

*George Bittlingmayer*

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## Antitrust and Business Activity: The First Quarter Century

The modern corporation arose out of the trusts, mergers and holding companies of the late 19th century, an evolution that generated volatile political reactions. Though economists and business historians have analyzed the rise of the corporate form, they have neglected a second, related problem: Did attacks on the modern corporation depress business activity, as critics of Theodore Roosevelt and Howard Taft claimed? This paper has three aims. First, it covers the relevant analytical issues, including the effects of policy uncertainty on business investment. Second, it reviews the history of shifting governmental policy in the light of its possible economic effects. Finally, it examines the statistical link between anti-trust enforcement and business activity for the years 1891–1914. Antitrust case filings against large firms coincided with business downturns, while filings against small firms did not. These findings provide supporting evidence though not decisive proof for the charge that trust-busting hurt business activity.

The rise of the trusts and the modern corporation has generated discussion about origins and effects. Critics contend that the cartels and mergers sought monopoly. Defenders focus on the holding companies and integrated large firms that ultimately emerged, and they view them as largely efficient responses to new methods of transportation, communication and manufacture. Commentators of each school also attribute a major influence to the law. New Jersey

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laid the legal basis for the holding company in 1888, and federal antitrust law treated cartels more harshly than merged firms, especially until 1904.<sup>1</sup>

The origins and the long-run effects of the trusts constitute one question. Another related, but largely ignored problem concerns the effects of volatile and politically charged antitrust prosecution. Did the political struggle over the “trust and corporation problem” affect business confidence and the business cycle? What seems like an far-fetched idea today had a wide following at the turn of the century.

Theodore Roosevelt’s famous trust-busting offers the best illustration. The federal government sued Standard Oil in November of 1906, and American Tobacco and Du Pont in July of 1907. Federal antitrust authorities also considered criminal charges against Standard and rejected Standard’s offer to settle in 1907. Real output declined at the same time, by 20 percent from January 1907 to January 1908. Critics blamed Roosevelt, in particular his administration’s attack on Standard Oil and the sort of rhetoric illustrated by his “malefactors of great wealth” speech.

Historians of the Progressive Era know these charges well, but no one has evaluated them systematically. My aim is to examine the pertinent economic theory and the statistical and historical evidence. Could and did trust-busting hurt the economy, as the critics claimed?

A number of economic mechanisms may link antitrust policies with the declines of output. For example, uncertainty about future economic policies may lower production and investment. This relationship was recognized informally by early economists and has recently received more formal underpinnings. Turn-of-the-century antitrust policy was in fact unstable, and since it concerned the fate of the modern corporation, arguably the most important innovation

<sup>1</sup> The vast literature on the rise of the trusts and the modern corporation defies summary. Alfred D. Chandler, Jr., *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, Mass., 1977), treats the development of new structures; Hans B. Thorelli, *The Federal Antitrust Policy* (Baltimore, Md., 1955), provides a useful early and Martin J. Sklar, *The Corporate Reconstruction of American Capitalism, 1890–1916: The Market, the Law and Politics* (Cambridge, U.K., 1988), a useful recent treatment of the political and legal reaction to the rise of the trusts; Leslie Hannah, *The Rise of the Corporate Economy* (London, 1976), Alfred D. Chandler Jr., “The Development of Modern Management Structures in the U.S. and U.K.,” in *The Essential Alfred Chandler: Essays Toward a Historical Theory of Big Business*, ed. Thomas K. McCraw, (Boston, Mass., 1988) and Tony Freyer, “The Sherman Antitrust Act, Comparative Business Structure, and the Rule of Reason: America and Great Britain, 1880–1920,” *Iowa Law Review* 74 (July 1989): 991–1017, emphasize the legal attacks on loose business forms as a factor in the development of modern managerial structures in the U.S.

in the history of business, fluctuating antitrust may very well have affected the business cycle.

Bread-and-butter antitrust issues—mergers, vertical restraints and cartels—offer other mechanisms by which shifts on the trust issue could affect long-term growth and hence current investment and consumption. The fixed-cost or cutthroat-competition explanation for some cartels and mergers suggests an additional mechanism beyond policy uncertainty, and in fact complementary to it, that could explain why aggressive antitrust would hurt investment.

Finally, according to arguments with a Schumpeterian flavor, actual and threatened legal restraints on fast-growing and innovative “center” firms such as Standard Oil and Du Pont would affect future growth prospects for the economy as a whole, and hence current investment and economic activity. Section I reviews the literature on the effects of business practices that the government has challenged on antitrust grounds, and Section II describes the mechanisms that could link fluctuating antitrust policy and the business cycle.

The view that antitrust policy affected business conditions must also be confronted with empirical evidence. One major strand of this evidence is statistical. In the work below, I use federal antitrust case filings, in particular filings against large firms, to measure the severity of current and expected future policy. Though this is a crude measure, it is defensible. Another major strand of evidence is historical. The historical narrative illuminates the sources and nature of policy fluctuations, the political and economic importance of the trust issue, and whether business reacted to the shifting antitrust climate. Section III addresses my use of case filings, and Section IV presents a narrative of antitrust history and an analysis of enforcement data. Section V provides some examples of business reaction to antitrust.

The formal statistical work, Section VI, exploits the volatility of large-firm antitrust policy, a volatility that extends over the entire century of Sherman Act enforcement.<sup>2</sup> My regressions show that filings against major firms were associated with declines of aggregate output, while filings against other firms had a variable, perhaps weakly positive effect. Because no aggregate investment data exist for this period, I examine quarterly changes in aggregate output, and, as a proxy for investment, changes in pig iron production. I find

<sup>2</sup> William E. Kovacic, “Failed Expectations: The Troubled Past and Uncertain Future of the Sherman Act as a Tool for Deconcentration,” *Iowa Law Review* 74 (July 1989): 1105–1150, shows the episodic nature of antitrust for large-firm deconcentration.

that each case against a large industrial firm or railroad was accompanied by a decline in output of -4.5 percent.

Whereas the divestiture of a single firm is unlikely to have effects this large, it seems more plausible that sporadic antitrust initiatives, especially attempted divestitures of large firms, raised fears of more extended forced restructuring and perhaps other anti-business initiatives. Shifts in enforcement signaled possible directions of future antitrust policy. Shifts in antitrust enforcement may also have signaled changes in other policies. Tellingly, political initiatives to establish a central bank and federal income taxation coincided with attempts to regulate the trusts. If fear of other, related policies measures affected business confidence, the statistical results would overstate the effects of antitrust but still reflect the influence of fluctuating economic policies taken as a whole.

The view that trust-busting hurt the economy seems specially crafted for the United States during these years. Antitrust did not loom large in other countries. However, other countries have also experienced political struggles between business and other sectors, notably labor and agriculture. Arguably, antitrust played the same role in America as did socialism in Europe. In less developed countries, other types of political uncertainty may also play a role. The prospect of any one of a variety of government actions may unsettle business confidence. I proceed under the assumption that the decades-long antitrust controversy in the United States was economically important either directly or because it served as the flagship for a cluster of policies affecting modern forms of business organization, and that other, often related political struggles in other countries may have affected business confidence and output there.

Business critics of Roosevelt and Taft argued strenuously that antitrust hurt business activity. Historians have been skeptical of this assertion, and modern economists have little or no knowledge of the controversy. While the materials presented here offer belated support for the critics, the results will understandably fall short of providing decisive proof. To be sure, the results could be driven by reverse causation (when the going gets tough, the trust-busters get going), by some third, unknown factor that affects both business activity and antitrust filings, or by mere chance. In the end, whether the count against Roosevelt and Taft holds up will depend on additional historical and statistical study, both of the great trust-busting era and of other times and places.

I. Economic Effects of Controversial Business Forms and Practices

The effects of antitrust, one could argue, depend on the effects of the business forms and practices that antitrust challenges. If antitrust challenges monopolies, stricter antitrust enforcement should make the economy more efficient since competition promotes efficiency. Stricter antitrust should lower prices and increase output.

The view that turn-of-the-century cartels and merged firms had monopoly gain as their primary or major goal runs through a large part of the economics and antitrust literature. According to Richard Posner, “The elimination of the formal cartel . . . is an impressive, and remains the major, achievement of American antitrust law.<sup>3</sup> George Stigler saw the formation of large firms and concentrated markets as “monopoly and oligopoly by merger.”<sup>4</sup>

Others have disagreed. Some economists, defending the trusts and mergers, emphasize that cooperation can also promote efficiency. For example, the firm itself is a restraint of trade. The modern theory of the firm observes that unrestricted use of the price system will generally not be efficient since the use of the price system entails costs as well as benefits.<sup>5</sup> If competition or the search for efficient forms govern structure, the scope of firms, the extent of cooperation between firms and the emergence of hybrid forms like franchising will be governed by the relative costs. Lewis Haney formulated an early analysis of the costs and benefits of the various organizational forms—“trust” types—very much in this spirit.<sup>6</sup>

Historical studies of legal and managerial innovations in business organization (such as Alfred Chandler’s classic, *The Visible Hand*) offer support for the view that the new forms of organization were a response to new technologies and that they improved efficiency. Modern management structures were created in the rapidly growing telegraph and railroad firms, and mergers and consolidation allowed the implementation of new management methods. However, Chandler and others also view antitrust—in particular the attacks on cartels and the holding company—as hastening or stimulating tighter consolidation and hence a more thorough development of modern

<sup>3</sup> Richard A. Posner, *Antitrust Law: An Economic Perspective* (Chicago, Ill., 1976), 39.

<sup>4</sup> George J. Stigler, “Monopoly and Oligopoly by Merger,” *American Economic Review* (May 1950). Reprinted in George J. Stigler, *The Organization of Industry* (Chicago, Ill., 1968).

<sup>5</sup> The idea is due to Ronald Coase, “The Nature of the Firm,” *Economica* n.s. 4 (1937): 386–405.

<sup>6</sup> Lewis H. Haney, *Business Organization and Combination* (New York, 1914).

centralized management structures.<sup>7</sup> In this view, the economic effect of antitrust will depend on the type of case filed. Stepped up enforcement would have pushed corporations toward their modern form only if the law offered clear legal havens for large, coordinated enterprises. Attacks on consolidated enterprises, for example, would have undermined, rather than promoted, the search for new organizational structures.

Work by Lester Telser supports Chandler's view. Telser regards mergers as a way of transferring information between business units, allowing low-cost methods to be transferred to previously independent high-cost firms. He also finds that turn-of-the-century merger intensity is positively correlated with industry growth, where high growth rates presumably reflect more rapidly changing technology and markets. Michael Gort provides similar but more extensive results with more recent data. Industry merger activity is positively correlated with industry growth, the fraction of technical personnel, and productivity increases.<sup>8</sup>

Other research by economists has reevaluated the economic arguments for and against various "restraints of trade." For example, many of the early antitrust cases involved vertical restrictions such as exclusive dealing, leasing, tying clauses, and fixed retail prices. At one time economists rejected such restrictions as monopolistic.<sup>9</sup> Aaron Director, Robert Bork, Ward Bowman, Lester Telser and others developed plausible, economically consistent rationales that did not place the pursuit of monopoly at center stage.<sup>10</sup> While a new generation of theoretical economists has advanced monopoly explanations for some practices, the blanket condemnation that was common earlier seems unjustified on theoretical or empirical grounds.

In short, economists and business historians have shifted the debate on the modern corporation away from monopoly and toward organizational issues. A firm's internal organization, and not just

<sup>7</sup> Chandler, "The Development of Modern Management Structures;" Hannah, *The Rise of the Corporate Economy*; and Freyer, "The Sherman Antitrust Act."

