Chapter 1
It's about the Economy

A grand master asks the tournament organizers to pay him by placing one penny on the first white square of a chess board, two pennies on the second white square, four on the third white square, proceeding until all thirty-two white squares are covered. The initial penny would double in value thirty-one times, resulting in more than $21 million being laid on the last white square. Growth compounds faster than the mind can grasp. Compounded over a century, 2 percent annual growth increases wealth more than seven times, which is roughly the growth rate of the United States in the previous century, and 10 percent annual growth increases wealth almost fourteen thousand times, which is roughly the growth rate of China in the last thirty 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 fifty-six 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. We repeated this 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.

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. The lifting of so many Asians out of poverty in the late twentieth century, especially by rapid growth in China and India after 1980, is one of history's triumphs. Conversely, if rich nations grow faster than poor nations, the gap between them will widen surprisingly quickly. Income per capita declined in sub-Saharan Africa by roughly 20 percent between 1970 and 1990, which is one of history's 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 seventeenth-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 uncharted. 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 two to five 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 seventeenth 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 stealing the ship and its cargo. 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 toward 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 incorporate and appoint him 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 start-ups, 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.

Seventeenth-century spice voyages and twentieth-century technology start-ups 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 held together two Jewish kingdoms, according to the Bible. 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 institutions 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? 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. Nike 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 the goods that it sells. This new organizational form has spread dramatically in the United States as more and more companies "outsource" manufacturing and focus on research and marketing. Other examples of recent innovations in markets and organizations in the United States 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. Before buying edible oil, African consumers smell and taste it to assure themselves of freshness, which requires selling it 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 dispersing trustworthy workers around Africa required innovation in organization like Phil Knight accomplished at the Nike Corporation.

Besides new organizations, adaptations often create new contracts. The textile business in Bangladesh relies on two new contracts: bonds for warehousing 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 marketplace 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 in developing countries thus faces many of 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. 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 United

States in 1929 and 2008. In recent decades, however, many countries have enjoyed benign conditions for growth—peace, open economies, no natural disasters, no bursting bubbles. With these background conditions satisfied, law has big effects on growth. Good law engages business energy and advances the economy, whereas bad law suppresses business energy and retards growth.

Sustained growth in developing countries occurs through innovations in markets and organizations, innovation poses a problem of trust between innovators with ideas and financiers with capital, and the best solutions are necessarily legal. Nonexistent, weak, or underenforced laws hobble economies, as some examples illustrate.[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. 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. Central Africa produced few diamonds and got paid much less than the world price for them. If anarchy were replaced by secure 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 abuses 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.") When providing security, the Moscow criminals burden business more heavily than a successful state. 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 telephone numbers and addresses of his family, friends, and business associates. 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 debtors often gain by stringing out the legal process because courts assess low interest rates on delays in collecting court judgments. High-cost debt collection can dry 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 more people.

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 percent is sold to the public who can resell freely ("tradable" shares), 47 percent is allocated to the government, and 20 percent is allocated to insiders who cannot sell ("nontradable" 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 on soft government loans. In the case of China, their voracious appetite for cash crowded 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 response of the United States to the financial crisis of 2008. The U.S. government committed to loaning or giving over $700 billion to financial institutions. Direct beneficiaries included former business associates of the program's administrator, Secretary of the Treasury Henry Paulson, who earlier had profited vastly from dismantling the regulations protecting against a financial crisis.[8] In spite of the unsavory character of these loans, most U.S. economists endorsed them as necessary to avoid a depression resembling 1929.

A 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 money 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.

Why are stock markets so small in countries like Ecuador? 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, but a company's managers can hide profits. A stock market cannot flourish unless corporate and securities laws effectively protect noncontrolling investors. Compared to stocks, loans and bonds reduce the problem of protecting outsiders against insiders. Loans and bonds

entitle the lenders to repayment according to a fixed schedule. Monitoring repayment is relatively easier for courts and other legal officials with the will to protect lenders. The credit market can flourish under conditions where the stock market languishes. However, borrowing is more risky for an entrepreneur than selling stocks, so weak stock markets dampen investment and slow the pace of innovation, as illustrated by the Ecuadorian shrimp farm.

