

Reinventing The Bazaar – A Natural History of Markets

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Preface: A workable platform (for a market) has five elements: **information flows smoothly; property rights are protected; people can be trusted to live up to their promises; side effects on third parties are curtailed; and competition is fostered.**

Chapter 1 The Only Natural Economy

1. **Market transaction: an exchange that is voluntary:** each party can veto it, and (subject to the rules of the marketplace) each freely agrees to the terms. A market is a forum for carrying out such exchanges.
2. Three categories of nonmarket activity:
 - Unpaid work **inside households**.
 - **Government activities** such as building roads and supplying schools and the police force. Government consumption (which means all government activities other than transferring money between people) amounts to a fifth or more of national income in modern economies.
 - The business taking place **inside firms**. In the United States and similar economies, more transactions occur within firms than through markets.
It is a market economy because even these nonmarket transactions take place within the context of markets. The market transactions mold the economy overall.
3. The Reverend Richard Whately, a professor of political economy at Oxford University in the eighteenth century, believed the **coherence of the market to be proof that God exists. If no human planner is guiding the market to the optimal outcome, God must be. The invisible hand is the hand of God.**
4. Market design consists of the mechanisms that organize buying and selling; channels for the flow of information; state-set laws and regulations that define property rights and sustain contracting; and the market's culture, its self-regulating norms, codes, and conventions governing behavior. While the design does not control what happens in the market – **free decision-making is key** – it shapes and supports the process of transacting.
5. Some of the pieces of a market's design are devised by the market participants (informal or bottom-up); other pieces are devised by the government (formal or top-down).
6. **A basic part of the government's role in market design is the defining of property rights.** The surest way to destroy a market is to undermine people's belief in the security of their own property. But the government's role goes far beyond just assigning property rights.
7. "Find me a one-armed economist," President Herbert Hoover reportedly ordered, out of frustration with economic advisers who kept saying, "On the one hand... On the other hand..."

Chapter 2 Triumphs of Intelligence

1. Entire sectors of a modern economy are devoted to organizing transactions. The retail and wholesale trades and the advertising, insurance, and finance industries exist not to manufacture things but to facilitate transacting. These activities account for one-fourth of GNP in USA.
2. **In 1792**, one John Sutton organized a securities exchange at 22 **Wall Street**. Sellers would bring in their stocks and bonds each morning, and at noon Sutton would auction them for a commission. The changeover was rapid. Sutton's auctions lost their effectiveness because other traders began to free-ride on them. The interlopers would attend the auctions merely to observe the going prices, then they would hold their own sales, offering the securities at lower commission rates and taking business away from Sutton. This practice soon became self-defeating, as it meant too few securities were passing through Sutton's auctions for the bids to be meaningful guides to the securities' true value. To solve this problem, 24 of Wall Street's most prominent brokers agreed to form a new auction. They would trade securities at fixed fees. They would not buy or sell in other auctions but only among themselves. They formulated the rules governing how securities were brought and sold, and set up methods of contract enforcement and dispute settlement.
3. A half-century before Sutton began his auction, rice merchants in **Osaka, Japan**, had already set up the world's **first futures market**. The idea of forward trading is said to have originated around 1620 when a Nagoya rice merchant named Chozaemon met a friend from Sendai, in the north of Japan. The friend reported the rice harvest in the north was going to be bad. Chozaemon promptly bought the future Nagoya-area rice harvest, paying the farmers 10% upfront and owing them the rest. After the harvest came in, he stored the rice for several months, selling it for a tidy profit once the north's poor harvest had driven prices up.
4. While Google's offering is being underwritten by Morgan Stanley and Credit Suisse First Boston, these types of public offerings have been a specialty of San Francisco-based WR Hambrecht, which holds a patent on the process for its OpenIPO. In a **Dutch auction**, a company reveals the maximum amount of shares being sold and sometimes a potential price for those shares. Investors then state the number of shares they want and at what price. Once a minimum clearing price is determined, investors who bid at least that price are awarded shares. If there are more bids than shares available, allotment is on a pro-rata basis--awarding a percent of actual shares available based on the percent bid for--or a maximum basis, which fills the maximum amount of smaller bids by setting an allocation for the largest bids

Chapter 3 He Who Can't Pay Dies

1. Pharmaceutical companies will always aim for maximum profits by marketing a new obesity drug rather than pioneering a novel malaria treatment. The search for new drugs is directed at the cosmetic afflictions of the rich while overlooking the fatal illnesses of the poor. Medicines against tropical diseases make up a minuscule 1% of new drug patents. **The pharmaceutical companies specialize in the maladies of the affluent.**
 2. In neglecting tropical diseases and in setting drug prices high, the pharmaceutical companies are responding to the system they are in: they are reacting to the incentives of the marketplace. It is the companies' fiduciary responsibility to act in their shareholders' interest. They invest where they see some prospect of a return.
 3. The root of the shortcomings in the global pharmaceutical market is not companies' policies but countries' poverty. Without an improvement in basic health services, the drugs' effects would be limited even if they were available. Economic growth is the only reliable source of a cure for AIDS and the various tropical diseases.
 4. Drug companies do not passively take the market's rules as given, but actively try to shape them. They subject the US government to fierce lobbying. The government is involved in two ways: **supplying funds and designing the market.**
 5. Public health –preventing epidemics and the spread of disease, protecting against environmental hazards, promoting healthy behaviors, responding to disasters – a public good and recognized as a legitimate concern of the government. Basic scientific knowledge is also a public good. Most of the major new drug patents awarded to the drug companies have their origins in government-funded research. Of the key discoveries cited in biomedical patents, just 17% came from industry. The productivity of the pharmaceutical companies' research rests on state funding.
 6. Market incentives are generally needed to push ideas beyond pure science into usable application. Converting a scientific breakthrough into a workable new drug is usually done most effectively in the private sector.
 7. **A patent is an officially sanctioned monopoly.** Offering the prospect of monopoly profits, a patent is a powerful incentive to innovate. Patents successfully generate inventions while inhibiting their use.
 8. Some developing countries initiated the redesigning of the pharmaceutical market unilaterally, setting their own intellectual property rules.
- **South Africa passed a law in 1997 to make essential medicines affordable by compulsory licensing.** (This means appropriating the patent, manufacturing or importing copies of the drug, and paying the patent holder a royalty).

