the Hindu Kush. Compared to rich countries, poor countries are relatively dangerous places to drive a car, work in a factory, plug in a refrigerator, drink milk, check into a hospital, or live near something that is heavy or fast or volatile. Statistics prove that poverty is dangerous. Road fatalities per 10,000 motor vehicles is much higher in developing and transition countries than in developed countries -- around 17 per 10,000 motor vehicles in Asian countries, as high as 26 in Latin American countries, and only 2 in Western Europe.[1] Work accidents also occur more frequently in developing and transition countries.[2] According to one estimate, developing and transition countries suffered over 95% of the 351,000 fatal work accidents that occurred in the world in 2002, and western industrialized countries suffered less than 5%.[3] The same conclusion applies to fatal man-made disasters. Between 2000 and 2004, the world experienced an estimated 1,725 disastrous man-made accidents, mostly in industry and transportation, such as leaks of poisonous gas, train derailments, and collapsing buildings. Developing

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[1] The total number of road fatalities worldwide was estimated at 543,000 in 1999, of which 99,000 occurred in highly motorized rich countries and all others in developing and transition countries. If we considered injuries, the gap would widen many times, because 30 to 45 injuries occur for every fatality. These numbers are estimates that combine data of uneven quality. All figures are from Investors Services, Fact book 2000, Estimating global road facilities. WHO, World Health Statistics, various issues. If one corrects these figures for the underreporting bias they increase insignificantly for Western countries but in the order of 200-300 thousands for developing countries. The World Health Report 2000 arrives at a much higher number of fatal road traffic accidents (1.23 million for the world and 129 thousand. for Europe, see stat. Appendix, Table 3 p. 168. Also see G. Jacobs, A. Aeron-Thomas, and A. Astrop, *Estimating Global Road Fatalities* (London: Transport Research Laboratory, Department for International Development, 2000), http://www.esafetysupport.org/download/eSafety_Activities/Related_Studies_and_Reports/Estimating%20Global%20Road%20Fatalities%20report,%20TRL.pdf.
*[BERND, HOW DOES THIS DATA TREAT JAPAN, SINGAPORE, TAIWAN, KOREA – DEVELOPED NON-WESTERN COUNTRIES?)*

[2] ILO,World Day for Safety and Health at Work, 2005: A Background Paper, available at http://www.ilo.org/public/english/bureau/inf/download/sh _background.pdf.

[3] International Labor Office.

countries and transition countries apparently suffered 90 percent of the resulting fatalities.[4]

Why do people in poor countries have more accidents? The obvious answer is that poor people have less money to spend on safety, just as they have less to spend on vegetables, insurance, furniture, and everything else. An economically rational individual balances the harm from accidents against the cost of avoiding them. When poor people strike the balance, accidents are relatively numerous and expenditures on precaution are relatively low. This is the first explanation of why poverty is dangerous and we will examine it.

Income, however, is only part of the answer. Self-interest prompts people to buy safety for themselves and their families, but not for others. Morality urges us to give similar weight to our own costs and others' risks, but we do not always heed morality. Separation by class, religion, ethnicity, race, or gender aggravates the problem. Besides morality, many people need material incentives to protect others adequately from accidents. Incentives come partly from liability law. Fear of liability causes many people to increase the safety of their homes, vehicles, offices, factories, and products. Liability law confronts difficult and distinctive obstacles in countries with many poor people. This is the second explanation of why poverty is dangerous and we will also examine it.

[4] Calculated from EM-DAT: The OFDA/CRED International Disaster Database www.em-dat.net - Université Catholique de Louvain –Brussels- Belgium. For a disaster to be entered into the database at least one of the following criteria must be fulfilled: 10 or more people reported killed, 100 or more people reported affected, declaration of a state of emergency, call for international assistance. The following table shows some countries with a large number of fatalities from man made disasters per 10 million inhabitants during the period 2000-2004:

| Country | Fatalities per 10 million inhabitants | Country | Fatalities per 10 million inhabitants |
|---|---|---|---|
| Nigeria | 10.76 | Thailand | 2.65 |
| Iran | 9.23 | Bangladesh | 2.60 |
| Egypt | 6.96 | Indonesia | 2.30 |
| Turkey | 5.14 | China | 2.24 |
| Zaire | 4.42 | Pakistan | 2.19 |
| Russia | 3.53 | Brazil | 2.09 |
| Philippines | 2.72 | | |

Source: Calculated from EM-DAT: The OFDA/CRED International Disaster Database www.em-dat.net - Université Catholique de Louvain –Brussels- Belgium.

## Your Money or Your Life

The American comedian Jack Benny portrayed himself as a stingy tightwad. In a famous comedy routine, Benny is walking home at night when a man steps from the alley with a gun and says, "Your money or your life!" Most of us would immediately give up our money. However, Benny hesitates and says, "I'm thinking, I'm thinking."

Like Jack Benny, economists have thought about how much people value their lives. Economists can impute such a value by applying an ingenious and controversial logic to safety expenditures. To illustrate this logic, assume that I want to buy an alarm to protect my antique car against theft. The more I spend for an alarm, the higher my level of security. Assume that I spend $100, which reduces the probability of theft by .01. From these facts an observer can impute a rough estimate of my subjective valuation of the car. If I am economically rational, my valuation of the car multiplied by the reduced probability of theft roughly equals the expected benefit of my expenditure on security:

(my valuation of car) x (.01) = $100.

This equation implies that my valuation of the car equals $10,000.[5]

Applying this logic, economists have estimated the subjective valuation of a fatal risk based on the amount that people will spend to reduce it.[6] Thus a homeowner can reduce the probability of a fatal accident by moving to a safer house, or by installing costly smoke detectors, breaker boxes, and safety cables. A worker can reduce the probability of a fatal injury on the job by quitting and looking for a safer job. The market price of safer houses, the expenditures by consumers to make houses safer, and the wage-premium paid for more dangerous work reveals the subjective cost of fatal risks.[7]

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[5] Solving the equation, the value of the car equals $100/.01 or $10,000.

[6] In the simplest form of reasoning, if a person will spend $100 to reduce the risk of a fatal accident by .001, then value of a fatal risk is $1,000,000. Economists' phrase for the subjective cost of a fatal risk is the "value of a statistical life."

[7] W.K.Viscusi, J.E.Aldy, 2003. The Value of a Statistical Life: A Critical Review of Market Estimates throughout the World," Journal of Risk and Uncertainty, Springer, vol. 27(1), pages 5-76.

Estimates of the subjective cost of a fatal risk are very suggestive, even though they are imprecise and disparate. For rich countries with a GNP per capita between $25,000 and $30,000, typical numbers are $3-$9 million. In other words, people in rich countries spend $3-$9 million on safety to avoid one accidental death. Relatively rich people in a country will spend more to reduce fatal risks than relatively poor people. Thus Viscusi estimated that an increase in income of 1% causes individuals to increase their expenditure on safety against fatal risks by roughly .5%.[8] Such estimates find higher values for a fatal risk in relatively rich countries. For Taiwan the estimated value was $.43 million in the 1980s;[9] for South Korea, the estimate was $0.8 million; for India, some estimates vary between $1 million and $4 million.[10] If we turn from fatal risks to work related diseases, much the same is true about the relationship between income and expenditures.[11]

The preceding numbers concern the subjective values that individuals place on their own risks, including the risk of death. Earlier we observed that self-interested people buy safety for their families and themselves, but not for strangers. Many people need material incentives to protect others adequately from accidents, which liability law can provide. The material incentives from

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[8] See preceding footnote. The income elasticity for the optimal investment to save statistically one life is estimated at 0.5-0.6.The related function between optimal safety investment (I) and per capita income (y) would then be $I=725y^{0.6}$.

[9] Liu/Hammit/Liu (1979) Estimated hedonic wage function and value of life in a developing country, Economic Letters, Vol 57,3 pp. 353-358. Data from 1980s, and values expressed in 1990 dollars.

[10] See W.K.Viscusi, J.E.Aldy, 2003, The Value of a Statistical Life: A Critical Review of Market Estimates throughout the World," Journal of Risk and Uncertainty, Springer, vol. 27(1), pages 5-76, pp. 27-28, table 4

[11] Statistics on health tell a similar story to accidents. Work-related diseases kill 4 times more people than work related accidents, and these deaths also concentrate in developing and transition countries.The World Health Report of 2005 shows that in 2002 the USA spent 14.6%, of the GDP on health, and GDP per capita exceeded $27,000. Note that combining accidents and disease puts the total number of work related fatalities at 2.2 million per year worldwide. Asbestos kills around 100,000, chemical fertilizer and pesticides killed another 70,000, and the hazards of construction work killed approximately 60,000 people. The numbers are far higher for injuries. The number of work accidents causing 3 or more days of absence is estimated at 268,000,000 for 2001. Of those only 5 percent occur in Western industrialized countries. These numbers increase in most developing countries, especially those with high industrial growth rates. India is a noticeable exception to these results, presumably because of its superior legal and regulatory system relative to many developing countries. CITE. Turning to health expenditures, the USA spent roughly $4,000 per capita on health in 2002, which was more than the gross domestic product per capita in many Asian and African countries. World Health Organisation, World Health Report 2005, Stat. Annex 5 p. 198.

liability law should ideally cause individuals to take the same care towards strangers as they take towards themselves. If this ideal were realized, liability law would cause people to spend less on the safety of others in poor countries than in rich countries. Regulatory safety standards, environmental standards, standards against workplace accidents and workplace diseases and levels of due care would be substantially lower in poor countries as compared to rich countries. This principle is consistent with the difference between roads in the Swiss Alps and Afghan roads in the Hindu Kush. Afghanistan would badly misallocate the state's revenues by spending as much money as the Swiss spend on protecting roads against rockslides. If the state in developing countries tried to imitate safety levels of rich countries, their citizens would object, because they prefer their taxes spent on other things.

This proposition about the state also applies to private businesses. When developing countries impose unrealistically high standards of heath and safety on businesses, the effects are all too predictable: Production shifts to the gray market where regulations are ineffective.[12] Many consumers prefer cheaper and more dangerous goods produced by the informal sector, rather than more costly and safer goods produced by the formal sector. Thus much of the food and water consumed in developing countries comes from gray market producers. Egypt, for example, imposes unrealistic health standards on food products that results in more than 80% of the food being produced informally by low productivity small-scale providers."[13] Enforcing moderate standards improves safety more than proclaiming unrealistically high ones.

We explained that when regulators apply the same safety standards to businesses in poor countries as in rich countries, markets in poor countries divert business into unregulated production. This proposition about regulations applies to standards of care in the private law of accidents. Courts hold injurers liable for

[12] Chapter 11 explains in detail that gray markets operate outside of state regulations.

[13] V. Palmade (2005), Why Worry About Rising Informality? The Biggest and Least Well Understood Impediment to Economic Development, Washington D.C. (FIAS), Working Paper.

accidents caused by their negligence. If courts apply the same standards of negligence in poor countries as in rich countries, markets in poor countries divert business to firms that escape liability. Thus if courts require the maintenance of trucks in a poor country at the same level as in a rich country, trucking moves to firms in the informal sector. This argument about level of care in private law also applies to the level of damages. Computing compensation requires estimating the harm caused by the accident. When courts apply the same levels of compensation for accidents in poor countries as in rich countries, markets in poor countries divert business to firms in the gray sector that escape liability.

Multinational firms present these facts in an emotionally painful form. Assume that an Indonesian employee is injured while working in the Jakarta subsidiary of a Japanese firm. The victim sues the firm. The average level of safety is higher in factories in Osaka than Jakarta. Which safety standard should the courts apply to the case? Should the court require the Japanese firm to provide the same level of safety to its Indonesian workers in Jakarta as to its Japanese workers in Osaka? Or should the court require the Japanese firm to provide the same level of safety to its Indonesian workers in Jakarta subsidiary as comparable Indonesian factories in Jakarta provide to their workers? Indonesians will sharply resent a foreign employer who treats an Indonesian life as less valuable than a foreigner's life, and a foreign firm will resent being held to higher standards in Jakarta than comparable Indonesian firms.[14] The same dilemma arises for damages: Should the court award the same damages for the same injury regardless of whether the victim works in the firm's factory in Jakarta or Osaka, or should damages be different in different places?

Transnational suits raise this dilemma. The injured Indonesian worker may want to sue the firm in Osaka instead of Jakarta. Perhaps the Indonesian worker hopes that a Japanese court will apply higher standards and award larger

[14] In principle, a foreign court can accept a tort case and decide it according to the law of the country where the accident occurred, but this is difficult in fact. International law has not resolved this problem. The UN or the ILO set international codes of conduct for multinational firms with respect to safety, health and the environment. However, international codes are soft law and have no binding force. See K. Tapiola, UN Global Compact and other ILO instruments. (OECD, Paris, 2001), R. Blanpain., M. Colucci , The Globalization of Labour Standards - the Soft Law Track, Kluwer Law International, 2004

damages than an Indonesian court. This same logic applies with much greater force to the Jakarta subsidiary of an American firm, because American courts are more generous than Japanese courts towards accident victims. In general, workers and consumers in developing countries who are injured by multinational firms may want to sue in a foreign court in the hope of getting foreign safety standards and damages applied to the case.[15]

Judges in developed countries should understand that accepting such cases puts multinational firms at a competitive disadvantage relative to comparable domestic firms in the developing country.[16] Put differently, applying the tort law of the home country to cases arising in foreign subsidiaries of a firm conveys a competitive advantage to investors whose home country has the weakest tort standards and the smallest damage awards. As a result, foreign investment is distorted and reduced in developing countries. This fact may partly explain why courts are reluctant to take such transnational suits, although some courts do take them.[17]

### Judgment-Proof versus Trial-Proof

Before the industrial revolution, accident law and safety regulations played a minor role in European law.[18] The modern law of accidents grew in Europe with industrialization, expanding markets, the welfare state, and rising living standards. These changes strengthened responsibilities for accidents that

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[15]When a court in a developed country applies the same law to resolve a case as a domestic court in a developing country, the injured worker may still want to bring the case in a foreign court because it may be more honest and efficient than the domestic court. Competition for jurisdiction can improve the efficiency of courts, just as competition for markets improves the efficiency of firms. Almost everyone benefits from more efficient courts. In general, if international firms operate in a country with corrupt and inefficient courts, courts in developed countries should hear cases involving torts committed in foreign countries, but the courts should apply standards, care levels, and damages appropriate for low-income countries. In our example, the Japanese court should apply the accident law of Indonesia, not Japan. Indonesian standards of safety and levels of damages will produce better incentives for plants operating in Jakarta than Japanese standards and damages

[16] Sykes develops this argument in detail in analyzing the effects of the Alien Torts Claim Act (ATCA) of 1789, which regulates access of foreigners to American courts CITE

[17] Thus English courts have opened the forum to plaintiffs from developing countries in damage claims against multinational firms. See *Lubbe and Others v. Cape Plc*. [2000] 4 All ER 268, in an asbestos case with an English mother company as defendant and citizens from Namibia as plaintiffs.

