





How economics bolstered power by obscuring it

Michael Perelman

Conventional economics has constructed a powerful ideological system that reinforces the power of capital by providing much of the intellectual firepower of neoliberalism, which has been successful in imposing destructive austerity around the world. Every reasonable demand made by grassroots social forces, such as calling for environmental protection or better working conditions, will be met by a regiment of dogmatic economists, standing ready to charge that such demands are evidence of ignorance of economics, because popular demands would undermine the presumed efficiency of markets. Naturally, the media and corporate funded think tanks will give the economists a powerful megaphone, typically capable of drowning out the messages of the social movements. This paper is written in the hope that historical and contemporary examples of economists' unwarranted support of corporate power might contribute to diminishing the destructive influence of economics in curtailing the progress of social movements.

Giving economic ideology a veneer of science

A combination of historical and current perspectives is useful for confronting three dimensions of power, which will be discussed here, while disregarding the scientific definition of power in terms of physical force. First, social movements apply power to make society better for human beings. Second, artificial

human beings, known as corporations, exercise power to offset social movements in order to give them absolute freedom to do whatever will bring them profits, no matter the social cost. Both sides in this struggle communicate ideas to reinforce their positions. Finally, economists have developed a highly influential intellectual power, in the form of a theoretical toolkit designed to further the interests of business, helping to neutralize any challenges to capital.

To avoid addressing questions of power, conventional economics generally obscures the role of power by portraying the market as an efficient system of voluntary transactions that, taken together, results in market efficiency. In doing so, power is reduced to a metaphor with the power of the market or the power of competition, but corporate power is nowhere to be found. At the same time, economists are quick to decry the dreaded power of unions to challenge the untrammeled powers of business.

Ironically, Adam Smith, while largely responsible for inspiring economics' overemphasis on voluntary transactions, also offered trenchant critiques of business' proclivity to engage in "conspiracy against the public," including the way business wielded power to both extract monopolistic rents and to dominate workers. Since then, many have read Smith selectively, praising his pro-market positions while ignoring his insights about the abuse of business power.

The neoliberal movement, which personifies contemporary economic theory, proposes that every problem has a market solution, but if markets do not offer a ready made solution, a new market can be devised. Of course, not all market activity is voluntary. As far back as 1962, Rachel Carson's *Silent Spring*, gave new energy to the environmental movement by showing how pesticides and other chemicals were wreaking havoc on the environment. Carson's book posed a serious challenge to laissez faire by showing how innocent bystanders are involuntary parties to transactions in which producers of chemicals voluntarily supply products to voluntary customers.

Problems, such as toxic chemicals, or more recently, climate change can, and generally do affect the public, as well as the natural world, yet no simple tweaking of the market offers anything resembling a solution. Economists marginalize such problems by labeling them as externalities, because they fall outside of the market. Substantial government intervention seems to offer the only hope. Doctrinaire laissez faire advocates felt threatened enough by prospect of government intervention that they slimed Carson's work, just as many do today in attacking climate science as a hoax and treating individual climate scientists as intentionally lying to the public.

The lack of a market solution to environmental problems had long troubled conventional economists, although they rarely mentioned them. But by 1960, just two years before Carson published her book, the emerging neoliberal movement found a convenient answer in Ronald Coase's famous article "The Problem of Social Cost." Coase, from the University of Chicago, came up with a market solution to the problem of externalities through voluntary negotiations between the polluter and those adversely affected, leading to agreements about fair compensation from the polluter. This kind of transaction supposedly makes all parties better off. Polluters get their profits while those affected by the pollution get compensation that exceeds the value of the damage inflicted on them.

Coase's market solution offered welcome support to the neoliberals, who were obsessed with the elimination of government regulation in general. George Stigler, a close University of Chicago colleague of Milton Friedman, immediately recognized the ideological implications of Coase's idea, declaring it to be a "theorem," thereby conferring a simple thought experiment with the status of a scientific discovery, which gave pseudo scientific support to the neoliberal project. Coase's work catapulted the Chicago school of economics to the forefront. Within the limited context of economic theory, Coase's suggestion makes sense, but only because of the exclusion of any consideration of power. In practice, Coase's "theorem" is unworkable, because the polluter has no compulsion to negotiate.