9. In 2001, the major companies announced they would provide AIDS drugs to developing countries for what it cost to manufacture them, about One-tenth the price charged in the West.
10. The solution of selling AIDS drugs at cost in the poor countries is not transferable, however, to drugs against many other diseases. *With diseases that do not hit the developed countries, by contrast, the weakening of incentives for research from overruling patents could be such a large drawback as to outweigh any benefits.* With tropical diseases, no patents would mean no research. For developing drugs against the diseases that hit the poor countries alone, deeper changes in market design are needed.
11. Workable ways to deliver drugs to the poor countries
 - Subsidizing the inputs drug firms use in their research, perhaps by means of tax credit. Because it is hard to monitor research inputs, subsidizing inputs is in general less effective than rewarding success by paying for outputs.
 - Revenue enhancement, under which the government or an international agency promises to top off the company's earnings once the new drug is being manufactured, by paying the company a pre-specified sum for each dollar earned from its sales.

Chapter 4 Information Wants to Be Free

1. For competition to work, sellers must be rewarded for lowering their prices. This would occur if information were free. But when search costs lock customers in, sellers are penalized if they cut their prices. The cost of shopping around –even if it is tiny by comparison with the value of the purchase – can prevent competitive forces from breaking out. Each seller is a little monopolist. Because of the buyers' cost of searching, the merchants make a large profit. **Big effects can come from small transaction costs.**
2. **Information is the lifeblood of markets.** One partial solution to informational problems is repeat-business relationships. The shopper values the assurance against being cheated that the relationship provides, and the merchant wants to leave the shopper satisfied enough to return tomorrow. The relationships economize on search costs and result in prices being lower for repeat customers.
3. Most markets contain devices designed to overcome the frictions generated by search costs and thereby allow competitive forces to drive prices down. Services like Consumer Reports and the Yellow Page lower search costs. Word of mouth is a handy source of shopping tips. Brand names and trademarks can reduce search costs. Market intermediaries like wholesalers and trading companies reduce search costs for firms.
4. Online stores: **The ready availability of price information has not driven prices of identical items into alignment.** The typical dispersion was 37% for

- books and 25% for compact discs (online). For books, there is actually more price variation among internet retailers than among bricks-and-mortar retailers. Since price dispersion continues to exist, it must be that even internet markets are subject to frictions. These are not costs of locating sellers or learning their prices, for those costs are close to zero. The remaining transaction costs are more subtle. They come from difficulties of observing quality. The internet has not created perfectly frictionless markets. The need for buyers to be able to trust sellers has been heightened by the internet. **Information costs include not only the costs of locating a seller but also the costs of getting assurance.**
5. Gresham's law rules in lemon markets: low-quality goods drive out high quality.
 6. Building channels for the flow of info, both to help buyers and sellers to get together and to allow buyers to verify the quality of what they are purchasing, is a major part of designing a market. "The secret of business," the shipping tycoon Aristotle Onassis remarked, "is to know something that nobody else knows." The secret of market design, conversely, is to enable information to flow.

Chapter 5 Honesty Is the Best Policy

1. A well-functioning market has an array of signaling mechanisms to communicate reliable info about quality. Signaling can overcome the problem of low-quality goods driving out high-quality ones, but it does not come for free. The peacock's tail is a burden; the bank's lavish headquarters and the soft-drink maker's expensive ads are a detriment to their bottom line.
2. Concern for the future is the most basic incentive to induce people to keep their work. Whether honesty is the best policy, then, depends on which is the larger: the future gains from ongoing business or the immediate gains from renegeing. Even where renegeing has a higher payoff than the value of any ongoing business with this seller, you might still have an incentive to pay the bill if other sellers would also refuse to do business with you.
3. **In the NY wholesale diamond trade, dealers pass among themselves bags of diamonds worth millions of dollars, without written contracts.** A handshake with the worlds *mazal u'brache* – 'with luck and a blessing' – creates a binding agreement. The oral contracts work in part because the dealers are mostly Hassidic Jews. More importantly, the diamond marketplace is designed so that anyone who breaches a contract loses the future business not only of the person cheated but also of all the other diamond traders.
4. Some deals cannot work under informal contracting; they can be done only with the support of the law. **"Where large sums of money are concerned, it is advisable to trust nobody,"** remarked Agatha Christie (Agatha Christie remains the most popular novelist in history, with over two billion of her books sold at a conservative estimate. The rejacketing of her books and new adaptations of Poirot and Marple on ITV have all ensured that the magic of her storytelling

- continues to reach a contemporary audience and that she continues to be recognized as the undisputed 'Queen of Crime').
5. Even in countries with excellent legal systems, the law does not work frictionlessly. If your trading partners know it would not pay you to sue, the law provides no basis for you to rely on them. Furthermore, the law is useless if one cannot prove that a contract was breached. In business, as in sports, the incentive to behave well rests on both formal and informal rules. The courts have blind spots and can be cumbersome. Market participants supplement the law of contract by developing their own self-enforcing mechanisms.
 6. Kenneth Arrow said, "Virtually every commercial transaction has within itself an element of trust, certainly any transaction conducted over a period of time." As a result, "much of the economic backwardness in the world can be explained by a lack of mutual confidence."

