

REGULATION
AND THE
NATURAL PROGRESS
OF
OPULENCE

SAM PELTZMAN

2004 DISTINGUISHED LECTURE
AEI-BROOKINGS JOINT CENTER FOR REGULATORY STUDIES

Regulation and the Natural
Progress of Opulence

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Sam Peltzman

AEI-Brookings Joint Center 2004 Distinguished Lecture
Presented at the American Enterprise Institute
September 8, 2004

AEI-Brookings Joint Center for Regulatory Studies

WASHINGTON, D. C.

Available in the United States from the AEI Press, c/o Client Distribution Services, 193 Edwards Drive, Jackson, TN 38301. To order, call toll free: 1-800-343-4499. Distributed outside the United States by arrangement with Eurospan, 3 Henrietta Street, London WC2E 8LU, England.

Library of Congress Cataloging-in-Publication Data

Peltzman, Sam.

Regulation and the natural progress of opulence / by Sam Peltzman.
p. cm.

Includes bibliographical references.

ISBN 0-8447-4230-9 (pbk. : alk paper)

1. Delegated legislation—Economic aspects—United States. 2. Law and economics. I. Title.

KF5411.Z9.P45 2005

342.73'0664—dc22

2005007448

10 09 08 07 06 05 04 1 2 3 4 5 6 7

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The AEI Press

Publisher for the American Enterprise Institute

1150 17th Street, N.W.

Washington, D.C. 20036

Printed in the United States of America

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Foreword

The 2004 AEI-Brookings Joint Center Distinguished Lecture Award was given to Sam Peltzman. Professor Peltzman is the first member of the Joint Center's Academic Advisory Board to receive the award.

The purpose of this award is to recognize an individual who has made major contributions to the field of regulation and related areas. Senior members of the Joint Center select the distinguished lecturer on the basis of his scholarly and practical contributions to the field. The lecturer is given complete latitude in choosing a topic for the lecture.

Sam Peltzman is one of the few economists, and probably the only regulatory economist, to have an effect named after him—the “Peltzman effect.” The Peltzman effect arises when people adjust their behavior to a regulation in ways that counteract the intended effect of the regulation. So, for example, when the government passes a seatbelt law, some drivers may respond by driving less safely. It turns out that the Peltzman effect has widespread application and has spawned, like much of Professor Peltzman's other work, a veritable cottage industry for economists.

The hallmark of Professor Peltzman's work is that it combines elegant theory with careful empirical work. He has made numerous contributions to the field of regulation, including seminal work on the political economy of regulation. Other areas in which he has made important contributions include banking, drugs, automobile safety, electric utilities, advertising, mergers, education, voting, and the growth of government. It is a very impressive list, especially when one considers the difficulty of doing careful empirical work.

One of the most important aspects of Professor Peltzman's research is that it often flies in the face of conventional wisdom. This monograph is no exception. His basic thesis is that market forces frequently undermine attempts at regulation. At the same time, counterproductive regulation can survive for a long time—a puzzle that defies simple explanation, but one that Peltzman explores in this monograph. In concluding, Professor Peltzman suggests that good empirical research on regulation can help influence the design of policies when issues become politically salient.

Like all Joint Center publications, this monograph can be freely downloaded at www.aei-brookings.org. We encourage educators to use and distribute these materials to their students.

ROBERT W. HAHN, Executive Director
ROBERT E. LITAN, Director
AEI-Brookings Joint Center
for Regulatory Studies

Regulation and the Natural Progress of Opulence

Sam Peltzman

It was a singular honor for me to receive the 2004 AEI-Brookings Joint Center Distinguished Lecture Award. I follow notable predecessors—Fred Kahn, Stephen Breyer, and Richard Posner. All of them have participated in the shaping of actual regulation. I have not. So feel free to regard me as an impostor when I discuss this or that regulatory program. Mostly, though, I will use my outside-the-Beltway perspective to examine some broad issues that cut across the regulatory landscape.

The title for this monograph comes from a chapter in *The Wealth of Nations*. Adam Smith was, of course, deeply curious about the conditions that foster economic progress. And this essay will be about the interaction between government regulation and economic progress. This is also Smith's concern in the chapter of his great work titled "Of the Natural Progress of Opulence."