Individuals could threaten to sue but the corporation could easily find experts who could undermine any claims to harm. Even worse, to have a case heard before a jury requires proof of legal standing. In the unlikely case of a trial, the victims have to be able to mount a legal team capable of matching the power of the corporation's high priced attorneys. Previously, individuals could sometimes band together in the form of a class action suit, but recent court decisions make that option virtually impossible. The best an individual like me can hope for is the unlikely payment of a modest settlement conditioned on secrecy in order that others will not follow that example.

By way of example, the U.S. judiciary has become increasingly pro business, minimizing the chance of legal redress. For example, three conservative federal judges, Lee Epstein, William M. Landes, and Richard A. Posner, ranked the 36 justices, who served on the Supreme Court from 1946 to 2011, according to the proportion of their pro business votes; all five of the current court's more conservative members were among the top 10. But the study's most striking finding was that the two justices most likely to vote in favor of business interests since 1946 are the most recent conservative additions to the court, Chief Justice Roberts and Justice Samuel A. Alito Jr.

Of course, in a utopian society in which universal consent was required for permitting environmentally destructive investments, all affected parties could possibly arrive at a mutually satisfactory solution, but we do not live in utopia, freed from the undue influence of giant corporations.

Corporations' protection from opposition to their potential environmental damage has won powerful international support in the so called free trade agreements, beloved by both economists and corporations. According to these treaties, national states lose their capacity to place limits on investments, such as toxic waste dump. Any attempt to do so will be met by a legal challenge before a corporate friendly tribunal, which can levy significant fines for a country's illegal efforts to protect the environment and their citizens' health. In short, power becomes tilted ever more against the public interest.

Economics and primitive accumulation

Although economists present capitalism as a system of voluntary transactions, raw power has been exceedingly important in its historical formation. A crucial early step in the evolution of capitalism in Britain was a ruthless practice that Marx called "primitive accumulation". In order for landholders to take advantage of the lucrative market for wool in the Netherlands in the late fifteenth century, they evicted

people who had traditional rights to the land, often violently to make room for sheep. This process escalated with the rise of industry and was extremely important in creating a commercial society. Those who suffered eviction were left without any means of support, thereby populating a pool of extremely cheap labour for anyone who wanted to hire them. Classical political economists' cavalier attitude regarding this early example in abusive exercise of raw power set a precedent for a long tradition of intellectual avoidance of power.

This historical myopia by economists can also be clearly seen in the different interpretations of the Game Laws versus the Corn Laws in Colonial Britain. In the early 17th century, the state allowed the aristocracy to enforce the Game Laws that granted exclusive property rights in wildlife to the King, remnants of feudalism that had long fallen into disuse. This meant people could no longer hunt to feed their families. A commoner's punishment for killing animals was harsh, from execution to incarceration or transportation to Australia, even when the purpose was to prevent the creatures from destroying farm crops.

Besides the significant crop losses that the protected game caused, neo-feudal fox hunts involved riding roughshod through farmers' fields, creating even greater destruction. One might have expected the political economists at the time to have taken notice of the crop losses associated with the Game Laws' and violation of traditional property rights. Yet they remained silent about such abuses.

By contrast, economists (most famously, David Ricardo) strongly objected to the Corn Laws (1815 1845), which levied a tariff on imported grain to increase agricultural profits, even though these tariffs had a much smaller effect than the Game Laws.

What could cause the different treatment of the Corn Laws and the Game Laws? The Game Laws were an important tool of primitive accumulation, preventing self provisioning, thereby forcing people to enter the labour market in order to subsist. This pressure increased the supply of labour and lowered wages. In contrast, the Corn Laws put upward pressure on wages by increasing the cost of food. Seen in the context of coercive power, however, both the abolition of the Corn Laws and the earlier renewed enforcement of the Game Laws served to strengthen capital's position.

Political economists of the time were too concerned with demonstrating the justice of markets to address such obvious abuses of power. However, in their more private writings, diaries and letters, they applauded the use of power to push workers off the land and into wage labour. Contemporary economists generally follow this tradition in presenting the evolution of markets as if they were a purely voluntary phenomenon, beneficial to all.

Land grabs continue around the world to give cheap access for commercial agriculture or new factories without compensation for the displaced, except for the possibility of the meager wages necessary for survival. In Africa, both American hedge funds and Chinese business interests get land for a few pennies per acre. In the United States, local governments invoke eminent domain in order to evict homeowners and renters in order to provide real estate for commercial development. Even so, economists continue to reproduce the myth of voluntary transactions.