[18] The Code Civil, which France enacted in 1804, devoted only two sections to the law of torts.

people cause to strangers. Developing countries "transplanted" much of their accident law from European civil codes, common law, and regulations. Laws are easily written down, but institutions that make them effective must develop through time. Instead of "transplanting," a better metaphor is "grafting" law, like attaching a limb from a peach tree to a plum tree's trunk. The written law from a foreign country is grafted onto existing legal institutions. To succeed, a graft must overcome resistance from its host. When relatively poor countries graft accident law from relatively rich countries, the rules must adjust to the underlying institutions.

The greater demand for safety in relatively rich countries partly explains why relatively poor countries are more dangerous. Now we turn to the second explanation -- the legal incentives to take precautions against injuring others. Compared to rich countries, many more people in poor countries cannot afford to pay a liability judgment or buy liability insurance. Accident victims, whether poor or rich, cannot collect damages from people who cannot pay for the harm that they cause. With nothing to lose, poor defendants have nothing to fear from liability suits.

Liability law is ineffective for deterring very poor defendants, and poor countries have many such people. "Absolute poverty" is often defined as purchasing power of less than a dollar a day. The World Bank estimated in 2001 that 22% of the population in developing countries lived on less than a dollar a day, and 54% lived on less than two dollars a day.[19] These people obviously cannot pay compensation to their victims when they cause personal injury or death.

In rich countries like those belonging to the OECD, hardly anyone lives in *absolute* poverty as defined above. The more relevant concept is *relative* poverty. The proportion of people living in relative poverty – defined as an income less than half of the average income -- was about 10% in the year

[19] World Bank (2005) World Development Indicators, Table 2.5.

2000.[20] In OECD countries, courts award high damages for injury or death. Consequently, people living in relative poverty in OECD countries often cannot pay liability judgments when they accidentally injure or kill someone else. The judgment proof problem is much smaller in rich countries than in poor countries, even though liability judgments are much larger.[21]

Instead of liability, safety regulations can alleviate the judgment proof problem. To impose a fine, a state official must first detect the violation of a safety regulation. The sanction's trigger is a violation of the regulation, not an accident. A small fine imposed with high probability can provide effective incentives for safety by someone who is judgment-proof. Thus assume that safety precautions costing $1 completely eliminate the possibility of an accident. Also assume that regulators impose a fine of $3 for violating the safety regulation, and regulators detect violations with probability .5. The injurer who fails to spend $1 on precaution expects to pay $1.50 in fines. A rational injurer will respond to this threat of a fine by taking the safety precaution that costs $1. Alternatively, instead of a fine, assume that the court threatens the potential injurer with liability. Failure to take precaution causes an accident with probability .1 and harm of $200. A rational injurer will respond to this threat of liability by taking safety precautions if he has enough wealth to pay damages of $200, but not if his wealth only equals $5.[22]

As explained, a poor person who is undeterred by the threat of liability can be deterred by regulations backed by fines for violations. Therefore the scope of liability is smaller in poor countries, and the scope of regulation is larger. In general, as a country eradicates poverty, it can rely more on liability and less on

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[20] See M. Förster, MM. D'Ercole, Income Distribution and Poverty in OECD Countries in the Second Half of the 1990s, OECD, 2005, Table 7.4. p. 74.

[21] S. Rose-Ackerman (2003), Establishing the Rule of Law, in R. Rotberg, Ed, When States Fail, Causes and Consequences, Princeton NJ: Princeton University Press.

[22] If the injurer's wealth only equals $5, then he is almost judgment proof. If he fails to take precaution, his expected liability is .1x$5, which equals $.50. He saves money by facing expected liability of $.5 rather than taking precaution that costs $1. Consequently, liability law will not cause a rational injurer with wealth of $5 to take safety precautions in our example.

fines to deter people from exposing others to unreasonable risks. (The threat of imprisonment is another form of deterrence that we will not discuss here.)

Administrative capabilities limit the extent to which a developing country can rely on safety regulations. In developing countries, the informal sector or gray market employs around 70% of the workforce on average and produces 38% of the national income.[23] In the best circumstances, regulations are hard to enforce in the informal sector, which avoids most taxes, labor laws, and health and safety regulations. More efficient administration and more realistic regulations shift production from the informal sector to the formal sector.

Also, regulators may be more susceptible than judges to corruption and capture by interest groups. Compared to regulators, most countries make more effort to insulate judges from the influence of politics and business. The legislators who enact laws and the civil servants who apply them often pursue money and power by tailoring liability law to special interests. Therefore, the best balance between regulations and liability law depends on particulars of the country. A comparison of regulation and liability as ways to control accidents must respond to the institutional strengths and weaknesses of regulators and the judiciary in the country in question.

While poverty can make poor people judgment proof, wealth can make rich people trial proof. If a rich person can afford to defend a suit, and a poor person cannot afford to bring a suit, then the rich person is trial-proof against the poor person. This situation often arises in poor countries for many categories of accident, such as motor vehicle accidents and industrial and workplace accidents.

Legal aid from state bureaucracies and non-profit organizations can reduce the trial-proof problem. However, legal aid often does not reach people outside urban areas, and legal aid suffers from other weaknesses that generally afflict public services. Alternatively, contingent fees can give poor accident

[23] For a comprehensive study see F. Schneider (2007), Shadow Economies and Corruption All Over the World: New Estimates for 145 Countries, Economics: The Open-Access, Open-Assessment E-Journal Vol.1 Issue 9, 1-66. Estimation Results over the Period 1999-2005.

victims access to courts. A plaintiff's attorney who works for a contingent fee gets paid a portion of the settlement or judgment if the plaintiff wins the case, and nothing otherwise. Contingency fees shift the financial burden of litigation to the lawyer. The lawyer takes a case on a contingency because of its monetary value, not because of the plaintiff's wealth. Indeed, the lawyer who works on a contingency wants to sue a wealthy *defendant*, and he is often indifferent about whether the plaintiff whom he represent is wealthy or poor.

Contingency fees were traditionally prohibited in England and in most civil law countries. However, contingency fees appear to be spreading in developing countries. Thus poor plaintiffs in India rely heavily on lawyers who work for contingent fees. Contingency fees create incentive problems between client and attorney,[24] but contingency fees are the only key that will unlock the door of the courtroom for the poor in many countries.

**Insurance**

We have been discussing incentives to prevent accidents. Many accidents, however, are unpreventable. Now we turn from preventing accidents to spreading risk. When accidents occur, they can cause hardship. Avoiding hardship involves spreading the cost of accidental harm across people, rather than concentrating it on the accident's victim. In rich countries, social insurance by the state or private insurance purchased by victims or injurers covers most accidents. Insurance spreads the cost of accidents from the victims to all policyholders or taxpayers. In poor countries, however, insurance is often confined in practice to government workers, military personnel, civil servants,

[24] Roughly speaking, a lawyer working by the hour gains from working more hours than benefit the client, whereas a lawyer who works for a contingency gains by working fewer hours than benefit the client. The attorney working for a contingent fee might put little effort into a case and agree on a settlement with a low recovery for the client, thus yielding a high income per hour worked. For an explanation of these incentives, see Cooter and Ulen, Law and Economics , Chapter 10 (any edition will do). Also see A. M. Polinski and D. L. Rubinfeld (2002), A note on settlements under the contingent fee method of compensating lawyers, Intern. Rev. of Law and Economics, Vol. 22, 2 , 217-225. http://www.sciencedirect.com/science?_ob=JournalURL&_cdi=5846&_auth=y&_acct=C000047720&_version=1&_urlVersion=0&_userid=1093976&md5=30359928f2da6a4287539ded6222850f

employees of large private or state owned companies, and rich people. Poor people, especially in rural areas, mostly lack insurance.

"Uninsured out-of-pocket costs" refer to the victim's expenditures caused by an accident, minus compensation from insurance. Thus the uninsured out-of-pocket costs of a personal injury include unreimbursed medical expenditures by the victim. In low-income countries the average out-of-pocket share to cover the costs of injuries is high and variable. Poor people in developing countries pay a large fraction of accident costs out of their pockets.

We have no data to prove this fact for accidents, but we do have related data for all health expenditures. Figure 11.1 gives out-of-pocket expenditures as a percentage of national health expenditures for selected countries. These are the health costs that the sick person pays himself, rather than insurance or the state paying. The percentage measures the level of risk spreading in the medical sector in any country. The numbers vary from less than 5% to more than 80%. Out-of-pocket costs are a much higher percentage in poor countries than in rich countries, because of less insurance and state health care.[25]

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[25] P. Musgrove, R. Zeramdini G. Carrin, (2002) Basic patterns in national health expenditure, Bull World Health Organ vol.80 no.2 , p. 134-146 . World Health Report, 2000 WHO, CH. 5 Who pays for Health Systems? pp. 93.

Figure 11.1. Out-of-pocket Medical Expenditures as a Percentage of Total Medical Expenses in Selected Countries (1997)

| Country | Expenditure | Country | Expenditure |
|---|---|---|---|
| UK | 3.1% | South Africa | 46.3% |
| Germany | 11.3 | Indonesia | 47.4 |
| USA | 16.6 | Philippines | 49.1 |
| Canada | 17.0 | Mexico | 52.9 |
| Japan | 19.9 | Brazil | 54.6 |
| France | 20.4 | Nigeria | 71.8 |
| Russia | 23.2 | China | 75.1 |
| Italy | 41.8 | India | 84.6 |

Economic growth and urbanization change social relations in ways that increase the need for insurance. Family, friends, and clans help someone who suffers an accident. The proposition that relationships partly substitute for insurance is a particular form of our general proposition that relationships partly substitute for contracts. While relationships are strong in the countryside, industrialization and urbanization attenuate the ties among relatives and diminish their willingness to help each other. At the same time, markets and the state provide insurance to substitute for attenuated relationships. However, gaps persist in the institutions for spreading risk, which leaves poor people vulnerable to accidents. For example, the father in a poor Indian family may become ill, forcing the family to depend on the oldest son's income. If an accident should kill the oldest son, relatives will not provide the needed help for long enough to keep the family off the street. Thus a panel study in Indian villages determined that high out-of-pocket expenditures for illnesses and accidents are a principal cause for collapsing into absolute poverty.[26]

Everyone living moderately above absolute poverty fears collapsing into it. Why don't insurance companies sell policies to most of these people? Insurance companies must base policies on information that is cheap to collect. This

[26] A. Krishna (2004), Escaping Poverty and Becoming Poor: Who Gains, Who Loses, and Why? World Development Vol. 32,1pp. 121-136.

information is notoriously susceptible to manipulation and fraud. V.S. Naipul describes it vividly in A House for Mr. Biswas, where an Indian merchant in the Caribbean staves off bankruptcy by resorting to "insure-and-burn."[27] The insurance company in the novel suspects, but cannot prove, the truth -- the merchant bought an insurance policy and then burned down his own store.

To reduce fraud, a profitable insurance business usually depends on its customers generating written records in their daily lives. The formal sector of the economy generates such records and the informal sector does not generate them. Thus businesses in the formal sector use banks that document transactions, whereas businesses in the informal sector seldom use banks. Record keeping is one important reason why relatively rich individuals and firms in the formal sector have insurance, and poor victims of accidents in the informal sector have no insurance.

Perhaps liability law in developing countries should shift accident costs to the party with most access to insurance. For many transport and industrial accidents, the injurers are insured firms and the victims are uninsured individuals in the informal sector. Holding these injurers liable spreads the accident's cost through insurance, whereas a rule of no liability concentrates the accident's cost on the victim. To offset the lack of insurance among relatively poor people, the state could hold individuals and firms with access to insurance strictly liable for the harm that they cause to people without access to insurance. This prescription makes the most sense where the injurer and the victim have no contract (think "automobile accidents"), so the rich cannot avoid liability by not dealing with the poor.

This prescription, however, encounters an obvious limit. Earlier we explained that manipulation and fraud raise the cost of insurance to unreachable levels for part of the population. The same forces that obstruct accident insurance also obstruct liability law. Like private insurance companies, the courts in civil liability cases can be fooled and manipulated. Thus a failing shopkeeper

[27]The novel is A House for Mr. Biswas.

who burns down his own store can make a false insurance claim, or, alternatively, the shopkeeper could retain a lawyer on a contingency fee to bring a false liability suit against the manufacturer of the store's stove.

**Standards in Accident Law**

We have discussed how regulations can ameliorate the judgment-proof problem and contingent fees can ameliorate the trial-proof problem. Another general prescription concerns the form of accident law in poor countries. Accident law can rely on clear standards or vague principles. An example of a clear standard is a speed limit for cars or a weight limit for trucks. An example of a vague principle is the requirement that cars drive at a reasonable speed and trucks weigh a reasonable amount. Another example of a clear standard is stipulating the dollar value of compensation for different kinds of accidents (e.g. $5,000 for loss of a finger, $35,000 for loss of a hand), whereas a vague principle awards "income foregone plus pain and suffering."

Clear standards allow for swift decisions without collecting much information, thus reducing endemic court delays. Clear standards also make the law easier for administrators and courts to apply who have low education and little training. Also, when standards are clear, corruption and fraud is harder to hide and easier to detect. For these reasons, accident law in developing countries should rely more on clear standards and less on vague principles.

To illustrate, consider the difference between the rules of strict liability and negligence. Under a negligence rule, the court must collect information about what the defendant did to avoid the accident and then compare these efforts to the care required by law. These facts, however, are unnecessary for applying a rule of strict liability. Under this rule, liability depends on whether the injurer caused the accident, not whether the injurer was negligent. Thus a strict liability rule imposes a simpler standard than a negligence rule. The difference between strict liability and negligence illustrates the general principle that fewer defenses simplify the application of liability law.

As another illustration, *s*ome developing countries have introduced flat rate compensation for certain categories of accidents. When the law stipulates flat rates of compensation, the court does not have to hear arguments about damages. To illustrate, the Indian Motor Vehicle Act of 1998 replaces vague principles of the common law with clear standards. The Act (Articles 140-142) grants flat rates of compensation in case of death and permanent disablement, provides a comprehensive list of injuries leading to permanent disablement, and stipulates fixed sums for funeral expenses, loss of consortium, medical expenses, pain and suffering, and loss of income. The Indian Motor Vehicle Act was explicitly introduced to shorten litigation and reduce delay in compensating victims and their heirs. The law also reduced the training required for judges to decide liability cases, and makes corruption harder to hide. A disadvantage is that statutory damages tend to lag behind changes in the economy. To avoid lags, a panel of experts should regularly revisit the numbers and update them.