Chapter 6 To the Best Bidder

1. Competition between sellers drives the price down to the second-lowest production cost. Over time, competition serves to discipline firms. It pressures firms to innovate so as to become more efficient, and its survival-of-the-fittest logic winnows out the inefficient firms.
2. **The surest route to a competitive market is the arrival of new firms. Monopoly contains the seeds (high profits) of its own destruction.**

Chapter 7 Come Bid

1. *Why are some items auctioned while others are sold by posted prices?* Posted prices are used for items that are traded frequently and therefore have a well-established market value. **Auctions are used for unique items.**
2. Auctions: open auctions, Dutch auction, second-price auction (used for selling stamps), sealed-bid auction, in which there is a single round of sealed bids; the high bidder wins and pays his or her bid. **eBay chose open auctions.** The open auction yields, on average, a price that is closer to the item's true value than do the other forms of auction.
3. The problem for eBay: some wait until a few seconds before the end time, then submit a bid just above the current high bid, trying to leave the other bidders no time to respond. (**Sniping**). *eBay's solution is to accept proxy bids.* Bidders may confidentially tell eBay's automated bidding agent the maximum they are prepared to bid.

4. **Amazon.com made a different design choice. Its auctions have no fixed end time.** If there are any last-minute bids, the scheduled end time is abandoned and the auction continues until ten minutes pass with no new bids.
5. To prevent seller fraud, eBay asks the buyers to rate the seller, and then posts the ratings and comments online for anyone to see. A seller is given a score that counts the number of favorable and negative comments received. This device works; eBay claims fraud affects less than 1% of its auctions. **A reputation for honest dealing is valuable: bids go significantly higher when the seller has a high rating.**
6. Spectrum auctions by Federal Communications Commission (FCC): *simultaneous ascending auction*. Multiple licenses are open for bidding at the same time and remain open as long as there is bidding on any of the licenses. Bidding occurs over rounds, with the results of each round announced before the start of the next one. Why not use other methods? The main reason is that the licenses are interdependent. For most of the licenses there is a close substitute: a twin license that covers the same region and the same amount of spectrum. Licenses are also complementary: a license may be more valuable if the holder also has the license for a contiguous region. FCC expected that some bidders would want to aggregate licenses, either geographically or by waveband. The FCC did not know before the sale how the licenses should be packaged. Different firms wanted different packages. The auction mechanism had to be flexible enough to enable the bidders to construct their own license packages.
7. A firm asked economist Charles Plott how to predict the sales of its products. Plott designed an **electronic asset market**. There are tradeable certificates saying something like “September, 1501-1600,” meaning that if September sales turn out to be between 1501 and 1600 units, the bearer is paid one dollar. The certificates range over the possible sales totals. Some months ahead, the company gives each salesperson twenty certificates for each sales interval, and let them trade among themselves. Anyone who predicts sales will be high buys the high-sales certificates, driving their price up, and sells the low-sales certificates, pushing their price down. The price of any given certificate, when the market settles down, reflects the salespeople’s collective beliefs about the likelihood of the corresponding sales level. These prices predict sales, Plott reported, better than the company’s standard forecasting techniques.

Chapter 8 When You Work for Yourself

1. Most of Vietnam’s trucks were broken down in the early 1990s. Imported from the Soviet Union, built using Soviet technology and production methods, they were notoriously unreliable. To make matters worse, the collapse of the Soviet Union had made spare parts unobtainable. Without trucks, the nation faced a transportation crisis. Out of desperation, the government granted each driver an ownership stake in his truck. “It’s a miracle!” **“Suddenly, all the trucks run.”**

