

Economic Doctrines and Approaches to Antitrust

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The key to unraveling the antitrust riddle lies in disentangling differences among the fundamental economics doctrines underlying the disparate views towards antitrust. These differences reflect diverging views not only on how the economy works, but also on what the main goals or priorities for the economy should be.

There is considerable disagreement over optimal antitrust policy.¹ Some propose a weak role for antitrust authorities, others a strong role. These differences don't stem principally from politics, in the sense of different interests expressing different views. Rather, they stem from differences in the overall antitrust doctrine held by regulators, other policymakers, scholars and advocates. In fact, at least four separate schools of antitrust philosophy can be identified, each reflecting a different core economic doctrine. Recognizing that virtually all antitrust analysis and opinion emanates from one of these four well-defined schools of thought should help policymakers better understand issues of competition and hopefully make better decisions.

This report lays out the four dominant economic doctrines influencing positions on antitrust: conservative neoclassical economics and in the context of antitrust, its analogue the Chicago school; liberal neoclassical economics and the post-Chicago school; liberal neo-Keynesian economics and the populist school of antitrust; and innovation economics and the "innovation school." It then examines the four schools' approaches to antitrust issues, including merger and monopoly, collusion, and pricing. Finally, it examines how different approaches to antitrust by different nations (and multinational regions like the EU) stem from the different antitrust doctrines of policymakers.

The report argues that the three conventional doctrines (Chicago, post-Chicago, and populist) are inadequate guides to effective antitrust policy in the twenty-first century, in part because they do not adequately incorporate dynamic factors and innovation.² As Hart

notes, “interest in technological innovation among antitrust policy makers is sporadic and relatively rare over the long run.”³ The innovation school of antitrust attempts to remedy that and promises to be a more effective guide for competition policy in the twenty-first century.

ECONOMICS AND ANTITRUST: SCIENCE OR DOCTRINES?

Many economists like to portray their field as a science, with “economists” serving as the sole arbiters of economic truth. In fact, economics has much in common with philosophy – different people have different doctrines. As Schumpeter once stated, “the majority of economists”... “are ready enough to admit its [ideologies] presence, but like Marx, they find it only in others and never in themselves. They do not admit that it is an inescapable curse and vitiates economics to its core.”⁴

As such, when considering economic issues it is important to realize that much of what appears to be objective theorizing and unbiased empirical analysis is, in fact, deeply shaped by the doctrine of the economist. Economists’ and policy makers’ beliefs about what policy works best for the economy, including their beliefs about the appropriate approach to antitrust, are not simply independent thoughts applied anew to each situation; rather such beliefs constitute and are a reflection of coherent world views or doctrines, which in turn, profoundly shape how they view the economy, what they see as important and not important, and most importantly, what they believe is correct public policy and what is not.

Moreover, it’s not just Ph.D. economists working at the Federal Reserve, on Congressional committees, or in think tanks that subscribe to particular economics doctrines. Virtually all policymakers involved in economic policy subscribe to a particular economics doctrine, even if they may not be aware of which it is. Indeed, as John Maynard Keynes himself once stated, “Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist.” These economic doctrines guide the thinking and deliberations of practical men (and women) and help them make sense of a complex, rapidly-changing economy with limited data and knowledge.

Because antitrust at its heart involves the application of legal theory and analysis to economic problems, it should not be surprising that economic doctrines shape approaches to antitrust. As Caulkins notes, “Legal standards are informed by economics, moreover, so as economics evolves the law may evolve with it.”⁵

In fact, while many antitrust scholars prefer to portray the field as a scientific one based on objective analysis and careful reason, some scholars have argued that antitrust has been more based on core values and doctrines, and that these significantly influence views of antitrust issues (such as monopolization, vertical arrangements, and so forth) and particular cases. As Page notes, there has long been tension within antitrust between two views: what he calls the intentional vision and the evolutionary vision.⁶ The intentional vision – grounded in the Keynesian economic doctrine – views the market as a mechanism within which powerful interests can coerce consumers, labor, and small businesses. Here, antitrust is seen as a tool for fairness, distribution and political freedom.⁷ In this view, Page notes,

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market structures consequently tend toward monopoly and because of this should be corrected by active government intervention.

In contrast, the “evolutionary vision” – grounded in the neoclassical economics doctrine – views the market, framed solely by common law rules of property and contract, as a mechanism for facilitating free exchanges among countless individuals in the pursuit of their best interests. Markets, in this vision, will destroy monopoly without government intervention. Page goes on to argue that, “The influence of versions of these ideologies is apparent throughout antitrust history”... “the 1890 Sherman Act embodied a legislative compromise between these two visions. This compromise was not a settlement between opposing identifiable factions in Congress, but rather a synthesis of elements of opposing world views.”⁸

Ultimately, in the absence of strong empirical evidence, debates over the appropriate approach to antitrust boil down to ideology. As Jacobs notes, “To the question of why refrain (or intervene), Chicagoans would claim that, for the most part, markets function efficiently and courts do not. Post-Chicagoans would argue precisely the opposite”... “[both] their theses rest on unproven beliefs about markets and government.” He goes on to argue, “At bottom, the debate between Chicago and post-Chicago economists implicates contending articles of political faith. Although the disputants fail to acknowledge it, the absence of empirical proof about the efficiency effects of many business practices, the competitive consequences of large firm size, the proclivity of firms to collude, and the efficiency of government intervention has not only retarded the emergence of clear answers to the questions under debate, but as also obscured the very nature of the debate.”⁹

In 1988, Audretsch wrote “discordance is alive and well in antitrust.”¹⁰ Almost a quarter of a century later, little has changed. But few antitrust scholars or practitioners want to ground their work on the shifting sands of ideology. Rather, holders of different doctrines seek to claim sole universality and truth. As Waller argues, “Typically each side searches and researches a well-worn body of case law and legislative history for undiscovered clues concerning the intent of various Congresses that passed the antitrust statutes or other previously undetected nuggets that support the normative vision of the commentator.”¹¹ Indeed, he notes that antitrust is a “social, economic, and political construct that takes on different legal understandings in different contexts and at different historical moments.”¹² He goes on to state that “Antitrust law will continue to change as the dominant economic and political discourse of the United States changes.”¹³

Because of this it is often difficult to determine which camp is right in antitrust disputes. As Jacobs notes, “Ironically, far from having marginalized the role of value choice in antitrust discourse, the ascendancy of economic models underscores its enduring importance.”¹⁴ This is in large part because all doctrines rely on arguments, sets of facts and interpretations that cannot be directly rebutted. Each inevitably draws upon political assumptions about the workings of markets and firms and the proper role of government. This suggests that for antitrust policy to effectively promote societal interest, participants need to acknowledge that the issues are often empirically and methodologically difficult to resolve. They should seek a better understanding of the choices and tradeoffs involved in

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COMPETING ECONOMICS DOCTRINES

In order to make sense of the vigorous, ongoing debates over antitrust, it is important to understand the doctrines underlying different positions. And since much of antitrust is about economics, it is important to first understand that different and competing antitrust doctrines stem from differences between economic doctrines more broadly. There are three prevailing economics doctrines: (1) conservative neoclassical (often called “supply-side economics”); (2) liberal neoclassical, sometimes called “Rubinomics,” referring to the policies of President Bill Clinton’s Secretary of the Treasury Robert Rubin (although perhaps it should now be named “Summernomics,” after Rubin’s Deputy at Treasury Larry Summers, who is now head of the National Economic Council for President Obama); and (3) neo-Keynesian. In the last decade, however, a small but growing share of economists began arguing that the conventional doctrines are fundamentally limited and that a new economic doctrine – innovation economics – is a better guide to policy. Each of the three prevailing doctrines has its own particular limitations that in turn influence antitrust doctrine.

Conservative and Liberal Neoclassical Economics

A core principle of both conservative and liberal neoclassical economics is that the policy priority should be to maximize allocative efficiency. Allocative efficiency refers to the allocation of resources in such a way that maximizes the net benefit attained through their use; and the quantity of goods produced is that which is most beneficial to society. A market economy characterized by allocative efficiency is one in which scarce goods and services are consumed on the basis of the prices consumers are willing to pay for them, and produced on the basis of marginal costs equaling the prices charged for them. Neoclassical economists believe economic welfare is almost always maximized if actors in competitive markets set prices and if policy avoids distorting these prices. In fact, neoclassical economists spend much of their lives defending and trying to preserve what they consider this utopian state of market affairs. For according to them any violation of this principle leads to “deadweight loss” – a loss of economic efficiency that occurs when people buy too much of one product (if it is priced lower than it costs, for example because of preferential tax incentives) or buy too little of a product (if it is priced higher than cost and a market-clearing profit). This is why antitrust that is guided by the neoclassical doctrine focuses so much on static allocation and the impact of market power on prices and efficient allocation, rather than on productivity or innovation.