**Conclusion**

Life is more dangerous in poor countries because people spend less on safety for themselves and others. Conversely, people spend more on safety for themselves as their incomes rise, and they spend more on safety of others as their expected liability increases. Liability law, however, is a less effective deterrent of accidents in developing countries for two primary reasons: Injurers in the informal sector cannot pay liability judgments ("liability proof"), and poor accident victims cannot pay lawyers to sue their injurers ("trial proof"). To ameliorate these problems, poor countries should control accidents by relying more on regulations and less on liability law, compared to rich countries. Also, accident law should rely more on clear standards of care and statutory stipulation of damages, rather than vague rules. In order to extend insurance to uninsured accident victims, strict liability should apply more widely to actors in the formal sector who harm people in the informal sector. And to increase access to courts, countries should allow accident victims to pay their lawyers with contingent fees.

How much protection of workers and consumers is best for industrializing countries? Like European nations in the 19th century, developing countries today want to industrialize quickly, so they encourage economic growth partly by making workers bear much of the cost of on-the-job accidents and consumers bear much of the cost of injuries from defective products. This is a mistake. People who impose risks on others should bear the cost of the resulting harm. Otherwise the price of risk is distorted, which distorts the pattern of growth. If firms pay less than the cost of the accidents that they cause, they have too little incentive to reduce the cost of accidents by innovating. If injurers in developing countries bear the cost of the accidents that they cause, however, the standards of care and the amount of damages for liability will be lower for equivalent injuries or death in poor countries than in rich countries.

# Chapter 13.
# Academic Scribblers and Defunct Economists

18th century physicians thought that an imbalance in the blood causes disease. To restore the balance, doctors used leaches to suck blood from weak people. This treatment apparently hastened the death of the ailing composer Mozart.[1] Similarly, false theories of development weaken economies and sometimes kill people. As noted earlier, the worst example of death from bad economics was collectivizing agriculture, which contributed to starvation and disease that killed up to 40 million Russians and Chinese in the 20th century.[2] Short of immediate death, bad economics causes poverty, which is unhealthy -- life expectancy today is 82 years in Japan and 39 years in Zambia.[3]

How much do economic ideas, bad or good, affect economic policies? Keynes, the great theorist of the 1930s depression, thought that little else matters:

> The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic

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[1] Ralph DePalma, Virginia Hayes, and Leo Zacharski, 'Bloodletting: Past and Present,' (2007) 205 *Journal of the American College of Surgeons* 132.

[2] The Soviet Union apparently suffered approximately 10 million military deaths and 12 million civilian deaths in WWII. World War II killed approximately 4 million Chinese military and 6 million Chinese civilians. So the combined total of war deaths is around 30 million. Robert Conquest estimates famine deaths in the Soviet Union as 11 million from 1926 to 1937. China's Great Leap Forward apparently resulted in around 30 million deaths. So the combined total of famine deaths is over 40 million. Estimates of deaths vary significantly by source. Collectivization of agriculture occurred in a context of other disastrous policies that contributed to the deaths, such as forcing farmers to neglect agriculture and work in village industries in China. For a website that compares estimates, see "Source List and Detailed Death Tolls for the Twentieth Century Hemoclysm", http://users.erols.com/mwhite28/warstat1.htm. For a list of casualties by country in World War II, see "World War II casualties," Wikipedia, at http://en.wikipedia.org/wiki/List_of_World_War_II_casualties_by_country#Casualties_by_country. )

[3] Data for 2009 from Central Intelligence Agency, The World FactBook, viewed at https://www.cia.gov/library/publications/the-world-factbook/rankorder/2102rank.html

scribbler of a few years back.[4]

A brief history of development economics shows how the ideas of economists, both good and bad, affected economic growth in poor countries.

## Schematic Theories of Economic Development

We will distill three broad theoretical approaches from the history of development economics and stylize their claims about the causes of growth. The first approach emphasizes state leadership in the economy. The state can lead through central planning as in communism, ownership of the key industries as in socialism, or through pervasive regulation and manipulation of prices of markets in capitalism. The theory of state-led growth dominated development economics from the 1930s until roughly 1980. According to this theory, free markets cause insufficient capital accumulation and slow growth in developing countries. Administrators and politicians in developing countries should choose promising industries and direct capital to them through state ownership of corporations, subsidies, and regulations.

To illustrate the logic of state-led growth, a construction site in Sri Lanka has 100 workers. 99 of them use hand shovels to excavate the same amount of dirt as 1 worker excavates by using a power shovel. If a second power shovel were available, production would rise by almost 50%. According to the theory of state-led growth, free markets under-invest in power shovels and the like, whereas state planners increase the rate of investment and allocate the funds across industries as best for society.

Alternatively, the second broad approach to development economics emphasizes market liberalization as growth's cause. Liberalization theory, which is associated with neo-classical economics, favors the allocation of capital by markets. To allocate resources efficiently, liberalization theory holds that developing countries must eliminate distortions that come from subsidies,

[4] John Maynard Keynes, *The General Theory of Employment Interest and Money* (London: The Macmillan Press Ltd, 1936) at page 383.

regulations, and trade barriers. Developing countries should privatize, deregulate, and adopt free trade – just the opposite prescription from state-led growth. Liberalization displaced state-led growth as the dominant theory of development in the 1980s, especially under the influence of the World Bank and the International Monetary Fund. The location of these two organizations gave liberalization theory its name – the "Washington Consensus."

Liberalization theory makes optimistic predictions about capital markets. According to this approach, local, national, and global markets channel capital to where it earns the highest rate of return. The rate of return is presumably higher in poor countries where capital is scarce relative to labor. So capital markets will cause poor countries to gain capital faster than rich countries, and living standards will converge in different nations.[5] To illustrate by the preceding example, free capital markets will cause the construction firm in Sri Lanka to buy additional power shovels so long as their productivity exceeds their cost. Construction companies in Sri Lanka will continue buying additional power shovels and the like until the ratio of capital per worker resembles countries like France or Korea.

Instead of emphasizing state leadership or liberalization, the third approach focuses on "institutions". This vague term usually refers to, enduring practices that constrain policies. In the language of Douglas North, institutional constraints are the "rules of the game" for policy makers.[6] Thus "institutions" include social and legal norms that sanction rule-breakers, as well as the organizations sustaining them. According to this approach, institutions determine the actual consequences of an economic policy. The same policy – say, an

[5] The marginal benefit of capital declines with the amount of it, so countries with the least capital benefit the most from getting more of it. Furthermore, the marginal benefit measures the amount that borrowers will pay for capital in a competitive market. Capital markets will lend where borrowers pay the most, which is in poor countries where the marginal benefit of capital is greatest.

[6] D.C. North, Institutions, Institutional Change and Economic Performance (Cambridge: Cambridge University Press, 1990) at 3. D.C. North, 'Institutions and economic growth: an historical introduction' (1989) 17(9) World Development,1319 at 1321. D.C. North & R.P Thomas, The Rise of the Western World: A New Economic History, (Cambridge: Cambridge University Press, 1973). Barry R. Weingast, 'The Economic Role of Political Institutions: Market-Preserving Federalism and Economic Development,' (1995) 11(1) J.L. Econ. & Org., 1-31.

industrial subsidy or the regulation of a market -- can have different consequences depending on the institutional setting. Thus regulations that restrict logging can stop deforestation or merely provide forestry officials with a new source of bribes.

Which institutions generally matter to economic growth? Perfecting institutional theory requires identifying the central institution whose weakness inhibits growth. We could look in many places for institutions that matter -- government organizations such as ministries, civil service, courts, police, and political parties; economic organizations such as trade associations, exchanges, guilds, labor unions, ethnic trading networks, and organized crime; religious institutions such as churches, mosques, temples, and charities; educational organizations such as schools, universities, and research organizations; and social organizations such as the family, marriage, communities. The contemporary turn to law began when economists looked carefully at law's role in finance and compared the performance of different countries econometrically.[7] After 2000 development scholars increasingly focused on the legal institutions that support markets, especially property, contracts, and business law.

When effective, these laws protect property rights, enforce promises, and assure the integrity of business organizations. Unlike institutionalism, state-led growth and liberalization theory mostly neglected law or focused on the wrong law. State-led growth favors policy over law, and it rejects private law in favor of public law. Liberalization emphasizes repealing public laws that impede markets.

[7] The leading figure in this movement is Andrei Shleifer, and his co-authors Glaeser. La Porta, Lopez-de-Silanes, and Vishny. They use cross-country econometrics to conclude that common law tends to evolve towards greater efficiency than civil law, but this claim has not withstood econometric scrutiny. See Daniel Klerman et al., "Legal Origin and Economic Growth," Working Paper 03-07, Georgia State University School of Policy Analysis (2009). However, their can be mined for evidence on growth-increasing differences in the legal basis for financial markets. We draw on their work here, but, compared to them, we emphasize innovation and de-emphasize the common law or civil law origins of different legal systems. Note that an earlier law and development movement in the 1960s flourished briefly and then fizzled out. See D. M. Trubek, 'Toward a Social Theory of Law: An Essay on the Study of Law and Development' (1972) 82 Yale L.J.1;D.M. Trubek & M. Galanter, 'Scholars in Self-estrangement: Some Reflections on the Crisis in Law and Development Studies in the United States' [1974] (4) Wis. L. Rev. 1062. In contrast, the contemporary economic analysis of law rose like a solid building -- excavated tentatively in 1960s (Coase, 1960), foundations laid in the 1970s (Calabresi,1970; Posner 1972), and rising dramatically in the 1980s.

Thus the historical turn towards private law recalls the Psalm: "The stone the builders rejected has become the capstone.[8]"

This book concerns legal institutions that support innovation. Developing countries mostly innovate by discovering new markets and adapting organizations, not by inventing new technologies. Innovation in markets and organizations, like any innovation, is risky. A risky venture that unites capital and new ideas poses a problem of trust. The best solutions to this double trust problem emerge from a framework of private law (property and contracts) and business law (corporations, finance, bankruptcy).

Figure 12.1 summarizes our schematic history of development economics. Next we provide some details about the constituent theories.

Figure 12.1: Schematic History of Development Economics

| Name | Dates | Failure | Fix |
|---|---|---|---|
| State-led growth | 1930-1975 | insufficient capital | directed investment |
| Washington Consensus | 1975-1990 | wrong prices | liberalization |
| Institutionalism | 1990-2000 | bad institutions | market-supporting institutions |
| Legal | 2000-present | bad law | laws supporting markets and organizations |

**State-led Growth?**

Why did state-led growth originally dominate development economics? Two historical developments answer the question. First, almost a century of economic growth ended in the great depression of the 1930s, which crippled the world's capitalist economies and prompted skepticism about free markets and free trade. Second, as capitalism sputtered, many people thought they saw vibrant economic growth in communist Russia under Stalin and Nazi Germany under Hitler. The Soviet Union achieved high growth with state enforced industrialization and with little international trade. After World War II ended, other

[8] Psalm 118:22.

countries tried their own version of soviet socialism. Communism triumphed n China and part of Southeast Asia. The newly independent countries of Africa and Asia implemented socialism to various degrees, as illustrated by Nehru's India and Nkrumah's Ghana. In South America, Juan Peron restructured Argentina's economy through government planning, and Francisco Franco pursued a similar policy in Spain.

In this political environment, development economics emerged as an academic discipline. In the 1940's and 50's, many of its prominent scholars taught that developing countries need state leadership of the economy.[9] In 1957 Nobel Price winner Gunnar Myrdal succinctly summarized the wisdom of the age:

> "The most important change in state policies in underdeveloped countries is the common understanding that they should each and all have a national economic development policy…Indeed it is also universally urged that each of them should have an overall, integrated national plan. All underdeveloped countries are now attempting to provide themselves with such a plan, except a few that have not yet been reached by the Great Awakening."[10]

Was state-led growth the great awakening? To answer this question, we will briefly review and critique its major schools of thought. Any introductory textbook on microeconomics explains the fundamental idea behind state-led growth. Students first learn the model of perfect competition, which textbooks describe as a self-regulating system. Next students learn about departures from perfect competition that cause markets to fail, beginning with monopoly. Monopoly occurs naturally when increasing returns to the scale of production cause the largest firm to have the lowest production costs. With natural monopoly, only one firm can survive in free competition. Similarly, oligopoly occurs naturally when the minimum efficient scale of production is large relative to the market. With natural oligopoly, only a few large firms can survive in free competition. Unlike self-regulating competition, natural monopoly and oligopoly

[9] See P. Krugman, 'Complex Landscapes in Economic Geography', (1994) 84(2) American Economic Review 412.
[10] Gunnar Myrdal, Economic Theory and Under-Developed Regions. (London: Duckworth, 1957) at 79.

may require regulation or other forms of state control, although economists disagree about how much they require.

If natural monopoly and oligopoly occur equally in developed and developing countries, then managing them requires similar amounts of government control of the economy. However, if natural monopoly and oligopoly pervade developing countries more than developed countries, then developing countries require more government control of the economy than developed countries.

Pursuing different aspects of this idea produced several schools of thought in development economics that all favor state economic leadership, as we will explain. The school of "unbalanced growth," which is associated with Rosenstein-Rodan, held that firms have increasing returns to scale. Stating with a very small company, as the size of a company increases, the average cost of production usually falls. When this is true, a company loses money until its reaches the "minimum efficient scale," after which it turns profitable. To be viable, each firm in the modern sector must reach a minimum size. The minimum scale for selling fruit from a cart on the street is small, and the minimum scale for refining oil is large. In the modern economy, according to this theory, the minimum scale is large like an oil refinery, not small like a fruit cart. Private firms in developed countries already exceed the minimum efficient scale, according to this theory, whereas firms in developing countries remain below it.

Unprofitable companies in developing countries would allegedly turn profitable if they got bigger. Private capital markets in developing countries will not finance the growth of firms sufficiently to make them big and profitable. The state, consequently, should subsidize domestic companies and protect them from foreign competition until they reach the minimum efficient scale to compete internationally, at which point subsidies and protection can be removed, or so the theory goes. This claim about developing countries is much like the European claim that Airbus Industrie needed government financing to reach the scale

necessary to compete with the Boeing Corporation in building commercial airplanes.[11]

An influential idea that complemented "unbalanced growth" is the "big push." A cluster of interdependent firms must reach the minimum efficient scale all at once to make an industry viable. For example, an automobile manufacturer and its supplier of tires many need to reach minimum efficient scale at the same time in order for either of them to compete in the world market for cars. Linkages among firms require all of them to get big at once. The required amount of capital is too large for capital markets. Instead, the state should create an investment board or a state monopoly to direct capital to promising industries. Government investment in many industries all at once is the "big push."[12]

Like the big bang in physics, the big push in development reverberates to this day. The contemporary United Nations Millennium Project presumes that African nations south of the Sahara need to stand on massive foreign investments in order to reach the first rung on the growth ladder and begin their

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[11] Designing large commercial airplanes is so expensive that the world probably has room only for a few manufacturers. In 1970 the Boeing Corporation dominated the world market, and the Europe Union formed Airbus Industrie to challenge Boeing. European governments heavily subsidized the creation of Airbus, but once it achieved a prominent position in world markets, the consortium was privatized and the subsidies were allegedly removed. (Airbus and Boeing often trade accusations that governments clandestinely subsidize the other firm in violation of the World Trade Organization's rules.) Private capital markets allegedly did not have enough funds to finance Airbus at the scale needed for profitability.
Was the European Union prudent to use state funds? Commentators disagree. Perhaps Airbus is one of those exceptional cases of a good investment that is too large for the private market to finance. Or perhaps Airbus is an uneconomic folly, like the super-sonic passenger airplane named the Concorde, which was built using British and French subsidies. The Concorde, whose commercial service began in 1976 and effectively ended with a deadly crash in Paris in 2000, set speed records, never came close to recouping the massive government investments in it. Travelers preferred cheap fares.