The ostensible subject of this chapter is the allocation of capital between cities and the countryside. Smith tells us that a nation's economic progress would be best facilitated if its capital were at first mostly allocated to agriculture and then followed by a gradual development of industry and trade in towns and cities. Moreover, he argues that just such a sequence of development would emerge if investors were left alone to seek the greatest return on their investments.

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He observes, however, that in the Europe of his day, “this natural order of things” is “entirely inverted.” It is the towns that grow first and the countryside that tags along. How can this inversion be explained? Smith has no doubt about the answer—it is because of those darn regulators in London, whose rules and taxes artificially raise rates of return on nonagricultural investments.

As in much of *The Wealth of Nations*, the point Smith is making here is far more general than the specific issue he is talking about. The larger question Smith is addressing is about long-run economic growth. Why does per capita income gradually grow in some societies and stagnate in others? He understood, as did few before him, that the key to opulence is progress—that nations achieve lasting prosperity not by discovering a pile of gold but by establishing conditions that foster steady growth.

The “natural” part of his chapter title conveys an important part of Smith’s answer to the mystery of steady growth. His message is that, when unregulated, undistorted rewards are higher in one activity than another, economic progress is usually promoted if resources flow toward the high-return use. And resources would flow that way if we were left alone to pursue our happiness. When regulators do things that change those market signals or prevent us from responding to them, the nation as a whole usually ends up poorer.

There is much wisdom in Smith’s view, but I shall argue that it gives an incomplete picture of the connection between regulation and the progress of opulence. Smith is emphasizing the conflict between regulation and economic progress. If he were writing an AEI-Brookings monograph, it might be called *Regulation: The Enemy of Progress*. Here I want to outline two other monographs that could explore other aspects of this dynamic. The first I will call *Progress Strikes Back* and the second, *Progress: The Friend of Regulation*.

The point of *Progress Strikes Back* is that market forces and prosperity often undermine the effects of regulation. There are two kinds of subterfuge. One is that the regulation often induces changes in behavior that counter the intended effects of the regulation. The other, more subtle kind of erosion occurs because

unregulated progress often produces the intended benefits of regulation, albeit more slowly and quietly.

The second proposed monograph, *Progress: The Friend of Regulation*, tries to answer a question about counterproductive regulation that troubled Smith: How does such regulation survive politically? The answer it proposes is that progress can often hide the bad effects for a long time and thereby immunize the regulation politically.

Progress Strikes Back

It is entirely understandable that Smith would have emphasized the clash of regulation and the natural progress of opulence. The conflict between the two is almost definitional. We might differ about the wisdom of this or that regulatory policy. But all of them came into being to reject and disrupt the *natural* part of the progress of opulence—to look for the gold mine rather than accept the results of the gradual progress produced by unregulated choices. How then, precisely, does natural progress strike back and reassert itself?

I have alluded to one reason—that regulation creates incentives for behavior that offsets some or all of the intended effect of the regulation. This is sometimes called “offsetting behavior,” and I will provide three examples of it. These are based on the work of many different economists, including me. My examples are drawn from what has come to be called “social” regulation, but the principles apply to other forms of regulation as well.

The three regulatory changes I will explore here are the auto safety legislation that began in the 1960s, the Americans with Disabilities Act of 1990, and the Endangered Species Act of the 1970s. They seem on the surface very different, but I hope to show that a powerful common current runs through all of them. And that offsetting behavior has undone some, all, or, in one case, more than all of their intended effects.

The general point about offsetting behavior has been around a long time. I can still remember the profound impact that this principle made on me when I first encountered it in an early

economics class. The instructor was claiming—against what appeared to be millennia of contradictory evidence—that governments could not impose maximum prices. His point was not that the regulation would be unwound by evasion of the law, something his class of New York street kids probably already knew. It was that even if the law were perfectly enforced (and even if sellers did not change the quality of the product), the law could not succeed.

The reason, we were told, was that a perfectly enforced maximum would give buyers the incentive to line up for a bargain. The extra time spent waiting in line was valuable. So the real price of the good to any consumer was the bargain-regulated price plus the value of the time spent waiting to get at it. Then came the punch line: As long as the line was sufficiently short, the sum of the regulated price and the value of waiting time would remain a bargain. So the line would continue to grow until the sum of the regulated price and the value of the extra waiting time induced by the regulated price just equaled the free-market price. QED.