<sup>8</sup> Lester G. Telser, *A Theory of Efficient Cooperation and Competition* (Cambridge, U.K., 1987); and Michael Gort, "An Economic Disturbance Theory of Mergers," *Quarterly Journal of Economics* 83 (November 1969): 624-642.

<sup>9</sup> For example, the following faculty members at the University of Chicago signed a letter in 1952 urging repeal of the fair-trade laws: Ward Bowman, Milton Friedman, H. G. Lewis, L. A. Metzler, Margaret Reid and T. W. Schultz. Listed in Thomas R. Overstreet Jr., *Resale Price Maintenance: Economic Theories and Empirical Evidence* (Washington, D.C. 1983), 8.

<sup>10</sup> These developments are summarized by Robert H. Bork, *The Antitrust Paradox: A Policy at War with Itself* (New York, 1978); and Posner, *Antitrust Law*.

anonymous market mechanisms, can perform a useful coordinating function; and merger and vertical restrictions between firms can be interpreted as an attempt to have one's cake and eat it too, that is, to have the advantages of both market and firm forms of organization.

Even cartels, which modern mainstream economists have typically condemned, found defenders among prominent turn-of-the-century economists and lawyers. Modern theoretical work has revived this defense, as have interpretations of the historical role of cartels in subsequent organizational forms like the holding company and tight merger. With fixed costs and fluctuating demand, a competitive equilibrium may not exist. This sounds like a technical oddity, but it rests on a simple change in the usual model of competition. Instead of assuming that there are "many" firms in the market, suppose that there are only a few firms. For given market conditions, all firms in an industry will not be able to operate at minimum average cost. The situation is a type of natural monopoly involving not one firm, but several firms.

The fixed-cost problem provides a justification for certain common types of cartel agreements, merger and vertical restrictions.<sup>11</sup> It also closes an obvious gap in modern economists' theoretical machinery—the case of fixed costs and few firms. Expositors of "cutthroat competition" or "spoiling the market" included Alfred Marshall, Irving Fisher and J. M. Clark. The notion that cartels may promote efficiency is also supported by two recent studies of ocean shipping, where cartels have persisted for 150 years despite easy entry.<sup>12</sup>

<sup>11</sup> The idea of a competitive equilibrium is made precise by the theory of the "core." Economic applications of core theory to a variety of circumstances, including industries with fixed costs, were pioneered by Lester G. Telser, *Competition, Collusion and Game Theory* (Chicago, Ill., 1972); and Lester G. Telser, *Economic Theory and the Core* (Chicago, Ill., 1978). William W. Sharkey, *The Theory of Natural Monopoly* (Cambridge, U.K., 1982), contains a less theoretical treatment. Lester G. Telser, "Genesis of the Sherman Act," in *Research in Finance*, ed. Robert G. Lanzilotti and Yoram C. Peles (Greenwich, Conn., 1984), and Telser, *A Theory of Efficient Cooperation*, discuss developments at the turn of the century in light of this theory. George Bittlingmayer, "Decreasing Average Cost and Competition: A New Look at the Addyston Pipe Case," *Journal of Law and Economics* 25 (October 1982): 201–299; and George Bittlingmayer, "Did Antitrust Policies Cause the Great Merger Wave?" *Journal of Law and Economics* 28 (April 1985): 77–118, covers various aspects of the economic issues and provides an application to the cartel in Addyston and to the Great Merger Wave. George Bittlingmayer, "The Economic Problem of Fixed Costs and What Legal Research Can Contribute," *Law and Social Inquiry* 14 (Fall 1989): 739–762, discusses economic and policy implications, with particular reference to the common law of restraints of trade and the judicial interpretation of antitrust law over time.

<sup>12</sup> See William Sjoström, "Collusion in Ocean Shipping: A Test of Monopoly and Empty Core Models," *Journal of Political Economy* 97 (October 1989): 1160–1179, and Stephen Craig Pirrong, "An Application of the Theory of the Core to the Study of Ocean

Business historians also regard many turn-of-the-century cartels as originating in over-capacity but view the cartels in many industries as transitional forms that laid the groundwork for future efficiencies. For example, legal challenges and the complexity of coordination led railroads to “communities of interest” or interlocking directorates. Similar problems led manufacturing firms to seek merger, first on a small scale in the late 1880s, and then on a larger scale in the 1890s. Consolidation allowed more efficient regulation of plant closing than cartels and also laid the basis for vertical integration.<sup>13</sup> While some of the peripheral consolidations merely sought legal refuge from the prohibition against cartels, the center firms developed new centralized management structures and integrated production over several stages.

This excursion into the origins and nature of the trusts and the corporation deserves a summary. The Sherman Act and other antitrust laws have prohibited a variety of practices at one time or another as “monopolistic.” However, there are plausible efficiency alternatives to the monopoly story. These alternatives have a basis in economic theory and in actual business experience. Alternative explanations certainly exist for mergers, the large integrated firm, and various “vertical” practices such as territorial restraints on dealers, resale price maintenance, tying, and franchise restrictions. Even some cartel arrangements, uniformly condemned by American law, have an efficiency explanation. While some mergers, some vertical restrictions and some cartels may be monopolistic, there is no major class of restrictions or practices that does not have an efficiency rationale.

## II. Economic Consequences of Politics and Policy Uncertainty

Antitrust in practice amounts to more than a simple undoing of the effects that an outside observer might attribute to the business practices that have come under attack. In particular, antitrust may have other

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Shipping Markets,” *Journal of Law and Economics* 35 (April 1992): 89–131. Herbert Hovenkamp, “The Sherman Act and the Classical Theory of Competition,” *Iowa Law Review* 74 (July 1989): 1019–1065, takes up the apparent simultaneous abandonment by the law of defenses for cartels and the adoption by economists of the neoclassical competitive model. He argues that thinking on the Sherman act was influenced by prevailing “economic ideology.” It seems possible, however, that economists’ views also adapt to prevailing ideology, or less charitably, to politics.

<sup>13</sup> Chandler, *The Visible Hand*, 137–143 and 315–336; and Thomas K. McCraw, “Rethinking the Trust Question,” in *Regulation in Perspective*, ed. Thomas K. McCraw (Boston, Mass., 1981), 12–15.



effects for three reasons. First, antitrust authorities and judges make mistakes. Second, antitrust enforcement is influenced by politics. Finally, controversy and new initiatives result in uncertainty that generate incentives for firms to wait with major undertakings until that uncertainty is resolved.

Since economists and business historians have not reached a consensus about the ultimate effects of various business practices, it seems likely that well-intentioned prosecutors and judges faced some difficulty in distinguishing good from bad business practices. If some vertical restrictions foster inefficiency but others promote competition between brands, if some business practices restrict the ability of rivals to compete but others protect productive investments, if some cartels have simple monopoly gain as their goal but others solve the fixed cost problem, then government and judges are likely to make mistakes. This is the first source of inefficiency in antitrust enforcement.

Antitrust in practice involves more than mistakes. It also involves politics. Relatively recent examples in which politics appears to have played a role include the initiative to break up the oil companies in the 1970s, proposals to file cases against Japanese companies for their practices in Japan, the 1969 suit against the auto companies for allegedly conspiring to suppress innovations in smog control, the ill-starred thirteen-year suit against IBM filed in the last days of the Johnson Administration by Ramsey Clark, and the trust-busting of Thurman Arnold in the late 1930s. Perhaps more importantly, the antitrust authorities' periodic revivals of large-firm deconcentration and monopolization initiatives arguably have been directed against the winners and promoted politically by the losers of Schumpeterian competition. Illustrative instances include the cases against Standard Oil at the turn of the century and against Microsoft in the 1990s.

Unfortunately, the politics of antitrust have been largely ignored. Fred McChesney argues that while a good deal of analysis of antitrust, including "Chicago School" antitrust, takes a "public interest" perspective, an economically consistent approach should be based on the "public choice" of antitrust.<sup>14</sup> Thomas McCraw's observation concerning the "over-capacity problem" or in terms set out above, the "fixed-cost problem," suggests that the struggle over antitrust was as redistributive as any other political debate. The over-capacity problem "underlay nearly every major economic issue of the period:

<sup>14</sup> Fred S. McChesney, "Be True to Your School: Contrasting Chicago Approaches to Antitrust and Regulation," *Cato Journal* 10 (Winter 1991): 775-798.

not only the trust question, but also the perennial divisive battles over the protective tariff, the railroad rate problem, and the imperial quest for foreign markets to absorb surplus production.”<sup>15</sup>

Finally, shifts in policy, whether purely efficiency-motivated or reflecting redistributive struggles, generate uncertainty. As a result, firms have an incentive to wait before investing. The relevant choice is no longer investing or not investing, but rather investing now or waiting until the uncertainty resolves itself. Surprisingly, economists have only recently addressed in a systematic way the effects of uncertainty, in particular political uncertainty, on investment and economic activity. As observed by Robert S. Pindyck, who recently surveyed this emerging literature: “A major cost of political and economic instability may be its depressing effect on investment.” The effects of uncertainty may explain why actual investment does not appear to be influenced very much by the “cost of capital” variables such as interest rates, the tax treatment of investment or the relative price of capital goods.<sup>16</sup>

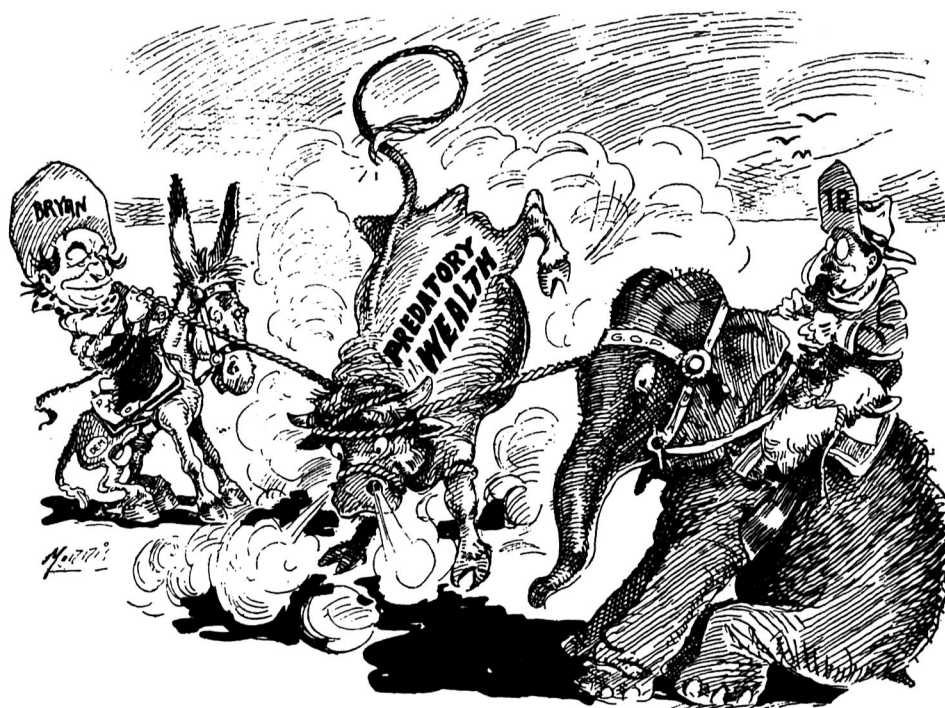
Though the theoretical work is new, early economists held similar views, and mentioned the trust issue by name. Wesley Clair Mitchell, the founder of modern business cycle research, cited uncertainty over the legal status of large firms to explain the 1911 recession. Irving Fisher attributed the 1920s expansion to restrained antitrust enforcement, especially against mergers. Kenneth Roose’s study of the Great Depression and Friedman and Schwartz’ *Monetary History of the United States* mention New Deal economic policies, including reversals on antitrust, as factors that slowed recovery.<sup>17</sup> This line of economic thought is also consistent with the repeated requests by business during the Progressive Era for new legislation and regulatory bodies that would “restore certainty” to the administration of antitrust.