The power of expertise

Major policy decisions often turn on which side is able to enlist the most credible experts, including economists. Policy advocates typically take pains to make themselves more attractive as expert witnesses or well paid advocates within neoliberally inclined think tanks. Others get lucrative grants. Once Coase's idea became commonly accepted, his work gave considerable confidence to neoliberals, who could claim scientific grounds for their anti regulatory agenda, both in the courthouse and in the seats of government, while social movement's demands were treated as demonstrations of their economic ignorance, even when backed up by scientific experts.

Corporate public relations operations employ their expertise in destroying the reputations of experts that work for the public interest, even if they have the support of the overwhelming majority of scientific research. The same outfits exaggerate the credentials of their clients' experts, even if their work is generally rejected in the halls of science. In short, scientific evidence becomes irrelevant. Business interests employ supposed experts to protect industries by creating enough doubt to sidetrack unwelcome government actions. The tobacco industry pioneered this strategy of manufacturing doubt, by recruiting purported experts who raised enough doubts about the dangers of smoking to prevent government action for decades. Others have followed this strategy by employing the same public relations firms as the tobacco industry did. Nowhere is this strategy more obvious than in the debates over climate change.

Government regulators also often rely upon experts, whose intentions are not suited to serving the public interest. Frequently, their expertise comes from previous employment in the same industry that they are now charged with regulating. Often after serving for a few years, they can return to a more lucrative position in that industry, which is grateful for their services. One recent example is the Environmental Assessment Impact report released in January 2014 by the State Department, which has authority over the controversial Keystone XL Pipeline, a project to convey environmentally-destructive Canadian tar sands oil. The report found no fault with the project, which is perhaps not surprising when you learn that companies with commercial interests in a more intensive reliance on tar sands happened to be major contributors to the report.

Leading figures in the world of finance frequently move back and forth between business and government. Often those who take government positions are rewarded with responsibilities, based on their presumed expertise, which allows them to make regulations ever more friendly to finance. This has enabled the private financial sector to develop new products, such as risky derivatives and swaps, as well as practices that created the financial meltdown of 2007.

Power and microeconomics

Power enters into microeconomic theory. According to the standard assumptions of conventional microeconomics prices tend to move toward the cost of producing one more unit of output, which excludes fixed costs such as rent or interest, (in the jargon of economics,' marginal costs'). In a small village

economy based on handicrafts, this arrangement might work satisfactorily. But what happens when marginal cost pricing operates in a modern economy in which fixed costs are very high and marginal costs are insignificant, such as in the case of a railroad where adding a few pounds of freight has insignificant costs? Something similar is common throughout modern industries in which production requires massive investment in research or equipment industries such as software, pharmaceuticals, telecommunications, etc. With little thought, one can easily see that with competitive pricing corporations could not cover their fixed costs. Bankruptcy would become common, because marginal cost pricing does not take those prior costs into account.

By the 19th century, the introduction of modern technologies with low marginal costs led to widespread bankruptcies, especially in the capital intensive railroad industry. Other industries throughout the United States with low marginal costs suffered a similar fate, leading to what became known at the time as the Great Depression, which began in 1873.²

Most economists, indoctrinated with a theory of market efficiency, had little to say about this problem. However, at the time many of the most promising economists went to study in Germany. These German trained economists, who returned to the United States, had no problem identifying the nature of these bankruptcies, in part because they were steeped in a tradition similar to that which Karl Marx experienced. Given this training, these economists were discouraged by the irrelevance of much of the merchant oriented simplicity of conventional economics. To promote their more holistic Germanic orientation, they formed the American Economic Association.

Given their more realistic understanding of economics, these economists recognized the need for some kind of countervailing power to blunt the destructive power of competition. They advocated trusts, cartels, and monopolies as a way to give corporations enough power to prevent the market from self destructing. Nonetheless, perhaps motivated by careerism, the leaders of this new organization then turned around and wrote textbooks praising the wonders of perfect competition. John Bates Clark was the most egregious example of this duplicitous form of economics.

In effect, these economists carried on two separate dialogues to serve the interests of the rich and the powerful. One recommended blunting the power of market forces, which would protect industries with high fixed costs from competitive pricing. The other dialogue insisted that unregulated markets were both just and efficient; that the rising militancy of the working class was misguided. According to their "scientific" theory of economics, wages were a mutually beneficial transaction in which workers' meager earnings were their just rewards. In short, while the power of competition should be allowed to collapse the level of wages, the state should take measures to increase profits by weakening the power of competition in product markets.