[12] See P.N. Rosenstein-Rodan, 'Problems of Industrialization of Eastern and Southeastern Europe', (1943) 53(210/211) Economic Journal 202-211. Leibenstein took a similar view, when he asserted that before self-sustained industrial growth first requires state assistance to assure "critical minimum effort." Harvey Leibenstein, Economic Backwardness and Economic Growth, (New York: John Wiley & Sons, Inc., 1957). Note that big push theory resembles Marx's concept of "primitive accumulation," which played an important role in debate over industrialization in the Soviet Union. The modern industrial sector, according to Marx, Capital: A Critique of Political Economy (1867), must achieve a minimum size before it can exist on its own. Capitalists financed the original accumulation of machines, buildings, railroads, etc., by stealing wealth from the guilds, peasants, and others in the traditional sector, not by retaining profits from their own production. To achieve "primitive accumulation," the Soviet state extracted resources from the agricultural sector to finance the industrial sector.

ascent. The Project calls for doubling or tripling foreign development assistance to Africa and foresees eventually wiping out poverty.[13] This rationale contradicts statistical studies finding little or no effect of development assistance on economic growth.[14] Also, instead of being trapped, some very poor countries in Africa and elsewhere have enjoyed periods of fast and sustained growth.[15]

Like the "big push," the school of "balanced growth" associated with A.O. Hirschman and G. Myrdal starts by observing that economies of scale in developing countries produce spillovers up and down the chain of supply, so each firm that buys inputs or sell outputs conveys benefits to other firms. The market prices at which the firms trade with each other undervalue these "forward and backward linkages."[16] The private benefits of production in linked industries falls short of their social value, so industries in free markets will not expand enough. To solve the problem, the state should choose promising industries and favor them with subsidies and regulations that shield them from competition. State leadership is necessary to balance growth, but not a big push.

Having discussed economies of scale and scope in developing nations, we apply these ideas to international trade. Given scale economies, the largest firm or firms in international trade enjoy natural monopoly because they can produce at lower costs than their competitors. This natural advantage comes from the historical accident of getting big first, not from the inherent strength of these firms. The largest firms in international trade in the 1930s and 1940s were ones in the rich countries that industrialized first. This accident of history has given these firms monopoly power in international trade.

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[13] See Goal 8 of the United National Millennium Project at http://www.unmillenniumproject.org/goals/gti.htm#goal8.

[14] William Easterly, The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good (New York: Penguin Press, 2006).

[15] D. Rodrick, 'Goodbye Washington Consensus, Hello Washington Confusion? A Review of the World Bank's Economic Growth in the 1990s: Learning from a Decade of Reform' (2006) 44(4) Journal of Economic Literature 973.

[16] See A.O. Hirschman, The Strategy of Economic Development (New Haven: Yale University Press, 1958) and G. Myrdal, Economic Theory and Underdeveloped Regions, (London: Gerald Duckworth, 1957).

With free trade, the large firms in developed countries will drive out the small firms in developing countries. If developing countries allow free trade, their domestic firms will never become big enough to compete internationally. To catch up, according to this argument, developing countries should reject free trade and protect their "infant industries" while their firms grow up big and strong. Thus many authors writing on international trade and development advised poor countries to use tariffs to block imports.[17] As domestic industries grow behind the tariff wall, consumers will substitute domestic goods for imported goods. Import substitution makes domestic firms get bigger, which causes their costs of production to fall. This process should proceed until domestic industries reach an efficient scale where they can compete internationally, at which point the state can remove international trade protection.[18]

Singer and Prebisch also thought that poor countries that primarily export raw materials would stay poor. Exporting raw materials is a trap because the prices of raw materials will always fall relative to manufactured goods.[19] As these prices fall with time, the poor countries that mostly export raw materials will get poorer. (Modern ecologists usually believe the contrary -- that prices of raw materials will rise sharply through resource exhaustion.)

While Prebisch favored temporary tariff protection against international competition, radical trade skeptics favored permanent protection. Radical skeptics held that poor countries with small industries could never compete in international trade. By trying to do so, they will become the poor "periphery" far from the rich "center." Even worse, if poor countries allow direct foreign investment, international firms will exploit them. Exploitation of poor countries by

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[17] See H.J. Bruton, 'A Reconsideration of Import Substitution', (1998) 36(2) Journal of Economic Literature 903.

[18] Raul Prebisch, The Economic Development of Latin America and Its Principal Problems, UN document No. E/CN.12/89/Rev.1. (Lake Success, N.Y.: United Nations, 1950).

[19] Specifically, demand for raw materials is inelastic, according to Prebisch, so an increase in their supply from developing countries would cause a decline in their world prices. Thus the terms of international trade always turn against exporters of raw materials. So don't focus your economy on exporting raw materials. In addition, random shocks in supply combined with price inelasticity causes large price fluctuations, which disrupt economies. So create a government board to smooth out world price fluctuations. Supra note 18. Also see H.W. Singer, 'The Distribution of Gains Between Investing and Borrowing Countries' (1950) 40 American Economic Review: Papers and Proceedings, 473.

rich countries was central to Lenin's theory of imperialism.[20] To avoid exploitation by imperialists, some contemporary critics of globalization believe that poor countries should curtail participation in the international economy.

Besides spillovers and trade skepticism, another reason for developing countries to subsidize domestic firms comes from a different strand of thought in development economics. According to Lewis's "dual economy" theory, developing economies have two distinct sectors – modern and traditional.[21] Each worker in the traditional sector produces little because he has so little to work with, like digging with a hand shovel. In contrast, each worker in the modern sector produces a lot because he has much to work with, like digging with a power shovel. According to this view, when workers move from the traditional to the modern sector, production falls a little in the traditional sector and increases a lot in the modern sector.

To illustrate concretely, a farmer employs his son to work the family's small plot of land. There are so many workers and so little land that the son's labor does not produce much. The father pays his son a subsistence wage that exceeds his son's production, so the son receives a subsidy in the form of a gift from his father. In these circumstances, if the son leaves the farm, moves to the city, gets a factory job, and supports himself, the son's income will increase and so will the father's income.[22] (This claim can be formulated more precisely in the technical language of economics.[23])

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[20] Lenin, the leader of Russia's communist revolution that began in 1917, argued that the rich and poor countries stand in the same relationship to each other as the capitalists and the workers in Marx's theory -- the former exploit the latter. V.I. Lenin, *Imperialism: The Highest Stage of Capitalism* (New York: International Publishers, 1984).

[21] W. A. Lewis, 'Economic Development with Unlimited Supplies of Labor'(1954) 22(2) Manchester School of Economic and Social Studies139; J. C. H. Fei & G. Ranis, Development of the Labor Surplus Economy: Theory and Policy, (Homewood, Ill.: R. D. Irwin, 1964), Jorgenson 19…, A. Sen 19…

[22] The same argument held, when a pre capitalist feudal landlord under the "noblesse oblige" rule guaranteed a subsistence income to his serf independent of the serf's marginal productivity of labor.

[23] Generalizing, dual economy theory holds that the traditional sector sets wages more like a family than a market. Each worker in the traditional sector receives a subsistence wage that depends on the average product per worker, not the marginal product. When a worker moves from the traditional sector to the modern sector, the remaining workers in the traditional sector benefit. Specifically, they benefit by the difference between the traditional worker's average and marginal product. In contrast, competition in the modern sector causes a worker's wage to equal his marginal product.

We will mention the most important policy implication of dual market theory.[24] According to this theory, society benefits when employment shrinks in the traditional sector and increases in the modern sector. Free markets will not capture this benefit, so the traditional sector tends to be too large and the modern sector tends to be too small. To correct this distortion, the state should tax the traditional sector and subsidize the modern sector. This argument justifies policies that transfer resources from poor workers in agriculture to relatively rich workers in industry. In the 1980s, many developing countries discriminated against agriculture by using regulatory price ceilings, export restrictions, and multiple exchange rates. As a result, farmers in developing countries received less than the world price for their crops.[25] This is a recent episode in the ancient history of towns taxing farmers.[26] (In rich democracies today, the situation usually reverses itself: Towns subsidize farmers.[27])

[24] Another policy implication that we do not discuss concerns evaluating investment projects. The World Bank and national development agencies often apply cost-benefit analysis to investment projects in poor countries. According to dual economy theory, cost-benefit analysis should assign little cost to labor drawn from the traditional sector. This accounting practice prices labor below prevailing wages, which makes projects undertaken by the World Bank and national development agencies seem more valuable. In reality, migration from the traditional to the modern sector depends on wage differentials between them. With free migration, the shadow wage in the traditional sector approximately equals the market wage in the market sector. See Raaj Kumar Sah & Joseph E. Stiglitz, 'The Social Cost of Labor and Project Evaluation: A General Approach' (1985) 28 Journal of Public Economics 135.

[25] For a table showing the depression of prices paid to farmers relative to world prices for the main staples in 50 developing countries, see Daphne S. Taylor, Truman P. Phillips, 'Food-Pricing Policy in Developing Countries: Further Evidence on Cereal Producer Prices', (1991) 73(4) *American Journal of Agricultural Economics* 1036.

[26] In 1756 in the famous Diderot Encyclopedia, Francois Quesnay criticized this feature of mercantilist France as follows: "Wrong promises have drawn people from the countryside into the cities, where the necessity to offer cheap labor led to political pressure on the price for wheat. … (This has) has knocked down agriculture into a miserable state of subsistence (F. Quesnay, Grains, 1757, Encyclopedie de Diderot et d'Alambert) (Own translation from French).

[27] A possible explanation is that farm subsidies in rich countries, where farmers are few, benefit relatively few people, so they can overcome free-riding and devote resources to influencing politicians. Conversely, farm taxes in poor countries, where farmer are numerous, impose small costs on many people, so they cannot overcome free-riding and devote resources to influencing politicians.

Figure 12.2: Some Theories of State-Led Growth

| Name | Proponent | Policy |
|---|---|---|
| Big push | Rosenstein-Rodan | State mobilizes capital & labor |
| Balanced growth | A.O. Hirschman & G. Myrdal | State subsidizes promising industries |
| Import substitution | Prebisch | Tariffs against imports |
| Imperialism | Lenin | Withdraw from world trade |
| Dual economy theory | W.A. Lewis | Subsidize industry & tax farms |

Figure 12.2 summarizes the theories that we have discussed. Responding to these theories, the state led the economy in many developing countries through licenses, subsidies, tariffs, loans, manipulated exchange rates, and official prices. State-led growth produced impressive results in the 1950s, but its failure became obvious in some countries in the 1970s.[28] Lack of competition raised prices and lowered the quality of goods, overregulation stifled innovation and promoted corruption, and state domination of the economy channeled effort into gaining political influence rather than creating wealth. To illustrate, when Juan Peron achieved power in 1946 in Argentina, he taxed agriculture, subsidized industry, and erected tariff barriers against foreign goods. Consequently he weakened agriculture and created industries that could not compete in world markets.[29] In Ghana during the reign of Kwame Nkrumah (1957-66), a similar policy redistributed wealth and power from cocoa farmers to urban elites.[30] Tanzania under Julius Nyerere (1960-86) also pursued this strategy.

We have focused on economic organization and performance, but state-led growth also impacts class and ideology, as we describe briefly. In past centuries, aristocrats in Europe looked down on businessmen. For aristocrats,

[28] An important book that demonstrates the failure and its causes was Jagdish Bhagwati,…Also see H.J. Bruton 'A Reconsideration of Import Substitution' (1998), XXXVI JEL 903.
[29] Note that Peron's policies in Argentina and their consequences resemble the mercantilist in France in the 18th century and which Adam Smith criticized.
[30] Acemoglu Daron, Simon Johnson, James Robinson & Yunyong Thaicharoen, 'Institutional Causes, Macroeconomic Symptoms: Volatility, Crises and Growth' (2003) 50 Journal of Monetary Economics 49.

"bourgeois" was a pejorative term. Much the same was true among the higher castes in India. In the 20th century, aristocratic snobbery towards bourgeois culture transmuted into intellectual anger towards capitalism, which has a material foundation. Before the 20th century, many intellectuals lived off the largess of aristocrats and shared their conservative views. Building modern states in the 20th century, however, required developing a civil service that hires and promotes on relatively objective grounds, including education. Intellectuals perform well in school and on written exams that the civil service uses for hiring and promoting. By providing jobs, the civil service broke the dependence of intellectuals on aristocratic largess. For instance, the great 16th century Danish astronomer Tycho Brahe was the imperial astronomer for the Holy Roman Emperor Rudolph II, whereas the 20th century physicist Albert Einstein first developed his revolutionary ideas while working as an examiner in the Swiss patent office in Berne.

After becoming entrenched in the civil service, intellectuals obviously gained from expanding it. Administration expanded dramatically through state control of the economy. Leading the economy created more jobs with higher pay for intellectuals. Intellectuals were naturally attracted to the belief that the state should lead economic growth. Shouldn't the smartest people in school also be the richest and most powerful? As the civil service grew, left ideology made state officials confident that they could lead the economy. Thus ideas and material interests converged to promote state leadership of the economy.

**Why Liberalization?**

We have explained that state-led growth relied on planners to direct capital to the most promising industries and protect them from foreign competition. In the last half of the 20th century many developing countries pursued industrial policies that favored capital accumulation over consumption, manufacturing over agriculture, heavy industry over light industry, dirty industry over clean industry, fishing and cutting wood over sustainable production, and import substitution over exports. Import-substitution in Africa and South America

produced much worse results than export-led growth in East Asia. Whereas import substitution failed, export-led growth succeeded dramatically in Japan, Korea, and Taiwan. From Poland to India, state-led growth nurtured firms that were too clumsy to survive. With subsidies and protection, helpless infant industries grew into flabby adolescents. Most economists now view these policies as mistakes that retarded economic growth.