2. The owner of an asset has the right to any residual returns it generates. **Ownership is the strongest source of incentives.** Things that are owned in common often are not well kept. Ownership motivates you to learn about the asset's best uses, to maintain it and not run it down, and to match it with complementary assets so as to fully utilize it. Secure property rights are the surest motivation for productive effort and risk-taking.
3. Ownership matters precisely because the unexpected sometimes does occur. **Ownership is society's way of handling the unexpected. This explains why small firms tend to be the most dynamic and entrepreneurial.** While large firms necessarily dominate industries where there are economies of scale, like the steel, automobile, and computer software industries, elsewhere small firms have an edge. Why? They are more flexible internally and less bound by bureaucratic rules and procedures. They are more nimble in responding to their environment, faster to adapt to changes in market circumstances.
4. **For innovation, ownership matters greatly.** The biotech industry shows the benefits both of being large and of being small. **A new drug goes through three stages: two stages of research and then one of development.** First is applied science: investigating whether a piece of pure scientific knowledge could lead to a workable medicine. Second is clinical testing. Third is the development of the drug into a manufacturable product, followed by a marketing effort directed at physicians, and then large-scale production. The final stage is usually done by an established drug companies. *A common pattern, especially when the drug is truly novel and not just a variation on a theme, is for the research to be carried out by a start-up firm.*
5. **Ownership makes a difference. Breakthroughs demand obsession.** Success in solving a hard problem comes through thinking about it in the shower, while driving to work, during coffee break, over dinner, in front of the TV. Isaac Newton, asked how he had arrived at his insights, answered, "By keeping the problem constantly before my mind." **Obsession with the problem at hand comes with ownership, broadly defined to include having not only a financial stake but also a personal stake in the success of the idea.**
6. China's agriculture switched from collective to individual production in the late 1970s. A tiny beginning sparked this massive reform: **a clandestine meeting of the householders in Xiaogang village in Anhui province in 1978.** The villagers met secretly and agreed to parcel out the communal land among themselves. They made a three-part resolution. First, the contracting of land to individual households was to be kept strictly secret. Second, they would continue to deliver the stipulated amount of rice taxes to the state. Third, if any of them were jailed, the others would raise their children until they were eighteen years old. They signed the pact with their thumbprints. A rapid turnaround followed. The amount of land planted in rice nearly doubled in one year, and the village began producing a rice surplus. At a Communist Party conference in 1982, Deng Xiaoping endorsed the reforms. In 1983 the central government formally proclaimed individual farming to be consistent with the socialist economy and therefore permissible, By 1984 there were no communes left.

7. The agricultural reforms led to a transformation of the rest of China's economy. The increase in productivity freed labor and capital to be moved into industrial production. It shows the force of property rights. The productivity gains were achieved without formal legal recognition of the farmers' ownership rights. **China obtained the benefits of private property without actually having private property.** All land still belongs to the state and farmers are merely granted rights to use it temporarily. The insecurity of property has had perceptible effects. One study found that farmers apply less fertilizer and labor to plots that have a higher risk of reallocation. Another found that farmers are less likely to make long-term investments such as wells and drainage on land that is more at risk of confiscation.
8. Property rights do not just appear by magic. The state has to build a range of institutions. Procedures for assigning initial ownership must be set up. Public registration is needed so that Land titles are accurately recorded and easily verified. Property boundaries must be physically demarcated. Credit markets, escrow services, and the like are needed so people who have little saving can buy land based on their future earnings. Laws governing land ownership have to be written. Judges and lawyers must be trained to adjudicate disputes. The Japanese government, for example, began a drive to formalize farmers' landownership in the late nineteenth century and did not complete it until the middle of the twentieth century.

Chapter 9 The Embarrassment of a Patent

1. McDonald's owns 'Mc' – McBagel, McSleep, McCoffee, McAllan's... are sued. Intellectual property protection restricts usage. The costs of assigning ownership in ideas sometimes outweigh the benefits. New ideas drive the economy. **IP must be protected neither too much nor too little.**
2. Innovators are driven by a range of motivations, of which pecuniary reward is just one: there is intellectual curiosity, personal pride, professional prestige. *George Washington, asking Congress to pass copyright legislation, argued that copyright would increase the nation's stock of knowledge, and knowledge is "the surest basis of public happiness."* Abraham Lincoln said, "The patent system added the fuel of interest to the fire of genius."
3. Patents do have a drawback. A patent is, literally, a license to overcharge. To the legal criterion for judging a patent award – the invention should be new, useful, and nonobvious – economists add a further criterion: the benefits from awarding the patent should outweigh the costs.
4. The evidence on the effects of the patenting of software is inconclusive. Patenting brought no sharp increase in software production, nor did it lead to a sharp decrease. *In 1998, a U.S. federal court ruled that business methods could be patented.* This ruling made it possible to patent a novel market design.

5. The Grateful Dead allowed fans to tape its rock concerts and circulate the bootleg tapes, provided they did not sell them. John Perry Barlow, who was a lyricist for the Dead before he became an internet activist, said permitting the copying “was the smartest thing we could have done. We raised the sales of our records considerably because of.”
6. 5 record companies vs. Napster:
 - Napster: Napster actually promoted purchases. Members who used Napster to sample the music before buying it tended to buy more, not fewer, CDs.
 - Record companies: the turnover of music stores near colleges had declined when Napster was operating. This sales decline was interpreted as a consequence of Napster (though instead it might have come from the students switching to buying their CD from online stores).
7. **Silicon Valley vs. Route 128:** The labor market for engineers operated differently in Silicon Valley than in Route 128. Silicon Valley developed a culture of open relationships between employees of competing firms. Ideas were freely exchanged. Engineers changed jobs often, and no one disapproved if they took what they learned in the old firm to the new one. Massachusetts was more hidebound. Loyalty to the company and long-term employment were valued. Ideas were tightly held with firms. Why did the Silicon Valley labor market develop a culture of sharing while in Route 128 there was a culture of concealment? **The explanation lies in differences in laws. Massachusetts law enforces postemployment covenants (within a specified period, typically one or two years, a former employee may not go to work for a competing firm), whereas Californian law prohibits them.** Ideas flowed freely when the industry was new, but as it matured, the Silicon Valley firms began invoking the law to guard their rights to their ideas.
8. Patents are not the only way of defining property in ideas. An alternative is a **buyout mechanism**. The government would buy the rights to an innovation and then put the patent in the public domain and let anyone freely use it. Two difficulties. The promise to pay must be credible. And how to set the buyout price is difficult.
9. A **research tournament** is an alternative. This offers a cash prize, as with the buyout mechanism, but is awarded differently. The prize is paid on a specified date and is not delayed until whenever the innovation is successfully completed.