Power and monetary theory

Monetary theory concentrates on the effect of changes in the money supply on the respective levels of economic activity and inflation (often a codeword for wages). Power was once briefly considered as a

factor in monetary policy in studies coming out of Latin America around the 1960s. The Latin American experience suggested that inflation reflected the response of the state to a stalemate in which it was incapable of simultaneously satisfying the demands of both powerful business interests and militant labour organizations. To appease both powerful interest blocks, the state adopted policies that created significant inflation.

In conventional economics today, monetary policy is treated as a purely technical matter, unrelated to power. The stated goal of monetary policy is simply to ensure price stability, which can allow the economy to follow its natural equilibrium path of economic growth and stability, an unrealistic vision to say the least.

While wage repression is a high priority, the outlandish fees that banks and credit card companies charge do not even merit a comment. Increasing prices of financial assets (bubbles) appear as a sign of economic health; however, wages must, by all means, be kept in check. The disconnect between the need to hold down wages and the lack of concern about other kinds of prices suggests that concern about price stability can be nothing more than a cover for a crass exercise in class warfare.

In 1979, shortly after taking the reins at the Federal Reserve, Paul Volcker voiced his determination to hold inflation in check. At first, many powerful people doubted whether Volcker would be willing to follow through with his plans, which were sure to create enormous casualties. A front page story in the *Wall Street Journal*, entitled, "Monetary Medicine: Fed's Cure is Likely to Hurt in Short Run by Depressing Economy, Analysts Say" expressed this sentiment. The paper noted:

"Among those who are skeptical that the Fed will really stick to an aggregate target is Alan Greenspan ... who questions whether, if unemployment begins to climb significantly, monetary authorities will have the fortitude to stick to the new policy."

Around this time possibly in response to the article Volcker invited the editor of the *Wall Street Journal* editorial page, along with his deputy, and the features editor, to a lunch at the New York branch bank of the Federal Reserve. Volcker asked his guests, "When there's blood all over the floor, will you guys still support me?" The deputy editor responded affirmatively, later proudly recollecting, "There was blood indeed, as overextended Latin borrowers and American farmers were caught out by a return to a sound dollar. But we held fast." 3

Volcker's militaristic analogy (expressed privately to the staff of the *Wall Street Journal*) let the cat out of the bag. The effort to tame inflation was, in reality, little more than an exercise in class war. In fact, Volcker himself had intended to spill blood. Volcker also visually expressed his intentions as Greider reports:

"[Volcker] carried in his pocket a little card on which he kept track of the latest wage settlements by major labour unions. From time to time, he called various people around the country and took soundings on the status of current contract negotiations. What is the UAW asking for? What does organized labour think? Volcker wanted wages to fall, the faster the better. In crude terms, the Fed was determined to break labour."

Toward this end, Volcker restricted the money supply, making interest rates soar so extremely that the United States experienced what was became the worst economic downturn since the Great Depression. Volcker only let up when the collateral damage became too great. Mexico, which owed a great deal of money to U.S. banks, seemed to be on the brink of bankruptcy, threatening the U.S. banking system.

Later, Michael Mussa, director of the Department of Research at the International Monetary Fund, looked back fondly at Volcker's accomplishment. Mussa continued the military analogy, praising Volcker's victory in vanquishing "the demon of inflation".

"The Federal Reserve had to show that when faced with the painful choice between maintaining a tight monetary policy to fight inflation and easing monetary policy to combat recession, it would choose to fight inflation. In other words to establish its credibility, the Federal Reserve had to demonstrate its willingness to spill blood, lots of blood, other people's blood."⁵

What would the response have been if unions had gloated about using their power to spill capitalists' blood in the streets? Even if unions merely suggested the imposition of serious hardships on the capitalists, an angry response would have been followed by strong anti labour measures. Instead, monetary policy continues to appear as a bloodless technological policy to ensure the smooth operation of voluntary markets. Power has no place in such matters.