Of course, no economy is ever characterized exclusively by allocative efficiency. However, neoclassicalists see the economy as tending towards an equilibrium that at least approaches allocative efficiency. The neoclassical doctrine sees the economy simply as a large market of goods and services that is generally in equilibrium and usually best left to itself. Equilibrium occurs when a market price is established through competition such that the amount of goods or services sought by buyers is equal to the amount of goods or services produced by sellers. Because they believe that the economy tends toward equilibrium,

neoclassicists believe that the main task of economic policy is simply to reduce artificial barriers and impediments to market equilibrium, particularly by ensuring that prices are aligned with costs. As applied to antitrust doctrine, this means that the focus tends to be on short-term immediate impacts of firm actions, rather than on longer-term ones with more complex implications.

Neoclassical economics also holds that individuals act in response to incentives to rationally maximize their own self-interest and that individuals' pursuit of their own self-interest generates the public interest. Indeed, according to Adam Smith, the individual who "intends only his own gain" will, in the course of maximizing his needs, be "led by an invisible hand to promote" ... "the public interest."

Finally, as noted above, neoclassical economics also holds that economics is a science — akin to physics — where the laws of the universe work the same in all places and at all times. Thus for them, antitrust policy should remain largely constant over time and space.

Although conservative and liberal neoclassicalists agree on much, they differ in some important ways. In general, conservative neoclassicalists are less concerned with fairness, generally view markets as not prone to failure, and are less willing to assign roles to government to intervene. Liberal neoclassicalists are generally more concerned with fairness, see market failures as more common (although compared to Keynesians and innovation economists, they still don't see many market failures), and are more willing to support government intervention, even though they often think intervention harms growth.

Neo-Keynesian Economics

The third major doctrine is based on Keynesian economics, named after British economist John Maynard Keynes. Keynesianism gained wide acceptance after World War II and was the dominant economic doctrine in the United States until the 1970s. In the economic doldrums of the mid-1970s, when conservatives and many moderates moved to replace Keynesian economic thinking with neoclassical economics, many liberals remained firmly committed to the Keynesian economic doctrine. Even today, as the economy has become more global, dynamic, and technology-driven, a large group of liberal "neo-Keynesians" — so called because they have attempted to revise Keynes' ideas in response to new economic conditions and new research — continue to hold on to the Keynesian doctrine.

Neo-Keynesians hold that demand for goods and services — coming from business investment, government spending, and consumer spending — drives growth. Because of their focus on aggregate demand, many neo-Keynesian economic policy prescriptions revolve around increased government spending to keep the economy at full employment, and in the case of antitrust, to ensure high levels of competition to keep short-term prices low, in part to stimulate consumer demand.

Neo-Keynesians also place a high policy priority on an equitable distribution of income and wealth, which they see as leading to greater consumption, which in turn leads to greater economic growth. Neo-Keynesians see most economic issues as boiling down to a question of who gets the benefits: working people or wealthy individuals and corporations.

Moreover, they see little that government can do to directly spur more growth (and conversely there is little government can do to harm growth), other than ensure high levels of aggregate demand. Consequently, neo-Keynesians — even more than liberal neoclassicalists — focus on ensuring that the fruits of economic growth are distributed fairly.

Innovation Economics

Finally, a new economics doctrine — innovation economics — has emerged in the last decade through the work of a wide range of scholars. Unlike the three prevailing economics doctrines, innovation economics postulates that innovation (the development and adoption of new products, processes, and business models) drives growth. As a result, it makes an explicit effort to understand and model those forces and factors conducive to innovative activity, seeing such advances as a result of intentional activities by economic actors, including government.

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In contrast to the other doctrines, innovation economics holds that the policy priority is long-term economic growth and that the major drivers of growth are productive efficiency (the ability of organizations to reorganize production in ways that lead to the most amount of output with the fewest inputs, including labor inputs) and adaptive efficiency (the ability of economies and institutions to change over time to respond to successive new situations, in part by developing and adopting technological innovations). If the focus in neoclassical economics is “the study of how societies use scarce resources to produce valuable commodities and distribute them among different people,” the focus in innovation economics is “the study of how societies create new forms of production, products, and business models to expand wealth and quality of life.”

In contrast to neoclassical economics, which is focused on getting the price signals right to maximize the efficient allocation of scarce resources, innovation economics is focused on spurring economic actors — from the individual, to the organization or firm, and to broader levels, such as industries, cities, and even entire nations — to be take actions to be more productive and innovative. From the standpoint of innovation economists, if policies to encourage innovation “distort” price signals and result in some minor “deadweight” loss to the economy, so be it, because losses to allocative efficiency are almost always minor compared to the significant gains from increased productive and adaptive efficiency. As such, an approach to antitrust based on innovation economics would place more weight on the impacts of actions in the marketplace on productivity and innovation, and relatively less on short-term price effects, even if they “distort” market allocation.

Innovation economics also holds that although there is equilibrium in some markets at some times, in a growing share of markets in the new knowledge-based economy, equilibrium is a fleeting moment at best. Markets are constantly roiled by entrepreneurial entry, disruptive technologies, political and social upheavals, changes in trade patterns, and more, never settling down into equilibrium. The lack of equilibrium is especially common to industries characterized by higher levels of change and innovation. Moreover, innovation economists believe that market disequilibrium is responsible not for economic inefficiency but for growth and progress. As such, an antitrust approach based on innovation

economics would pay more attention to potential dynamic and disruptive effects in the marketplace and not just seek to ensure the “right” result in a static context today.

Innovation economics also holds that individuals and firms are not the rational maximizers described by neoclassical economics. Rationality has generally been understood to involve consistency across decision making based on measurable calculations. Decisions involving risk, where outcomes and their associated probabilities are known, can be made rationally. On the other hand, innovative activity, particularly if it involves a high degree of novelty, typically involves uncertainty, where the outcomes and their associated probabilities are not known at all, rather than risk, where the outcomes are known with a calculable probability. As a result of such uncertainty, innovative efforts will meet with many failures, as well as some great successes.

When the economy is characterized by uncertainty, price signals alone are not the sole or even the best guide to decision making. As we have so clearly seen in the run up to the financial crisis, individuals and organizations are often “irrational.”

Innovation economics also holds that effective economies entail more than just atomistic competition among firms. Rather, innovation and growth often entail a coordination challenge that competing firms alone cannot often manage. Innovation economist Allan Naes Gjerding has observed that although neoclassical economics doctrine sees the market mechanism as the most effective way of coordinating economic activities, “Innovation economics argues that the market must be endowed with inter-organizational arrangements in order to achieve coordinative efficiency in cases where there is not complete knowledge about the characteristics of new products and processes.”¹⁵ As such, an approach to antitrust based on innovation economics would be more open to seeing the benefits of inter-firm collaborative activity.

Finally, innovation economics, rather than being a theory that can be applied to all situations for all time (for example, have markets set prices), is based on a set of practical guidelines that change depending on the context, including the industry, the era, and the nation. In this sense, any antitrust philosophy should be flexible and evolving.

COMPETING ANTITRUST DOCTRINES

As noted above, because antitrust issues are fundamentally informed by economics, it should come as no surprise that the economic doctrines held by antitrust experts significantly shape their approach to antitrust. Each of the four economics doctrines has an analogue and corresponding antitrust doctrine.

Table 1: AntiTrust Doctrines

	POPULIST	CHICAGO	POST-CHICAGO	INNOVATION
Major Goal	Fairness for consumers	Allocation efficiency	Allocation efficiency	Innovation, productivity, and global-competitiveness
Temporal focus	Short-term	Short-term	Short-term	Longer-term
Scope of competition	National	Irrelevant	National	Global
View of Inter-firm Collaboration	Suspect as anticompetitive collusion	Okay, except for price fixing and other egregious practices	Suspect as anticompetitive collusion	Can be a way for firms to address collective action challenges
Source of market power and rule	Unfair and exclusionary practices (per se exclusions)	Firms' superior performance, or government interference (rule of reason)	Unfair and exclusionary practices, natural monopoly (both per-se and rule of reason)	Unfair practices, superior firm performance, and natural monopoly (mostly rule of reason)
Barriers to entry	High	Low or non-existent	Often moderate or high	Depends on the industry, but innovation can spur entry and transformation
Effectiveness of government intervention	High	Low	High	Varies
Concern with buyer power	High	Low	Moderate	Low
Predatory pricing	Likely	Unlikely	Likely	Case by case
Supranormal profits as evidence of market power	Yes	Yes	Yes	Depends
Universality of the doctrine	High	High	Moderate	Low – differs by place, time and industry.

The Populist Doctrine

As innovation policy scholar David Hart argues, in the formative period from the Sherman Act to the New Deal, antitrust was characterized by the establishment of judicial supremacy and laissez-faire thinking.¹⁶ He notes, “The Act is perhaps best read as an effort to recreate the norms of self-governing markets under the watchful eye (and perhaps iron fist) of the Department of Justice and the Federal Courts, without prejudging the specific organizational forms that would evolve in those markets or worrying much about their consequences.”¹⁷ As Page argues, “The goal of government intervention [was] the restoration of a competitive market rather than the establishment of fair outcomes.”¹⁸

However, with the Great Depression, the emergence of the New Deal, and the rise of Keynesian economics, an alternative approach to antitrust became dominant — what Page terms the “intentional vision” and what is referred to here as the populist doctrine. Indeed, the Roosevelt Administration’s Justice Department took a much more interventionist approach to antitrust, and in particular focused on preserving small competitors and insulating them from “coercion” by their suppliers and from competition from larger firms. The Supreme Court at the time, influenced by the Roosevelt appointments, began to adopt this general view. Beginning with the tenure of Thurman Arnold as Assistant Attorney General, the Antitrust Division began an ambitious enforcement program aimed, in part, at changing the law to reflect a different understanding of markets. One area of special emphasis was distributional restraints. In an era when larger chain stores were emerging, Arnold believed big business was choking off the channels of distribution by coercive measures that undermined the freedom of action of independent dealers. A majority in Congress held this view as well, as evidenced by the passage of the Robinson-Patman Act of 1936, which attempted to protect small businesses from discriminatory pricing by their suppliers.