Chapter 10 No Man Is an Island

1. An action brings an externality if it affects, without compensation, others than the decision-maker. Externalities can be addressed by government-set rules that require people behave in ways that mitigate their effects on others. Speed limits, tax on gasoline, increasing the alcohol tax curb driving externalities.

2. William Vickrey proposed a plan for pricing urban car travel in DC. Roadside receptors would scan each car that passed, sending the data to a central computer, which would calculate the congestion charge and bill the driver. The fee would be larger when the congestion was greater, and zero when there was none. *Singapore has put Vickrey's idea into practice, charging drivers for the use of certain roads at peak times. The fee varies with the type of vehicle and the time of day. Traffic in the central business district during peak times fell 13%.* It requires setting the fees correctly. The point is not to raise revenue for the government; it is to make people pay the true cost of their driving. The fee should be just enough to deter those who would value the rush-hour trip less than the congestion costs they would cause others. Given that the price is set right, taxing the externality can make almost everyone better off. You pay a congestion tax one way or the other: if not in cash, it is in the time wasted and the frustration of sitting in traffic jams.
3. Overfishing: Regulating fisheries, governments have imposed controls on the number or size of boats. They have specified that fishing can take place only within a certain season. **Each control leads to predictable distortions.** Regulatory controls on inputs induce the fishers to compensate by overusing whatever inputs are unregulated. Restrictions on the number of boats have brought bigger boats with extra equipment and crew. Restrictions on the length of the vessels have induced companies to build wider, heavier boats. Restrictions on the number of crew have results in investment in high-tech fishing gear; adding electronic devices for locating fish increases a vessel's catch dramatically. A short fishing season induces firms to invest in high-capacity boats so they can catch as much as possible in the time allowed.
4. Rather than controlling inputs, some governments assign to each fishing vessel a quota, defining how much it is allowed to catch. **Quotas directly address the basic issue** – that overfishing is a consequence of the fact that no one owns the fish – **by establishing property rights.** New Zealand, Canada, and Iceland allow quotas to be bought and sold like any private property. But quota is an imperfect solution, for the monitoring of the property rights is expensive and leaky. Quotas don't eliminate the need for regulatory supervision. The regulators must devise rules on who initially receives the quotas. Ongoing and extensive government monitoring is needed to check that the catches do not exceed the quotas. In the British Columbia halibut fishery, every single fish is tagged with the vessel's code as it is landed on the dock so it can be traced through to final use.
5. Sports: a strong team acquiring extra stars increases its share of the pie by raising its chances of winning, but it shrinks the total size of the pie by unbalancing the on-field competition. A lopsided player trade affects not just the two teams directly involved, but also, via its effects on competitive balance, the entire league.

Chapter 11 A Conspiracy against the Public

1. The government has an essential role to play in designing markets. But intervention in markets has a downside, for governments cannot necessarily be relied on to act as they should. **Corruption is one of Russia's most prevalent crimes**; each year prosecutors uncover around three thousand cases of bribery of government officials – and this is just the tip of iceberg. **The amount taken in bribes, by one estimate, exceeds the sum of government expenditures on education, science, and health care. Corruption adds perhaps 5 to 15% to the price of goods and services.** “If you are in the government and you don't take a bribe now, people don't look at you as honest,” said Russian political analyst Sergei Markov. “They look at you as stupid.”
2. People will not invest if they cannot keep the fruits of their investment. More corruption means less investment and less growth.
3. **Corruption in Indonesia vs. in Russia.** Both had comparable levels of total corruption; in fact, in the data Indonesia looks even worse than Russia. How did markets operate in Indonesia under extensive corruption, while in Russia markets were stifled? Shleifer and Vishny (1993) explained: if the fire inspector, the tax evaluator, the customs official, the state-bank loan officer, and the business license registrar each have the power to damage a firm, they can all extort profits from it. Under free-for-all extortion, each knows that any money left with the firm with probably be taken by some other bureaucrat, so each takes as much as possible. With everyone separately putting his hand in the till, however, the firms are discouraged from investing. Thus, there will be little left to take bribes from next year. The bribe-takers' unrestrained greed deters productive activity, with the result that the total bribes are lower than they could be. In Indonesia, the corruption was rigidly controlled from above and so did not deter investment.
4. Given that corruption exists, whether functioning markets can coexist with it depends on the rules governing the corruption. Markets worked in Indonesia because the state was able to control freelance corruption and thus limit the investment-detering effects that corruption usually has. Given that corruption exists, it does less harm to markets if it is monopolized than if it is free for all.
5. **Dango**: it is the name given in Japan to a negotiation among construction firms to decide which firm will get the job. During the negotiations over the division of the spoils, the conspirators must agree which firm is going to win the particular contract, what price should bid, and how the other firms are to be compensated. Much of the excess profits that dango's high prices generate are bid away in the competition for political favor; they end up in the hands of the politicians. The construction industry is the largest single source of political contributions in Japan.
6. Dango is not merely a transfer from taxpayers to firms to politicians. The price-fixing causes real losses in economic efficiency. Three effects work to cause production costs to be inefficiently high under dango.

- Competitive bidding allocates the job to the firm best able to do it. Negotiations will usually be less effective than bidding as a means of selecting the low-cost firm.
- Firms that sidestep the discipline of competition tend to produce inefficiently. They fail to search for cost-reducing innovations...
- If the colluding firms cannot completely deter entry by inefficient newcomers, industry costs will be higher than they would be under competition.