By the end of the 20th century, the chairman of the Federal Reserve, Alan Greenspan, was confident that the war was already won. The Fed need not take any aggressive actions. Greenspan believed that the psychological state of the workers, what George Orwell called "the haunting terror of unemployment", meant that the threat of increasing wages had been annihilated. As Greenspan testified before Congress, in a language that was legendary for its obscurity: "The rate of pay increase still was markedly less than historical relationships with labour market conditions would have predicted. Atypical restraint on compensation increases has been evident for a few years now and appears to be mainly the consequence of greater worker insecurity".6

Greenspan was correct in his assessment of the situation facing workers. He had numbers to back him up, reporting:

"As recently as 1981, in the depths of a recession, International Survey Research found twelve percent of workers fearful of losing their jobs. In today's tightest labour market in two generations, the same organization has recently found thirty seven percent concerned about job loss." ⁷

With wages held in check while the economy boomed, inequality soared during the late 1990s. In 1997, responding to a question from Representative Patrick Kennedy, Greenspan, who made a science of public evasiveness, blamed the resulting growth in inequality on technology and education, excusing his own contribution:

"It is a development which I feel uncomfortable with. There is nothing monetary policy can do to address that, and it is outside the scope, so far as I am concerned, of the issues with which we deal."8

Power, labour economics and crisis

In order to emphasize the voluntary nature of markets, economists have generally gone out of their way to create a theory that excludes all considerations of work, workers, and working conditions Instead, economics represents the job market (suggesting that labour is just another commodity) as a voluntary arrangement. Two highly respected economists, Alchian and Demsetz, one of whom was the instructor in my freshman class in economics, compared the relation between employer and employee to that between shopper and grocer:

"The firm has ... no power of fiat, no authority, no disciplinary action any different in the slightest degree from ordinary market contracting between any two people He [an employer] can fire or sue, just as I can fire my grocer by stopping purchases from him or sue him for delivering faulty products... To speak of managing, directing, or assigning workers to various tasks is a deceptive way of noting that the employer continually is involved in renegotiation of contracts on terms that must be acceptable to both parties. Telling an employee to type this letter rather than to file that document is like my telling a grocer to sell me this brand of tuna rather than that brand of bread."9

The main benefit of this exclusion is that it conveniently eliminates a major area of power from the discipline of economics, even if this practice is exactly what "good" economists are supposed to do. The problem is that "good" economists ensure that their approach obscures any negative effects of markets.

That cover, however, is incapable of hiding the intractable problems of capitalism. Most obviously crises repeatedly occur. Once the damage becomes obvious, power may briefly enter into the picture. After the crisis subsides, power quickly returns to its previous state of invisibility. What is most remarkable is that a clear consideration of mainstream economic theory should be enough to alert economists to the inherent contradictions in their view of the capitalist economy. Such insight might be capable of moderating some of the more destructive results of untrammeled capitalism.

Business power over workers and consumers

Although the use of power to take advantage of workers is important, power under capitalism has numerous dimensions. For example, Schumpeter made the case that large firms often act as corespectors; that is, they both compete and cooperate. Such corporate cooperation may be intended to wield power against suppliers, distributors, the public, or even competitors, which are not involved in the collusion.

Of course, businesses also wield power on their own. For example, business does everything possible to take advantage of consumers without losing too many customers. To avoid unnecessary controversy, I will ignore the use of advertising that saturates capitalist society. Although the sophisticated use of art, demographics, and psychology to control consumers' minds may be seen as an exercise in power, I will not make that case here.

One could also ignore the requirement that consumers sign agreements before consummating a purchase as an exercise in power; even though such agreements often involve the purchasers waving any rights to sue the sellers.

Classifying the seemingly arbitrary imposition of fees, which have no relationship to business costs, as exercises in power would seem to be less controversial an example, especially because the customer may not even be aware of the possibility of such fees.

The power over consumers is not unrelated to the power over workers. In the early 19th century, economists, such as Simon Patten, were explaining to workers that they should see themselves as consumers rather than as workers. This tactic made perfectly good sense for capital because workers, who laboured side by side with other workers, were more likely to feel some sense of solidarity with each other. In contrast, consumption is an individualistic activity. Taken to extremes, consumers can even compete with each other in their consumption.

Competitive business power

Businesses also use raw power to gain a competitive edge over other businesses. Economists ignore such use of power, emphasizing the benign consequences of competition: lower prices, improved quality, and even entirely new products.

Yet competition also has a dark side. The earlier discussion of the macroeconomic use of power to affect the level of wages is paralleled by a much more direct, microeconomic application of raw power in which business attempts to lower wages and intensify work. In business to business competition, power is used to hobble competitors. Corporate chains will choose to open outlets strategically in order to stymie competitors' expected business strategies.