Hart notes that this tradition continued into the 1940s and through the 1970s, and was characterized by efforts to “establish market structures for ideal performance.”¹⁹ After WWII, large national, and in many cases multinational corporations emerged and in many industries gained considerable market share. As such, there was a growing concern among holders of the populist antitrust doctrine that, in some cases and some industries, firms had become too powerful and too concentrated. These large firms now came to be seen as retarding entry and innovation rather than driving growth (the pre-Depression view). The focus shifted from protecting small firms to policing “oligopolies.” Because of this, the court was more willing to intervene in relationship to vertical restraints.

Case law reflected the dominance of this doctrine. In *Brown Shoe Co. vs. the United States*, for example, the court declared that Congress intended the Clayton act “to promote competition through the protection of viable, small, locally owned businesses.”²⁰ Likewise, the *United States vs. Von’s Grocery Co.* case in 1966 rejected a merger that would have produced a firm with just 7.5 percent of the relevant market, citing “Threatening trends toward concentration.”²¹ Such a policy sometimes prevented firms from achieving efficiencies of scale. Indeed, the post-war approach could be summed up as: “big is bad, small is good.” The high water mark of concern about concentration was the 1968 submission of the “Neal Report,” a task force report commissioned by President Lyndon

Johnson.²² It recommended enactment of a “Concentrated Industries Act” and a “Merger Act” which would mandate deconcentration of any “oligopoly industry” and limit conglomerate mergers.

At a scholarly level, this populist approach to antitrust became known as the Harvard structure-conduct-performance paradigm. This view, best characterized by Kaysen and Turner, was that market power per se is harmful, and therefore should be illegal. The focus of analysis was on market structure rather than on business conduct as the source of adverse economic performance. In other words, markets in which single or few firms controlled more than a certain percent of production were automatically suspect. Indeed, the holders of the populist doctrine continue to see large firms and concentrated industries as leading to allocative inefficiency (and harm to consumers, small businesses and others).

Because they argue that market forces are insufficient to challenge the entrenched power of a dominant firm, the populists emphasize structuralist solutions, such as aggressive merger enforcement and the breakup of large firms.²³ Even George Stigler, who subsequently abandoned this school, was sympathetic with the structuralist view when he wrote, “An industry which does not have a competitive structure will not have competitive behavior.”²⁴ The populist doctrine may have made a certain amount of sense at the time, when the economy was national in scope and dominated by large firms in commodity type industries with little dynamism and entry. But the economy is very different today.

Over the past three decades there has been considerable academic critique of the populist position. Scholars have pointed to industries that have more structures, but are intensely competitive. As a result, the populist school’s position has evolved into a wider concern incorporating exclusionary conduct — business behavior that may create market power where it otherwise would not exist. In this new populist school, an oligopolistic market structure alone may not be sufficient to enable supranormal profits. Rather, it may require exclusionary conduct, including creating artificial barriers to entry.

While populists hold that allocative efficiency is one factor to be considered, they give more weight to questions of distribution and in particular to whether consumers are made better or worse off by any firm action.²⁵ And while they are less likely to defend the “big is bad/small is good” focus, populists today nevertheless view bigness with suspicion. Moreover, they see any wealth transfers stemming from market power as pernicious even if the economy enjoys higher productivity and/or innovation as a result. Thus, if a merger or other economic activity gives a firm market power and pricing power, populists will normally oppose it, even if the benefits to society from increased productivity or innovation are greater than the losses to consumers.²⁶ Populist antitrust scholars such as Lawrence Sullivan, Robert Pitofsky, and Robert Lande have argued “that the goals of antitrust should be, and always have been, far broader than the promotion of a narrow type of allocative efficiency; they encompass ensuring fairness, protecting the competitive process, controlling wealth transfers, limiting the accumulation of private economic power, and preserving the freedom of individuals and enterprises to engage in economic activity.”²⁷ At the same time, reflecting their policy priority for a more even distribution of wealth,

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populists want to use antitrust enforcement to favor workers and small businesses, often by favoring producers that might be hurt by large corporate competitors.

The Chicago and Post-Chicago Schools

In part because of perceived excesses from the populist approach, plus changing economic conditions (including increased international competition and economic dynamism), a new school of antitrust, the Chicago school, emerged in the 1970s and gained prominence in the 1980s, particularly as the Reagan administration embraced much of what its adherents wrote. The Reagan administration explicitly directed the Department of Justice to relax antitrust enforcement. Just as its close intellectual cousin, supply-side economics, called for a dramatic reduction of the role of government and regulation, the Chicago school called for a dramatic reduction of antitrust enforcement. Proponents argued that markets were much more contestable and disciplining than the populists thought, and that government attempts to intervene vis-à-vis antitrust legislation caused more harm than good. In addition, the Chicago school gave more weight to efficiency than did the populists, who focused more on distributional questions. Indeed, as Hart notes, “allocative efficiency remained at the heart of their debate with deconcentrationists of the New Deal order.”²⁸

The Chicago school, which emanated from the works of legal scholars such as Director, Bowman, Bork, McGee, Posner and Stigler, (many of whom were at the University of Chicago), was a reaction to the populist-based Harvard orthodoxy, just as supply-side economics was a reaction to the Keynesian orthodoxy. The Chicago school applied the doctrine of neoclassical economics that was based on the view that markets generally got it right.

Much of the objection of the Chicago school to the populists resulted from what the former considered to be a misguided interpretation of the goals of antitrust. Where the populists focus principally on questions of distribution, providing the basis of a more interventionist policy, Chicago acknowledges only one goal, the pursuit of allocation efficiency that increases consumer welfare. The Chicago school shifted the focus to the measure of standard of efficiency, (albeit static short-term efficiency) and consumer welfare, rather than just market power pricing effects on consumers.

The Chicago school argued, for example, that if a merger led to increased market power and prices (which reduces allocation efficiency), it still could lead to overall societal welfare if the gains from productivity increased more than the losses from allocation inefficiency. As Bork describes it, “the whole effort of Chicago was to improve allocative efficiency without impairing productive efficiency so greatly as to produce either no gain or a net loss in consumer welfare.”²⁹

To understand the difference in these goals it is important to understand the economics of industrial structure and behavior. Neoclassical economists note that if a firm is able to price above what a competitive market would otherwise allow, there are two effects: an allocation efficiency effect and a transfer effect. Because the allocation efficiency effect leads society to consume too little of the good or service that is priced too high, this represents a loss to society since it means that society is misallocating production (for example, too much

wheat, too little barley). But the transfer effect means only that consumers are paying more for the product or service than they otherwise would and the firm is making higher profits than it otherwise would, at no cost to society. It is a transfer payment from one party to another, with society as a whole in the same position. Chicagoans largely ignore the transfer effect issue, while populists see it as central. Conversely, Chicagoans argue that if the allocation efficiency costs from pricing power are lower than the benefits from productivity, then merger should be allowed.

To the extent they worry about higher prices from market power, it is in the context of impacts on allocative efficiency (the efficient allocation of economic resources). Chicagoans worry that undue market power will lead to higher prices that distort allocative efficiency, thus harming consumers. In other words, if market power leads to the price of beef being higher than it would be in a competitive market, consumers will eat too little beef and too much chicken. Chicagoan Robert Bork is convinced that allocative efficiency was not just the dominant but the sole consideration of Congress in enacting the antitrust statutes:

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My conclusion, drawn from the evidence in the Congressional Record is that Congress intended the courts to implement only that value we would today call consumer welfare... Though an economist of our day would describe the problem of concern to (Senator) Sherman differently, as a misallocation of resources brought about by a restriction of output rather than one of the high prices, there is no doubt that Sherman and he would be thinking the same thing.³⁰

However, in reaction to the perceived conservative over-reach of the Chicagoans, a more liberal version of the Chicago approach, also grounded in neoclassical economics, emerged in the 1980s and 1990s. Chicagoans and post-Chicagoans have much in common. Like the Chicagoans, the post-Chicagoans also work within the efficiency model, but the two groups start from different assumptions. As Jacobs notes, “both agree that economics is ‘the essence of antitrust’ and that protecting consumer welfare, conceived in allocative efficiency terms, should be the exclusive goal of competition law.”³¹ As post-Chicagoan Jon Baker states, the new developments in antitrust economics “demonstrate that we need not reject the value of economic efficiency in order to question the Chicago School. These challenges to Chicago arise from within the efficiency paradigm.”³²

But while the Chicagoans and post-Chicagoans agree on much, they differ on some critical points. First, Chicagoans generally see market power as the result of firms’ superior performance.³³ Thus Bork laments, “Failure to consider efficiency — or worse, the tendency to view it as pernicious by calling it a ‘barrier to entry’ or a competitive advantage — is probably the major reason for deformation of antitrust’s doctrines.”³⁴ In this way the Chicago school believes that firms should not be penalized for being efficient and thereby gaining market share. This would only discourage firms from trying to be efficient and grow.³⁵ In contrast, post-Chicagoans are more willing to see market power as the result of firms’ anti-competitive actions.