As the examples suggest, this book tells the story of how insecure property, unenforceable contracts, uncollectable debts, financial chicanery, and other legal problems stifle business ventures and cause national poverty. Why care so much about wealth? Wealth is a means, not an end like happiness, goodness, holiness, beauty, love, knowledge, or self-fulfillment.[9] Philosophers and priests warn that treating means as ends perverts values. Does our study risk making growth 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 get perspective on wealth, consider what it can and cannot do. Wealth can buy goods like hamburgers, penicillin, houses, books, theater tickets, shingles, tractors, word processors, movies, and insurance. They are means to ends approved by almost everyone, such as nutrition, health, comfort, enjoyment, education, culture, and travel. They are also means to ends that many people criticize, such as obesity, idleness, wastefulness, dissipation, display, and domination. Like most of economics, this book is more concerned with making wealth than using it wisely. Wealth matters to people. Almost everyone would prefer the wealth of Belgium to the poverty of Bangladesh. Individuals struggle mightily to increase personal wealth, and governments pursue national wealth to secure their popularity and power. The study of economic growth concerns how people can get more of what they want, whereas ethics includes the study of what people ought to want.

The measurement of wealth by economists reflects this fact. All goods sold in markets have prices. The market price of a good reflects how much people want it, regardless of whether they want it for good or bad ends. 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. Thus economists combine heterogeneous goods into a single measure of national income such as gross domestic product (GDP). Since Adam Smith, national income has been identified with the wealth of a nation.[10]

Economists also use this approach to value innovations. Shingles repel rain better than thatch, a tractor plows faster than a digging stick, a word processor corrects errors more easily than a typewriter, a moving picture entertains more than a zoetrope, penicillin cures 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? When innovators make better goods, the additional amount that people are willing to pay for them measures the innovation's market value. Summing these increments measures growth in wealth based on market prices.

Economic measures of wealth like GDP measure the wealth of a nation too narrowly, because market prices fail to measure the value of goods not sold in markets, such as national parks, safe streets, clean rivers, public health, and graceful buildings. The same is true for nonmarket "bads" such as strip-mall ugliness, congestion, global warming, global dimming, high blood pressure, stupid television shows, bad architecture, litter, and intimidating thugs. A comprehensive measure of wealth or national income takes account of the nonmarket goods that people would be willing to buy if markets could sell them. Compared to GDP, more comprehensive measures of wealth that incorporate nonmarket goods reflect more accurately the quality of life and the causes of human welfare.[11]

Explaining law's effect on growth requires data to compare economic performance in different legal jurisdictions. Comparative data are abundant on narrow measures of wealth such as GDP and scarce on inclusive measures of the quality of life. This book mostly cites data on GDP that is readily available although not ideal, and we rarely cite data on the quality of life that is ideal but not readily available. We would prefer inclusive measures of wealth that encompass nonmarket goods, but we must work with the data that we have. Fortunately, the most fundamental principles for business ventures and growth are much the same regardless of

wealth's measures, so more inclusive measures of growth are unlikely to change this book's conclusions.

Instead of measuring wealth comprehensively, economics could go directly to one of its ends—say, happiness. Does more wealth cause more happiness? Songwriters disagree: Barrett Strong sang, "Money don't get everything it's true / What it don't get I can't use,"and the Beatles replied, "Money can't buy me love."[12] 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 your life high, medium, or low?" In comparisons of 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.[13]

This book explains how better law can promote innovation and increase a nation's wealth. It does not explain what people ought to use their wealth for or how wealth can promote happiness. People want more wealth and understanding how law can give it to them is an appropriate subject of study. The goal of increasing wealth is a more appropriate goal for particular bodies of business law like patents and financial contracts than the goal of improving individual values or increasing happiness. Law for the economy should be designed mostly to maximize wealth, not improve tastes or increase happiness.

A single phrase from the 1992 U.S. presidential campaign of Bill Clinton famously summarizes our approach in this book: "It's the economy, stupid."