For a number of reasons, then, the primary influence of antitrust policy, in particular shifting and unstable antitrust, is likely to be through investment. The defense of cartels and merger outlined

<sup>15</sup> McCraw, “Rethinking the Trust Question,” 6.

<sup>16</sup> Robert S. Pindyck, “Irreversibility, Uncertainty, and Investment,” *Journal of Economic Literature* 29 (September 1991): 1141. Avinash K. Dixit and Robert S. Pindyck, *Investment under Uncertainty* (Princeton, N.J., 1994) survey the literature on uncertainty and investment.

<sup>17</sup> Wesley Clair Mitchell, *Business Cycles* (Berkeley, Calif., 1913) 85; Irving Fisher, *The Stock Market Crash—And After* (New York, 1930), 101, 106 and 110; Kenneth Roose, *The Economics of Recession and Revival: An Interpretation of 1937–38* (New Haven, Conn., 1954), chap. 4; and Milton Friedman and Anna J. Schwartz, *A Monetary History of the United States, 1867–1960* (Princeton, N.J., 1963), 495–496.



"Roped!" • According to one view, Roosevelt's groundwork from the Republican side and Bryan's pressure from the Democratic side had "roped," though not yet tamed, the "predatory wealth" of the trusts. (This illustration originally appeared in the *Spokane Spokesman-Review*, and is reproduced from Albert Shaw, *A Cartoon History of Roosevelt's Career* (New York, 1910).)

above points to their function in allowing firms to recover fixed costs. Consequently, legal initiatives that put that recovery in danger will affect investment in capital. This explanation also nicely complements the effects of pure policy uncertainty.<sup>18</sup> Legal attacks on merged firms also raise the possibility of divestiture, that is, an arguably less efficient and possibly unpredictable rearrangement of assets. Hence, the threat of divestiture is also likely to affect investment by firms under attack or likely to be attacked. Finally, antitrust initiatives reflect a political equilibrium and may act as a signal or proxy that other attacks on business and investors are imminent, where these attacks would also lower the expected return on invest-

<sup>18</sup> Avinash K. Dixit, "Investment and Hysteresis," *Journal of Economic Perspectives* 6 (Winter 1992): 123, makes the argument that Japanese firms "are protected from the downside risk because the government supports them in various ways, including cartelization to avoid destructive competition in recessions. Then the value of waiting to invest, which is governed mainly by the downside risk, is quite small, and they invest more aggressively."

ment. For example, the federal corporate and personal income taxes were passed during Wilson's first term.

While the primary mechanism linking antitrust and economic activity runs through investment, other measures of activity are likely to be affected. Consumer purchases of durables depend on the business cycle and may also be influenced by economic uncertainty.<sup>19</sup> In addition, many expenditures typically not treated as investment by accountants or in official statistics, such as labor and maintenance, have an investment component.

### III. Measuring Policy with Case Filings

Actual and expected antitrust policy does not have a single dimension. Antitrust cases have been filed against cartels, mergers, single-firm business practices, large national and international firms, railroads and small proprietorships. There is also no single yardstick for the severity of expected enforcement. Businesses and investors will attempt to infer expected enforcement by looking at current case filings, presidential statements, congressional initiatives and court decisions.

In the statistical work below, I use filings of federal antitrust cases, sorted into two classes, major and minor, depending on whether one or more of the defendants appears on David Bunting's list of large industrials or railroads. This section discusses the choice of this variable.

From a strictly legal point of view, case filings are irrelevant because cases have to be litigated and won: the ultimate effect depends on what the courts say, in particular the Supreme Court. At a practical level, however, filings are important because prosecutors will prefer to file cases they think they can win. More importantly, courts are influenced by popular opinion and political pressure. Faced with case filings that reflect a political sentiment, courts may compromise legal principle, knowing that if they do not, the political pressure that generates the suits in the first place will be translated into legislation that overrides the courts.<sup>20</sup> Case filings reflect politi-

<sup>19</sup> Christine Romer, "The Great Crash and the Onset of the Great Depression," *Quarterly Journal of Economics* 105 (August 1990): 597-624, makes this argument for the effects of the 1929 crash.

<sup>20</sup> Some judges explicitly recognized the courts' susceptibility to political influence. In his famous dissent in *Northern Securities*, Holmes accused the majority of pandering to political pressure: "Great cases, like hard cases, make bad law. For great cases are called great, not by reason of their real importance in shaping the law of the future, but because

cal reality. In addition, the filing of a case by the federal government is important because antitrust offers great latitude to prosecutorial discretion. Finally, the government may file cases with no intention of winning, but merely for their nuisance or short-run political value. Cases often outlive the administrations that file them.

The history of antitrust shows that courts often yield on an issue or run the risk of being overruled. The Supreme Court's enunciation of a "rule of reason" in *Standard Oil* and *American Tobacco* in 1911, for example, provoked Congress into passing the Clayton and Federal Trade Commission Acts, which spelled out in greater detail which mergers and which practices it wanted outlawed. Also in 1911, the Supreme Court stumbled onto the prohibition of resale price maintenance in *Dr. Miles*. However, it has been loathe to reverse itself, regardless of the scholarly debate, leaving that for Congress. In fact, Congress did exactly that by first passing and then repealing the Miller-Tydings Act, which allowed states to pass so-called fair trade laws.

Clearly, a number of factors influenced the number and types of cases filed in the first twenty-five years of the Sherman Act and offered signals about future policy. The courts adopted and then barely rejected the view that mergers do not fall under the Sherman Act; Congress created two new antitrust agencies—the Antitrust Division and the Bureau of Corporations; Presidents Roosevelt and Taft addressed the trust issue frequently and forcefully; and the Courts ordered the divestiture of Standard Oil and the Tobacco Trust but did so in a way that led to the antitrust reforms of 1914. But in the end, the ultimate instrument of policy remained the federal lawsuit itself.

#### IV. Antitrust Enforcement and the Economy

This section recounts the history of antitrust enforcement and general economic developments from 1890 through 1914. The aim is to provide important background. Do antitrust case filings, especially against major firms, reflect other, harder-to-measure aspects of policy? Was the antitrust issue important, politically and economically? What did contemporaries say about the effects of antitrust on business conditions?

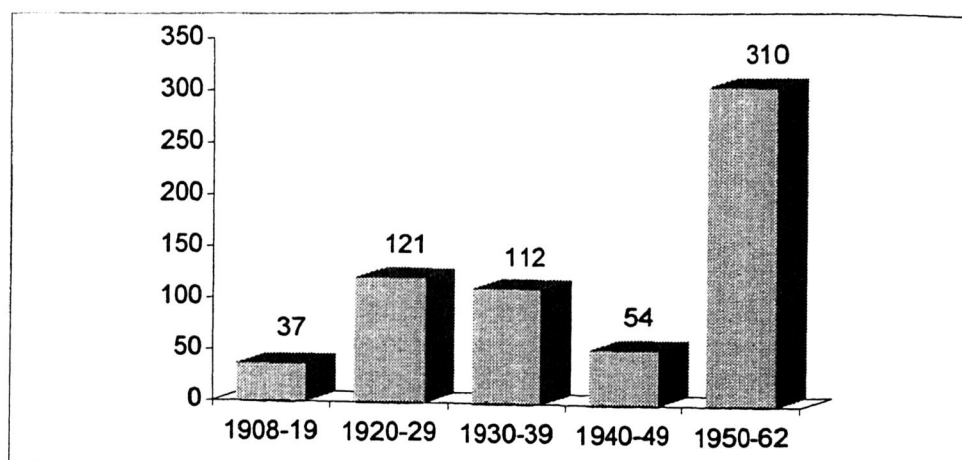
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of some accident of immediate overwhelming interest which appeals to the feelings and distorts the judgment." *Northern Securities*, 193 U.S. 197 (1904).

Table 1  
*Federal Antitrust Cases Filed, Millions of Dollars of Assets or Invested  
 Capital of Defendants in Brackets, 1890-1914*

	Total Cases	Major Industrial	Major Railroad	Major Cases Total	Case Name or Major Defendant in Major Cases
1890	1	0	0	0	
1891	0	0	0	0	
1892	5	2 [130]	1 18 RRs	3	Trans-Missouri, American Sugar Refining, Distilling & Cattle
1893	1	0	0	0	
1894	4	0	0	0	
1895	1	0	0	0	
1896	3	1 [33]	1 32 RRs	2	Joint Traffic, Addyston (U.S. Cast Iron Pipe & Foundry)
1897	2	0	0	0	
1898	0	0	0	0	
1899	1	0	0	0	
1900	0	0	0	0	
1901	0	0	0	0	
1902	3	1 [90]	1 [350]	2	Northern Securities, Swift (also Armour)
1903	2	0	0	0	
1904	1	0	0	0	
1905	5	1 [70]	1 [433]	2	Armour, Terminal Railroad Assn.
1906	14	3 [647]	0	3	Virginia-Carolina Chem., American Ice, Standard Oil
1907	9	2 [345]	2 [692]	4	Reading, American Tobacco, Du Pont, Union Pacific
1908	7	0	2 [570]	2	Union Pacific, NYNH & Hartford RR
1909	3	1 [124]	0	1	American Sugar Refining
1910	15	3 [276]	1 [309]	4	Cudahy, Missouri-Pacific, Swift, American Sugar
1911	23	3 [1889]	0	3	General Electric, U.S. Steel, United Shoe
1912	19	2 [295]	0	2	International Harvester, Aluminum Company of America
1913	24	5 [312]	2 [797]	7	United Shoe, Corn Products, Kodak, AT&T, American Can, Ter minal RR Assn., Reading RR
1914	11	0	4 [531]	4	S. Pacific, Lehigh Valley, NYNH & Hartford, Rockefeller (NYNH & Hartford)
Total	154	24	15	39	

Note: Case filings are from Commerce Clearing House, *The Federal Antitrust Laws with Summary of Cases Instituted by the United States, 1890-1951* (Chicago, 1952). Major cases are those involving firms that ranked, in the year of the case filing, among the top 100 industrials or top 25 railroads, as measured by assets or invested capital. (The *Addyston* defendants are classified according to the 1899 rank of the merged successor corporation, which involves an overstatement of their size since firms in addition to the original defendants were merged.) This classification relies on the lists of large corporations in David Bunting, *The Rise of Large American*



*Figure 1* • Six-month Moving Sum of Antitrust Case Filings Against Major Firms and Natural Log of Production Index, June 1891–December 1914.

Notes: The production index comes from Moore, *Business Cycle Indicators*; the antitrust cases against major firms were compiled from Commerce Clearing House, *The Federal Antitrust Laws*; and the size class of firms were taken from Bunting, *The Rise of Large American Corporations*.

*Corporations*, 1889-1919 (New York, 1987), Appendices D and E. The case against a major utility, American Telephone & Telegraph (filed July 1913), is also included. Asset values of AT&T, and the second 1914 case involving the NYNH & Hartford Railroad are not included. Emory R. Johnson, *American Railway Transportation* (New York, 1909), 245-246, has information on the Trans-Missouri and Joint Traffic agreements.