The failure of the policies of state-led growth has three general causes. The first is motivation. Public officials cannot keep the wealth that their policies create for the nation, but they can keep the wealth that they receive in salaries and bribes. By leading development, officials increase their responsibilities, which increases their salaries and their opportunities for bribes. Industrial policy is rife with political favoritism, chicanery, cronyism, and corruption. Politicians and officials have strong incentives to invest the state's money less productively than businessmen invest their own money.

The second cause of failure is information. Even if officials were motivated to make wealth for the nation, they do not have the information needed to guide industrial development. An economy produces everything from pins to powerhouses. State officials cannot centralize enough information to manage this complexity. People in firms distort or withhold information from officials for strategic reasons – to avoid taxes, attract subsidies, gain political influence, etc. Strategic resistance to officials makes their task of economic leadership intractable. Economists made these arguments against state-led growth based on information and motivation in the 1940s,[31] but they appreciated the problem of information more fully in the 1980s.[32]

The third cause of failure is the impotence of capital accumulation. On its face, capital accumulation may seem like the key to unlock the treasure chest of national wealth. On construction sites in Germany, machines resembling dental

[31] Two of the seminal works were published in 1944: Lerner, The Economics of Control (New York: The Macmillan Company, 1944), and Friedrich A. Hayek, The Road to Serfdom (Chicago: University of Chicago Press, 1944).
[32] In 2001 the Nobel prize was awarded to Michael Spence, George Akerlof, and Joseph Stiglitz for contr,ibutions to information economics.

drills for dinosaurs bore the foundations of buildings, and other machines carry away the dirt without human hands touching it. With so much capital per worker, the productivity of German labor is high. In contrast, on construction sites in India, laborers with picks and shovels dig the foundations of some buildings and women remove the dirt in baskets balanced on their heads. With so little capital per worker, the productivity of Indian labor is low.

Why do Indian workers have less capital? In a market economy, households decide how much money to save and businesses decide how many machines to buy. People in poor countries voluntarily save a lot of money.[33] Could a country like India grow faster and become rich like Germany by forcing people to save and invest more? Russia tried to speed development in the 1940s and 1950s by forcing people to save more and investing their savings in machines and other capital goods. Growth rates were spectacular in the 1950s, but they proved unsustainable.[34] The facts about Russia are consistent with the *law of diminishing marginal productivity*, which predicts that total production increases at a decreasing rate as capital increases relative to other factors of production.

In general, economists who examine the data find a weaker connection between growth and capital accumulation than theories of state-led growth assumed. To illustrate, in 1960 capital per capita in the relatively rich UK was three times higher than in relatively poor Algeria. Over the next 28 years, capital increased by roughly 240% in the UK and real income per capita increased by more than 80%, whereas capital per capita increased by roughly 300% in Algeria and income per capita stagnated. Capital accumulation brought higher incomes

[33] In recent years, people in low-income countries voluntarily save a larger fraction of their income than people in high-income countries. In general, people save more when they have to pay for their own retirement and medical treatment, rather than the state providing social security and medical care. See World Development Indicators (2007).

[34] After the 1950s, capital kept accumulating, but productivity stopped rising and growth rates began a long decline that contributed to the downfall of communism in 1991. M. Harrison and K.B.Ye, 'Plans, Prices, and Corruption: The Soviet Firm under Partial Centralization,1930 to 1990', (2006) 66(1) The Journal of Economic History 1,

to Britain and not to Algeria.[35] (Algeria is not the only example of capital accumulation without growth.[36])

Capital accumulated in the UK and its productivity did not fall, thus defying the law of diminishing marginal productivity.[37] Innovation in UK firms apparently increased the productivity of capital enough to offset the decrease caused by having more of it. While capital accumulation proved less important to growth than many supposed, innovation proved more important.[38] Conversely, bad organization and leadership of Algerian firms apparently caused them to waste increasing amounts of capital. Developing countries cannot accelerate growth by importing modern machines and placing them in inefficient organizations. The state can make people accumulate easier than it can make them innovate.

Development economics turned away from state-led growth and towards liberalization when the "Washington Consensus" emerged in roughly 1980.[39] This turn in development economics apparently favored a retreat of state ownership, which occurred in fact. Figure 12.3 distinguishes four groups of countries by income level, from low to high. In each group of countries, the

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[35] All data are from King, R.G., & Levine, R. (1994). Capital Fundamentalism, Economic Development and Economic Growth. Carnegie-Rochester Conference Series on Public Policy 40.

[36] From 1980-1992, capital per capita increased by more than 1% per year in Costa Rica, Ecuador, Peru, and Syria, and per capita GDP decreased. W. Easterly & R. Levine: It's not Factor Accumulation: Stylised Facts and Growth Models, (2002) Working Papers Central Bank of Chile 164, Central Bank of Chile at 10. Between 1980 and 2004, average per capita growth rates in high income countries were 1.93 per cent per annum, compared to 1.97 per cent per annum in low and middle income countries.

Note, however, that the experience of Tunisia in this period resembles Britain more than it resembled its neighbor, Algeria. In Tunisia the capital output ratio was slightly higher than in Algeria in 1960 and the capital stock per capita was then about half of what it was in Algeria. Between 1960 and 1988 the per capita capital stock in Tunisia increased by around 70 per cent. Tunisia experienced a real per capita growth of about 40 per cent over the period of 28 years. The capital output ratio decreased substantially during the same period. Supra note 36.

[37] The ratio of output to capital measures capital's productivity. The capital-output ratio changed little in the UK as capital accumulated and income increased. See supra note 36.

[38] In general, an increase in an economy's output per worker can be decomposed into the amount caused by increases in capital per worker, more education of workers, and a residual that represents better organization and other unmeasured changes. Thus Easterly and Levine analyzed the growth of income per capita for 60 countries between 1960 and 1992. They found more capital and education explained roughly 40%, leaving 60% unexplained. In their study, immeasurable variables like better organization cause most growth. CITE

[39] J. Williamson, 'Democracy and the ''Washington Consensus''' (1993) 21(8) World Development 1329.

percentage of GDP supplied by state owned enterprises declined between 1980 and 1999, which indicates a worldwide trend towards privatization. However, the percentage declined the most in low-income countries. In 1980 low-income countries produced relatively *more* in state owned enterprises compared to high income countries, and in 1999 low-income countries produced relatively *less* in state owned enterprises compared to high income countries.[40]

Figure 12.3: Share of State Owned Enterprises in Gross Domestic Product

| Countries (by income group) | 1980 | 1999 | Change |
|---|---|---|---|
| Low Income Countries | 15% | 2.5% | -12.5% |
| Lower Middle Income Countries | 11% | 4% | -7% |
| Upper Middle Income Countries | 10.5% | 4% | -6.5% |
| High Income Countries | 6% | 4% | -2% |

Source: E. Sheshinski, & L. F. Lopez-Calva, 'Privatization and Its Benefits: Theory and Evidence.' (2003) CESifo Economic Studies. Estimations based on World Development Indicators, The World Bank.

Another indicator of state leadership's decline and liberalization's ascent is the shift from government development assistance to private investment in developing countries. In 1950, private direct investment in developing countries (credits and equity) was much smaller than government development assistance ("foreign aid"). In 1970, they were approximately equal -- around $10 billion. Today, however, the former is much larger than the latter. Private international capital flows into developing countries increased seven fold between 1991 and 2007. In 2008, Official Development Aid was $20 billion U.S. dollars, and private international investment was $325 billion.[41] Unfortunately, international investments in stocks still concentrate in a few countries, especially "portfolio investment." This term refers to shares purchases by corporate outsiders who do not participate in managing the company. In the developing world, more than 80 percent of all net portfolio investment went to five countries: China, India, Turkey,

[40] For privatization by sector in developing countries, see Table 2 in Pierre Guislain, "The Privatization Challenge: A Strategic, Legal, and Institutional Analysis of International Experience," *World Bank & Regional and Sectoral Studies* (1997).
[41] Fior full statistics, see OECD International Development Statistics 2009

Brazil and South Africa.[42] In some of the poorest countries, more capital flows out than in, because fear makes people place their money with the best protector, not the best investor.

### *Institutions and Law*

We can compare the history of liberalization to actual growth rates as summarized in Chapter 2.[43] Liberalization and growth correlated positively in some countries. Thus the pace of economic growth quickened with liberalization in East and South Asia in the 1980s, and in Central Europe in the 1990s. Liberalization and growth correlated negatively in other countries. Thus production plummeted after 1990 when liberal reforms demolished planning in Russia, Eastern Europe, and other countries of the former Soviet Union. In the 1980s, Latin America liberalized and stagnated, compared to modest growth in previous years of state activism.[44] Figure 12.4 summarizes this schema.

Figure 12.4: Liberalization Experience Schematized

| | |
|---|---|
| **Positive** | |
| | • China<br>• India<br>• Central European countries that joined the E.U. |
| **Negative** | |
| | • Africa<br>• Latin America (excluding Chile)<br>• Eastern European countries not joining the E.U. (Russia, etc.) |

Why did the same policy of liberalization have different consequences from one country to another? The same policy gets different results when implemented with different institutions in the background, like proposing a toast

[42] Also, of all net private direct investments (equity capital investment of inside investors) into developing countries in 2005, 78 percent went to only 23 countries. World Bank, Global Development Finance (2006) Stat. Appendix.
[43] For data on growth rates by region and country, see Supra note 1, Chapter 2.
[44] Hugo A. Hopenhayn & Pablo A. Neumeyer, Latin America in the XXth Century: Stagnation, then Collapse. Department of Economics Working Papers No. 028 discussion paper 2004, 1-28.

with wine in Catholic Spain or Muslim Iran.[45] To succeed, liberalization requires background institutions that secure property for the makers of wealth, enforce promises in business, and distribute the profits of firms predictably. These institutions are what we mean by effective property, contract, and corporate law, as represented in Figure 12.5.[46]

Figure 12.5: Institutional Prerequisites for Liberalization to Cause Growth

| | | |
|---|---|---|
| Secure property for makers of wealth | <=> | property law |
| Enforce promises | <=> | contract law |
| Distribute profits of firms | <=> | corporate law |

A country achieves effective property, contract, and corporate law through the interaction of social norms, courts, the civil service, and politics, with different countries combining them in different proportions.[47] The form of protection varied from one country to another. Courts, state law, and constrained government provided protection in some countries in Central and Eastern Europe, such as Poland and the Baltic states after 1990. These countries dramatically improved their legal institutions in an effort to join the European Union. In other countries, the state bureaucracy, intermediate institutions, and authoritarian leaders provided protection of property, contracts, and business

[45] D. Rodrik, A. Subramanian & F Trebbi, 'Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development' (2004) 9 Journal of Economic Growth 131.

[46] The ideal index for testing a legal theory of economic growth would measure *effective* law as distinguished into three components: property, contracts, and business law. For an attempt to measure the effective law of property and contracts, and to use the index in cross-country regressions, see Bernhard Heitger, "Property Rights and Their Impact on the Wealth of Nations -- A Cross-Country Study," Kiel Working Paper No. 1163, Kiel Institute for World Economics (2003). His simultaneous regression model indicates that doubling the index of the quality of property rights leads to a more than doubling in per capita incomes.

[47] Rodrik, supra note 16 at 979, summarized his research results with the following words: "The cross-national literature has been unable to establish a strong causal link between any particular design feature of institutions and economic growth. We know that growth happens when investors feel secure, but we have no idea what specific institutional blueprints will make them feel more secure in a given context. The literature gives us no hint as to what the right levers are. Institutional function does not uniquely determine institutional form."

organizations, as in Taiwan, South Korea, China, and Vietnam.[48] In China, state protected growth succeeded spectacularly where state led growth failed. In the 1990s, India relaxed state planning and liberalized cautiously in phases. Growth accelerated as stagnant state industries made way for vibrant, new businesses like computer software and outsourced services. Indian state planners, who failed to foresee the success of these businesses, did little to inhibit or stimulate their development, rather like U.S. government officials did little to inhibit or stimulate Silicon Valley.

Conversely, liberalization succeeded less in countries without effective private and business law. Big-bang liberalization in Russia in the early 1990s caused gangster capitalism and economic decline. In sub-Saharan Africa, lawlessness devastated economies and caused negative growth. In Latin America, liberal reforms without institutional improvements caused economic stagnation. Liberalization showed better results after institutions strengthened for private and business law.

## Conclusion

To unite ideas with capital and produce growth, business needs freedom through law.[49] Recent history suggests that freeing markets caused growth in states with effective private and business law. This fact leads to our prescription for growth as depicted in Figure 12.6.

Figure 12.6: Institutional Prescription for Growth

[48] E.L. Glaeser, R. la Porta, F. Lopez-De-Silanes, & A. Shleifer, 'Do Institutions Cause Growth?' (2004) 9 Journal of Ec. Growth 271. Democracy and constrained government cannot explain growth. But as growth occurs it generates better institutions according to their findings. They also find human capital to be a strong determinant of growth, contrary to findings by other authors like Hall et. al. and Easterly, who point to institutions and social capital.

[49] An insightful book with a similar conclusion about economic development is William Baumol, Robert Litan, & Carl J. Schramm, Good Capitalism, Bad Capitalism, and the Economics of Growth and Prosperity (New Haven: Yale University Press, 2007).


According to this prescription, the state's first role in economic development is to build the legal foundations for markets. With the legal foundations in place, liberalization will promote innovation. The state should take this indirect approach to promoting growth, not the direct approach of choosing firms and industries for subsidies and special privileges.

In making economic policy, the state should mostly rely on public information. When officials decide by using public information, they can explain and justify their policies to the citizens. Public discussion, debate, and criticism create a basis for accountability that dampens nepotism, favoritism, and corruption. Conversely, state officials can easily divert secret investments to their cronies. Politicians mostly direct public money to their supporters in order to build loyalty, however much they may talk about economic growth.[50] Citizens in most democracies are right to demand that officials defend their economic publicly.