Second, Chicagoans assume that markets with dominant firms are generally self-correcting, in part through new entry. Even when there is little or no competition, the supranormal profits achieved by monopolists will attract new entrants to the industry. For Chicagoans, entry barriers, except when imposed by government regulation, are low. They also reject the notion that there is much of an empirical relationship between concentration and monopoly power. In contrast, post-Chicagoans see entry barriers as higher in many cases, thus limiting the ability of the market to automatically correct for market power.

Finally, because the Chicago school is skeptical of government, it generally favors weak antitrust enforcement, assuming that the market will adequately deal with any issues arising from market power or market abuse. Chicagoans also believe that judicial process should proceed cautiously, particularly because judges are not trained in neoclassical economics and therefore will have difficulty in correctly identifying market imperfections. As Albert Foer, president of the Antitrust Institute and a critic of the Chicago school, states, “The idea is that markets work extremely well, and when they have problems they self-correct, and government is incapable of correcting such things as a flawed market. Government can only make things worse.”³⁶ As such, the Chicago school rejects almost any role of government in antitrust beyond prohibition of collusion or mergers to achieve near monopoly. In contrast, post-Chicagoans have more faith in government’s ability to accurately distinguish between competitive and anti-competitive behavior.

The Innovation School

Since the early 1980s, when the Chicago school was successfully mounting its intellectual assault on the populist school, another strain of antitrust critique emerged as well. Driven in part by scholars with a business background or an approach to economics grounded in innovation economics, this approach proposed an alternative to both the populist school and the neoclassical economics-inspired Chicago and post-Chicago doctrines.³⁷ The “innovation school” critique is based on several factors. First, proponents believe that the focus of antitrust should be much more on the side of spurring firm productivity and innovation with less worrying about either allocation efficiency or distributional effects. Second, they see the neoclassical Chicago and post-Chicago doctrines as too focused on static, short-term allocation efficiency and as not recognizing the importance of dynamic markets and innovation. Third, the innovation school is more prone to see inter-firm cooperation as positive. Finally, it sees different industries as having different dynamics and therefore requiring different antitrust approaches.

The innovation doctrine places more emphasis on productive and dynamic efficiency. Proponents believe that there can be many instances where the losses in allocation inefficiency (from higher prices in less than fully competitive markets) will be small and dwarfed by the gains in productivity and innovation. (Holders of neoclassical doctrine, particularly post-Chicago, assume the opposite — they are apt to view losses in allocation inefficiency from market power as large and gains from innovation and productivity as small). F.M. Scherer argues that while difficult to measure, “The effects of production efficiency and long-run technological efficiency (innovation) probably outweigh those of allocative efficiency.”³⁸ Likewise, Michael Porter argues, “Productivity growth is also more understandable and palatable to managers. Imagine how much more constructive it would

be for corporations and their attorneys to debate whether a merger will boost productivity growth rather than continuing to debate the size of HHI.”³⁹ (HHI, or the *Herfindahl-Hirschman Index*, is a measure of concentration of an industry.)

Indeed, the innovation doctrine makes it clear that the focus of antitrust thinking should be on the long-term trajectory of product value and price, not just current consumer welfare measured by short-run prices. Again, as Porter argues:

Since the role of competition is to increase a nation’s standard of living and long-term consumer welfare via rising productivity growth, *the new standard for antitrust should be productivity growth*, rather than price/cost margins or profitability. All combinations or practices scrutinized in antitrust should be subjected to the following question: how will they affect productivity growth? If a merger, joint venture, or other arrangement will significantly enhance productivity growth, it is probably good for society and for consumers (as well as the firms involved). Transactions with dubious benefits for productivity growth, or those that offer only a one-time productivity benefit, are likely to be net negatives for society if they pose any risk to the overall health of competition.⁴⁰

The innovation doctrine makes it clear that the focus of antitrust thinking should be on the long-term trajectory of product value and price, not just current consumer welfare measured by short-run prices.

Similarly, Alberto Pera writes, “it could be argued that a proper application of the efficiency framework would be the examination of practices not in terms of their effects on consumer welfare, but rather in terms of their effects on total welfare and wealth.”⁴¹ Thus, the Chicago school and the innovation school have similar, but not exactly the same goals. Both would place more value on efficiency gains than net income transfers from consumers to producers, since the latter is a transfer payment in which society as a whole is no worse off. In this sense both the Chicago school and the innovation school would value the loss from transfer payments due to higher prices less than the gains from more efficient production or innovation.

The innovation school also focuses less on favoring competitive markets and more on examining processes that develop competitive, innovative and productive firms, particularly firms that can effectively compete in global marketplaces. As Lester Thurow argues, “The time has come to recognize that the antitrust approach has been a failure”... “the attraction of the competitive ideal has failed.”⁴² Indeed, the innovation approach emerged in part because many came to recognize the emergence of international markets and new challenges to U.S. economic competitiveness. In the old economy, competition took place almost exclusively in domestic markets. If the application of antitrust policy hurt one firm and helped another, the effects were seen as (at worst) a wash. Today that is not true, as the effects of domestic antitrust action could well hurt firms that are trying to compete in global markets, and thereby hurt both producer and consumer welfare, at least in the nation taking action. Indeed, the worry is that under the influence of the post-Chicago or populist doctrines, antitrust will be used as a tool to reduce competitiveness by penalizing successful firms that need scale and perhaps some market power in order to compete effectively in international markets. Thus, while consumers might benefit in the short term from the application of conventional antitrust doctrines, workers and national economic growth might be hurt.

The second area of difference concerns time and change. The innovation school argues that the analysis of growth impacts cannot be static (as it is with the Chicago school, for example with respect to more efficient production). For the innovation school, the focus is more dynamic, involving both productivity and innovation. In the other three approaches, the losses to consumer welfare are included in the model, but the dynamic gains (for example, the introduction of a new product or service) usually are not. As Hart notes, innovation has historically been only one of many objectives of antitrust policy, and not necessarily the most important one. Rather, the focus has been more about short-term impacts on prices. Indeed, as Michael Porter notes, “The effect of mergers or competitive practices on the overall rate of innovation is usually only paid lip service.”⁴³

Adherents of the innovation doctrine argue that antitrust policy — and merger policy specifically — need to incorporate analysis of longer-term dynamic effects. Joseph Schumpeter explained dynamic efficiency as:

...competition from the new commodity, the new technology, the new source of supply, the new organization... competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives.⁴⁴

If a merger, for example, results in greater market power, but also increases profits that are in turn invested in research and new product development, the merger might be justified since the longer-term benefits to society could be significant. As Carl Shapiro notes, “If appropriability is low, e.g. due to weak intellectual property rights and significant spillovers to rival firms who engage in imitation, then increased concentration can improve appropriability and promote innovation, weakening the link between concentration and competition.”⁴⁵

But the focus on static efficiency means that the very processes that can be conducive to innovation are sometimes seen as threats by holders of the conventional antitrust doctrines, particularly the populists and post-Chicagoans. As Evans and Hylton argue:

It follows from the Schumpeterian view that antitrust law, with its focus on improving consumer welfare, has a keen interest in protecting innovation. Fostering innovation requires recognition of the benefits of dynamic efficiency and the dangers of focusing myopically on static efficiency. The same forces that yield the benefits of static efficiency — conditions that encourage rivals quickly to adopt a new business method and drive their production toward marginal cost — can discourage innovation (and thus dynamic efficiency) if the drive toward marginal costs occurs at such an early stage that it makes innovation uneconomical. Where innovation requires substantial up-front research and development costs, a rational firm will elect not to innovate if it anticipates a selling environment that too quickly resolves to marginal cost of production. This problem is sometimes described as the need to recoup R&D costs and an expected profit sufficient to induce firms to direct their capital to risky R&D ventures.⁴⁶

As such, the innovation doctrine is based on the view that firms with some market power have more incentive to invest in R&D and innovation since they worry less about imitators and are able to better capture the returns needed to support this work.

David Hart calls holders of this view “concentrationists.” In contrast, “deconcentrationists” (the post-Chicago and populist schools) believe that the incentives to innovate are stronger in industries where firms have less market power. In this view, even though firms with little market power may see their innovations copied by rivals who did not make these investments, the pressure to innovate and differentiate their products and services from rivals trumps the former constraint. The challenge for antitrust as a technology policy (and for intellectual property policy) is to foster a balance of incentives that stimulates an optimal level of technological innovation.