To aid this discussion, Table 1 summarizes the enforcement record by year and lists the cases filed against major firms, Table 2 lists the ten largest industrial firms in 1911, their assets and antitrust cases filed against them, and Figure 1 shows the natural log of monthly aggregate production, and a six-month moving sum of the number of cases filed against major firms.

The Sherman Antitrust Act signed into law by President Benjamin Harrison on 2 July, 1890 prohibits “every contract, combination, in the form of a trust or otherwise, or conspiracy in restraint of trade or commerce.” It also prohibits “monopolization.” The language came from the common law, but its implications were unclear. In fact, the courts later explicitly rejected common law precedents in *Trans-Missouri* and in Taft’s *Addyston* opinion.<sup>21</sup>

<sup>21</sup> Hovenkamp, “The Sherman Act,” and Mark F. Grady, “Toward a Positive Theory of Antitrust,” *Economic Inquiry* 30 (April 1992): 225–241. Thomas Hazlett, “The Legislative History of the Sherman Act Re-examined,” *Economic Inquiry* 30 (April 1992): 263–276, argues that the Sherman Act was passed to deflect attention from the McKinley Tariff.

Table 2  
*Ten Largest Industrial Firms in 1911, Firm Assets, Year of Federal  
 Antitrust Case Filing and Divestitures Sought*

	Asset Rank and Firm Name	Assets (millions)	Year of Case, Divestitures
1.	U.S. Steel	\$1,739	1911 Divestiture
2.	Standard Oil	860	1906 Divestiture
3.	American Tobacco	283	1907 Divestiture
4.	International Harvester	224	1912 Divestiture
5.	Anaconda Copper	189	—
6.	American Smelting & Refining	186	—
7.	Armour & Co.	140	1902, 1910°
8.	Swift & Co.	134	1902, 1910°
9.	Pullman Co.	129	—
10.	American Sugar Refining	128	1892, 1909, 1910 Divestiture°°
Total Assets of Defendants		\$3,508	
Total Assets, All Manufacturing°°°		\$16,937	

° Two cases, one criminal.

°° All three cases.

°°° For 1892 and 1909.

Notes: Asset values are from Bunting, *The Rise of Large American Corporations*, Appendix D; and U.S. Department of Commerce, Bureau of the Census, *Historical Statistics of the United States*, Colonial Times to the 1970 (Washington, D.C., 1975), Series P123, 684.

Members of a coal cartel served as the first defendants in a Sherman Act suit. The case, *Jellico Mountain Coal & Coke*, was filed in October of 1890. The government was able to claim victory by the following June. It filed three major cases in early 1892: *Trans-Missouri*, against a major railroad agreement; *E. C. Knight*, against the reviled Sugar Trust (newly incorporated under the New Jersey Holding Company Act); and *Greenhut*, against the Distilling and Cattle Feeding Trust.<sup>22</sup> All three cases wound their way through the courts over the next few years. The *Trans-Missouri* agreement was held in 1897 by a divided Supreme Court to be in violation of the Sherman Act. The Sugar and Whiskey trusts were eventually cleared on the ground that single firms with large market share, even if achieved through merger, were beyond the law's reach. These three cases against major trusts were followed by a string of cases against labor in 1893 and 1894, a local coal cartel in 1895, and coal dis-

<sup>22</sup> Even before these cases were decided, William W. Cook, *The Corporation Problem* (New York, 1893), 243, recognized where the Sherman Act would lead: "The law has decided that the trust mode of organizing a monopoly is illegal. Hence it is that the numberless trusts are hastening to adopt the other mode of organization—the corporation, the plan of the Diamond Match monopoly. Already the Sugar Trust and the American Cotton Oil Trust have dissolved and become New Jersey Corporations, and other trusts are following the example."



tributors and the Kansas City Livestock exchange in 1896 and 1897. Two new major initiatives were filed in 1896, however. The agreement at issue in the January 1896 filing in *Joint Traffic* involved 32 major railroads and an agreement crafted to satisfy the requirements of the Sherman Act, and the December 1896 Addyston Pipe filing represented the first case filed against a major industrial cartel. Major cartel cases had previously involved railroads.

Arguably, the trust and free silver issues dominated economic policy discussions of the 1890s. Most analysis of the business-cycle for this period has focused on the gold standard and free silver, seeing them as causes of the Panic of 1893 and the recession of 1896. However, Figure 1 shows that output declined in 1892, that is with the filing of the cases against the Trans-Missouri Association and the Sugar and the Distilling and Cattle Feeding Trusts. The last two involved the legality of the holding company. The timing suggests that the decision to file cases against major trusts may have led to the initial decline in 1892. Similarly, the 1896 *Joint Traffic* and *Addyston* cartel filings offer one reason for the severity of the 1896 slump.<sup>23</sup>

The key to much of what follows is the 1895 *Knight* decision, which held that merger was per se legal. *Knight* explains the subsequent merger wave, and it illuminates the significance of Roosevelt's trust-busting. Circumstantial and other evidence strongly favors the view that *Knight* encouraged merger. The *Addyston* defendants merged shortly after they lost their case in the Court of Appeals in 1898.<sup>24</sup> The Standard Oil company, which had been attacked as a trust, adopted the holding company form in 1899.<sup>25</sup> Other firms that merged or re-organized include U.S. Steel, Republic Steel, International Harvester, American Tobacco and International Paper. Approximately 50 percent of United States manufacturing capacity was involved, and many merged firms achieved market shares in excess of 50 percent.<sup>26</sup>

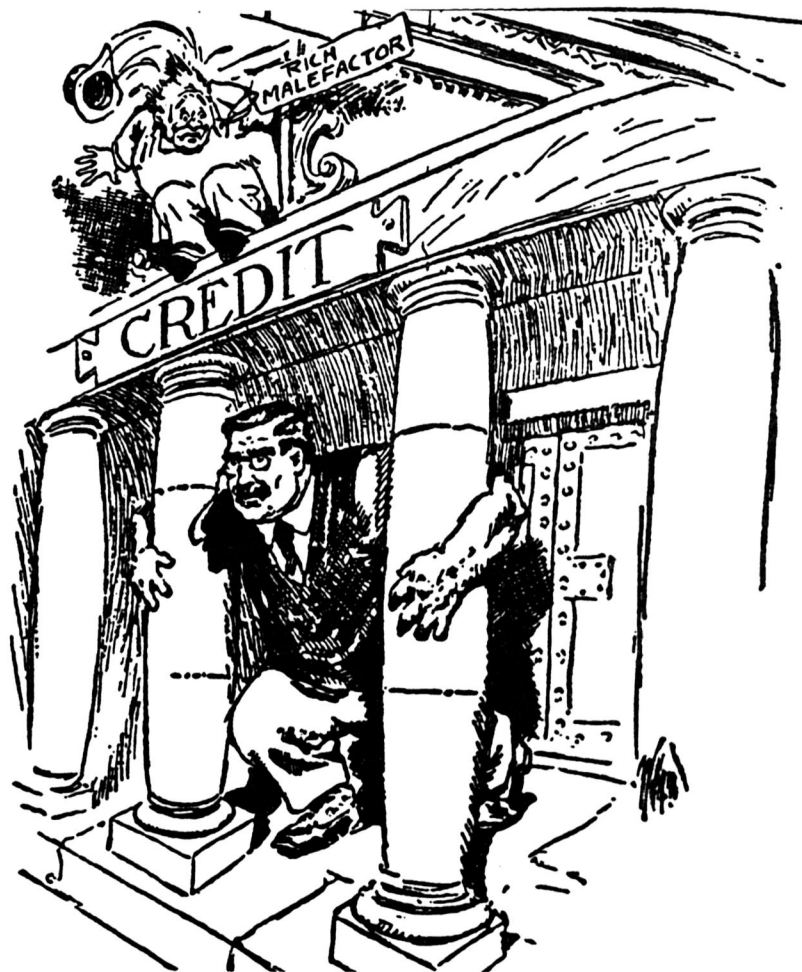
McKinley's attorney general, John W. Griggs, never failed to cite

<sup>23</sup> Mitchell, *Business Cycles*, 51, emphasizes uncertainty about the gold standard in 1893 and cites a number of contemporaries, including Taussig and Carnegie. Friedman and Schwartz, *A Monetary History*, chap. 3, also discuss this period, as well as the 1896 free silver debate.

<sup>24</sup> George Bittlingmayer, "Price Fixing and the Addyston Pipe Case," in *Research in Law and Economics* 5, ed. Richard O. Zerbe, (1983), discusses the case in detail.

<sup>25</sup> Haney, *Business Organization and Combination*, 215.

<sup>26</sup> See Ralph L. Nelson, *Merger Movements in American Industry, 1895–1956* (Princeton, N.J., 1959), App. C, 154–162. Bittlingmayer, "Did Antitrust Policies Cause the Great Merger Wave?" sifts through the arguments and data.



*"To trap the mouse, don't raze the house."* • Roosevelt as Samson bringing down more than a "malefactor of great wealth." Illustration is reproduced from George E. Mowry, *The Era of Theodore Roosevelt* (New York, 1958), 221.

*Knight* as the reason for not moving against the merger wave that picked up steam in the late 1890s. "As a matter of fact all the companies which you refer to as now organizing for the purpose of securing complete or partial monopoly of different branches of manufacture, are similar to the sugar combination and are not within the jurisdiction of the federal courts."<sup>27</sup> From December 1897 until March 1902, the Department of Justice filed only one case.<sup>28</sup> Hans Thorelli calls this period the "low watermark" of antitrust.<sup>29</sup> This was also a time of rapid economic growth. Figure 1 shows that between

<sup>27</sup> Griggs in March of 1899. Quoted in William Letwin, *Law and Public Policy in America: The Evolution of the Sherman Antitrust Act* (New York, 1965), 140.

<sup>28</sup> *U.S. v. Chesapeake & Ohio Fuel*, 115 Fed. 610 (1902), filed 8 May 1899.

<sup>29</sup> Thorelli, *The Federal Antitrust Policy*, 405.

1897 and 1902 real output quickly moved above the long-term trend. That growth was interrupted only by the recession of the second half of 1900. Friedman and Schwartz point to three factors in the expansion: the demise of agitation for free silver, the expansion of world gold supplies, and strong agricultural output at home coupled with poor harvests in Europe, which accelerated the flow of gold into the United States.<sup>30</sup> However, the Supreme Court's favorable treatment of merger, the government's unwillingness to challenge the extraordinary merger wave of the late 1890s, and the virtual suspension of cartel case filings may also have made investment in productive assets more attractive.

After McKinley's September 1901 assassination, Theodore Roosevelt became president. This event changed antitrust history. Roosevelt's anti-trust views were well known from his time as governor of New York. Financial markets tumbled after McKinley was shot, and again when he died.<sup>31</sup> After some waffling, Roosevelt filed two cases, *Northern Securities* and *Swift* in March and May 1902. The aim in the first case was to reverse the *Knight* holding that merger was per se legal, and Roosevelt later took pride that he succeeded.<sup>32</sup> The defendants in both cases were the bane of midwest farmers—the large midwest railroads and the Chicago meat packers.<sup>33</sup>

There can be no doubt that the trust issue was politically important. The Expediting Act of 1903, immediately applied to *Northern Securities*, allowed the attorney general to declare an antitrust case of “general public importance,” which meant that it would be heard by a panel of three circuit judges, whose decision could be appealed only to the U.S.