Chapter 12 Grassroots Effort

1. How much of the economy should be left to markets? **The pitfalls of central planning are fundamentally problems of information.** The planners cannot mobilize the knowledge they need for their decision-making. An economy cannot, therefore, be successfully controlled from the top. How is a system of markets able to function with no one in charge? The answer is that markets gather information dispersed among millions, and prices steer the economy.
2. **The strengths and limits of markets.** First, markets' vigor comes from their decentralized nature: they empower people to find creative solutions to problems. Second, for the elaborate exchanges occurring in modern economies, the state is indispensable, providing goods and services that markets would undersupply and acting in the background as market rule-setter and referee. These two are not equal. There are limits to decentralization, but the primary point is that decentralized – that is, market based – decision-making is essential for economic success.
3. Kenneth Arrow and Gerard Debreu (1954) confirmed the internal logical consistency of Smith's and Walras's model of the market economy. The Arrow-Debreu theory identifies certain precise conditions under which individuals' separate decisions add up to a consistent overall outcome. Prices steer the economy, by rising or falling to restore balance whenever there is a shortage or a glut. The economy can be coherently directed by the market's invisible hand.
4. What is sometimes called the wisdom of the market results from the dispersion of decision-making. **Markets make fewer big mistakes than planners.** A market economy works not because forecasts are usually correct but because the consequences of incorrect forecasts are held in check.
5. A still bigger cost of central control would have been **a curbing of innovation.** **The main failure of over-centralized systems is their inability to mobilize local knowledge.** People at ground level often have the best insights into how the system could be improved. The best way to motivate creative people is to give them a stake in their innovations. This means using a decentralized system.

6. **Markets cannot provide everything.** The state must protect its citizens by providing national defense and a police force – public goods, which are nonrivalrous and nonexcludable.
7. There are **upper and lower limits** on the size of a workable state; countries whose governments are outside these bounds have a low standard of living. **Public provision does not necessarily mean public production.** These facilities are sometimes most efficiently produced by the private sector, but their public-good nature calls for the government to help pay for them.
8. Funding roads, bridges, and ports is not the only way the modern state facilitates commerce. The state provides the foundation for market activity, by supplying the legal and regulatory infrastructure, that is, by helping to set the rules of the market game.
9. **Shadow economy.** How to measure it?
 - Survey
 - Compare the nation's annual total expenditure with its total measure income.
 - **Extrapolate from electricity usage.** Total economic activity moves in lock-step with electricity consumption: in most countries, an increase in economic activity of 1% brings an increase in electricity consumption of about 1%. [Schneider and Enste(2000). JEL 38].

Nigeria, Egypt, and Thailand have the world's largest shadow economies, at nearly three-fourths the size of their official national income. In countries such as Peru, the Philippines, Mexico, and Russia, the shadow economy is about half the size of the official economy. In Tanzania, Chile and South Korea it is about a third.

10. The shadow economy numbers are both good news and bad news. On the one hand, the existence of the shadow sector shows it is possible for large amounts of market activity to proceed independently of the state. On the other hand, countries with large amount of shadow activity tend to be poor. The large amount of shadow activity shows that markets can function where the state is not merely absent but even disruptive. Markets can thrive without the state. But the business in it, with few exceptions, are small. They confine their activities to elementary activities like retailing, services, and small-scale manufacturing.

Chapter 13 Managers of Other People's Money

1. A transaction within a firm is subjected, not to the market, but to hierarchical control. How can GM be reasonably productive as planned economies, while Hungary is not? – **the firm's owners have a direct stake in its performance and monitor the managers' decisions. Discipline comes from the product market and financial markets.**

2. **Employees' earnings** –which represent transactions inside the boundaries of firms and other organizations – account for 71% of American's aggregate income. In a market-oriented economy, intrafirm transactions predominate. Large firms play a major role in any modern economy. Firms exist as response to market frictions. Sometimes it is less expensive to run a hierarchy than to use the market. Whether a firm produces its inputs in-house or procures them from other firms depends on the relative costs of each form of transaction.
3. Given that firms are run internally by a kind of central planning, what is there to replace the incentives for efficiency that markets provide?
 - **Private ownership is the primary reason why firms, large or small, operate efficiently.** After 1980, state ownership plummeted world-wide. In low-income countries the output produced by state-owned enterprises fell from 16% of national income to 5%, and in industrialized countries from 9% to 5%. Following privatization, most firms charge their customers lower prices and offer better service than under state ownership. Some firms increased their employment after they were privatized, but layoffs, of workers followed in many cases. Overall, employment rose slightly following privatization (by about 1% on average). Also, productivity grew faster, production costs were lower, and debt was lower.
 - **An organizational invention** devised just before the industrial Revolution was as important for subsequent worldwide economic growth as any engineering invention like steam engine or the cotton loom. This **was the limited liability corporation.** The corporation serves to limit investors' risks. Limited liability and multiple owners mean that the risks carried by any individual investor are attenuated. Limited risk also means limited incentives. Most large firms grant their managers a stake in the firm's performance by offering them stock options and linking the managers' pay to the firm's stock market value. These incentives partially – but only partially – align their interests with the owners'. A study of large US corporations found that divisional managers built slack into their annual budgets by understating expected revenues and overstating costs. The padding, which was lower in years when operating conditions were adverse, averaged 20 to 25% of the divisions' budget.
 - Smith correctly diagnosed the problem of the separation of ownership and control. He failed to anticipate the solution: market forces. **The market system provides checks and balances.** Pressing on the firm from outside, market forces constrain the managers' decision-making and induce them to run the firm efficiently. Discipline comes from both the product markets in which firms sell and the financial markets from which they get capital.
4. **For markets to work well enough to discipline firms, some state action is needed.** Richer countries have larger firms. In the USA, plants with 50 or more employees account for over 80% of total manufacturing employment. In Thailand they account for 30%, and in Indonesia and Ghana, 15%. **Why does small-scale production go together with low national income?** Where labor is cheap and capital is scarce, firms use simple equipment for which a small scale of production