But this is difficult to do since dynamic effects are often ignored. Evans and Hylton observe:

...in antitrust economic analysis we tend to look at the price and output effects of practices. We evaluate them by asking whether they tend toward increased or decreased output, higher or lower prices, or whether they injure consumers over a testable time period, which is typically quite short. We do not try to show more, because for the most part we cannot answer second order questions about long run welfare implications. In the short run a practice may destroy a rival, produce monopoly, and may even appear to impair consumer welfare. But in the longer run it may be part of the very process of creative destruction that Schumpeter believed to be the bedrock of economic progress. Or to say it differently, it may be quite easy for an antitrust economist to predict that a particular exclusionary practice will tend to produce lower marketwide output and higher prices. But it is very likely impossible to predict whether some inchoate innovation that is part of the monopolist’s scheme might produce long term gains that greatly outweigh these short term losses.⁴⁷

It would be more accurate to say that it is difficult, rather than “very likely impossible” to accurately predict the impacts of innovation. But the point is that such effects should be given serious attention when considering the impact of industry practices. Most economists and antitrust scholars focus on static competition in the equilibrium-based market not because they are biased against dynamic competition. Rather, conventional economics largely ignores dynamic factors because of its almost exclusive focus on mathematical models. This is in part because “the mathematics of dynamic models is far more challenging and the likelihood that an economist who invests efforts in such models will achieve a publishable result is lower”.... “When realism and relevance butt heads with analytical tractability, tractability almost always wins out in economics.”⁴⁸ In short, a major reason why innovation is often ignored by conventional doctrines is because it “cannot be expressed in blackboard economics.”⁴⁹

This is one reason why the conventional doctrines provide little guidance to policy makers and the courts in deciding cases based on an understanding of dynamic processes. As Evans and Hylton argue: “If a judge wanted to know whether any particular business practice should fall on one side or the other of the boundaries for the game of competition she

In contrast to the other three doctrines where all industries, in all economies, over all time operate generally alike, the innovation school suggests that industries should be treated differently.

would not find the answer — or even much of what she would need to know to make an informed judgment — in the modern industrial organization literature.”⁵⁰ This is in part because the conventional antitrust approaches are based on a notion of markets in equilibrium where market power is sustaining and the allocation mechanism leads to predictable outcomes. Thus, the goal is to enable competition that will lead to clearly determined outcomes (selling a bit more barley and a bit less wheat, for example). In contrast, the innovation school argues that markets and positions in markets are constantly shifting. As Mantavinos states, “competition thus leads to a permanent forming, shifting and erosion of market power.”⁵¹

Finally, conventional neoclassical-based antitrust doctrines tend to see industries as largely the same (all compete on the basis of price in marketplaces) and tend to ignore important structural differences between industries that can influence competition. In contrast to the other three doctrines where all industries, in all economies, over all time operate generally alike, the innovation school suggests that industries should be treated differently. And indeed, some industries, particularly high-tech industries, have very different characteristics than others. As Richard Posner states, high-tech industries “are characterized”... “by falling average costs (on product, not firm, basis) over a broad range of output, modest capital requirements relative to what is available for new enterprises from the modern capital market, very high rates of innovation, quick and frequent entry and exit, and economies of scale and consumption (also known as ‘network externalities.’).”⁵² One defining feature of these industries is that firms are more likely to engage in dynamic competition for the market (for example, in a process of “creative destruction”) whereby drastic innovation makes market leadership highly contestable. In other words, innovation is pursued not just to gain a small share of a stable market, but to fundamentally disrupt the market. As Farrell and Katz argue, “in network markets subject to technological progress, competition may take the form of a succession of “temporary monopolists” who displace one another through innovation. Such competition is often called Schumpeterian rivalry.”⁵³

The innovation school approach also more explicitly recognizes that differences among industries require different approaches to antitrust. As one analyst of EU competition law states:

Because these industries [technology industries] have increasing returns or significant economies of scale on the production side, the markets will tend to be concentrated. In many cases marginal costs are close to zero. And combined with substantial economies of scale on the demand side (e.g., network effects); there is real benefit from concentration. In other words, products are more valuable to consumers when there are more consumers. In addition, many of these industries compete in durable goods or software where consumers can use and reuse these goods almost without limit. They buy new ones, not because the old ones wear out, but because the new one is better. As such firms selling these goods are competing with their own prior sales, which provide price competition.⁵⁴

The doctrines also differ on the extent to which all practices should be viewed alike depending on where they are taking place. A case in point is the 1986 case Matsushita

Electric Industrial Corp. vs. Zenith Radio Corp., where an American electronics firm alleged (correctly) that Japanese firms were colluding to charge high prices on televisions in Japan so they could engage in predatory pricing in the United States to gain market share and drive U.S. producers out of business. Chicagoans and post-Chicagoans saw this as unlikely, since rational firms in a market economy would not only have an incentive to break the cartel and charge lower prices in Japan in order to expand their market share, but also would not accept low profits in the United States for a long period of time in order to gain monopoly profits in the distant future. For them, this type of alleged behavior was irrational and therefore simply could not exist. This is the principal reason the U.S. court sided with the Japanese and in so doing contributed to the decimation of the U.S. television industry.

In contrast, an innovation-based view of antitrust would take into account different institutional structures and not assume that all markets are structured as they are in the United States. The reality was that Japan, Inc. (the close collaboration between the Japanese government and industry) was able to get producers to collude to charge high prices in home market and lower prices abroad in order to gain market share abroad. They were able to eliminate all competitors in the United States and gain market share, and potentially higher profits because of this. The government turned a blind eye to collusion (and in fact encouraged it) because the leaders of Japan decided that their society should pay a short-term societal tax (higher prices paid by Japanese consumers) in order to gain longer-term benefits (a larger global market share for televisions made by Japanese companies).

In sum, innovation economics focuses on the pragmatic issues surrounding each issue, and judges it based on the extent to which it spurs innovation and productivity. As Porter notes, “The five forces methodology involves analysis on an industry-by-industry basis, and does not rest on the determination of *the* relevant market. Every industry is different.”⁵⁵ The innovation school doctrine calls for analyzing each case on its own, for cases differ by industry, by location and by era.

THE DOCTRINES AND MONOPOLY AND MERGERS

The doctrines discussed above have different views regarding market power. Holders of the populist and post-Chicago doctrines are more likely to view market power with suspicion, with populists seeing it as a threat to consumers and small businesses and the post-Chicagoans seeing it as a threat to efficiency. The populists focus on market structure and are sympathetic toward deconcentration schemes where antitrust is used to break up firms, even if there is no evidence of exclusionary conduct. In addition, populists generally believe that industries can be deconcentrated with few efficiency losses.⁵⁶ Likewise, populists consider merger enforcement not only laudable, but perhaps the strongest, most decisive component of antitrust, and generally favor toughening Section 7 of the Clayton Act (merger enforcement), particularly with regard to horizontal acquisitions. As Weiss notes, “Altogether there is still plenty of reason to believe on both theoretical and empirical grounds that high concentration facilitates tacit or explicit collusion”... “[a] policy of prohibiting horizontal mergers among viable firms wherever significant concentration is present or in prospect is well founded.”⁵⁷

In contrast, holders of the Chicago school doctrine argue that monopolies are likely to be rare because, in the absence of state privilege, their profits strongly attract new entrants to the market. They consider entry barriers to be “vague notions” from the “scribbling of academics.”⁵⁸ In this view, excessive rates of return attract competitors, and potential competitors have the ability to enter all markets that are not natural monopolies. Thus, market power is often self correcting, and in cases where it is less so it is a result of actions taken by the firm to be more efficient. Finally, they argue that any effort to limit concentration results in losses of efficiency. Likewise, any effort to enforce Section 7 of the Clayton Act with regards to mergers is a mistake, resulting in a loss of efficiency. As Robert Bork argued, “It would be easy enough to parade the horrors of Clayton 7 case law in this field almost indefinitely.”⁵⁹

Holders of the innovation school doctrine also argue that any analysis of market power should be tempered by recognition of the possibility of new entrants, particularly in dynamic industries. As Shapiro and Varian note, “The information economy is populated by temporary, or fragile, monopolies. Hardware and software firms vie for dominance, knowing that today’s leading technology or architecture will, more likely than not, be toppled in short order by an upstart with superior technology.”⁶⁰ As Schumpeter notes, this is a different kind of competition than that envisioned in the conventional doctrine:

It is hardly necessary to point out that competition of the kind we now have in mind acts not only when in being but also when it is merely an ever present threat. It disciplines before it attacks. The businessman feels himself to be in a competitive situation even if he is alone in his field or if, although not alone, he holds a position such that investigating government experts fail to see any competition between him and any other firms in the same or neighboring field and in consequence conclude that his talk, under examination, about his competitive sorrows is all make believe.⁶¹

Indeed, because innovation economists look at evolutionary dynamics more than static efficiency, they are more prone to consider how disruptive technologies and new entrants might pose a challenge to firms with market power. Thus, holders of the innovation doctrine would argue that antitrust needs to adopt a broader view of analyzing market structure along the lines of Michael Porter’s five forces model: “The five forces model is a dynamic approach to analyzing industry structure, based on five competitive forces acting in an industry or sub-industry: threat of entry, threat of substitution, bargaining power of buyers, bargaining power of suppliers, and rivalry among current competitors.” He goes on to say:

Five forces theory also argues that for any one of the competitive forces, the causes of competitive intensity are multidimensional. In assessing the intensity of rivalry, for example, seller concentration does have a role, although our interpretation would focus more on the *balance* of competitors (the more balanced, the more rivalry). With such a cost structure, even a concentrated industry can exhibit strong rivalry. Switching costs are another important influence on rivalry. Where it is easy for customers to shift from one supplier to another, the effect of concentration is mitigated.⁶²

In this regard, holders of the innovation doctrine would argue that merger review should more thoroughly investigate mergers to determine the nature of market power gain. The key is to distinguish between market power that supports innovation (or other benefits, such as network externalities) from market power that enables simple abuse (higher prices with little gain in terms of productivity or innovation). Market power can often enable the former. As Possas and Fagundes argue, “the basic lesson drawn from the neo-Schumpeterian view is that the potential direction of market power use (or abuse) should not be prejudged as necessarily harmful to competition and welfare, and consequently repressed, from a dynamic standpoint.”⁶³ Indeed, market power can have beneficial aspects, especially for productivity and innovation, especially in industries with low marginal costs and high fixed costs. In these industries a greater market share means lower overall production costs. Too little market power can in some cases weaken competition because competitors would be less able to innovate and engage in dynamic competition.⁶⁴

Antitrust authorities should, therefore, acknowledge that the task of differentiation is a needed, albeit difficult one, and not sweepingly condemn all market power.

As a result, innovation economists advocate giving more weight in mergers analysis to how it affects company efficiencies and innovation.⁶⁵ Even if a particular merger might lead to an increase in market power and a concomitant reduction in allocative efficiency and/or hurt other companies in the marketplace, such a merger might expand economic welfare if it leads to even greater efficiencies from consolidation — particularly in industries with declining marginal costs, where added scale or network effects (for example, through de facto standardization and coordination) can drive significant cost savings. Hence, one challenge is that although potential allocative efficiency losses from a merger are relatively easy to measure, the long-term benefits from innovation and productivity are harder to visualize and measure. It is important to differentiate between market power that is anti-competitive and anti-consumer and market power that is pro-innovation. Antitrust authorities should, therefore, acknowledge that the task of differentiation is a needed, albeit difficult one, and not sweepingly condemn all market power.

In contrast, populists are skeptical that these benefits exist and to the extent they do, they value them at a low level. As the American Antitrust Institute argued in response to the Antitrust Modernization Commission report, the report “did not question in any serious way whether there has been too much consolidation as a result of weak merger laws or inadequate enforcement. The brunt of the AMC’s recommendations is that the enforcement agencies should give more weight to evidence demonstrating that a merger will enhance efficiency and should give more weight to certain efficiencies and to evidence that a merger will enable companies to increase innovation.”⁶⁶

While most of the focus is on seller power, some post-Chicago and most populist doctrine holders also worry about buyer power. For example, some populists worry that large companies like Wal-Mart will unfairly use their market power to hurt business suppliers, thus not only hurting allocative efficiency but also unfairly harming small firms.⁶⁷ But while holders of the innovation (and Chicago) doctrine would agree that firms with some buyer power may be able to pressure suppliers, the result is normally beneficial because it pressures suppliers to become more innovative and competitive. Strong buyers are in a better position to require continued cost cutting and innovation on the part of their suppliers, both of which benefit consumers. Moreover, such buyer market power can be a

key in driving industry-wide innovation, particularly in areas with chicken-or-egg characteristics, such as radio frequency identification technology (RFID). Producers have no incentive to include RFID tags on their products because the supply chain is not set up to be RFID-enabled. Firms farther down the supply chain have no incentive to structure their supply chain to be RFID-enabled if no or few suppliers provide RFID-tagged products. However, a large organization with buying power (for example, Wal-Mart) has the power to drive such welfare-enhancing system change.

The innovation school approach also differs from the other doctrines in how it identifies market power. The conventional doctrines focus on market share and the presence of supranormal profits. If profits are normal, by definition there can be no market power. Likewise, if market shares are small there can be no market power. But, in industries where the competition is not for margins but for existence, small firms can exercise power to keep out new business models.

A case in point is contact lens sales. By conventional definitions optometrists have no market power. Moreover, in their sales of contact lens (in addition to their provision of eye exams) there is no evidence of supranormal profits. In spite of this, they were clearly engaging in anti-competitive action by pressuring contact lens manufacturers to not sell lenses to lower-cost distributors (particularly newly emerged online sellers of lenses) because they rightly saw that the latter were taking away market share. In this case the collusion was based on professional norms (repeated in blogs and trade journals), but they had the same effect as a coordinated boycott.⁶⁸ And they did not use their market power over contact lens producers to generate supranormal profits. They used it to keep low-cost competitors out of the marketplace, thus preserving their “normal” profits and denying consumers lower prices through lower-cost delivery channels.

Finally, holders of the innovation doctrine differ with respect to remedy. The conventional doctrines, particularly the post-Chicago and populist schools, generally believe that monopolists should be fined an amount that reflects the static welfare costs of monopolization. For populists, this is a way to transfer wealth back to consumers from the rapacious firm. In the case of post-Chicagoans, it reflects the belief that allocation efficiency is maximized by penalizing the firm by at least the amount they extracted through their higher prices. But this view assumes that there are no externalities from the product being produced. In other words, it assumes that the reduced demand for the products due to higher prices induced by the penalties is efficient. But there are significant positive externalities associated with the consumption of some products and services such that increased prices (as a result of government imposed fines) reduces overall societal welfare. A case in point is IT (for example, semiconductors, computers, software), which some economists have termed a “general purpose technology” that drives productivity and innovation in a wide array of industries.⁶⁹ If governments impose significant penalty on firms producing such general purpose technologies it would reduce, not increase social welfare, by raising the average price of IT products and services — thereby lowering their consumption and in turn lowering overall productivity growth.⁷⁰ In essence, the fine serves as an IT tax, no different in its economic effects than a discriminatory sales tax or tariff. In

contrast, if a fine is imposed, a fine (or settlement) that transfers money to other firms in the affected industry would be a more efficient solution.

THE DOCTRINES AND COLLUSION

Antitrust has long been grounded in a deep-seated suspicion of collusion among market competitors. Over 200 years ago Adam Smith noted that people from the same trade seldom gather without conspiring to set higher prices or to monopolize markets. Modern antitrust law in many ways derives from this remark. Thus, it should come as no surprise that of all the antitrust statutes, Section 1 of the Sherman Act, which bars harmful collusion among firms, has probably the greatest support from all four schools. Yet, even here the controversy is considerable.

The Chicago school is most concerned with prohibiting harmful collusion, but would apply a rule of reason here, rather than a per-se rule that defines all such activity as illegal. As Bork states, “Many price-fixing and market-division agreements make cooperative productive activity more efficient and these should be judged according to the circumstances.”⁷¹ Chicagoans would argue that horizontal cooperation among enterprises not aimed at fixing prices or at subdividing markets is often pursued in order to overcome some externality problems. The populists would prefer to stick to a per se rule, in part because they argue that courts are incapable of monitoring economic performance in suspect industries. Moreover, they argue that price fixing rarely yields efficiency gains.

Like the Chicago school, the innovation school would advocate for a rule of reason, because proponents see that many areas of collusion (what they would call cooperation) have beneficial outcomes in terms of productivity and innovation. Adherents of innovation economics see innovation as involving a learning and coordination challenge and therefore see inter-firm collaboration related to learning as usually a good thing to be encouraged, not a bad thing to be prosecuted, as neoclassicalists and neo-Keynesians might advocate. “Collusion” might also be used to more effectively rationalize production in order to meet the challenges of international competition. Likewise, mergers to attain the scale needed to effectively compete in global markets can benefit the economy, making it more internationally competitive. As Heller argues, the widespread suspicion against “collusion” in conventional antitrust has gone too far and in some cases, we should promote “protrust.” As he notes, “Trust busting may make sense when substitutes are scarce, but fragmentation is not necessarily good policy for complementary goods. If property fragments are complements, if ownership starts out in an anti-commons, then gridlock is a danger and monopoly can be the solution.”⁷² For example, Heller argues that patent pools and copyright collectives are protrust — collaborative efforts between market participants that can lead to net increases in societal welfare. Likewise, consumers and society would be better off if broadband Internet Service Providers could cooperate in establishing bit-pricing policies whereby heavy bandwidth users paid more than light ones. But because the first company to do this loses out in the marketplace, none of the companies have acted.