<sup>30</sup> Friedman and Schwartz, *A Monetary History*, 139–141. The worldwide growth in the stock of gold no doubt had a favorable effect, but the sluggish growth of per capita income in the U.K. over the same period suggests that real factors such as the antitrust climate may have influenced real growth either directly, or indirectly through the allocation of gold supplies across countries.

<sup>31</sup> The reaction of the financial markets is covered in Henry F. Pringle, *Theodore Roosevelt: A Biography* (New York, 1931), 237–238 and 244–246; William Henry Harbaugh, *Power and Responsibility: The Life and Times of Theodore Roosevelt* (New York, 1961); Letwin, *Law and Public Policy*, 196; and Thorelli, *The Federal Antitrust Policy*, 417. In contrast, Kennedy's 22 November 1963 assassination was marked by a decline that day, but recovery above previous levels when trading resumed.

<sup>32</sup> Pringle, *Roosevelt*, 253 and 264.

<sup>33</sup> Gary D. Libecap, “The Rise of the Chicago Packers and the Origins of Meat Inspection and Antitrust,” *Economic Inquiry* 30 (April 1992): 242–262; and Donald J. Boudreaux and Thomas J. DiLorenzo, “Antitrust before the Sherman Act,” in *The Causes and Consequences of Antitrust: A Public-Choice Perspective*, ed. Fred S. McChesney and William F. Shughart II (Chicago, Ill., 1995) analyze the rise of the Chicago packers and the political fallout.

Supreme Court. On the stump in the summer of 1903, Roosevelt mentioned the trust issue in every speech and devoted several talks alone to that issue.<sup>34</sup> The revival of antitrust was also accompanied by an economic and financial slump, the “Rich Man’s Panic” of 1903.<sup>35</sup> After the district court declared the *Northern Securities* agreement illegal in April of 1903, the stock market dropped by 10 percent over the next three months.<sup>36</sup> The Supreme Court upheld the district court in March 1904, in a 5-4 decision.

Interestingly, in light of the stock market declines and the upcoming election, Roosevelt did not file any more major cases, despite the favorable district and Supreme Court rulings. His attorney general said immediately following the Supreme Court decision that there would be no “running amok” on the trust question.

Once the 1904 election was safely out of the way, however, Roosevelt’s trust-busting again came to life. The cases filed over the next two years were directed for the most part at local associations of grocers, ice plants, lumber dealers and meat wholesalers. Three cases involving associations and selling organizations were national in scope, involving retail druggists, producers of licorice paste, and paper manufacturers.

Two suits involved large firms. The government sued the Chicago meat packers in July of 1905 and the Terminal Railroad Association of St. Louis in December. The other major change was the establishment of the Antitrust Division of the Department of Justice, which was given its first appropriation in 1904.

Roosevelt’s biggest case, and the biggest antitrust case to that point, was filed against Rockefeller’s Standard Oil in November of 1906. It was the second largest industrial firm at the time. Disgruntled petroleum industry interests had been urging the federal government to sue Standard Oil since the Sherman Act was first passed.<sup>37</sup> Under Roosevelt, pressure increased. No less than fourteen state suits were filed against Standard Oil in the year and a half prior to the November 1906 federal filing.<sup>38</sup>

<sup>34</sup> Thorelli, *The Federal Antitrust Policy*, 430.

<sup>35</sup> *The Wall Street Journal*, 12 August 1903, p. 1, discussed the charges, but dismissed them.

<sup>36</sup> Stock data here and below are from Alfred Cowles 3rd and Associates, *Common-Stock Indexes* (Bloomington, Ind., 1939).

<sup>37</sup> Bruce Bringham, *Antitrust and the Oil Monopoly: The Standard Oil Cases, 1890–1911* (Westport, Conn., 1979), chap. 5, chronicles the unsuccessful efforts of the oil industry interests and others to have the federal government bring charges against Standard.

<sup>38</sup> Ralph W. Hidy and Muriel E. Hidy, *Pioneering in Big Business, 1882–1911: History of the Standard Oil Company (New Jersey)* (New York, 1955), Table 52, 683.

One source of this political pressure may very well have been the falling price of crude as new Oklahoma and Texas oil fields entered production.<sup>39</sup> The production of crude increased from 64 million barrels in 1900 to 135 million barrels in 1905. Prices fell from \$1.19 per barrel to 62 cents, which represented a real price decline of 55 percent.<sup>40</sup>

Public opinion was reflected and intensified by Ida Tarbell's *History of Standard Oil*, which appeared in installments starting in 1902 and then as a book in 1904. Congress directed the Interstate Commerce Commission to investigate Standard's relations with the railroads. An investigation of Standard by the newly formed Bureau of Corporations in May of 1906 concluded that Standard had used unfair methods, including secret railroad rebates, to gain advantages over its competitors. Following the filing of the federal antitrust suit, the ICC issued the results of its investigation in January of 1907, and concluded that Standard had accepted secret railroad rebates, violated the Hepburn Act (regulating railroad rates) and practiced unfair local price cutting, among other transgressions. A second, equally unfavorable report of the Bureau of Corporations was issued in May. Standard lost state suits in Missouri and Texas in May and June. It was fined \$29 million on August 3 for violating the Elkins Act, and the Bureau of Corporations issued a new report on August 5 castigating Standard.<sup>41</sup>

The legal wrangling on the Sherman Act suit began in early 1907 with the question of whether the St. Louis circuit court, which had handed down the unfavorable ruling against the *Northern Securities* merger, was the correct venue for the case. Standard attorneys argued that the suit had to be filed where Jersey Standard, the principle defendant, resided. Roosevelt's attorney general placed the case under the Expediting Act of 1903, and the St. Louis court quickly ruled against Standard, arguing that it was sufficient that one of the defendants, the Waters-Pierce Oil Company, was a Missouri resident. Despite the increased resources of the government, the investigation went slowly. This was due in part to the procedural restrictions inherent in a civil suit. The government seriously considered bringing criminal charges to speed things up. Standard Oil attempted to prevent the filing of criminal

<sup>39</sup> Hidy and Hidy, *Pioneering in Big Business*, chap. 23.

<sup>40</sup> U.S. Department of Commerce, Bureau of the Census, *Historical Statistics of the United States: Colonial Times to the Present* (Washington, D.C., 1975), Series M138-M139.

<sup>41</sup> This fine was overturned in July of 1908. Bringhurst, *Antitrust and the Oil Monopoly*, 139.



"Vaccinating the Trusts. Give the doctor time; his patient has a lot of arms that need attention." • Roosevelt's second antitrust case was directed at another trust unpopular in the midwest, the Chicago meat packers. (This illustration originally appeared in the *Minneapolis Journal*, and is reproduced from Albert Shaw, *A Cartoon History of Roosevelt's Career* (New York, 1910).)

charges by offering to settle the suit instead, but the government's attorneys refused. Testimony was taken in September.

The stock market declined by 12.5 percent from January to July, and another 22 percent from July through November. A number of bank failures occurred. The troubled economic conditions were widely associated with the antitrust case.<sup>42</sup> Filings in July against two other major industrial

<sup>42</sup> Pringle, *Roosevelt*, 434; and George E. Mowry, *The Era of Theodore Roosevelt* (New York, 1958), 219–220.

firms, American Tobacco and E. I. du Pont, probably contributed to the perception that Roosevelt's use of antitrust was serious.

Roosevelt adopted a two-pronged response to the charge that his trust policy was responsible for the Panic. Publicly, he went on the attack, claiming in an August 1907 speech that not he, but rather "certain malefactors of great wealth" had provoked the panic "in order to discredit the policy of the government." In early 1908, he blamed the stock decline on the "speculative folly and flagrant dishonesty of a few great men of wealth," and he vowed to seek federal supervision of corporations.<sup>43</sup> He also carried on an extensive correspondence, deflecting requests to change his policies.<sup>44</sup> The request by New York bankers for a publicly announced temporary suspension of the case was rebuffed. But behind the scenes, Roosevelt was ready to compromise in the face of the disastrous economic developments. The Antitrust Division agreed to a one-month postponement of the Standard case in December. During the first part of 1908, negotiations were entered into with the aim of settling the case. In the end no agreement was reached.

In another retreat from his trust-busting stance, Roosevelt also expressed willingness to modify the Sherman Act. The Civic Federation, in consultation with the president and the Commissioner of Corporations drew up a statute that would allow "reasonable" restraints of trade.<sup>45</sup> It was introduced by Congressman Hepburn in March of 1908 and hearings were held on the bill in both houses. Roosevelt endorsed it at first. It would have increased the power of the presidency and allowed a graceful retreat on the trust issue. Reaction to the bill turned hostile, however, in part because it increased the executive's powers. It became clear that a winning coalition could not be formed, and his administration put itself at ever greater distance from it. In addition, the possibility that Roosevelt would renege on his 1904 pledge not to run again in 1908 was dwindling, in part because of the hostility of business interests in the Republican Party. He had a good deal of popular support, however, right up to the Republican convention of June 1908.<sup>46</sup>

<sup>43</sup> Harbaugh, *Power and Responsibility*, 311; and Bringhurst, *Antitrust and the Oil Monopoly*, 140.

<sup>44</sup> Joseph Bucklin Bishop, *Theodore Roosevelt and His Time: Shown in His Own Letters* (New York, 1920).

<sup>45</sup> Arthur M. Johnson, "Antitrust Policy in Transition, 1908: Ideal and Reality," *Mississippi Valley Historical Review* 48 (1961): 415-434; and Sklar, *The Corporate Reconstruction*, 228-285, provide the background on the Hepburn Bill.

<sup>46</sup> "When permanent chairman Henry Cabot Lodge referred to Roosevelt by name in a keynote address as 'the most abused and most popular man in the United States today,' the convention exploded with a spontaneous demonstration of support for him, interspersed with chants of 'Four, Four, Four Years More.' The demonstration lasted forty-

The retreat on the trust issue is reflected in the trust cases the Roosevelt administration filed and those it decided not to file in late 1907 and 1908. Roosevelt explicitly directed his attorney general not to file a suit against International Harvester, and when asked to do so, offered no objection to a U.S. Steel merger in the midst of the Panic of 1907.<sup>47</sup> The Antitrust Division filed only seven suits in 1908, down from fourteen and nine in the two preceding years. None of the seven involved a major industrial firm, although two involved major railroads. The Supreme Court also took the opportunity in February 1908 of giving the Sherman Act a pro-business thrust by unanimously applying it to unions.<sup>48</sup> The Taft administration continued this trend at first, filing only three cases in 1909, and only one against a major firm, the Sugar Trust. Taken together, the softening of Roosevelt's stance, the declining prospects of his renomination, and Taft's election and initial caution arguably changed expectations from the peak of antitrust rhetoric and filings in 1907. Real output increased by 14 percent from January 1908 to January 1909, and another 17 percent by January of 1910, for a total increase of one-third in two years.

Policy under Taft became gradually less cautious, the number and notoriety of the defendants increasing. Fifteen cases were brought in 1910, eight in industries involved in the processing or sale of agricultural products: tobacco, meat packing and livestock trade (four cases), sugar, grocery retailing, butter and egg trade, cotton, and tallow, oleo oil and olesterin. This strict course had Taft's backing, but was largely charted by his Attorney General, George Wickersham. In September 1911, Wickersham predicted that suits would be filed against 100 corporations and that corporate officials would serve time.<sup>49</sup> It also bears emphasis that under the prevailing view, the finding that a particular practice—such as Standard's contracts with the railroads—violated the Sherman Act implied divestiture as the remedy.