Businesses also engage in predatory pricing, meaning that they lower prices to a level that drives competitors out of business. Once the competition disappears, the predator can charge prices that take advantage of consumers who are deprived of alternatives.

One of the most effective competitive measures is to take advantage of the legal structure of intellectual property. Corporations sue one another in order to prevent them from carrying on business of one kind or another. Presently, companies are spending billions of dollars for the patents owned by defunct companies. They intend to use them either to sue other companies or defend themselves when other companies take them to court. While textbooks describe the beneficial results of competition, this sort of deadweight loss goes unmentioned. In the end, consumers will bear the cost of all this exercise in power.

Power is a factor in the relationship between businesses and their suppliers or distributors. A classic example is the relationship between Vlasic Pickles and Walmart. The boutique pickle company wanted to take advantage of the marketing scope of Walmart. The giant retailer, however, made increasingly difficult demands of Vlasic, which destroyed its reputation as a premium brand. For example, Walmart

demanded that the pickles be packaged in gallon jars. Similarly, Charles Kernaghan has documented the damage done when Walmart demands increasingly low prices from its sweatshop suppliers, who have no choice but to squeeze more out of the young girls who are already working in subhuman conditions.

In other cases, power lies with the producer rather than the distributor, imposing conditions on the distributor. In the digital world, hardware producers can configure products in ways that prevent people from using materials from competing providers.

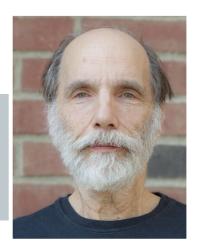
Conclusion

What this paper reveals is the existence of abusive economic power, which requires a sequence of recognition and understanding as well as movements well organized enough to assure a decent society. Understanding the nature of power and how economists have managed to invisibly apply their discipline to shore up the structures of capital is very important in pushing back.

Economists consistently have upheld the power of elites. They have done this by advocating policies by virtue of their alleged expertise as we saw in the Keystone Pipeline but also by coldly taking the side of elites as we saw in the case of Volcker's willingness to sacrifice working families to push through monetary stability. But the main way they have done this is by ignoring or obscuring power, giving economics a veneer of science, in which the impact on people and the environment is hidden from public view.

Unfortunately the fact that this discussion would not be possible in most North American venues brings us to another dimension of power. As an economist, I am sensitive to the fact that radical analysis or curiosity about the exercise of power has been virtually banned from the discipline. Of course, this systematic exclusion is, in itself, an inexcusable exercise of power.

Michael Perelman is an American economist and economic historian, currently professor of economics at California State University, Chico. Perelman has written 19 books, including Railroading Economics, Manufacturing Discontent, The Perverse Economy, and The Invention of Capitalism.



Endnotes

- 1 Coase, Ronald H. 1960. "The Problem of Social Cost." Journal of Law and Economics, Vol. 3 (October) pp. 1-44
- 2 Perelman, Michael. 2006. Railroading Economics: The Creation of the Free Market Mythology (New York: Monthly Review Press).
- 3 Melloan, George. 2003. "Some Reflections on my 32 Years with Bartley." Wall Street Journal (16 December).
- 4 Greider, William. 1987. Secrets of the Temple (New York: Simon and Schuster).
- 5 Mussa, Michael. 1994. "U.S. Monetary Policy in the 1980s." in Martin Feldstein, ed. American Economic Policy in the 1980s (Chicago: University of Chicago Press, 1994): pp. 81-145.
- 6 Greenspan, Alan. 1997a. "Testimony Before the Subcommittee on Domestic and International Monetary Policy of the Committee on Banking and Financial Services House of Representatives (5 March).http://commdocs.house.gov/committees/bank/hba38677.000/hba38677_0f.htm
- 7 Greenspan, Alan. 1997b. "Statement Before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate (26 February)." Federal Reserve Bulletin, Vol. 83, No. 4 (April): pp. 254-59.
- 8 Greenspan, Alan 1999. "The Interaction of Education and Economic Change: Address to the 81st Annual Meeting of the American Council on Education (Washington, D.C., February 16).
- 9 Alchian, Armen A. and Demsetz, Harold. 1972. "Production, Information Costs, and Economic Organization." American Economic Review, Vol. 62, No. 5 (December) pp. 777 96.