When using public information, state officials cannot predict the surge of a particular firm or industry. People who invest in innovative ideas keep many secrets in order to earn extra-ordinary profits. Like football teams, firms surprise outsiders by pursuing unforeseen strategies. Thus economists did not predict the invention of the "personal computer" by IBM in 1981, the explosive growth of this industry subsequently, and IBM's exit from personal computers in 2005 by selling this business to the Chinese firm Lenovo. Similarly, Japanese planners

[50] To illustrate, inflation-adjusted oil prices increased sharply from the mid 1970s until 1980, and then fell back to the previous low levels where they remained until turning up again in 2002. Whereas public officials predicted a sharp rise in oil prices, they remained stable for twenty years. U.S. politicians, however, used the prediction of rising oil prices to justify subsidies for private companies to construct and operate plants to extract oil from shale. The plants were uneconomic at current prices, but politicians and state officials predicted that prices would rise enough to justify the investment. In fact, these plants never became economic and they closed down after the subsidies expired. U.S. taxpayers lost a massive amount of money, and some very large energy companies profited handsomely.

did not predict the surge of automobile manufacturers after 1960, and Indian planners did not predict the surge of computer firms in Bangalore after 1990. Most state officials cannot accelerate growth by investing public funds in particular firms except by chance, just as most private investors cannot profit by trading on public information except by chance.[51] Industrial policies that allegedly redirect capital to growth industries mostly waste resources without increasing growth rates.[52]

We have stressed the state's role in developing a legal framework for competition and innovation. This is not the state's only role. In addition, the state must stabilize money and banking, supply public goods (defense, education, public health, social security, poverty relief, environmental protection, and so forth), and build infrastructure (roads, water, electricity, telephone lines, airports, harbors, industrial parks, and so forth).[53] By building infrastructure, the state channels and coordinates the expansion of business, without picking which

[51] The technical name for this proposition is the "efficient market hypothesis." According to the efficient market hypothesis, market prices incorporate all public information, so no one investor can do better than chance when relying on public information. This is the "semi-strong" form of the efficient market hypothesis. You don't have to accept the semi-strong form of the efficient market hypothesis in order to accept that much business innovation is unpredictable from public information. Consequently, if private investors cannot profit by trading on public information except by chance, then public officials are unlikely to do better.

[52] To illustrate, inflation-adjusted oil prices increased sharply from the mid 1970s until 1980, and then fell back to the previous low levels where they remained until turning up again in 2002. Whereas public officials mistakenly predicted a sharp rise in oil prices, they remained stable for twenty years. U.S. politicians, however, used the prediction of rising oil prices to justify subsidies for private companies to construct and operate plants to extract oil from shale. The plants were uneconomic at current prices, but politicians and state officials predicted that prices would rise enough to justify the investment. In fact, these plants never became economic and they closed down after the subsidies expired. U.S. taxpayers lost a massive amount of money, and some very large energy companies profited handsomely.

[53] Infrastructure projects often face obstacles that only the state can overcome. To illustrate, developing infrastructure often requires assembling large tracts of land from fragmented private owners. Thus a proposed road may cross land owned by many different people. Voluntary purchase of land to construct the road encounters a fatal problem: Owners who holdout by refusing to sell their land can command a higher price. To avoid holdouts, most legal systems allow the state to compel owners of land to sell it. Also, some forms of infrastructure are natural monopolies. For example, most towns do best with a single grid of electricity wires connecting homes and businesses, a single super-highway system to connect towns, and a few cable systems for Internet and television. Natural monopoly, especially for infrastructure, often requires state participation as owner or, if not as owner, then as regulator of the private owner.

firms or industries will succeed or fail. Instead of leading, the state has successfully coordinated economic growth in modest ways.[54]

Since the state has so many roles, the reader may wonder, "Why do you emphasize the institutions of private and business? Like a camera, we cannot focus on everything in the picture. Law belongs in the foreground because of its central role in economic growth. Sustained growth comes from economic innovation. Combining capital and new ideas requires solving the double trust dilemma, and the best solutions involve legal institutions, especially private and business law. If economic theories have power as Keynes believed, then understanding the double trust dilemma should help lawmakers to accelerate growth and alleviate the poverty of nations.

[54] Milhaupt and Pistor regard coordination as an important role of the state in promoting economic development. See C.J. Milhaupt & K. Pistor, Law & Capitalism: What Corporate Crises Reveal about Legal Systems and Economic Development around the World (Chicago: University of Chicago Press, 2008). Thus the best and brightest staff Korea's Ministry of Finance and Japan's MITI. In the 1950s and 1960s, MITI coordinated miraculous economic growth in Japan by such methods as pressuring companies to share technological innovations through cross-licensing. Similary, Zenishi Shishido told Cooter that Miti did not choose industrial winners so much as mediate industrial conflicts. Thus MITI arranged for a gradual run-down of the coal mining industry in the 1950s and 1960s to get workers out of this uneconomical business. More recently, MITI in cooperation with the Ministry of Justice adopted a rule for administrative guidance on hostile takeover similar to Delaware. This has opened the market for hostile acquisitions. Economic experts dispute whether MITI *caused* rapid growth, or other forces caused growth and MITI merely *participated* in it. See M. Yishiro & J. M. Ramseyer, 'Capitalist Politicians, Socialist Bureaucrats? Legends of Government Planning from Japan' (2002) Discussion Paper No. 385, The Harvard John M. Olin Center for Law, Economics and Business Discussion Paper Series. In any case, investment bankers agree that the period of MITI's guidance of the economy diminished with time until it ended aroundc 1990. A similar history applies to Korea. In contrast, since 1990 Taiwan has grown comparably to Korea and faster than Japan, although Taiwan has no equivalent of Japan's MITI or Korea's Ministry of Finance.

# Chapter 14.
# How the Many Overcome the Few

Mary Shelley, the author of *Frankenstein*, was born in 1797 and ten days later her mother died from puerperal fever. Some physicians believed that doctors transmitted the disease by delivering one baby after another in hospitals without washing their hands. Other doctors resisted the evidence, even after Pasteur identified the culpable bacteria in 1879.[1] So puerperal fever killed many people unnecessarily. In development economics as in medicine, error resists truths that challenge interests.[2] Economic growth harms a few people and benefits many, like eating peanuts, but the few people harmed sometimes command the heights of society, like billionaires, bankers, bureaucrats, and union leaders. From the heights, a few can hold back many like sharpshooters in a mountain pass.[3]

What is to be done? If poor countries have weak legal systems because people don't know better, then better results should have come from all the money spent since the 1990s on "rule of law projects" to train judges and administrators, promote judicial independence, reduce court delays, improve law enforcement, curb corruption, solve corporate governance problems, redraft laws and regulations, etc.[4] Reforms often do not serve the interest of those who have

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[1] Another curious fact: For more than a millennium, until the 17th century, science regarded children as having a biological bond only with their fathers and not with their mothers, in spite of the obvious fact that children often resembled their mother.

[2] A party to a legal dispute, say the plaintiff in an antitrust case, interviews experts to find someone to present testimony in court. You can be sure that the plaintiff will select an expert whose testimony will be favorable to the plaintiff. Selection for a favorable expert is just as rigorous when a minister or similar political official hires an economist to give expert advice. The economic expert is selected to give the sanction of science to the economic policies of the politician or party that hires him. Politicians mostly select economic ideas for political usefulness, not for inherent truth.

[3] Omar Azfar remarked, "Politics makes economists seem optimistic."

[4] R.J. Daniels, M.J. Trebilcock (2004) The Political Economy of Rule of Law Reform in Developing Countries, Manuscript 1-44. Believing that the problem was ignorance was also an error of the law and development movement in the 1970s. See Trubek, David M., and Marc

the power to initiate and carry them through. This chapter explains strategies to overcome growth-retarding elites -- the powerful few who oppose growth-promoting reforms that benefit the many.

## Three Types of Reforms

We will distinguish three types of legal reforms using examples from privatization in Russia after 1990. When communism collapsed, ownership of most state enterprises passed into private hands.[5] Konstantin Magin divided the complicated process of privatization into stages.[6] In the first stage, roughly from 1990 to 1994, managers became owners by grabbing state assets, especially in small firms.[7] Restaurants, clothiers, grocers, and other small state businesses were given away or sold cheaply to their managers. Approximately 14,000 Russian enterprises of medium size or larger (at least 50 employees), and many more small firms, passed from state to private ownership.[8]

Privatizing small firms benefitted far more people than it harmed in Russia, and the process generated more political support than opposition. In reorganizing these businesses, some employees were promoted and others were fired. The new owner-managers increased efficiency and profited personally. Competition among small businesses benefitted consumers through lower prices and higher quality.

The story is different when we turn from small to large enterprises. Like other centrally planned economies, Russia created industrial giants. State

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Galanter. 1974. "Scholars in Self-Estrangement: Some Reflections on the Crisis in Law and Development." *Wisconsin Law Review.*
*Review* 1974: 1062–1101

[5] Paul Stephan argues that Gorbachov abandoned central planning with the aim of supporting the Communist Party's power by taxing a market economy, but he could not retain political control for the Communist Party as the economy privatized. See "The Fall--Understanding the Collapse of the Soviet System," *Suffolk University Law Review* 29 (1996): 17-49. Also see "Privatization after Perestroika: The Impact of State Structure," 14 *Whittier L. Rev.* 403 (1993).

[6] PhD dissertation, Department of Economics, University of California at Berkeley.

[7] This is called "spontaneous nomenklatura privatization".

[8] Andrei Shleifer and Daniel Treisman, Without a Map, Political Tactics and Economic Reform in Russia, MIT Press, 2001, page 9. This figure covers the years 1991 to 1995, whereas Magin's characterizes the first state of privatization as the years 1990-1994.

ministries controlled unprofitable conglomerates making steel, automobiles, refrigerators, ships, etc. When communism collapsed in the 1990s, the industrial ministries sought vast state subsidies to keep these conglomerates operating. The Russian state subsidized them by printing money, not by collecting taxes, which caused hyperinflation in 1994-95.

Despite resistance from the industrial ministries, the managers and reformers in government privatized many large enterprises.[9] In Magin's second stage, the state created private companies from large enterprises and distributed stock options to employees and other citizens ("voucher privatization"). The privatization process, however, included fraud, intimidation, and political chicanery. Given ineffective laws, insiders expropriated the holdings of outsiders.[10] Foreseeing this result, outsiders who owned a few vouchers in large firms sold them to insiders at trivial prices. What began as dispersed ownership of options ended in concentrated ownership of stock.[11]

Many scholars believed that rapid privatization of socialist firms and dispersed ownership of shares would stimulate legal reform to protect property rights. They were mostly wrong. Former managers and tycoons with access to finance bought under-priced firms and took control. Their political influence was so great that protecting property rights seemed unnecessary for them. Instead they blocked the development of laws for capital markets, as well as laws against self-dealing and stripping a firm of its assets. The private owners of large

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[9] See Andrei Shleifer and Daniel Treisman, Without a Map, Political Tactics and Economic Reform in Russia, MIT Press, 2001, circa page 13.

[10] Chapter 9 discusses the "control premium" -- the difference in the price per share when someone buys a few shares of stock, and the price per share when someone buys a controlling block of shares.

[11] Magin's PhD dissertation describes several causes of concentrations. The banks that organized auctioning of shares were also buyers, so they manipulated the process to direct shares to themselves or to associated companies. Inflation pauperized workers and caused them to sell their shares to wealthy people. Inflation also caused the state to borrow money from 1995 to 1998. The lenders were the oligarchs who got shares as collateral. When the state defaulted, the oligarchs kept the shares.

enterprises, who were called the "oligarchs," demanded property rights only after the Russian state regained power and used it against some of them. [12]

The economic effects of privatizing large enterprises were mixed. Some industries modernized, ended dependence on subsidies, and sold goods at competitive prices. In other industries, closing unprofitable plants caused local unemployment that harmed whole communities, and buyers faced high prices from private firms with monopoly power. Privatizing large enterprises benefitted many Russians and harmed others. The process generated controversy, not consensus.

Magin's next stage, 1998-2001, represents the response to this controversy and disagreement. In this period, Boris Yeltzin yielded the presidency of Russia to Vladimir Putin, who vigorously re-asserted central authority and brought the oligarchs under government control.[13] With more centralized power, the government slowed runaway inflation by resisting the demands of industries for state subsidies. In this stage, however, politicization replaced privatization as the dynamic of change for large enterprises. Successful operation of large enterprises now required the protection and participation of politicians. Unrealistic tax laws in Russia created tax liabilities on paper that few firms could pay. Given this fact, politicians could threaten the owners of firms with prosecution for tax evasion, fraud, and other crimes. To settle their tax arrears and avoid criminal prosecution, politicians sometimes required an owner to transfer his firm or its assets to another firm controlled by politicians.[14]

In discussing Russia's recent history, we distinguished between privatizing small firms, privatizing large enterprises, and politicizing large firms. Concepts from welfare economics explain the essential difference in these three

[12] Hoff, K. and Joseph Stiglitz, J.. (2002). "After the Big Bang? Obstacles to the Emergence of the Rule of Law in Post-Communist societies." National Bureau of Economic Research Working Paper 9282.

[13] Some oligarchs were expropriated under threat of imprisonment. Others were bought, notably by giving them the privilege of buying high yielding government bonds. See Andrei Shleifer and Daniel Treisman, Without a Map, Political Tactics and Economic Reform in Russia, MIT Press, 2001, page 13

[14] cite AEI and Pistor.

examples.[15] In the first example of privatizing small firms, many gain and a few lose. Following this logic to its conclusion leads to changes that benefit some people without harming *anyone*. A "Pareto gain" – to use the technical term for this concept -- has winners and no losers. [16] No legal reforms are strictly Pareto gains, because all have some losers, but some legal reforms approximate Pareto gains, such as privatizing small enterprises in Russia.[17]

The second example, privatizing large enterprises, has many winners and many losers. Judging from experience around the world, the firms in most industries will ultimately perform better under private ownership than state control. Almost everywhere, the economy has benefitted from private ownership in such industries as steel, automobiles, refrigerators, and ships. When a legal change benefits the winners more than it harms the losers, the change is a net gain by the standard of cost-benefit analysis.[18]

In the third example of politicizing large firms, a few politicians gain a lot and the economy suffers as a whole. Politicization disrupts property law and capital markets, which deflects the pursuit of wealth into taking instead of making. When the sum of the costs exceeds the sum of the benefits, the change is a net loss by the cost-benefit standard.[19]

Figure 14.1 depicts the three types of Russian legal reforms: Pareto gains, net gains, and net losses. Now we relate them to the political support and opposition provoked by them. Most people favor reforms when they expect to gain from them, and, conversely, they oppose reforms when they expect to lose.

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[15] A. Dixit (1987) On Pareto-Improving Distributions of Aggregate Economic Gains, Journal of Economic Theory, 41 No. 1 133-153, D, Acemoglu and J.A. Robinson (2000) "Political Losers as a Barrier to Economic Development," American Economic Review, 90, 126-130.

[16] Vilfredo Pareto was a 19th century Swiss economists who first recognized the centrality of these changes to economic analysis.

[17] The paradigm in economic theory for Pareto gains is exchange in free markets. In the absence of coercion or misinformation, exchange creates a surplus that the parties share to their mutual benefit.

[18] The paradigm for a net gain is state provision of a local public good such as a road. Commuters ideally gain from driving on the road, much more than taxpayers lose from paying for it. Those taxpayers lose who pay for the road without using it, such as pedestrians who do not drive. There is a net gain for society but some individuals lose.