Taft's Antitrust Division filed its most spectacular suit against U.S. Steel, charging illegal merger and cartelization. The October 1911 case

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seven minutes." Donald F. Anderson, *William Howard Taft: A Conservative Conception of the Presidency* (Ithaca, N.Y., 1973), 38.

<sup>47</sup> See Pringle, *Roosevelt*, 445, on the first episode and Harbaugh, *Power and Responsibility*, 314, on the second. Judge Gary and Frick claimed that U.S. Steel's acquisition of Tennessee Coal and Iron would save it from bankruptcy, Roosevelt later claimed he replied, "that while I could not advise them to take the action proposed, I felt it no public duty of mine to interpose any objection." Both episodes gave him political trouble later.

<sup>48</sup> In *Loewe v. Lawlor*, discussed in Sklar, *Corporate Reconstruction*, 223–224.

<sup>49</sup> *New York Times*, 23 Sept. 1911, p. 2 col. 2; *New York Times*, 24 Sept. 1911, p. 1 col. 7; Pringle, *Roosevelt*, 669.



was based in part on the acquisition that Roosevelt had approved in the midst of the 1907 Panic. Roosevelt was mentioned by name in the suit, and the defendants included Morgan, Rockefeller, Carnegie, Schwab, Perkins, Gary, and Frick.<sup>50</sup> Roosevelt used the opportunity to paint himself as the friend of “good trusts” and to criticize the Taft administration’s indiscriminate attack on all large firms. Wickersham’s policies turned out to be so unpopular with business that Republican finances suffered in the 1912 election, and Standard Oil and International Harvester supported Roosevelt’s Bull Moose candidacy.<sup>51</sup> The case against International Harvester filed in April of 1912 was turned into another barb aimed at Roosevelt, who was alleged to have been soft on the “farm machinery trust.”

As in 1907, businessmen claimed that the attacks hurt them. Taft acknowledged the possible harm: “A reform of any evil is bound to produce for a time not disaster, we may hope, but difficult situations that may make business halt.”<sup>52</sup> However, he vowed that “we are going to enforce that law or die in the attempt.”<sup>53</sup> His reasons for doing so included his opposition to the trusts, his fidelity to “enforcing the law,” and, paradoxically, a recognition that the law went too far. He admitted to banker Frank Vanderlip that the law put the railroads “in an impossible position” but “proposed to enforce the law to the letter, and by making it obnoxious secure its reasonable change.”<sup>54</sup>

Contemporary economists also saw a connection between trust policy and business conditions. Wesley Clair Mitchell held an eclectic view of business cycles that tended to favor monetary factors. However, he attributed the slump of 1911 to the trust question. “Throughout the year . . . enterprise on the part of large capitalists was materially checked by uncertainty regarding the legal position of business combinations.”<sup>55</sup>

The 1911 decisions in Standard Oil and American Tobacco also had legislative repercussions. The two “trusts” were dissolved, but the disso-

<sup>50</sup> Paolo E. Coletta, *The Presidency of William Howard Taft* (Lawrence, Kans., 1973), 159. U.S. Steel had qualified as a “good trust” in Roosevelt’s eyes, and Roosevelt claimed that Taft himself had approved of the merger when he was in Roosevelt’s cabinet. The suit contributed to the split in the Republican party that led Taft and Roosevelt each to enter the race against Wilson in 1912. Mowry, *Era of Roosevelt*, 291.

<sup>51</sup> Anderson, *Taft*, 82.

<sup>52</sup> *Wall Street Journal*, 7 Oct. 1911, p. 1 col. 4.

<sup>53</sup> Quoted in Mowry, *Era of Roosevelt*, 288.

<sup>54</sup> Sklar, *Corporate Reconstruction*, 369, n. 58, quoting correspondence of Frank Vanderlip.

<sup>55</sup> Mitchell, *Business Cycles*, 85. John Bates Clark (after whom a prestigious economics prize was named) and John Maurice Clark also claimed that “breaking up too many corporations at once would be highly disturbing in the realm of business.” John Bates Clark and John Maurice Clark, *The Control of Trusts* (New York, 1912), 44.

lution plans were widely viewed as ineffective. Standard Oil reverted to the earlier “community of interest” that had been assumed after the original trust form had been abandoned and before the holding company form was adopted. What is more, the court enunciated a “rule of reason” that was not popular with Congress. The ensuing turmoil on the trust issue ended in the 1914 Clayton and Federal Trade Commission Acts. Other contributing factors included the Supreme Court’s 1912 *A. B. Dick* decision, which supported the right of a patentee to require purchasers to also buy unpatented supplies from the patentee.

The election of 1912 was dominated by the trust issue. The incumbent Taft was in favor of applying the Sherman Act across the board, but was resigned to losing the election and did comparatively little campaigning.<sup>56</sup> Roosevelt was the champion of the “good trust, bad trust” approach, and his Progressive, “New Nationalist” platform included a proposed federal trade commission with regulatory powers over business.<sup>57</sup> The cornerstone of Woodrow Wilson’s “New Freedom” became the fight against monopoly crafted by his advisor, Louis Brandeis. Wilson, like Taft, was emphatic in rejecting the “good trust” idea.

Once in the White House, Wilson continued Taft’s policy of aggressive filings, but increasingly came under the influence of Brandeis who urged broader reform and a decidedly pro-small-business approach.<sup>58</sup> United Shoe, the Chicago Board of Trade, Burroughs Adding Machine, Kodak, American Telephone and Telegraph, American Can, and a number of railroads were the subject of Sherman Act suits during Wilson’s first year as president.<sup>59</sup> “More than anything else,” writes Thomas McCraw, “executives of both peripheral and center firms wanted certainty: a bright line between legality and illegality.”<sup>60</sup> In response to the clamor for reform, J. P. Morgan and other financiers withdrew from some

<sup>56</sup> After his defeat, Taft did however write a defense of the 1911 court decisions and argued against changing the antitrust law. William Howard Taft, *The Antitrust Act and the Supreme Court* (1914).

<sup>57</sup> Thomas K. McCraw, *Prophets of Regulation: Charles Francis Adams, Louis Brandeis, James M. Landis, Alfred E. Kahn* (Cambridge, Mass., 1984), 116.

<sup>58</sup> Indeed, Brandeis’ muckraking on the trust issue, in articles and a popular book, *Other People’s Money and How Bankers Use It*, helped set the stage for the Federal Reserve Act, which was viewed as an effort to rein in Wall Street, and for the 1914 antitrust legislation. McCraw, *Prophets of Regulation*, 114.

<sup>59</sup> The year 1913 also marked the temporary modification of the New Jersey corporation laws through the so-called Seven Sisters Act, which Wilson signed in January 1913 while still governor of New Jersey. It was repealed in 1920. Henry P. Seager and Charles A. Gulick, *Trust and Corporation Problems* (New York, 1929), 362–365.

<sup>60</sup> McCraw, *Prophets of Regulation*, 116.

of the boards of directors on which they sat.<sup>61</sup> Reform of antitrust had been one of Wilson's promises, but in view of deteriorating business conditions, he struck a conciliatory pose. "The antagonism between business and government is over," he told Congress in January of 1914.<sup>62</sup> The Federal Trade Commission Act, signed in September of 1914, was a response to the call for a stable regulatory body for the trust question. The Clayton Act, whose final version was passed and signed in October 1914, was an effort to trim back what Congress viewed as the Supreme Court's too liberal interpretation of the Sherman Act and to deal with specific "abuses."<sup>63</sup> Real output per capita, which had been constant under Taft's administration, peaked in January 1913, and declined steadily over the next two years, even before the outbreak of hostilities in Europe in August 1914.

At least at the level of appearances, contemporaries still saw a connection between business conditions and antitrust, as they had in 1907 and 1911. According to Thomas McCraw, "Although nobody fully understood the connection between the business cycle and the program of the New Freedom, everyone understood that if Wilson were regarded as antibusiness during a period of economic downturn, then the Democratic party would suffer in the off-year elections of 1914. This was one reason why Congress balked at voting adequate appropriations for the new FTC."<sup>64</sup>

Was the economic importance of antitrust in this period as important as the political controversy suggests? Table 2 shows that of the ten largest industrial firms in 1911, the top four were sued during the Roosevelt and Taft initiatives of 1906–07 and 1911–12. Seven of the ten were the subject of antitrust suits over the entire period, 1890–1914, and American Sugar Refining and the meatpacking firms Armour and Swift were sued three times each. The typical remedy sought was divestiture. The assets of just the seven defendants among the top ten firms in 1911 amounted to \$3.5 billion, or 21 percent of total manufacturing assets in 1909, the closest year with available data.

These figures deal with the scope of restructuring and with other remedies actually sought. However, changing estimates of the probability of a much larger, potentially disastrous antitrust campaign may have had more of an influence on economic activity than actual cases. Fluctuations

<sup>61</sup> Ray Strannard Baker, *Woodrow Wilson: Life and Letters* (New York, 1968), 367. The event was hailed as the "surrender of the Money Trust."

<sup>62</sup> Quoted in McCraw, *Prophets of Regulation*, 118.

<sup>63</sup> Detailed histories of these two pieces of legislation appear in Seager and Gulick, *Trust and Corporation Problems*, chap. 20, and McCraw, *Prophets of Regulation*, 114–135.

<sup>64</sup> McCraw, *Prophets of Regulation*, 126.



“No Molly Coddling Here.” • Roosevelt’s big stick applied to the trusts. (This illustration originally appeared in the *New York Globe*, and is reproduced from Albert Shaw, *A Cartoon History of Roosevelt’s Career* (New York, 1910).)

in actual cases were largely relevant for their signal value about future policy. According to the “bad news principle,” changes in the likelihood of unfavorable future outcomes—for example, massive divestitures—govern the decision to invest now or wait.<sup>65</sup> A small but temporary probability of catastrophe creates an incentive to wait before investing. Most of the gains from an investment will still be available even after the crisis has passed.

We would be hard pressed to estimate the probabilities of antitrust initiatives that could have taken place but did not. However, we can get

<sup>65</sup> The “bad news principle” is due to Ben S. Bernanke, “Irreversibility, Uncertainty, and Cyclical Investment,” *Quarterly Journal of Economics* 98 (Feb. 1983): 85–106.