- is economical. The other reason is that poor countries lack the market supporting institutions that enable firms to grow and, if they do grow, to operate efficiently.
5. The main way the government sets the rules of the market game is by writing laws and maintaining the machinery to enforce them. In addition, governments directly oversee economic activity via regulatory agencies.
 6. **Why do we need the extra degree of government involvement in the form of regulation?** The answer is that the law is imperfect, and in some cases regulation works more effectively. Regulation sometimes is needed to supplement the courts – usually not direct regulation of firms’ day-to-day activities but oversight to ensure markets are doing what they are supposed to do. E.g., SEC.

Chapter 14 A New Era of Competition

1. The **Clean Air Act of 1990** brought in **emissions allowances – licenses that allow the holder to emit in one year one ton of sulfur dioxide**. Protecting the environment cannot be left to the free market. Emissions allowances were introduced not to take the government out of pollution control, but to help it control pollution more efficiently. Emissions trading does not mean the market replaces the government; rather, the government is using the market to help it attain its policy goal. The emissions allowances program has been a notable success, more effective than any earlier acid rain program. The amount of pollutants emitted actually fell 30% below the ceiling the government had set. In an elegant twist, environment groups sometimes buy emissions allowances and hold them inactive. Sixth graders at the Glens Falls Middle School in Cleveland, among others, raised money to buy allowances. “It’s been a real launching point for us, to allow individual citizens to get involved and feel like they’ve actually done something for the environment.” The allowances are especially in demand for giving as Christmas presents.
2. **Why can’t the government achieve whatever the emissions allowance market achieves? The key info is held locally.** Each firm is different. It is the firms themselves that best understand their own circumstances, and in particular how much it would cost them to cut their own pollution. Bureaucracy-run pollution controls were hindered by a lack of info. The prices of the allowances surprised most observers, being far lower than expected. Before emissions trading began, the EPA estimated it would cost \$750 to clean up a ton of sulfur dioxide. The electric-power firms claimed it would cost them up to \$1500. the average price at which the allowances actually traded over 1994-1999 was about \$150.
3. **Does the success of emissions trading mean we can leave all pollution problems to the market?** No! first, command and control is still needed in some areas where markets are not workable. Second, even where markets work, as with the control of sulfur dioxide pollution, the government must continue to take the lead, setting the overall ceiling on emissions and monitoring compliance.

4. **California electricity crisis.** In most markets, high prices bring about their own demise, as they attract new producers into the industry, who then push the prices down. **With electricity, however, even in the long run and even with the pull of high prices, supply can expand only slowly to meet demand.** *After deregulation, although the wholesale price at which the utilities bought power was set by the market, the regulators fixed the retail price the utilities could charge their customers.* When wholesale prices shot up, retail prices stayed put. Normal market mechanisms also were prevented from doing their job in a further sense. The regulators required the utilities to buy all power when needed. Long-term supply contracts with generators were prohibited; power could be bought only in the spot market. The ability to buy ahead would have helped ease the day-to-day volatility of the wholesale prices and diminish the generators' peak-time market power. Prices could have been far above generation costs even under a more thoroughgoing reform. Competition by itself cannot always be relied on to hold the price down close to generation costs. The deregulation fell short in retaining retail-price controls and preventing prices from signaling scarcity; it went too far in eliminating restraints on overpricing by the generating companies. The problem was not too much or too little use of markets, but bad market design.
5. The main lesson from California electricity is that no matter how badly deregulation is needed, the details of how it is done matter. Elsewhere, such as in Norway and Australia, electricity markets have been introduced successfully. In those markets, most of the power is traded in long-term contracts, not in the day-ahead market, and retail prices move with generation costs. Moreover, their market designs were not put through the same kind of trials as California's, for electricity was in plentiful supply.
6. The private sector is equally prone to market design mishaps. Trial and error is the usual way for most markets to develop: learning from errors is the chief way of correcting any design flaws.

Chapter 15 Coming Up for Air

1. **Shock therapy in New Zealand:** it was arguably the right choice for New Zealand. The magnitude of the problems justified a radical cure. The main argument against using shock therapy in general – that it hinders the development of needed economic and political institutions – did not apply to New Zealand, for all the institutions were already in place.
2. **Shock therapy in Russia** had three components: the balancing of the government's budget, the immediate decontrol of prices, and the rapid privatization of firms. On new year's Day of 1992, the Russian government abolished price controls on almost all goods (controls remained only on prices of energy and transportation). Between October 1992 and June 1994, state-owned firms were privatized by granting vouchers to citizens. Two-thirds of Russian industry, around 15,000 firms, suddenly became privately owned. The attempt to balance the government's budget began firmly, then faltered, but was eventually somewhat successful. In 1992, inflation was 2500% for

the year. By 1996, inflation was under control, at 22%. Russia's reforms were deeply unpopular. Living standards crashed. National income in 1994, two years into reform, was just over a half what it had been in 1989. There was a disastrous decline in living standards, bringing a drop in life expectancy and an increase in family breakups.