[19] The paradigm for a net loss is a cartel. The members of the cartel gain less in monopoly profits than the consumers lose from higher prices.

Because few lose from reforms that approximate Pareto gains, they provoke the fewest opponents and they can often proceed by consensus, like privatizing small Russian firms. In contrast, reforms with net gains divide people into winners and losers, and the former usually outnumber the latter, like privatizing large Russian firms. A majority usually (but not always) favors reforms with net gains. Finally, when legal changes cause net losses, the losers usually outnumber the winners, like politicizing large Russian firms. A minority usually (but not always) favors legal changes with net losses.

Figure 14.1. Three Types of Reforms

| Technical Term | Welfare Effects | Political Support |
|---|---|---|
| Pareto gain | all win | consensus |
| net gain | more win than lose | majority |
| net loss | more lose than win | minority |

Even in democracy and other forms of polyarchy,[20] sheer numbers do not determine political outcomes. An active minority often prevails against a passive majority. Economists have analyzed conditions under which politics activates or pacifies people. A person acts when the effects of the law concentrate on him. Conversely, people hold back and wait for others to act when the effects diffuse.[21] Thus interests groups will form and influence laws whose benefits concentrate on a small group of people and whose costs fall on the general public. This is true regardless of whether the laws create a net gain or a net loss for society. [22]

[20] Polyarchy is government by many persons, of whatever order or class. *"… We may be able to loosen the grip of a few organized interests on power by forcing them to share political leverage with a variety of other groups. This is polyarchie; it is also rough justice, the only kind human beings will ever experience…"* S. Holmes, Lineages of the Rule of Law" (2003) 19-60 in J.M Maravall and A. Przeworski (eds.) Democracy and the Rule of Law, Cambridge University Press.

[21] For economists, this is the problem of "free riding," which arises wherever results require "collective action" (people must act jointly in order to produce a result.)

[22] This view is especially associated with the Chicago school in economics, for example, see George Stigler, *The Citizen and the State* (Chicago: University of Chicago Press, 1975) and Sam Peltzman, "Towards A More General Theory of Regulation," *J.Law and Economics* (1976). This view is also identified with the concept of "rent seeking" as that term is used in public choice theory. An early work that remains a classic is Mancur Olson's The Logic of Collective Action: Public Goods and the Theory of Groups (Cambridge, MA.: Harvard University Press, 1965). Conventional examples of such laws that usually cause a net loss to society include tariffs on

Applying this logic to development, some causes of sustained growth benefit almost everyone and few people have reason to resist such reforms. More often, however, innovation disrupts technologies, organizations, and markets. Concentrated costs provoke active opposition by the losers from growth. Prussian industrial reforms in the first half of the 19th century illustrate the political problem of net gains with concentrated costs. In the feudal system of industry, manufacturers and guilds enjoyed exclusive licenses that limited competition. By restricting competition, these rights inhibited innovation and restrained production. The Prussian government eliminated these exclusive rights in 1810. All commentators agree that the move towards free markets for labor, capital, and land contributed to the economic rise of Prussia and Germany in the 19th century. However, the reform of 1810 was a net gain, not a Pareto gain. By abolishing monopoly rights, these reforms harmed the guilds and exclusive licensees. Consequently, the losers found ways to undermine the law and delay the effects of the reform for decades. [23]

Another historical example of net gains that provoke opposition comes from ending public access to natural resources such as grazing land, forests, and fishing grounds. Closing access to the public blocks some traditional users. Thus enclosures of common land provoked peasant revolts all over in Britain in the 16th century and the winners suppressed the losers by force.[24] Similarly, closing fishing zones in Indonesia in 1982 harmed ethnic and religious minorities,

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imported goods, regulations restricting entry into a business, and most industrial subsidies. Our discussion of loans in chapters 4 and 6 describe an unconventional example. The borrowers who default on current loans receive a large benefit from actively resisting the seizure of their collateral by the lender. Laws and policies that prevent creditors from seizing the collateral of defaulting debtors cause lenders to deny many future applications for loans, but the future borrowers, are a diffuse group who may respond passively.

[23] B. Vogel (1980), Introduction, in B:Vogel, (ed) Preussische Reformen 1807-1820, Verlagsgruppe Athenäum, Hain et al. pp.1-29. H.Bleiber (1993), B. Sösemann (ed.), Die Preußischen Agrarreformen, in der Geschichtsschreibung der DDR. in: Gemeingeist und Bürgersinn, die Preußischen Reformen, Berlin, pp. 109-125.

[24] Bardhan, P. (2004), Scarcity, Conflicts and Cooperation: Essays in Political and Institutional Economics of Development, MIT Press: Cambridge, Mass. Also, for a good discussion of obstacles to institutional development in poor countries, see P. Bardhan, 1999, Understanding Underdevelopment: Challenges for Institutional development from the Point of View of Poor Countries, JITE,…

as did limiting access of the lower classes to natural resources in sub-Saharan Africa.[25]

How can proponents of growth overcome opposition from concentrated losers other than by force?[26] The art of legal reform is to undermine opposition, especially by three strategies. First, buy off the losers by a more inclusive political bargain that gives them a share of the surplus from growth. Buy-off might consist in subsidies, tax concessions, loans, or privileges. Giving everyone a share of the surplus transforms net gains into Pareto gains.[27]

Second, in an open economy, the winners and losers from disruptive innovation are unpredictable. A "veil of ignorance" descends when randomizing obscures the identity of future winners.[28] Growth with random winners and losers is like a game where two players each pay a dollar to draw straws and the winner gets five dollars. The game creates an *expected* gain for everyone in the statistical sense,[29] or an "expected Pareto gain." To overcome opposition, include more classes of people in the innovation game by opening competition.

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[25] Baland, J.M. Platteau, J.P. Wealth Inequality and Efficiency in the Commons, Part II (1998) Oxford Economic Papers, 50 (1998), 1-22

[26] "Governments seeking supports for policies to open the economy face the challenge of making the policies credible (anticipation). To be credible, however, the policies must enjoy the support of large numbers of diverse social groups (cohesion). Cohesion is unlikely unless the benefits are perceived to be widely distributed (inclusion). Without these elements in place, market-friendly regimes will have difficulty establishing themselves and surviving." Hilton Root, Capital and Collusion: Political Logic of Global Economic Development (Princeton University Press, 2006), at page 18.

[27] Every net gain can be turned into a Pareto gain by appropriate redistribution of the surplus. If political powerbrokers detect a net gain in society, then they can propose a bargain that makes everyone better off. This proposition extends the Coase Theorem from law to politics. Various obstacles, notably transaction costs and strategic behavior, can obstruct such bargains. In addition, every bargain poses a problem of distributing the surplus between the parties. Economists have proposed axiomatic, rational solutions to the division of the surplus, most famously Nash and Rubinstein. See Ariel Rubinstein, "Perfect Equilibrium in a Bargaining Game," Econometrica 50 (1982): 97-109 and M. J. Osborn, A. Rubinstein, Bargaining and Markets, Elsevier (1990). These models, however, fail to predict the frequency with which parties fail to cooperate because they cannot agree on how to divide the surplus.

[28] The "veil of ignorance" is the famous phrase used by John Rawls in his majesterial book, ATheory of Justice (1971). Rawls connects ignorance with fairness, because people are more nearly impartial about a law when they do not know who will win and lose. Ackerman suggests that the veil of ignorance can descend historically when a society faces a large constitutional crisis and everyone is uncertain about the future. This is one kind of "constitutions moment." See B.Ackerman (1992) The Future of Liberal Revolution, Yale University Press.

[29] In statistical terms, each player expects to win 1.5, so playing the game makes everyone better off ex ante than not playing the game. Ex post, however, one person wins 4 and the other loses 1.

Also, historical events sometimes open the possibility of basic reforms. A deep crisis can create a veil of ignorance about who will benefit in the future from essential reforms. Uncertainty about winners and losers can soften the opposition to reform.

Third, diffuse the costs of growth. When many people each bear a little of the costs of growth, their opposition will probably remain passive. Passing costs on to taxpayers or consumers pacifies opponents by diffusing the costs.[30]

Figure 14.2. Circumventing Opposition to Growth-Promoting Reforms

| policy | consequence |
|---|---|
| buy-off / Pareto gain | convert opponents to supporters |
| randomize /expected Pareto gain | convert opponents to supporters |
| concentrate benefits & diffuse costs | activate supporters & pacify opponents |

Figure 14.2 summarizes the three reform policies, which often combine and interact. Thus joining the World Trade Organization requires a country to lower its tariffs, which stimulates the economy as a whole and depresses some industries. To overcome opposition, the government may retrain impacted workers (buyoff), pay for retraining with taxes (dispersed costs), and increase uncertainty by lowering many tariffs all at once (randomize).

**Logic of Reform in China**

Now we turn to some important historical examples of overcoming opposition to growth-promoting reforms. As described in Chapter 2, Chinese reforms generated economic growth rates of 9 per cent per year for more than 25 years, reduced absolute poverty from 25 per cent to less than 5 percent of the population, and increased life expectancy from 64 to over 70 years.[31] This is a great historical achievement, in spite of environmental degradation and an

[30] Note that diffuse costs pacify opponents, and diffuse benefits pacify proponents. When diffuse benefits pacify proponents, we have a "free rider problems": Everyone waits for someone else to take the initiative of enacting the growth-promoting reform.
[31] Yingyi Qian, How Reform Worked in China, UC Berkeley, Discussion Paper, 2001, 1-63

authoritarian Chinese political system.[32] China proceeded by "dual track development," which means a different approach for the traditional socialist sector of heavy industry and the free sector of light industry.[33] The socialist sector mostly continued under state planning in its traditional way. As socialist industries stagnated, workers, directors, and party members kept their jobs. Meanwhile China unleashed the free sector, especially in light industries. The free sector escaped bureaucratic controls and retained most of its profits. Under the dual track system, the socialist sector remains shielded from competition and declines gradually, while the free sector grows quickly, raises national income, and creates better jobs for the young and adventurous.[34]

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[32] Authoritarian governments that lack legitimacy from democratic elections often seek legitimacy in economic growth and welfare.

[33] Lau, Qian, Roland, "Pareto-Improving Economic Reforms through Dual-Track Liberalization", Economics Letters, 1997, vol. 55 n° 2, pp. 285-292. In July of 2005, Cooter had the privilege of a brief conversation with China' Premier, Wen Jiabao. who is regarded as the leading figure behind China's economic policy. Cooter asked, "What is the difference between a social market economy and a capitalist market economy?" The Premier replied, "The difference is historical." In the present, there is apparently little difference.

[34] In a private email to Cooter on 7 April 2008, Xu Guangdong provides a more nuanced view that distinguishes Chinese economic reforms into two phases.

"Generally speaking, the overall process of China's economic reform may be interpreted as consisting of two main phases. The first phase, from 1979 to 1992, was known for the famous dual-track system which refers to the coexistence of a traditional plan and a market channel for the allocation of a given good. The market track improved efficiency while the plan track achieved Pareto-improvement by providing implicit transfers to compensate potential losers from market liberalization. As a result, it was very rare for a major social group to suffer significant economic losses and this phase has been labeled "reform without losers". During this period, rural incomes grew 15% per year from 1978 to1985, and 2.8% per year from 1985 to 1991. Urban incomes increased 7% per year from 1978 to1985, and 4.8% per year from 1985 to1991. At the same time, the economic reform narrowed the urban-rural gap and led China's overall Gini coefficiency to 0.28 in 1983 which made China one of the most equal countries in the world. Besides, the proportion of the population living in poverty fell dramatically from 53% in 1981 to 17% in 1987.

The second phase, which greatly changed regulatory and administrative framework in the key market sectors including banking system, tax system, the system of corporate governance, and so on, did impose significant losses on substantial social groups and lead to a "reform with losers". First, due to state owned enterprise restructuring, millions of workers were laid off with limited compensation and insufficient social security. Second, more and more rural lands were taken by local governments to support urban projects, to finance the operation of local governments, or even serve the private interests of officials. Furthermore, government shirked its responsibility to provide education, healthcare, and housing, which have become the biggest outlays in household expenditure. During this period, rural incomes grew 4.9% per year from 1991 to 2004, while urban incomes increased 7.7% per year. However, at the same time, the fiscal revenues increased 16% per year from 1995 to 2007, which means that government became the main beneficiary of economic reform. Meanwhile, inequality has been rising. The Gini

The dual track system can be viewed as a political deal between the socialist and free sectors to share the benefits of growth. Instead of abruptly privatizing the socialist sector, the state gradually shrinks its employment while sustaining wages. Meanwhile, incomes increase rapidly for entrepreneurs and successful employees in the free sector. The burden from taxes and corruption is modest. The communist party and the state bureaucracy allow people to keep most of the wealth that they make, as required by the property principle of innovation in Chapter 5.

In the free sector, individuals often share ownership of firms with local and regional governments. Entrepreneurs thus include some state officials and officials in the Communist Party. People who acquire political power in the Communist Party and the state also have opportunities to acquire wealth. Communist and state officials support the free sector because they benefit from its growth. As mentioned in Chapter 5, party chairman Deng Xiao Ping promoted reforms with the slogan, "For everyone to get rich, some must get rich first." This aphorism suggests that reforms will benefit everyone at uneven rates. Everyone gets a little richer as entrepreneurs get a lot richer first, including some state and communist officials. Since innovation is unpredictable, open competition among entrepreneurs naturally randomizes the winners and losers from growth. China offers its people an economic lottery with good odds for winning, so they are eager to play.

Like China, Pareto growth was the development strategy in Japan, Republic of Korea, Taiwan, Hong-Kong and Singapore. As they opened their markets to domestic and international competition in the 1950s, these countries developed instruments to spread the surplus and the costs, so almost everyone gained. Instruments to spread wealth included pubic services such as schools,

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Coefficiency increased to 0.447 in 2001, which made China similar to the most unequal Asian developing countries such as Thailand (0.43) or Philippines (0.46). Furthermore, from 2001 to 2003, the income of poverty people decreased 2.4% per year."

Xu Guangdong's views were influenced by Barry Naughton, The Chinese Economy: Transitions and Growth (Cambridge, MA: MIT Press, 2007, Chapter 4. Also see Martin Ravallion and Shaohua Chen, "China's (uneven) progress against poverty," Journal of Development Economics 82 (2007) 1 – 42 (2007).)

hospitals, and rural infrastructure; legal changes such as land reform and judicial independence; and opportunities open to talent. Many people in East Asia could start new businesses and rise in the social hierarchy. These policies encouraged economic transformation without political disruption by protecting new wealth from confiscation and predation. The result approximates a Pareto gain with unequal distribution of the surplus.[35]

### The Loser's Dilemma in Economic Growth

We explained how the Chinese government successfully used the three strategies in Figure 14.2 to overcome opposition to growth-promoting reforms. Why isn't every country like China? Why do governments reject growth-promoting reforms with Pareto gains or expected Pareto gains?[36] Reforms usually require a political bargain with an inherent obstacle that we call the "dictator's dilemma." The general Augusto Pinochet staged a military coup against the elected government of Chile in 1973. After ruling the country as dictator for more than a decade, he eventually returned political offices to civilians in a process ending with his resignation as head of state in 1990. He remained head of the army until he stepped down from that position in 1998. To avoid prosecution, Pinochet needed political cooperation from families whose members he had imprisoned and killed. In 2004 he was arrested and charged with various crimes. He died in 2006 before courts resolved most criminal charges.