Only later would I be forced to confront the qualifications of the sort that led Harry Truman to wish for a one-armed economist. Only much later could I think to ask whether anyone had ever shown that in fact the value of extra waiting time completely offset the effect of a price ceiling. Indeed, I am not sure to this day that anyone has shown that. But the moral of the story is important. Regulation seldom changes the forces that were producing the particular result the regulators seek to change. So we need to ask whether regulation really changes the result or only the form in which market forces assert themselves.

The National Traffic and Motor Vehicle Safety Act. I begin that inquiry with auto safety regulation—more specifically with a number: 3.5 percent. Remember that number, because I will come back to it later. It is the annual rate of decrease in automobile fatalities per mile driven over the period from 1925 to 1960, which is to say from the dawn to the dawn—from the dawn of the era of the automobile as a mass market consumer good to the dawn of the era of Ralph Nader.

That number is important because it tells you there was considerable progress in auto safety before the Department of Transportation begat the National Highway Traffic Safety Administration (NHTSA), which begat the Motor Vehicle Safety Standards (MVSSs), which have lived and multiplied for thirty-eight years and counting. That progress was not marked by any dazzling breakthrough. It was more the product of small advances on many fronts—auto and road design, drivers' knowledge, medical techniques, and so forth. In other words, the advances came from the working of the natural progress of opulence: Growing wealth was producing growing demand for personal health and safety, and markets were finding ways to meet the increased demands.

This particular example of natural progress undoubtedly had a regulatory or governmental component. Governments, after all, built the highways and streets, made the rules of the road, and policed these roads. Those areas of government activity were also evolving over this antediluvian time period. I mention this because we live in a time when it would be illusory to speak of a natural progress of opulence without government activity playing a substantial role. So, please understand that the term I am borrowing from Smith should not exclude contributions from the public sector, including regulation. Instead, you should think of a world in which such matters as auto safety are mainly led by the gradual evolution of market forces in a society that gradually becomes wealthier and also smarter. It is a world in which the government role is mainly complementary, interstitial, and therefore also evolving gradually. I think that fairly describes the pre-1960s period in which the auto fatality rate was declining steadily.

The contrasting case is one in which the government role becomes central, both jurisdictionally and operationally, and prescriptive rather than complementary. The matter is deemed too important to leave to market forces or even to the lower levels of a federal system to figure out what might best suit their local circumstances. Rather, a unified view of how best to promote the desired goal is articulated by the central government and then imposed on the market. That, I think, fairly describes the world we

have been living in with regard to auto safety since the National Traffic and Motor Vehicle Safety Act of 1966. It is the suddenness and comprehensiveness of the institutional change that I will be mainly referring to in this monograph when I use the term “regulation” and counterpose it to the natural progress of opulence.

The unified view that has informed auto safety regulation since 1966 is that safety depends critically on design features of cars that protect occupants from the consequences of accidents and that the discovery and deployment of these features are to be centrally determined. There is some room for market forces in this system—for example to determine the precise packaging of the mandated design features and to exceed minimum standards. But in this post-1960s world, most of the significant decisions about auto safety are initiated in Washington.

My contribution to the analysis of this regulation is now almost thirty years old. You can find a summary in one of the AEI Evaluative Studies publications of that era (Peltzman 1975). I was trying to evaluate the first few years’ experience with the first generation of motor vehicle safety standards, the ones that mandated installation of seatbelts, collapsible steering columns, and pop-out windshields, among others.

I argued that this regulation would encourage greater risk taking. In effect, the greater protection had reduced the price of risky driving. That is, if you are in a hurry and tempted to drive faster or more aggressively, part of the price you would pay for this is the extra risk of getting into an accident and then suffering injury or even death. The mandated safety devices would reduce this price by reducing the severity of the consequences you could expect if you got into an accident. If those consequences had been sufficiently severe to deter you before the regulation came along, they were now less likely to do so. So simple economic logic suggested that, in the aggregate, the mandated devices would encourage more risky driving behavior—and this greater risk taking would offset to some degree the safety benefits these devices seemed to promise.

Unfortunately but typically, this is about as far as basic economics can get you with an issue such as this one. It is important to note

that economic reasoning is uninformative about the degree to which the safety benefits will be offset. It could be partial, complete, or even more than complete. So most of what you will find in that old AEI Evaluative Studies publication focused on the facts as best they could be ascertained in the mid-1970s. And I suggested that some of the facts seemed consistent with a complete offset of the benefits. Specifically, occupant deaths per accident did indeed fall substantially compared to what might otherwise have been expected. But this was entirely offset by a combination of more accidents and more fatalities to nonoccupants such as pedestrians, bicyclists, and motorcyclists, whom the devices did not protect.