3. Part of the disruption was attributable to the two planks of shock therapy, price liberalization and mass privatization. On the first day of free prices, food prices shot up by 250%. Most salaries did not rise, so suddenly many people found themselves desperately poor. In a normal market, when prices rise, more product comes to be offered for sale. But in Russia of the 1990s, the price rises were followed by a sharp decrease in output. The economy's total production fell 19% in 1992, 12% in 1993 and 15% in 1994. Why?
4. **Russia's newly privatized firms lacked disciplines from shareholders, stock market, customers and competitors.** Many firms were monopolies and they continued to be free from the checks that normally come from competition. Privatization put ownership mostly in the hands of insiders. The incumbent managers were entrenched, and outside shareholders were unable to influence them. The absence of effective bankruptcy laws meant that the ultimate sanction for bad managers was missing; the state continued to bail them out. A further reason for Russia's output drop was that shock therapy shattered the relationships among firms. With reform, firms suddenly became free to seek out better-suited trading partners, but establishing relationships from scratch was not easy. The search for new trading partners took time, during which the firms were reluctant to invest, for they did not know what goods they should produce or for whom. With the market for their output in turmoil, it paid to wait and see. Russia's shock therapy created an institutional vacuum. Private ownership matters, but not enough to produce efficient firms. Also needed are functioning product and financial markets. Shock therapy privatized the firms before the market support they needed had time to develop. It demolished the old institutions and it took years to build the new ones. The reforms outpaced the economy's ability to adjust.
5. **China's reforms:** they were similar to Russia's in one of the three components of shock therapy: keeping a lid on inflation. Where Russia immediately privatized its state firms, China procrastinated. Where Russia freed prices in one dramatic stroke, China freed them by stealth. Instead of privatization, China fostered the formation of new firms. The new firms had a novel organizational structure. Most were not private firms. Mostly located in rural areas, they were run by village governments. Their ownership was vague, and there were no clear rights to residual returns. They had few of the usual instruments of corporate control: no shareholder controls and no threat of takeover. These township and village enterprises turned out to be well adapted to the peculiarities of the transition economy. They did not need access to credit market, because their owners, the village governments, had the power to raise funds locally. They ran efficiently, despite being publicly owned, because they operated in intensely competitive product markets and had to be efficient to survive. The new firms were the main source of China's dynamism under reform.
6. Whereas in Russia the government controlled the transition, or tried to, **in China the government was largely passive. Its main role was to repeal prohibitions: it removed**

the ban on farmers working individual plots, the ban on entrepreneurs forming new firms, and the ban on state firms trading on markets. It left in place the existing mechanisms by which the economy was running, and let people build the new economy around the old. Bottom-up changes drove China's reforms. The new economy arose more from the initiatives of the Chinese people, who built new firms and created new ways of doing business, than from changes imposed by the government. Some top-down changes were needed also; in fact more than what occurred. The government was unduly laggard in acting to correct China's hopelessly inadequate financial and legal systems; undoubtedly some of the growth was based on misallocated investment. Privatization was delayed too long. But what China's success shows is that a transition economy does not have to set everything right all at once.

7. **There are limits to the bottom-up mechanisms.** Property rights need to be secured, for corruption can derail the economy. Furthermore, the bottom-up mechanisms do not work well for large firms. A striking contrast is seen in the transition economies between the success of the start-up firms and the poor performance of the privatized firms (from large state-owned firms). Large firms need the support of market institutions. Adjudicating complex commercial disputes requires a sophisticated legal system, which only the state can supply. For a firm to grow large enough to benefit from economies of scale, it must make large investments that have long-delayed returns. Such investments require legal protection, to prevent the government or other firms from expropriating them. Also, where laws are inadequate, firms tend to deal with firms they know, rather than with strangers, but this limits their range of customers and suppliers, so their growth is constrained. If the economy is to develop, top-down rules are eventually needed, bottom-up mechanisms turned out to work surprisingly well, nevertheless, in supporting transacting in the early stages of transition.

Chapter 16 Antipoverty Warriors

1. Perhaps in affluent countries inequality may be salient, but in poor countries, in most economists' view, poverty is the more pressing concern. Poverty is usually reduced by economic growth. Inequality affects the rate of growth. Countries that have a more equal distribution of income grow faster on average than those with wider income gaps.
2. Investment – broadly defined to include investment in equipment and machinery, in people through education, and in ideas through research and development – is the direct route to growth.
3. Singapore: the primary source of growth was massive investment in physical capital. Singaporeans saved and invested as much as 40% of their income. A further source of growth was investment in people. In 1966, more than half the workforce had no formal education; by 1990 two-thirds had completed secondary education.

4. Investment in machines, people, and ideas is not enough to ensure growth. The investment must be well directed if it is to be productive. Two measures of a country's reliance on markets are its openness to international trade and the degree of development of its financial markets.
5. Small government does not necessarily mean fast growth. Growth is faster in countries that build workable public infrastructure such as roads, railroads, bridges, ports, and telephone and electricity networks. Markets do not automatically bring growth. It is not enough that the government stays out of the economy and just leaves things to markets. The variables that economists have found to be associated with increases in per capita income, to sum up, fall under two headings: *investment and institutions*.