This story depicts a dilemma: An aging dictator wants to resign from power, but he fears prosecution for crimes. His only effective guarantee against

[35] In the language of Campos and Root, these countries made "credible commitments" to property owners that secured "the political foundation of economic rights."J.E. Campos and H. Root, The Key to the Asian Miracle, Making Shared Growth Credible, Brookings Institutions Press 1996. The language is on page 175. Campos and Root stress the advantages of policies that not only cause Pareto gains, but also convince the public of the state's commitment to such policies. Their account of Asia's success is very similar to ours.

[36] Economists sometimes summarize these facts by saying "There is no political Coase Theorem." The Coase Theorem is the proposition that people can always achieve the surplus from bargains when the transaction costs are not too high. This proposition is more true of individual choices than collective choices.

prosecution is to retain the power that he wants to relinquish. The dictator's dilemma exemplifies a general problem of trust in politics. The proponents of growth-promoting reforms may want to buy off the opposition, but the reformers may be unable to commit to paying off the losers in the future. The reformers cannot guarantee providing the losers with subsides, retraining, tax breaks, protection against competition, etc, because the law preserves their right to change their minds. A future government can legally repeal almost any policy or law made by the current government.[37] The many who benefit from growth may want to buy off the few who oppose it, but the political bargain is not legally enforceable.

An historical example from India illustrates this problem. Before independence, India contained many small states where maharajas ruled and owned much of the land. Societies in which a small minority owns land and capital often have difficulties establishing legal rules that trigger entrepreneurial innovations broadly. Abolishing these small states had many advantages for India, including removing impediments to development. As compensation for the transfer of their states into the Union of India and their loss of tax income in 1947, the maharajas were granted a subsidy called the "Privy Purse." However, the subsidy was revoked in 1975.[38] In general, political commitment is especially problematic when the bargain extends for years, as with the Privy Purse. "Grandfather clauses" that preserve minority privileges look worse to the majority as memory fades of the bargain that created them.

[37] A legislature sometimes enacts a statute forbidding its repeal by a future legislature, but most constitutions give the legislature broad powers that effectively preclude such "entrenchment."
[38] The government tried to abolish the privy purse by an executive order, which the Supreme Court ruled unconstitutional in 1971. Parliament subsequently abolished it by an amendment of the Indian constitution in 1975. S.J.Sorabjee (2006) Palkhivala and the Constitution of India, in M.G.N. Kuma (Ed.), Nani Plakhivala A Role Model for India pp. 46-61 Universal Law Publ. Co Delhi

## Quieting Disagreements About Redistribution

Like the double trust dilemma of innovation, the dictator's dilemma is a problem of trust with no perfect solution.[39] The best solution aligns the interests of the reformers and the groups harmed by growth-promoting reforms. To align interests, the parties bargain and make agreements, but they are seldom enforceable legally. Political deals often need to encompass groups with a history of confrontation, not cooperation. The dictator's dilemma is more severe than the innovator's dilemma because politics involves more confrontation and less cooperation than business.[40] To avoid prosecution, Pinochet needed political cooperation from families whose members he had imprisoned.

Trust has no magic solution, but a general strategy for building it in business also applies to politics. Two executives begin discussing the promising and dangerous possibility of merging their companies. They agree to meet for lunch each Tuesday to discuss the matter. Should they take turns paying the bill for lunch, or should each one buy his own lunch? Behavior at lunch may reveal something about their traits that helps to predict behavior in a merger. By taking turns paying, each one will get to see whether the other party orders inexpensive wine when he pays and expensive wine the other party pays. After a lot of lunches, they may start to trust each other. The general strategy for building trust is to break reliance down into many small steps and spread them over time.

Like building trust over many lunches, security in property builds gradually over years. Thus judges in common law countries like Canada and India create property law through the gradual accretion of precedents. Securing property requires quieting redistributive disputes. Quiet falls when most people accept the broad division of wealth that property law yields. As explained in Chapter 5,

[39] The dictator's dilemma is a single-trust problem: The dictator gives up power first and trusts the civilian government not to prosecute him. In contrast, innovation is a double trust problem.
[40] In terms of game theory, politics has relatively more zero sum games (redistribution), and business has more positive sum games (production). The political philosopher Carl Schmitt famously defined the political as the sphere of conflict in which people confront each other as enemies.

entrepreneurs innovate when they believe that they will be able to keep much of what they make, so property law for growth must provide them with this security.

Once citizens feel secure against others taking their property, they can accept moderately adverse redistributions of wealth by taxes, government expenditures, statutes, and regulations. Conversely, a political agenda that redistributes too fast might destroy the trust necessary to secure property, and the reform might collapse like a sprinter in the starting blocks who leans too far forward. An historical contrast illustrates the difference. The French national assembly abolished feudalism in a sweeping reform in 1789. The peasants ceased to be serfs and the reforms redistributed aristocrat lands among the peasants, which impoverished aristocrats. (Besides losing their wealth, many lost their heads.) The reforms created the framework for markets in land and also disrupted property rights and unleashed redistributive disputes. Production grew in the long run, but slowly. In 1851, agricultural productivity per worker in France still amounted only to 44 per cent of the British level.[41]

In contrast, Prussia, wanted modernization without revolution, so it crafted reforms that benefited both peasants and aristocrats. Under the feudal system serfs kept part of the harvest and gave the rest to their lords. Furthermore, each side was tied to the other by feudal bonds that restricted freedom of contract. To modernize the system, reforms from 1807 to 1822 applied a simple formula: the peasants had to buy themselves out of serfdom by transferring up to half of the land to the lords. Both sides were freed from feudal restrictions, including compulsory labor. Like France, Prussian land reform created a framework for markets in agricultural land and labor, but, unlike France, Prussian reforms enlisted support of landlords and peasants by benefiting both of them. As a result, the transition was relatively smooth and production rose. Two widely-used measures of productivity, production per worker and production per unit of arable farm land, increased by 60% and 44% respectively over the relevant period

[41] G.Clark (1991) Labour Productivity in English Agriculture 1300-1860, in B.M.S. Campbell and M. Overton, Agricultural Productivity in the European Past, Manchester University Press, 211-235

between 1800 and 1850. In contrast, during the four previous centuries, agricultural productivity had barely advanced.[42]

The United States had a revolution like France and subsequent economic success like Prussia. Uncertainties created by revolution were quieted in the United States by a constitution that secured property through dividing political power.[43] As constitutional protection proved effective, redistributive disputes quieted and economic growth soared.

## Conclusion

In 1513, Machiavelli wrote, "The reformer has enemies in all those who profit by the old order, and only lukewarm defenders in all those who would profit by the new."[44] Yet central Europe, south Asia, and east Asia provide recent examples where legal reforms triggered spectacular economic results. The many who win from economic growth can overcome the few who lose, and economic analysis shows how. Three principles provide a guide for activating support and pacifying opposition to pro-growth reforms. First, a more comprehensive political bargain that uses subsidies, taxes, and privileges turns losers from economic growth into winners (Pareto gain), so opponents become supporters. Second, opening competition among entrepreneurs gives more people the possibility to win the innovation lottery (expected Pareto gain). Third, a more comprehensive bargain spreads losses, which pacifies pacify opponents. Conversely, concentrating losses from economic growth on a small group of people activates their opposition. If they are powerful, they may frustrate policies that benefit the nation.

Spreading the gains from economic growth to buy off or pacify the opposition sometimes requires guarantees. In politics, credible guarantees

[42] Figures taken from Helling (1966), p.134 and p.139. The latter figure refers to the whole of Germany and cereal products only. It remains, however, debated how much of these productivity gains can be attributed to the reforms.
[43] See Federalist Papers 10 and 51.
[44] *The Prince* (1513), ch. VI.

mostly depend on the recipient's power against the guarantor, which poses a dilemma. Since power accompanies wealth in politics, economic growth that realigns wealth also redistributes power. The loser's dilemma is that economic growth erodes the power that guarantees his share in the gains.

While this dilemma has no perfect solution, something can be done. Doing something requires evolving institutions, not just enacting laws. Laws and social norms must braid into institutions that strengthen each other like the strands in a rope. Trust develops from a history of cooperation, like taking turns buying lunch. If not cooperation, then a history of fair competition can develop trust, like tennis players refereeing their own games. By solving trust problems, law provides the framework for economic innovation to end poverty of nations.

# Chapter 15.
# Legalize Freedom -- Conclusion

In 1732, Benjamin Franklin wrote in Poor Richard's Almanac, "Where there's no law, there's no bread." This aphorism applies to contemporary Sudan where anarchy causes hunger. Conversely, *Prosperous* Richard's Almanac should say, "Where there's law, food improves." Food was scarce in China during the Cultural Revolution, but the recovery of law and the economy after 1980 restored China's status as a culinary superpower. Similarly, when Cooter arrived in Berkeley, California, in 1975, he could buy a slice of white bread and an acid cup of coffee in any restaurant. By 1990, they had disappeared, replaced by baguettes and lattes.

How does good law make better food? Not by cooking it, but by an indirect approach. One certainty about the future is that it will not be what we expect. Few predicted that outsourcing of services and computer software would drive so much of India's economic growth. Since innovation is foreseen imperfectly, economic growth necessarily has an air of mystery about it. The only contribution to growth theory that merited a Nobel Prize in economics, which was awarded to Robert Solow in 1987, assumes that innovation falls from heaven like hailing Euros.[1] No one can ever dispel the mystery of innovation completely, which would imply its end, but studying innovation can help us to understand why it hums.

Each innovation brings new information, new information brings extraordinary profits to the innovator, extraordinary profits attract competitors, competitors acquire the information, and the innovator's profits return to ordinary. At the end when the information disseminates, the nation is more productive and

[1] Technological progress is exogenous in Robert Solow's book, Growth Theory, An Exposition (1970).

wealthier, and the stage is set for the next innovation. By this process, nations become rich. Relative to sustained growth, nothing else is significant for lifting nations out of poverty. Doctors can diagnose more medical problems than they can cure. The right diagnosis can sometimes help the patient to speed his own recovery through care and exercise, as with many back ailments. Similarly, social science has progressed and improved its power to diagnose institutional weaknesses that impede economic growth. No magic pill cures legal problems, but the right diagnosis can help a state to promote development by improving law.

Growth requires an effective legal framework that releases the energies of entrepreneurs and allows innovation to take its creative, unpredictable path. Given a good legal framework and various background conditions, entrepreneurs will compete and innovate, like FIFA setting the rules for football so teams compete and the best ones reach the World Cup. We can adjust the rules to improve the competition among entrepreneurs and football teams, even though we cannot predict the firm that will innovate or the team that will win the World Cup. The central claim of this book is that sustained growth in developing countries occurs through innovations in markets and organizations, innovation poses a problem of trust between innovator with ideas and financiers with capital, and the best solutions are necessarily legal.

Does democracy cause economic growth? The effect of democratization of economic growth depends on an intervening variable – private and business law. Democratization promotes or undermines economic growth, according to this book's thesis, depending on whether it strengthens or weakens private and business law. Sometimes a dictator strengthens private and business law by increasing political stability for some years, say for the five or ten years that entrepreneurs need to recover their investments. Thus China and Vietnam grew quickly after vastly improving protection of property and business law, while

strictly forbidding competition with the ruling political party. Also South Korea and Taiwan achieved high growth rates under dictatorship. A transition to democracy can sustain or increase economic growth by increasing the stability of private and business law, as illustrated by South Korea, Taiwan, and Chiles. Conversely, a dictator sometimes damages the economy by giving loyalists the license to steal. Thus Zimbabwe's economy collapsed because one group had the money and another had the guns.

What about the converse? Does economic growth cause democracy? A causal chain runs from growth to democracy. Economic innovation requires developing new ideas that especially come from educated people. Economic freedom and educated workers create a cascade of innovations that sustain growth. The experience of economic freedom and the advantages of competition in business create a demand for it in politics. Pervasive political theories hold that legitimate political power comes from popular consent. As education improves and people experience economic freedom, governments apparently need competitive elections to sustain belief in their legitimacy. This fact partly explains why Taiwan, South Korea, and Chile transitioned from dictatorship to democracy.

Having acknowledged that economic growth causes democracy, we must pass on to another issue that is more central to this book. An old disagreement between left and right animates debate about the economy's legal framework: To what extent should the state regulate markets? This debate misses the main point about growth in developing countries. Economic freedom requires effective law, not its absence. An effective framework insures that people who create wealth can keep much of it (the property principle for innovation), that people can commit to keeping their promises (the contract principle for coordination), and that entrepreneurs can enter most lines of business and choose their firm's governance from a rich menu of legal templates (principle of organizational liberty). In brief, to promote growth, developing countries need to *legalize* economic freedom.

To do so, state rules and social norms must braid into institutions that strengthen each other like the strands in a rope. Experiencing growth tends to build commitment among its beneficiaries to the rules and norms that produce it. Almost everyone benefits from growth, but some lose relative to others, and a few lose absolutely. As a group loses wealth relative to others, it also loses political power. The loss in power diminishes its ability to protect its interests. The few losers may be strategically placed to obstruct reforms. Pacifying them requires credible political deals to pay them off. Credibility is hard to achieve in politics because governments are so free to change their minds. The loser's dilemma in economic growth is a trust problem that law can ameliorate, like the double trust dilemma that separates ideas from capital.

Besides legalizing freedom, much remains for the state to do that is not this book's subject. The state needs to supply law, infrastructure, education, basic research, public goods, and poverty relief. Growth benefits almost everyone by increasing wages, but the state must also protect the residual poor who do not work for wages. In focusing on growth, the state must not fetishize partial measures of wealth like gross national product (GDP). "Growth" should refer to a comprehensive measure of consumption that takes account of market and non-market goods, including the condition of the environment and the quality of life. Also reforming law for growth challenges politicians to consider the long run. The aim is sustained growth that comes from innovation, not temporary growth that comes from exhausting resources.

We have sketched law's role in ending the poverty of nations. If the obstacles seem overwhelming, the benefits are more so. If most people appreciated that 2% growth for a century increases wealth by 7 times, and 10% increase wealth by almost 14,000 times, their desire to make laws for growth would be irresistible.