This finding met with considerable skepticism from economists and noneconomists. Unlike most noneconomists, most of my colleagues accepted the underlying logic and reserved their skepticism for whether the facts fit the logic. This is the healthiest kind of skepticism, and it has led to a substantial and ongoing empirical literature on auto safety that examines a variety of regulatory changes in a variety of places.

On the whole, I believe that this literature has been kind to the offsetting-behavior hypothesis. The studies differ on whether the offset is complete, as it was in my old study, or on the gory details—for example, on whether significant offset is coming from increased nonoccupant deaths or from some more general change. But the common finding is that the actual effect of the safety regulation on the death rate is substantially less than it would be if real people behaved like crash dummies.

A recent article by Alma Cohen and Liran Einav (2003) on the effects of mandatory seatbelt use laws is reasonably representative. This particular study does not find increased nonoccupant deaths to be an important part of the story. But it shares with most such studies the crucial bottom line: The real-world effect of these laws on highway mortality is substantially less than it should be if there was no offsetting behavior. They conclude that the increased belt usage occasioned by these laws should, in the absence of any behavioral response, have saved more than three times as many lives as were in fact saved.

Equally important, this kind of “regulatory failure” does not arise because the engineers at NHTSA are wrong about the effectiveness of the devices they prescribe. Most studies show that, if you are involved in a serious accident, you are much better off buckled than not and with an air bag rather than without. The auto safety literature attributes the shortfall, either implicitly or explicitly, to an offsetting increase in the likelihood of serious accident.

The Americans with Disabilities Act. My second example of offsetting behavior comes from the Americans with Disabilities Act (ADA) of 1990. This law prohibits discrimination against the disabled in hiring, pay, promotion, and firing, and it mandates the “reasonable accommodation” of disabled workers by adapting the workplace to their disabilities. Thus, the law is trying to increase the employment and well-being of the disabled.

Although I have no precise figures, it is reasonably clear that the natural progress of opulence was producing this laudable result long before the ADA. The gradual shift of economic activity from brawn power to brain power, from producing goods to providing services, virtually guarantees that employment opportunities for the disabled were increasing over time. As with the highway safety act, the ADA is rejecting the adequacy of this sort of gradual improvement.

However, two recent studies, one by Tom De Leire (2000) and the other by Daron Acemoglu and Josh Angrist (2001), show that the ADA did not in fact improve employment opportunities for the disabled. Indeed, both studies conclude that employment rates for the disabled *fell* perceptibly after the ADA was implemented. How could this be? According to both studies, the answer lies in the incentives created by the ADA for not hiring disabled workers.

Consider the incentives of prospective employer Jack vis à vis disabled potential worker Jill. Prior to the ADA, Jack might have hired Jill and then watched to see whether her productivity compared to her wage plus any special costs of accommodating her disability justified her continued employment. Sometimes Jill would turn out to be a good hire, sometimes not.

After the ADA, the relative costs of hiring and firing change. If Jack does not hire Jill, he is, to be sure, now susceptible to penalties for discrimination. But Jill will have the burden of proving that discrimination drove Jack's decision. And if Jack is sufficiently nimble about how he looks for employees, disabled Jill will not find out about the job in the first place. But if Jack does hire Jill, Jack faces two kinds of costs he did not face before. First, the regulators, not Jack, will determine what costs have to be incurred to accommodate Jill and whether her wages are too low. Second, if he fires her now to avoid those costs, he is surely subject to penalties for discrimination. The burden will be on Jack to show that the accommodation costs were "unreasonable." So, in a prospective sense, the ADA imposes new costs both for hiring Jill and for not hiring her, but the hiring costs (or, more accurately perhaps, the subsequent firing costs) arguably are larger. Better then to avoid hiring Jill than to hire her and face those new costs imposed by the ADA.

The evidence is consistent with this tale. Not only did employment rates for the disabled fall after the ADA, they also fell more for young workers who would be more likely to be seeking employment than older, established workers. The fall is concentrated in new hires rather than any increase in separations. And it is heaviest for the less educated, who are now prevented from offering lower costs to prospective employers to offset their lack of skills.