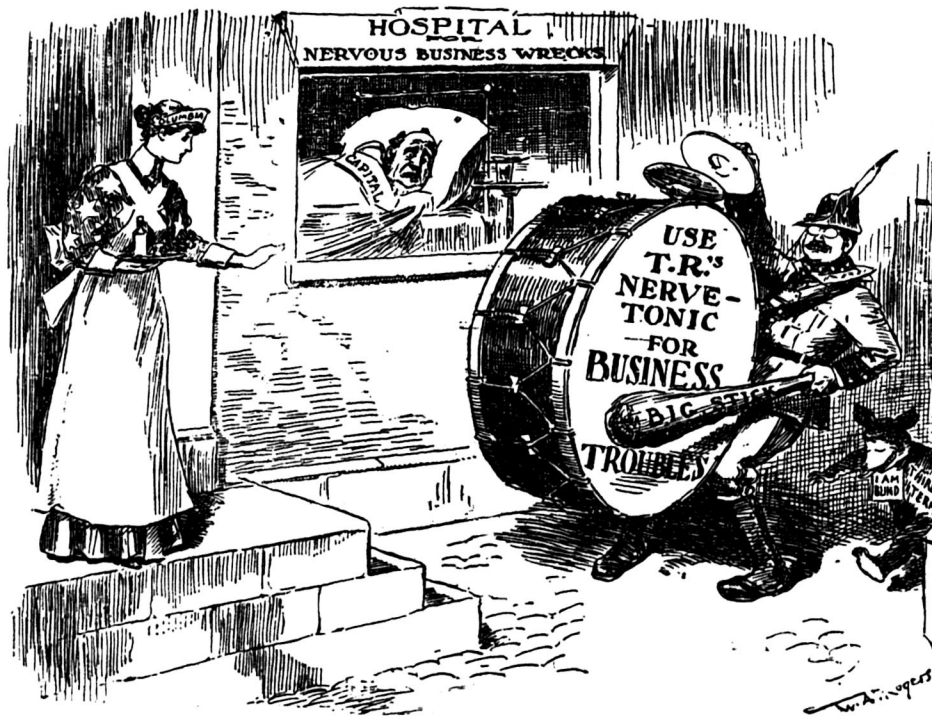
a sense of how extensive such an initiative could have been. Total assets of the top hundred industrial firms in 1911 amounted to \$8.9 billion, or roughly half of all manufacturing capital. Most and perhaps nearly all of those firms had grown through merger, and most engaged in anticompetitive practices. Consequently, a much larger fraction of assets than were actually attacked were susceptible to a thorough and consistently applied antitrust initiative. A thorough deconcentration was in fact Taft's stated aim in 1911: "We must get back to competition: If it is impossible, then let us go to socialism, for there is no way between." On another occasion, he promised to break up and force competition on any trusts that had violated the Sherman Act.<sup>66</sup> Many critics of early antitrust enforcement have in fact argued that the government could and should have gone much further but lost courage and passed up the opportunity to restore competition.

## V. Antitrust and Management Response

How did business managers respond to the shifting legal environment and the fluctuating politics of antitrust? There is little doubt that antitrust policy affected the choice between various forms of organization. The record of the E. I. du Pont Powder Company is probably among the most extensive, illustrating the importance management attached to having a safe legal haven, as well as the ultimate vulnerability to legal attack of that presumed safe haven. Chandler and Salsbury show that emerging antitrust policy during Theodore Roosevelt's first term delivered the decisive argument for du Pont in favor of full integration over other alternatives in 1903. Edward Walker, a Chicago attorney retained by Du Pont to advise on the consolidation, predicted that the looser holding company form would prove vulnerable in the pending Northern Securities case. "I would avoid all entangling alliances or contracts, but stand simply on the legality of your incorporation and the management and conduct of its corporate business."<sup>67</sup> However, Du Pont's merger turned out to be vulnerable to the Sherman Act as well. The government's suit, filed in July 1907, resulted in an unfavorable June 1911 ruling and subsequent divestiture. Du Pont management apparently did not take the prospect of divestiture seriously, and the ruling came as a surprise. As Chandler and

<sup>66</sup> *Wall Street Journal*, 7 Oct. 1911, p. 1 col. 4; and Pringle, *Roosevelt*, 669.

<sup>67</sup> Alfred D. Chandler, Jr. and Stephen Salsbury, *Pierre S. du Pont and the Making of the Modern Corporation* (New York, 1971), 113 and generally 112–119.



“Will You Please Hush!” • Business blamed Roosevelt’s boisterous rhetoric for capital market jitters. (This illustration originally appeared in the *New York Herald*, and is reproduced from Albert Shaw, *A Cartoon History of Roosevelt’s Career* (New York, 1910).)

Salsbury make clear, substantial managerial effort was devoted to fighting the case and dealing with the forced divestiture.

Clearly, if shifting legal standards affected the choice of organizational form, and if organizational form has an influence on the conduct of business, then uncertainty over what is permissible should delay important decisions. Are there recorded instances in which management explicitly deferred or altered its investment plans in response to antitrust policy uncertainty? If managers had wanted to do so, the general public discussion certainly provided the arguments and vocabulary. Martin Sklar observes that “the inhibitive impact of the uncertainty of law on market activity was a continuous theme among capitalists from the turn of century to 1914.” He cites as an example the 1908 statement before Congress by the president of Yale & Towne Manufacturing: “The law should be known and fixed in advance . . . so that business men may make their plans on a solid foundation.”<sup>68</sup> To this we can add the observations cited earlier by the business press, economists and the ever-candid President Taft himself.

Probably the most extensive collection of business opinion on the

<sup>68</sup> Sklar, *Corporate Reconstruction*, 204, n. 34.

effects of the Sherman Act appears in the National Civic Federation's 1912 survey on *The Trust Problem*. Manufacturers, bankers, merchants and leaders of other organizations were asked eleven questions, including: "What caused or causes the present disturbed business conditions?" The notion that trust-busting hurt business confidence runs almost continuously through the hundreds of responses from the business sector: "Disturbed business conditions are due to lack of certainty as to what is or is not legal under the Sherman Law, with the administration forcing it so drastically," argued the president of Lackawana Steel. Similarly, the president of Oliver Iron Mining emphasized the damaging aspects of "the uncertainty as to the exact meaning of the Sherman Law; the apparent unfavorable attitude of government officials towards large corporations and their efforts to return to destructive competition." The president of Sprague Warner (wholesale grocers) agreed, seeing "indiscriminate public antagonism to corporations, fostered by an indiscriminate press and self-seeking politicians; uncertainty as to the scope of the Anti-Trust Act," as creating a climate not conducive to business.<sup>69</sup>

Business leaders did more than blame the Sherman Act publicly. Sklar continues his discussion of business opinion by pointing to some business correspondence: "Similarly typical along these lines, but more concretely indicative, are private discussions in National City Bank president Frank A. Vanderlip's correspondence with James Stillman and others over deferment of investment programs by railways and manufacturing corporations pending clarification of the antitrust law."<sup>70</sup> To be sure, a cynic might contend that businesses chafing under the Sherman Act might delude themselves and incorrectly place blame on the government for investment plans deferred or abandoned. On the other hand, the marketplace imposes a penalty on actions that are based on erroneous beliefs and analysis, so that we can attach some weight to these private assertions.

<sup>69</sup> National Civic Federation, Department of Regulation of Industrial Corporations, *The Trust Problem: Opinions of 16,000 Representative Americans* (New York, 1912), 9, 11 and 276.

<sup>70</sup> Sklar, *Corporate Reconstruction*, 204, n. 34, cites Vanderlip to Stillman, 3 Feb. 1910, 3 June 1910, 17 Oct. 1911; Stillman to Vanderlip, 16 Sept. 1910; Vanderlip to Lyman J. Gage, 28 Feb. 1910; Frank A. Vanderlip Papers, Rare Book and Manuscript Library, Columbia University.

## VI. Statistical Evidence

The statistical work here regresses quarterly changes in aggregate production on current and past antitrust filings, with those filings grouped into major and minor cases. The results provide a formal test of the charges made in 1907 and again in 1911 that antitrust hurt business confidence and lowered output. As previously mentioned, the comments of business-cycle pioneer Mitchell and recent work on the effects of political uncertainty on investment suggest that unstable antitrust policies may affect investment, though secondary effects on the purchase of consumer durables and even consumption are possible. Unfortunately, no investment data at monthly, quarterly or even annual frequencies exist for this period. However, we do have detailed data on pig iron production, which offers a proxy for private investment and durable goods output. Consequently, I also present results using quarterly changes in pig iron production. In addition, the theoretical results on uncertainty and investment suggest that stock price volatility may reflect rapidly changing expectations. Empirical work by Christine Romer in fact links greater stock volatility to declines in purchased consumer durables. Hence, I also include stock price volatility as an explanatory variable. This captures factors like the fluctuating debate on free-silver, aspects of the trust issue not measured by case filings, as well as other uncertainty-inducing influences.

The regressions in Table 3 take the form:

$$Y_t = a + b_0J_t + b_1J_{t-1} + b_2J_{t-2} + c_0N_t + c_1N_{t-1} + c_2N_{t-2} + dV_t + \varepsilon_t,$$

where  $Y_t$  is defined as the change in the natural log of aggregate production (or of pig iron production) over the three months of quarter  $t$ ,  $J_t$  is the number of major cases filed in quarter  $t$ ,  $N_t$  is the number of other (minor) cases filed in quarter  $t$ ,  $V_t$  is the natural log of the standard deviation of the monthly return of the Dow industrial average over the three months of quarter  $t$  and the two preceding months, and  $\varepsilon_t$  is the error term.

Since the data are available monthly, there are nearly as many (overlapping) quarters as there are months of data. Using all quarters results in an efficient use of the data. However, since the observations overlap, the resulting regressions will have autocorrelated errors, which means that the estimated standard errors and t-statistics may be biased. Consequently, Table 3 provides both estimates based on quarters ending in all months, as well as successive estimates based on quarters ending in months 1, 4, 7 and 10 (January, April, etc.), months 2, 5, 8 and 11 (Feb-



ruary, May, etc.) and 3, 6, 9 and 12 (Mar, June, etc.). This second set of results is based on regressions that do not have autocorrelated errors and that yield unbiased standard errors and t-statistics.

Consider the first set of results for output in the columns labeled “all months.” Each extra major case per quarter is associated with a decline of output of -1.55 percent in the same quarter, -2.18 percent the next quarter, and -0.77 percent in the quarter after that. The total effect is therefore -4.50 percent. In contrast, minor cases are associated with a weak increase in output, suggesting perhaps that antitrust was being channeled away from large firms. Finally, a doubling of stock price volatility (a 100 percent increase) results in a -3.00 percent decline of output. Although the estimated standard errors in the first set of results are possibly biased downward and the t-statistics therefore inflated upward, the estimates in the other columns are not. These show that an increase in cases against major firms is correlated with or followed by a decline in aggregate output. The effect of stock price volatility is also confirmed.<sup>71</sup>

Regressions using pig iron production, my proxy for investment and durable goods purchases, confirm the results based on aggregate output. Each extra major case per quarter is accompanied by a cumulative decline of pig iron production of -13.81 percent, each extra minor case per quarter is accompanied by a slight, but statistically questionable increase, and a doubling of stock price volatility lowers pig iron production by -8.82 percent. Again, the results for non-overlapping quarters confirm that effects of major cases and of stock market volatility are unlikely to be due to chance. Each quarterly partition has at least one lag of the major case variable with a t-statistic in excess of 2.00, and all individual coefficients on major cases are negative.

<sup>71</sup> The discussion of particular statistical results here and in the next paragraph is intended to help the reader interpret the full set of coefficients in Table 3. Clearly, none of these results represents the “true,” precise effects of an antitrust case, in particular since a count of cases is a crude though perhaps serviceable proxy for the stringency of underlying enforcement. Estimated coefficients for antitrust cases will vary depending on the period covered and on the other variables included in a regression. In regression results that I do not report here, estimates that exclude stock volatility or that focus on specific subperiods generate somewhat different results. In all cases, however, the observed correlation between major case filings and changes in industrial production remains negative. The cumulative effect of major case filings also remains statistically significant when the years 1907 and 1908 are excluded or when the regressions focus only on 1909–1914 (the period after the Panic of 1907).

Table 3

Regressions of Quarterly Changes in Manufacturing, Agricultural and Other Production and Quarterly Changes in Pig Iron Production on Current and Past Antitrust Case Filings, and Log Volatility of Dow Industrial Returns, Quarters Starting May 1891 and Ending July 1914.