Adherents of the innovation school doctrine see collaboration among producers to fight restrictions among middlemen and distributors as beneficial, particularly if such collaboration leads to companies being able to bypass protectionist restrictions.⁷³ One of

Like the Chicago school, the innovation school would advocate for a rule of reason, because proponents see that many areas of collusion (what they would call cooperation) have beneficial outcomes in terms of productivity and innovation.

the reasons many producers still don't sell direct over the Internet is because they are afraid of retailer retaliation. In other words, if one producer steps forward to be the first to start selling direct online, it is indeed likely to face retaliation from retailers who will refuse to sell its product or give its product lower priority. There is nothing illegal with individual companies reacting this way, but the result is that the economy is less productive than it would otherwise be. For example, in some industries, such as auto sales, middlemen (such as car dealers) have considerable power to restrict actions by auto manufacturers. Multi-brand dealers can threaten not to carry a particular brand or to promote competitors' brands more strongly if the auto manufacturer threatens to sell direct. Yet direct selling is more efficient and can be better for consumers.⁷⁴ In this case, if all or most of the auto manufacturers could agree to sell direct at the same time, it would be impossible for car dealers to retaliate against any one and a more efficient online sales model would emerge, benefiting the economy and consumers.

But the innovation economics approach to antitrust would in some cases take a more aggressive stance against collusion than some of the conventional doctrines. For example, collusion among retailers or other middlemen, including through their trade associations, professional journals, or other means to organize what are essentially horizontal boycotts, should be aggressively investigated and if need be, prosecuted. For example, this was the case when optometrists "boycotted" certain producers of contact lenses that sold their lenses to online retailers.⁷⁵ In this case, the collusion was based on professional norms (repeated in blogs and trade journals), but they had the same effect as a coordinated boycott. Optometrists are hardly alone in trying to squelch e-commerce competition. With the emergence of the Internet economy, a host of middlemen in a variety of service, retail, and professional industries have worked to erect all manner of legal, regulatory, and marketplace barriers to hobble online competitors. This group includes travel agents, wine distributors, real estate agents, car dealers, and even morticians. Rather than compete fairly in the marketplace, these incumbent professional interests have sought to stifle online competition, taking action to prevent innovative and more productive entrants to the market. Since a central goal of antitrust policy is to promote innovation and productivity, the innovation school would argue, in contrast to the Chicago school, for government intervention to limit such collusion.

The innovation school also differs from the conventional approaches by questioning the assumption that contracts, alliances and other forms of collaborative behavior are the basis for cartel behavior and therefore wrong. As Massimo Motta writes, "To be condemned as exclusionary, a monopolist's act must have an 'anticompetitive effect.' That is, it must harm the competitive *process* and thereby harm consumers. In contrast, harm to one or more *competitors* will not suffice."⁷⁶ This difference can be seen in the *National Macaroni* case where defendants responded to a temporary shortage of durum semolina wheat by setting a product standard for pasta that called for 50 percent durum semolina and 50 percent inferior farina wheat. The standard was intended to suppress the price of durum semolina, and thus reduce the defendants' production costs. While this kind of practice was condemned by populist-oriented antitrust proponents (and by the court) because it represented collusion, the "collusion" in fact, resulted in a reduction of cost for society through the more efficient allocation of resources.

Innovation economics also recognizes that in the new economy, not only competition but also cooperation (what Brandenburger and Nalebuff termed “coopetition”) among firms that drives growth and innovation.⁷⁷ Indeed, many industries are characterized by complex cooperative ecosystems where firms collaborate on a host of issues and the collaboration results in increased productivity and innovation. And often one or two large firms play a key role in organizing the ecosystem for collaboration.⁷⁸ Hakansson calls this a “thickening” of interactions, where rather than engage only in the conventional arms-length competitive negotiations of a short duration, firms increasingly collaborate more closely over a longer period of time, resulting in networks of interconnected firms.⁷⁹ As Shapiro notes:

Collaboration among industry participants may be especially important in dynamic industries”... “Antitrust doctrine, with its emphasis on limiting coordination among competitors, can have difficulty distinguishing pro-competitive collaboration from collusion, especially in situations where two parties may have complex relationships that involve competition in some areas and collaboration in others. These complexities are the norm for large firms in the information technology sector of the economy.⁸⁰

However, holders of the post-Chicago and populist doctrines look on such practices with suspicion, when in fact they represent a pro-consumer (and certainly pro-worker) development. They argue that any discussion of these processes is just one more sophisticated attempt to resurrect the minimalist Chicago school.

THE DOCTRINES AND PRICING

The doctrines have different approaches to issues of pricing and competition. For the Chicago school, aggressive pricing to gain market share is pro-consumer even if prices are below cost. This is because proponents believe not only that lower prices boost consumer welfare, but also that rational companies will not do this, or will be disciplined by the market if they do. In contrast, holders of the populist doctrine usually view aggressive pricing to gain market share as anti-competitive, especially if prices are below cost. Their view is that such actions are taken only to gain market power later, at which point power will be used to raise prices and gain supranormal profits. Post-Chicagoans are also suspect of aggressive pricing to gain market share, but usually less so than the populists.

The innovation school holds that in order to effectively analyze the impact of pricing on societal welfare the structure of the specific industry needs to be considered. As Porter states, “the intensity of rivalry also depends on a series of other dimensions, including, for example, the industry cost structure. Where variable costs are low, strong pressures are created to cut price in order to contribute to fixed cost.”⁸¹ In other words, what might be anti-consumer predation in one industry is pro-consumer and pro-productivity price cutting in another. As Farrell and Katz note, “Rules against below-cost pricing and other allegedly predatory behavior can harm welfare by preventing firms from internalizing the benefits of increasing returns to scale.”⁸² They go on to note that “predation policy is meant to prevent the inefficient emergence of monopoly”... “but the same network effects that make predation possible can also, if strong enough (as in our model), make ex post dominance or monopoly inevitable. If so, the main question for economic efficiency may well be (and in our model is) getting the right monopolist”.... “Because it is hard to

diagnose which industries have which kind of competition, policies cannot readily be applied only to the one kind of competition or the other.”⁸³

One reason why the populist and post-Chicago schools are more likely to see aggressive cost cutting as predation is that their analysis is based on a static view: firms use predatory prices to drive out the incumbent or prevent entry and then raise prices. But in some cases aggressive pricing could lead to economies of scale or learning by doing or complementarities (selling more cars may increase revenues from parts). Innovation economists are also more likely to focus on issues like network benefits and learning that can come about. In these cases, “Predatory” pricing can be both rational and welfare enhancing if it is used either to establish de-facto standards that help market transactions or to drive down costs through learning. Indeed, if marginal costs are low, then pricing below average cost can be welfare enhancing. Finally, if the products in question have significant positive externalities (such as IT products) then aggressive price cutting that leads to increased adoption expands overall societal welfare.

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ANTITRUST DOCTRINES AND DIFFERENCES IN INTERNATIONAL APPROACHES

In recent years, there has been increasing interest in the concept of encouraging a global convergence of antitrust policy, if for no other reason that multinational firms increasingly face conflicting antitrust regimes and multiple and time consuming antitrust approval processes. Ensuring more consistency among national antitrust regimes would certainly enable a more robust global economy. In addition, more and more markets are better characterized as being global in nature, rather than of a national scope. However, antitrust policy, both in terms of legal statutes and enforcement, is at a national level, which is increasingly incompatible with the geographic extent of many, if not most, markets.

Holders of both the Chicago and post-Chicago doctrines generally assume that convergence can occur, because they believe that the laws of economies are largely the same across space, that antitrust is based on rationality, and therefore that decision makers in different jurisdictions should be able to take the same approach. Holders of both the populist and innovation economics doctrines view economies as institutional constructs, influenced significantly by culture, institutions and other factors. As such, they are more likely to expect that approaches to antitrust will differ between nations.

And in fact, this is what we see. The approaches to antitrust in Asia, Europe and the United States are quite different. While European antitrust officials, and what is known as European competition policy, have moved to embrace a post-Chicago approach with an emphasis on efficiency in recent years (particularly as it applies to European firms), they, and to a lesser extent EU courts, still hold on to a populist approach to antitrust, with a greater focus on defending the interests of producers (firms and workers), particularly European producers over non-European ones.⁸⁴ Antitrust is thus part of their overall industrial policies.

The “ordoliberal” tradition of EU antitrust policy embraces both economic and social goals, and in particular focuses on preserving competition for its own sake, not just for

what it can provide. This tradition, like the U.S. structuralist one, favors small competitors as they purportedly allow market structures to remain competitive. With reference to a case of applying the EU Article 82 with respect to a rebate scheme, the EU Advocate General argued that:

Article 82 EC, like other competition rules of the Treaty, is not designed only or primarily to protect the immediate interests of individual competitors or consumers, but to protect the structure of the market and thus competition as such (as an institution), which has already been weakened by the presence of a dominant undertaking in the market. In this way consumers are also indirectly protected. Because where competition as such is damaged, disadvantages to consumers are also to be feared.⁸⁵

As Pera argues, “consumers’ interests are viewed as indirectly protected by the protection of competition, not as the direct objectives of this protection.”⁸⁶ He goes on to note that “application of law in the field of unilateral practices tended to concern those [practices] which were in fact beneficial to the consumer and had the sole effect of leading to the protection of inefficient competitors rather than of competition.”⁸⁷ In short, EU competition policy seems to be guided by a mix of populist and post-Chicago doctrines, the former more likely to be applied in cases involving non-European firms.