Because employment opportunities for the disabled have been reduced by the ADA, this is a case where the offsetting response is more than complete. You might think the disabled would be pressing for repeal. But the law does benefit some of them. Disabled Jane, who was already working for Jack in 1992, clearly gains—better working conditions, no lower pay, and an option on a future antidiscrimination complaint to the Equal Employment Opportunity Commission. These beneficiaries know who they are. The victims—the unhired Jills—often do not know they are victims. This kind of asymmetry may help explain some of the underlying political economy of this and similar legislation. Similar stories can be told about other protected workers, such as women and minorities.

The Endangered Species Act. My last example of offsetting behavior comes from the Endangered Species Act (ESA) of 1973. This law is intended to protect wildlife species that face threat of extinction. It is by far the least well studied of my examples, and this fact gives me some pause. I will not be able to tell you how important the offsetting behavior is in this case. Nor will I have much to say about what was happening to wildlife preservation before it became a federal responsibility. But I do hope to convince my colleagues that such matters deserve much more of their attention.

The ESA was passed in the rush of enthusiasm for centralizing the protection of the environment that swept this town in the late 1960s and early 1970s. The law tells the Fish and Wildlife Service (FWS) to determine which species are endangered or threaten to become so. Once a species is put on the Endangered Species list, private owners of species habitat cannot alter their land in a way that “harms” the protected species. According to the FWS, “The law’s ultimate goal is to ‘recover’ species so they no longer need protection under the . . . Act.”

Let me compare what has actually happened since 1973 to this stated goal. In 1973 there were 119 species on the list that had gotten there under previous legislation. In the ensuing thirty years an average of 40 species per year has been added to the list, so something more than 1,300 species became listed. (Apparently there has been an astonishing explosion of zoological knowledge in the last thirty years.) How many species have been removed from the list? The correct answer is thirty-nine—not thirty-nine per year but thirty-nine in thirty years. Of these, fifteen were removed for information reasons (a change in taxonomy or erroneous information), nine became extinct, and fifteen were recovered. Thus, judged by its own stated goal, this regulatory enterprise has been a colossal failure, having thus far produced a net recovery rate of under ½ percent (6 of 1,300+) of listed species. An untutored observer should be pardoned for concluding that the real purpose of the act is the production of ever longer lists.

Now let me describe the offsetting behavior that is responsible for some indeterminable part of this failure. It is sometimes called

“preemptive development.” Anecdotes about this phenomenon abound, but I am aware of two studies that document systematic evidence of the behavior. One is a study of the red-cockaded woodpecker by Lueck and Michael (2003), and the other, by Margolis, Osgood, and List (2004), is about the pygmy owl. I will use the first of these to illustrate how preemptive development works to offset the intent of the ESA.

The red-cockaded woodpecker is an endangered species that inhabits southern forests with commercial value. In the natural progress of opulence, such forests are allowed to grow until it becomes economical to cut trees down. Some such forests might ultimately be clear cut, others thinned gradually. Some of the clear-cut forests will be replanted, others not. The ESA changes all these calculations. If you own a forest that is habitat for the red-cockaded woodpecker, you cannot cut down trees. That is good for the woodpecker. But these birds move around, and if you own forest land that is near the bird's habitat, your incentive is very clear—cut down all those trees now! If you wait and your land becomes habitat for this species, your lumber will be lost. This is not good for the woodpecker, but Lueck and Michael find that this is systematically what happened in the North Carolina forests they studied. Forests that might be thinned or allowed to grow a while longer were preemptively cut down when they became potential woodpecker habitat.

Change “woodpecker” to “owl” and “preemptively cutting down trees in the forests of North Carolina” to “preemptively developing land in the suburbs of Tucson,” and you have the essence of the Margolis, Osgood, and List study.

How Progress Sustains Regulations. My examples of offsetting behavior drip with irony: The highway safety act promotes reckless driving; the disabilities act disempowers the disabled; the endangered species act promotes clear cutting and suburban sprawl. This ironic aspect, I think, accounts for some of the appeal of the concept to economists as well as some of the controversy about it. We economists tend to prefer unexpected results to expected, especially if they illustrate the power of the simple logic of our discipline. But

we are also skeptical of unexpected new results, and the rest of the polity has resisted them at least since Adam Smith was pushing free trade more than two hundred years ago.