	Quarters ending months:							
	All months		1,4,7,10		2,5,8,11		3,6,9,12	
	Coeff	t-value	Coeff	t-value	Coeff	t-value	Coeff	t-value
Dependent Variable: Quarterly Change in Production								
Major Cases								
t	-1.55%	(3.12)	-0.70%	(0.72)	-1.96%	(2.35)	-1.86%	(2.13)
t-1	-2.18	(4.37)	-1.50	(1.55)	-2.63	(3.13)	-2.42	(2.75)
t-2	-0.77	(1.56)	-1.42	(1.44)	-0.40	(0.50)	-0.50	(0.57)
Sum	-4.50%		-3.63%		-4.99%		-4.79%	
Minor Cases								
t	-0.22%	(1.11)	-0.44%	(1.14)	-0.02%	(0.06)	-0.35%	(0.88)
t-1	0.49	(2.26)	0.65	(1.36)	0.41	(1.33)	0.51	(1.11)
t-2	0.35	(1.60)	0.17	(0.38)	0.34	(1.00)	0.49	(1.12)
Sum	0.61%		0.38%		0.73%		0.65%	
Log Volatility	-3.00%	(4.31)	-2.78%	(2.19)	-3.07%	(2.74)	-3.31%	(2.45)
Dependent Variable: Quarterly Change in Pig Iron Production								
Major Cases								
t	-2.43%	(1.34)	-0.73%	(0.21)	-2.65%	(1.00)	-4.01%	(1.14)
t-1	-5.05	(2.77)	-1.86	(0.05)	-5.40	(2.04)	-7.07	(2.00)
t-2	-6.32	(3.53)	-8.26	(2.30)	-5.73	(2.28)	-5.13	(1.46)
Sum	-13.81%		-10.86%		-13.77%		-16.21	
Minor Cases								
t	-0.52%	(0.72)	-1.74%	(1.30)	-0.04%	(0.05)	-0.09%	(0.06)
t-1	0.98	(1.26)	2.35	(1.43)	0.58	(0.60)	0.37	(0.20)
t-2	1.27	(1.62)	0.05	(0.03)	1.32	(1.22)	2.08	(1.19)
Sum	1.73%		0.66%		1.85%		2.36%	
Log Volatility	-8.82%	(3.45)	-8.78%	(1.97)	-8.79%	(2.42)	-9.08%	(1.63)

Notes: The production index is the seasonally adjusted Babson index from Geoffrey H. Moore, *Business Cycle Indicators 2* (Princeton, N.J., 1961). It includes manufacturing, mining, agricultural production, construction contracts, railway traffic, electricity production, and foreign trade, all value-added weighted. The log of stock market volatility is the natural log of the five month moving standard deviation of Dow Industrial returns (three months of the quarter plus two preceding months), with returns based on end-of-month values, from Phyllis S. Pierce, ed., *The Dow Jones Averages, 1885-1980* (Homewood, 1982). The pig iron regressions include unreported monthly or quarterly dummies. Pig iron data are from U.S. Department of Commerce, Bureau of the Census, *Historical Statistics of the United States, 1789-1945* (Washington, D.C., 1949), Series App. 10.

Statistical correlations raise familiar questions. First, the results may be due to reverse correlation—declining output or expectations of declining output may lead antitrust authorities to file cases. However, it seems unlikely that antitrust authorities can predict the business cycle. Even if they partly anticipate changes in output, they would have to be able to undertake an investigation and file a case on relatively short notice, or have a portfolio of pending investigations from which cases can be quickly filed.

A second question concerns the significance of case filings. Rather than reflecting antitrust policy, antitrust enforcement against large firms may reflect the general tenor of an administration's economic policy. This objection has greater force today, since the federal government's policies now cover not just antitrust, but also environmental, labor and corporate tax policy, for example. However, even to the extent that this objection applies at the turn of the century, the results are still interesting because they suggest that antitrust is a useful proxy for economic policy that affects output.

## VII. Other Times

It is possible that purely chance factors account for the correlation between major cases and declines in output during the years from 1891 to 1914. The best protection against flukes is replication with a new data set and under new circumstances. Here I will sketch out the nature of the evidence for other time periods.

The struggle over the "trust and corporation" problem did not end in 1914. In fact, it resurfaced at several points over the next decades, sometimes with the rhetoric and political overtones reminiscent of Roosevelt, Taft and Wilson. At other times, antitrust was scaled back and contained to the level seen under McKinley. A brief review of some key episodes suggests that while other factors, notably declines in the price level, have substantial effects on output, output declines typically accompany major "trust-busting" campaigns.

The 1919–21 antitrust initiative came in response to World War I inflation and the "war profiteering" controversy. It also accompanied a major economic downturn. Concrete actions included investigations and cases filed against the major meat packers, FTC attacks on association activities, and high-profile state-level investigations in



"The Usual Victim." • The battle between the trusts and the trust-busters harms an innocent bystander. (This illustration originally appeared in the *New York Herald*, and is reproduced from Albert Shaw, *A Cartoon History of Roosevelt's Career* (New York, 1910).)

New York and Illinois.<sup>72</sup> The price-level decline of 56 percent from May 1920 through June 1921 undoubtedly did much to aggravate this downturn.<sup>73</sup> However, the anti-business attacks began earlier, in August 1919, and the recession began in early 1920, before the fall in prices.<sup>74</sup>

The 1924–1929 relaxation of antitrust under Coolidge, and in particular under his chief antitrust official, "Colonel" William Donovan, accompanied one of the most spectacular peacetime expansions of the 20th century. Both agencies actively promoted trade association activities and mergers, and by the late 1920s, prominent anti-trust experts declared the Sherman Act dead. A wave of mergers proceeded unchecked by the antitrust authorities. Clearly, the Coolidge administration pursued pro-business policies across the

<sup>72</sup> Robert F. Himmelberg, *The Origins of the National Recovery Administration: Business, Government, and the Trade Association Issue, 1921–1933* (New York, 1976), 5–20.

<sup>73</sup> Friedman and Schwartz, *A Monetary History*, 231–232.

<sup>74</sup> Himmelberg, *Origins*, 7.

board, making it difficult to isolate the effects of antitrust, but restrained antitrust was a major component of the Coolidge program.

The potential importance of antitrust, either taken alone or as a flagship business policy, is illustrated by the shift under Hoover. On October 25, 1929, Hoover's attorney general, William Mitchell, announced at the annual convention of the American Bar Association that the newly installed administration would reverse the heretofore lax enforcement of the antitrust laws. Mitchell delivered this prepared speech, whose contents or fundamental message could have reached Wall Street a day or two earlier, in the middle of the week-long October 1929 stock market decline that started on October 23. Nor was the speech empty rhetoric. As Robert Himmelberg's detailed account shows, "one by one—often with long intervals between the public initiation of a new case—many of the most notorious organizations (some of whose programs had, initially at least, been approved by Donovan) were attacked, in nearly every case with prompt success."<sup>75</sup> The government's rediscovery of antitrust extended beyond trade associations to prominent entertainment mergers and the "Radio Trust," which included RCA, General Electric and Westinghouse. The 1931–33 period was, like 1920–21, marked by a major decline in the price level and monetary contraction, and this probably accounts for the severity of the output decline. However, the abrupt and unexpected shift in antitrust initiated with Mitchell's October 1929 speech is arguably a possible cause for the crash and the 1930 recession.<sup>76</sup>

The 1933 National Industrial Recovery Act (NIRA), as Himmelberg shows, represented an attempt to restore lax antitrust—the status quo ante under Coolidge—in exchange for concessions to labor. Its passage and early enforcement were marked by a remarkable economic expansion in the second and third quarters of 1933. That expansion has puzzled economists who regarded the NIRA as merely a monopolizing device. Typically, they dismissed the boom as artificial, as due to purchases made in advance of expected monopoly price hikes. However, that explanation is inconsistent with the sharp

<sup>75</sup> Himmelberg, *Origins*, 93.

<sup>76</sup> I discuss the 1920s policies at greater length in George Bittlingmayer, "The 1920s Boom, the Great Crash, and After," working paper, Graduate School of Management, University of California, Davis, 1995.

increase in stock prices and output even in sectors that might be expected to be victims rather than beneficiaries of monopoly price increases.<sup>77</sup>

After the NIRA was declared unconstitutional in 1935, the New Deal waffled on antitrust until late 1937, when it reversed itself and initiated a new round of antitrust enforcement, especially after the appointment of Thurman Arnold as antitrust chief. These actions were accompanied by a major stock market decline in October 1937, increased stock-market volatility, and the 1938–39 recession.<sup>78</sup>

In separate work, I have examined the antitrust initiatives in individual industry sectors for 1947–1992. Case filings were correlated with declines in investment, and the revival of antitrust in the late Eisenhower and early Kennedy years explains the low levels of investment for 1958–1962 that have puzzled economists. In particular, Kennedy's celebrated confrontation with big Steel in May 1962, the filing of a number of cases against major firms that summer and the bear market of 1962 were reminiscent of Theodore Roosevelt's clashes with the trusts.<sup>79</sup>

Clearly, other factors affect the business cycle. For example, a decline in the price level has well understood, negative effects on output, illustrated by the 1920–21 and 1931–1933 declines. Conversely, high rates of inflation also appear to reduce economic activity. However, our understanding of what causes business cycles is still incomplete. Quite possibly, politically volatile attacks on the organization of business, especially when the ultimate scope of those attacks is unclear, may have been one important influence on business activity.

## VIII. Summary and Concluding Comments

The view that Roosevelt's and Taft's trust-busting shook business confidence was once widespread. At odds with textbook explanations

<sup>77</sup> George Bittlingmayer, "Output and Stock Prices When Antitrust Is Suspended: The Effects of the NIRA," in *The Causes and Consequences of Antitrust: A Public-Choice Perspective*, ed. Fred S. McChesney and William F. Shughart II (Chicago, Ill., 1995) covers the NIRA and analyses its economic and financial effects.

<sup>78</sup> George Bittlingmayer, "Stock Returns, Real Activity and the Trust Question," *Journal of Finance* 47 (Dec. 1992): 1701–1730, offers a brief historical treatment of this period, as well as an extended statistical investigation of the stock market effects of antitrust enforcement for 1904–1944.

<sup>79</sup> George Bittlingmayer, "Industry Investment and Regulation," working paper, Graduate School of Management, University of California, Davis, 1995.

for the business cycle, the idea is consistent with recent theoretical work that shows how uncertainty, in particular political uncertainty, can influence investment. It is also consistent with the view that the modern corporation improved the organization and coordination of business units, and with the view that many controversial business practices have efficiency rationales.

The political importance of the trusts is indisputable, their economic importance reflected in the fact that the hundred largest firms, preponderantly “trusts,” accounted for half of U.S. manufacturing capacity. Plausibly, then, an attempt to restructure big business forcibly, in effect to undo with protracted lawsuits in 1907 or 1912 the mergers that had taken place over the preceding two decades would have created substantial costs. Some forced divestitures did in fact take place in the face of much controversy, and each new initiative raised the possibility of even more extensive restructuring. That was an explicit threat under Taft and Wilson.

It bears emphasis that while a favorable view of challenged business practices—including the modern corporation—makes it easier to construct a connection between antitrust and business activity, it seems plausible that stepped up antitrust enforcement would have unsettling effects even if the “trusts” had been simple monopolies, as Taft himself allowed. The basic argument is aided by, but not wedded to, an efficiency story for the trusts and large corporations.

The work here offers theoretical and empirical evidence for an old but neglected claim, it puts the unusual passion and politics of the trust question in a new light, and it may explain why the federal government’s sporadic antitrust drives did not turn out as severe as supporters had hoped and detractors feared.