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We see this in a number of key cases. In 2001, the European Commission blocked the merger of Honeywell and General Electric, two U.S. technology companies, on antitrust grounds despite the fact that the U.S. Department of Justice had already approved the deal. In the Microsoft case, while both the United States and the European Commission opted for behavioral (as opposed to structural) remedies, the Commission’s decision went much further in 2004, when it required Microsoft to sell a separate version of Windows without the Media Player application and in 2006, when it imposed a fine of \$357 million on Microsoft. Most recently, the Commission has taken action against Intel regarding their sales practices. It is hard to imagine European competition authorities bringing a case against Microsoft, if, for example, Microsoft were a French firm headquartered in Paris — or denying the merger of GE and Honeywell if they were German and Finish companies (as Siemens and Nokia are in their partnership). Moreover, their decisions are made easier by the fact that the large fines levied on U.S. firms go to the EU coffers, rather than to consumers worldwide based on their relative share of purchases. In this sense, these kinds of antitrust actions become a tax on global producers (and ultimately consumers) to the benefit of the country engaging in the action.

It is similar in many Asian nations. When Korean antitrust authorities bring cases against foreign firms, like Qualcomm, sometimes at the behest of domestic competitors, they are placing national industrial interests ahead of consumer interests (and, of course, ahead of the rule of law). Likewise, the Korea Fair Trade Commission (KFTC) jumped into the “battle” against Microsoft by initiating an investigation based on complaints that may have come from Korean companies such as Daum Communications and NateOn (of SK Communications), both of which had been voicing concern that Microsoft’s Instant Messaging application was hurting their business. The KFTC later expanded its

investigation to focus on Microsoft's Media Player, which competes with similar products made by Sanview and DideoNET, also Korean companies. The KFTC not only required Microsoft to provide two versions of its product, one without Media Player and Windows Messenger, it also required Microsoft to promote its competitors' player and instant messaging products through links to icons on the Windows desktop. Moreover, the KFTC fined Microsoft \$34.5 million. While the new Chinese anti-monopoly laws are only now being implemented, it is likely that they will be implemented in at least as nationalistic a way as in places like Europe and Korea.

One key difference between the American and European and Asian approaches is that the former is grounded in the neoclassical view which puts short-term static consumer welfare first. In the Intel case, for example, the EU argued that consumers were harmed by Intel's decisions to engage in aggressive price cutting of its chips. While there can be a debate as to whether Intel's actions could have long-term harm to consumers (if it were able to gain market power), it is hard to see how consumers were harmed in the short run from price cuts. In fact, computer prices fell from such actions. Potentially hurt, however, was the competitor, AMD.

Antitrust all too often becomes the tool of choice for mercantilist nations because it flies under the radar screen of global trade governance organizations.

Indeed, while antitrust policy specifically, and economic policy generally in the United States is designed to foster short-term consumer interests, in many other nations it is designed to foster producer interests. But antitrust all too often becomes the tool of choice for mercantilist nations because it flies under the radar screen of global trade governance organizations. McGowan and Cini portray EU antitrust policy, particularly merger policy, "as an example of economic regulation, and therefore, as an interventionist tool used by governments to structure the operations of markets."⁸⁸ They go on to note that, "While EU competition policy has a goal of consumer welfare, it also has other goals including protecting small and medium enterprises, redistribution of wealth, enhancing EU economic competitiveness and EU economic integration. We see this in the blocking of the Boeing McDonnell Douglas merger in the early 1990s when concern for the economic wellbeing of the EU champion — Airbus — was a strong motivating factor in the Commission's placement of significant restrictions on the merger. In particular, the EU approach to competition policy is to give more weight to industrial engineering — to creating particular kinds of market structures, particularly ones that favor EU competitiveness."⁸⁹

Competition authorities in other nations generally have been slower to accept the innovation economics approach that certain kinds of industries (for example, high-tech) have different characteristics than conventional industries (such as positive externalities, networks, learning, and so on) and that conventional approaches to antitrust do not necessarily work for them. They have approached many cases involving technology companies in the same way they do non-tech companies, even though the market dynamics are quite distinct.

CONCLUSION

Antitrust must rank among the most convoluted and least transparent of the economic policy instruments. The debates concerning antitrust are riddled with seemingly

contradictory assessments and prescriptions. Antitrust policy rests on a triad of institutional pillars, consisting of legal statutes, their interpretation by the courts, and ultimately their enforcement by federal and state agencies. Each of these three pillars is constantly scrutinized, challenged and often attacked in what must appear to the public as a random and inconsistent manner without foundation. As the former Director of the Bureau of Economics at the U.S. Federal Trade Commission, F.M. Scherer, admitted, the policy approach towards antitrust was typically “muddled and often contradictory. I frequently felt that if we knew precisely where we’re to go, we could proceed there in a more orderly fashion. But clear objectives were a luxury we seldom enjoyed, ambiguity was our guiding star.”⁹⁰

Yet, as this report has shown, there are indeed systematic and consistent foundations to the differing and often contradictory assessments and proclamations concerning antitrust. The key to unraveling the antitrust riddle lies in disentangling differences among the fundamental economics doctrines underlying the disparate views towards antitrust. These differences reflect diverging views not only on how the economy works, but also on what the main goals or priorities for the economy should be. The disparate views concerning the most salient forces shaping the economy along with the main economic goals result in what may appear to the lay person as a tower of policy Babel concerning antitrust.

The most recent addition to the myriad of antitrust views emanates from innovation economics. While the more traditional views place a policy priority for the economy on delivering allocative efficiency, innovation economics instead values growth and innovation. The implication is that certain industrial structures, or types of firm conduct that may be offensive in terms of distorting allocative efficiency, may actually be more conducive to innovation and economic growth. Thus, what seems to represent a clear case for antitrust intervention among the more traditional economic doctrines is instead a misplaced one through the lens of innovation economics.

As such, antitrust enforcement agencies and other policy institutions should be sensitive to the close link between the policy stance and the underlying economic doctrine. A diversity of views, providing decision makers with a broad and thoughtful portfolio of policy choices may make the most sense. Thus, antitrust enforcement agencies around the world need ensure that they employ economists with an innovation economics background, or at least with a focus on studying the economics of innovation. Likewise, they should be given a reporting requirement with regard to innovation that charges them specifically to examine innovation issues as part of their antitrust review. Moving towards an innovation-based school of antitrust promises more effective antitrust policy going forward.

ENDNOTES

1. For example, under the Bush administration, the Department of Justice issued a report in September 2008, *Competition and Monopoly: Single-Firm Conduct under Section 2 of the Sherman Act*, that advocated a limited role for antitrust in addressing monopoly. But only a few months later Christine Varney, the Assistant Attorney General for Antitrust appointed by President Obama, repudiated the report's findings, stating that the practice of the DOJ during the Bush Administration, "advocates extreme hesitancy in the face of potential abuses by monopoly firms. We must change course and take a new tack. For these reasons, I hereby withdraw the Section 2 Report by the Department of Justice." Christine A. Varney, "Vigorous Antitrust Enforcement in this Challenging Era" (speech, Center for American Progress, May 11, 2009).
2. It is worth noting that there is a fifth doctrine of antitrust, one that gets little expression in policy or the courts, (and that is not addressed in detail in this report) but has some following in academia among conservative scholars. In what could be called the "nihilist view," the nihilists simply reject the notion of the perfect competition model and argue that firms and only firms are able to establish market conditions and that government actions, even if tempered as the Chicagoans would do, inherently get it wrong. The nihilists offer an alternative theory – the market rivalry model, in which firms compete with one another for profit and that virtually nothing they do is inappropriate when it comes to competition. In general, nihilists can be seen as libertarian Chicagoans. Like the Chicagoans, the nihilists see market structure as completely exogenous of conduct and solely determined by scale economies and efficiency. They see economies of scale as ubiquitous. They agree that supranormal profits are the reflection of superior management and that entry barriers do not exist. Rather, these barriers are simply a class of competitive tactics associated with competitive rivalry. Finally, since rivalrous behavior automatically produces the highest level of efficiency, they believe that anti-trust enforcement by definition promotes inefficient enterprise. Thus Armentano charges antitrust enforcement for the steady decline in productivity through the 1970s and early 1980s, while Demsetz claims it has blocked efficient management and competitive pricing policies.
But the nihilists part company with the Chicagoans on three points. While the Chicagoans acknowledge the possible existence of private monopoly power, the nihilists identify only one, government intervention. Second, while Chicagoans acknowledges that very high levels of concentration can be conducive to monopoly pricing, the nihilists see this as simply a form of healthy competition. Finally, and related to this, the nihilists' goal is not competition, for to push competition exclusively, would, according to Fink, "destroy the market's cooperative activity, which is fully as important to the efficient use of resources as is competition.
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4. Joseph A. Schumpeter, "Science and Ideology," *American Economic Review* 39, no. 2 (1949): 345-359.
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21. *United States v. Von's Grocery Co.*, 384 U.S. 270 (1966).
22. Report of the White House Task Force on Antitrust Policy, *reprinted at* Cong. Rec., May 27, 1969, at 13890 (although submitted in 1968, it did not become public until 1969).
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34. Robert H. Bork, "Legislative Intent and the Policy of the Sherman Act."
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42. Lester Thurow, *The Zero Sum Society* (New York: Basic Books, 1980).
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