And you should be skeptical. Here I am telling you how offsetting behavior has compromised three significant attempts to improve our lives. Yet each of them is a sacred political cow. Not one is in any serious danger of substantial alteration. How can that be? In the case of the ADA, I looked to asymmetries between beneficiaries and victims for part of an answer. Perhaps other aspects of the relevant political economy can help us understand the durability of the other cases. But these cases are merely illustrative. It has become routine, especially in this area of social regulation, for economists to find regulation with compromised benefits or with negative net benefits. There must be a very powerful force that protects such regulation.

I think I have found the culprit. It is the natural progress of opulence. I will argue that this very force, which these kinds of regulation reject, also sustains them politically.

This sounds paradoxical. But let me now take you back to the beginning of this monograph, and you will soon see where I am headed. I asked you to remember a number: 3.5 percent, the annual rate of decline in highway deaths per mile in the pre-Nader era. Now, I want you to guess what the comparable number is in the regulated post-NHTSA era. Answer: From 1965 to 2002, highway fatalities per vehicle mile declined at 3.5 percent per year. I cannot think of a better way to convey the basis for skepticism about the effectiveness of this regulatory enterprise than the identity of these two numbers.

I have given one reason why highway safety regulation did not improve safety. But I believe that the power of the natural progress of opulence is probably more important here than offsetting behavior. Progress in auto safety would likely have continued whether or not the NHTSA had been created, and it would not surprise me if the vehicle mile death rate falls at 3 to 4 percent per year for the rest of your lifetime, whether that agency issues new safety standards or not. Indeed, even in vehicle design, NHTSA's rules may have only

speeded up some changes that would otherwise have occurred more slowly. Just as it is unimaginable that a 1965 car would have a 1925 design, so too is it implausible that a 2005 model will have only 1960s safety technology. We will never be able to know, but it is likely that many of the design features mandated by the NHTSA would have been introduced anyway, just later.

This pattern of gradual progress prior to a regulatory innovation is common to many areas of social regulation, such as worker and product safety and environmental quality. Careful study may or may not show that the regulation accelerated the progress. The important point is that, in most cases, the gradual progress would plausibly have continued whether or not regulation had intervened.

But even if the rate of progress is no different under regulation, as with auto safety, there is a crucial difference. One era of progress happened after the regulatory enterprise was created. That permits the regulators to point with pride to the progress and to claim credit for it. An economist looking at the entirety of the historical record may say that “regulation has nothing plausibly to do with the progress.” But this is much too subtle. The fact is that there was regulation, there was progress, so why mess with it?

Progress: The Friend of Regulation

There is then a symbiosis between the progress of opulence and much regulation, even ineffective or counterproductive regulation. As long as the thing being regulated is seen to be working tolerably well—and that will often be the case in a growing economy—then the regulation is usually safe politically. This is the argument of my second proposed monograph, *Progress: The Friend of Regulation*.

The friendship reflects a crucial difference between the way economists and most others analyze the effects of regulation. The economic analysis begins by posing a counterfactual: What would the world have been like without the regulation? Then the analyst compares the actual world to the counterfactual. Regulation is deemed successful only if its intended effects are realized to a

greater degree than could reasonably have been expected according to the counterfactual benchmark. This is the procedure economists have followed since Adam Smith. Indeed, in the brief chapter that inspires this essay, Smith does not simply assert the virtues of investment in the countryside. He compares what mercantilist policy is doing in the England of his day to a counterfactual drawn from the history of places such as the North American colonies and ancient Egypt. Smith's descendants can use more powerful techniques, but their analytical method is the same as his.

Perhaps the method helped to end mercantilism. But it is hard to think of a significant regulatory enterprise in our time that has been placed in political jeopardy just because it fails to stack up well against a plausible counterfactual. Rather, the political process seems to require evidence of malfunction in some absolute sense before there is serious pressure for change. I can illustrate the point with two examples with which I was involved early in my career.

The Interstate Commerce Commission. My one brief sojourn in Washington goes back to the early 1970s. Much of my time then was taken up with an effort to reform freight transportation regulation. In this I was joined by a large and talented group of professional colleagues within the executive branch. We were reflecting a broad consensus among economists that this venerable form of regulation had been seriously counterproductive probably since the first highway network was built in the 1920s. We got absolutely nowhere with our reform initiative, which is just about where several previous such efforts stretching back to the Hoover administration had gotten.

Within five years, however, the regulatory edifice began to crumble. In another decade it would be gone. The Interstate Commerce Commission (ICC), the mother of all federal regulatory agencies, would not live to see its one-hundredth birthday. In retrospect, the reason for this stunning and swift change is clear: It was the financial collapse of a major chunk of the railroad industry in a time of general prosperity. This made continued regulatory-business-as-usual unviable. In this case, market forces had to

destroy the foundation of the regulatory system before there was fundamental change.

The Food and Drug Administration. Consider now the quite different recent history of another regulatory enterprise—the Food and Drug Administration’s (FDA) regulation of new drug introductions—and, more specifically, the 1962 amendments that require a manufacturer to prove a new drug’s efficacy before it can be sold. I studied the effects of this seemingly innocuous legislation many years ago, and you can also find this in a vintage AEI Evaluative Studies publication (Peltzman 1974). I concluded that the proof-of-efficacy requirement was a public health disaster, promoting much more sickness and death than it prevented. Nothing I have seen since has moved me to change that conclusion—the disaster is ongoing. But there is no realistic chance that this regulation will share the well-deserved fate of the Interstate Commerce Commission anytime soon.

Let me try to explain how I came to so stark a conclusion, what has happened since, and what I believe to be the sources of this regulation’s political survival. The 1962 legislation basically says to a drug developer that “if you want to claim that your new drug does something, you will have to prove that to the satisfaction of the FDA before you can sell the drug.” The intent is laudable: Ineffective drugs can waste money and the precious time for more beneficial treatments. But the tests required to prove efficacy to the FDA take time, whether the drug ultimately passes those tests or not. In fact, this extra time cost is measured in years, rather than months or weeks.

In some cases, it is a cost well spent. Some ineffective drugs are screened out, and the extra testing catches some that are dangerous as well. But every effective drug that ultimately makes it to market also incurs the time cost, including some that can save lives or relieve the suffering of illness. In these cases, the extra time means that some potential beneficiaries of the drug will die or suffer while the FDA sifts the test results. My reading of the available evidence was simply that this latter cost far outweighs any benefit. Indeed,

the death toll from this regulatory delay can easily number in the thousands per year. By contrast, the benefits were small. I found that the unregulated market was very quickly weeding out ineffective drugs prior to 1962. Their sales declined rapidly within a few months of introduction, and there was thus little room for the regulation to improve on market forces.

The first reaction to this work from the regulatory establishment was hostile and defensive. Any change was unnecessary and dangerous. Ultimately, this hard-line position softened. For one thing, most of the subsequent academic research reached conclusions similar to mine. The FDA itself came to acknowledge the desirability of speeding up drug approvals. Some changes were made, such as the institution of a user fee to provide more funding for the approval process. But the political process has never shown the slightest inclination to contemplate any fundamental change. The carnage from this regulation, I regret to assure you, will continue for a long time.

I think this harmful regulation survives politically because it is protected by the natural progress of opulence. Medical progress of all kinds continues. Beneficial new drugs, however delayed, ultimately do make it to market. Mortality rates decline on the order of 1 percent per year, as they have for more than one hundred years. In this broad context, a few thousand extra deaths a year is a rounding error.

And, perhaps more important, the deaths of which I speak are counterfactual deaths, not deaths that can be directly connected to any regulatory malfeasance. Imagine what would ensue if, as in some Michael Moore-like fantasy, lethal poisons were frequently marketed as new drugs, and you could thus directly connect the deaths to the regulatory process. I doubt such a system could survive politically. But the actual victims of the regulation did not swallow a bad FDA-approved pill. They merely failed to swallow a good one in time and never knew what they had missed. As long as medical progress continues, a case for reform built on anonymous, unknown victims of regulation is going to be difficult politically. Indeed, the defenders of the status quo make good use of

the progress. They will tell you how much regulation has contributed to the progress and what dire consequences would follow from any meaningful regulatory change.

The natural progress of opulence extended the longevity of both the ICC and the FDA. The ICC died when its failures became so great that they overwhelmed the protective forces of progress. We must hope a similar end does not await the FDA.

Conclusion

In this monograph I have told a story about a tug of war between regulation and the natural progress of opulence. Regulation begins as an attack on gradual progress but is often overwhelmed by it.

I would conclude with two lessons that can be learned from the story I have told. The first is that the natural progress of opulence will remain hard to overcome. In this I again echo Adam Smith. One day, it is said, he was confronted by a young admirer who blurted out, "Mr. Smith, England is going to ruin because she is not following your advice." Smith's alleged reply was, "Young man, there is much ruin in a nation." I agree, but I do think less ruin is preferable to more.

That leads to the second lesson, which is the importance of the kind of work that the AEI-Brookings Joint Center for Regulatory Studies does in bringing out the facts about the effects of regulation. This statement may seem odd in light of what I have said so far. The economists in my story have been little more than skeptical, often querulous, bystanders. They did their counterfactual analysis and sometimes uncovered unpleasant truths, but nothing they said appeared to matter very much. That appearance is, I think, somewhat deceptive.

It may be true that economic analysis cannot all by itself change fundamentally a well-entrenched mode of regulation. But economic analysis does often, I believe, play an important catalytic role when regulatory issues become politically salient. The examples of the FDA and the ICC illustrate that role.

Once it became clear that railroad regulation had to change, Washington policymakers found economists in near-unanimous agreement that the direction of that change should be toward less regulation. They also found a similar pro-deregulation consensus among economists about the regulation of trucks and air carriers, where the need for change seemed less urgent than with the railroads and where powerful interests strove to retain the status quo. When political entrepreneurs in the executive and legislative branches succeeded in broadening the agenda to encompass all of transportation regulation, that professional consensus had a powerful effect. The defenders of the status quo tried to play the well-established Washington game—"my economic study cancels yours"—but they could not obscure the breadth or depth of the professional consensus. The path of least resistance for wavering members of Congress was now better defined: You could vote for the truth or against it.

The changes in FDA regulation of new drugs were not nearly as fundamental as in transportation. They illustrate the more common situation in which the issue is some modest change in regulation. In this case, the path of truth defined by the professional consensus was toward a less-protracted regulatory process. This proved useful—probably not determinative, but useful—first in moving the FDA to speed up the administrative process, and then in easing the way for Congress to pass the Prescription Drug User Fee Act of 1992. This act levied user fees on new drug applicants to generate funds that, it was hoped, would speed up the regulatory process. Apparently, that hope has been realized (Berndt et al. 2004). Those whose lives have been lengthened as a result owe some of their good fortune to the broad agreement among economists that helped promote this incremental change in FDA policy.

These examples illustrate why the work of the AEI-Brookings Joint Center is so important. Its very name conveys "professional consensus" to the Washington regulatory policy community. So it is destined to play a significant role when that consensus can inform policy debate.

You will not find a decade-long drug-approval process in poor countries. The costs of such a luxury are too palpable in such societies, but in ours they are often dissolved by the progress of opulence. There is, accordingly, no natural progress of truth in these matters. That kind of progress will require our constant attention.

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About the Author

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Professor Peltzman is currently the director of the George J. Stigler Center for the Study of the Economy and the State at the University of Chicago. He is also an editor of the *Journal of Law and Economics*. He serves on the editorial boards of several academic journals and on the Council of Academic Advisers of the American Enterprise Institute.



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REGULATION AND THE NATURAL PROGRESS OF OPULENCE

AEI-BROOKINGS JOINT CENTER 2004 DISTINGUISHED LECTURE

SAM PELTZMAN

Over the course of a long and distinguished career, Sam Peltzman has established a reputation for developing provocative, original research that frequently flies in the face of conventional wisdom; *Regulation and the Natural Progress of Opulence* is no exception. Peltzman's thesis is that market forces frequently undermine attempts at regulation, but nevertheless, counterproductive regulation can survive for a long time. This puzzle defies simple explanation, but Peltzman explores some possibilities in this monograph. In concluding, he suggests that good empirical research on regulation can help guide policy reforms when the issues become politically salient.

Sam Peltzman is the Ralph and Dorothy Keller Distinguished Service Professor of Economics at the Graduate School of Business, University of Chicago, where he is the director of the George J. Stigler Center for the Study of the Economy and the State. He also serves on the editorial boards of several academic journals and on the Council of Academic Advisers of the American Enterprise Institute. Professor Peltzman's research has focused on issues related to the interface between the public sector and the private economy. He has made numerous contributions to the study of regulation and is the author or editor of several books, including *Political Participation and Government Regulation* and *The Deregulation of Network Industries: What's Next*.

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