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# **Deregulation: The Expected and the Unexpected**

The last decade has seen some truly remarkable changes in the public regulation of economic activity. Institutions and policies that had resisted any change for many years were, in some cases, nearly swept away. The changes affect all of us every day. For example, we are affected by them every time we make a telephone call or buy an airline ticket. But, for economists who study public policies, the changes are especially exciting. We rarely get the opportunity to observe a controlled experiment, and we often envy the ability of natural scientists to do so. The regulatory change of the past decade has been so substantial that it may come close to providing a controlled experiment in the effects of public regulation.

I want to share with you what I think economists have learned from this experience—not only about the effects of public regulation but also about the power of their theoretical and empirical insights. Here, as it happens, we were either prescient or just lucky. In the decade or so before the deregulatory tide began rolling, the economic literature on regulation flourished. I am proud to say that the University of Chicago can claim a good deal of the credit for this scholarly efflorescence. Chicago economists, most notably our Nobel Laureate, George Stigler, pioneered the economic analysis of public regulation, and this work was soon taken up all over the academic world.

It is sometimes thought that if a hundred economists study anything, no fewer than a hundred conclusions will emerge.

Not so in this case. By the time the move to deregulation began, there was a fairly broad consensus about the effects of regulation up to that time and the likely effects of deregulation. I want to tell you what we thought we knew about these matters, and how well or poorly we can judge these insights to have been in light of the recent experience. It may not surprise you that I think we have encountered a few surprises.

I am going to talk about regulatory change in three specific areas: airlines, freight transportation, and telecommunications. These run the gamut of regulatory change from the virtually complete deregulation of the airlines to a substantial easing of regulatory constraints in railroads and trucking to a so far less sweeping change in the case of telecommunications. But before I get down to specific cases, I want to set them in some overall context. So I will begin with a few general remarks on what common characteristics these specific cases might share.

### **Common Characteristics of Regulation**

All three forms of regulation I'm about to discuss had within them elements designed to reduce competition. In each case the entry of new competition was limited or banned outright, and existing firms were permitted to get together in negotiating the prices the regulatory agency would permit them to charge. I'm not saying that this was good or bad; it was a fact-and, if you permit me to do so, I want to stick close to the implications of that fact rather than to the merits of the case for or against it. The implications are not as simple as they may sound. When I say that competition was restricted, you

will immediately suspect that prices were thereby raised above competitive levels. If so, you won't be wrong; but you will be missing an important part of the story. Economists have come to understand that **regulation-** and I'm using the term to refer to regulation of prices and entry-affects not only the average level of prices **but** the structure of prices as well. Specifically, regulation tends to introduce greater uniformities into the price structure than we expect of unregulated price structures. The nature of the uniformities differs from case to case, but they are omnipresent in regulated price structures. I am convinced that if we had a federal apparel regulatory commission small sizes would sell for the same price as big sizes, or we would have prices proportional to the square feet of material. My hedging here is deliberate: uniformity of price according to size would present a structure much different from a common per-square-foot charge. But either one would differ from the structure for unregulated apparel prices, and that would tell us a lot about what we should then expect from a deregulated apparel industry.

As I go along, I'll try to indicate more precisely how regulatory change is likely to bring with it change in the uniformities that got built up under regulation. Finally, regulation affects not only prices of the goods you **buy** but the prices of the resources used to produce them-particularly the wages of employees in regulated industries. If regulation holds at least some prices above competitive levels, workers have an incentive to organize and seek their share of the resulting monopoly rents. And the evidence is that they were not entirely unsuccessful in doing so.

## Change in the Airline Industry

Let me now apply all of this first to the airline industry, which has undergone the most sweeping change of the three industries I will discuss and where economists thought they knew most about the effect of regulation. Here was an industry that grew to maturity under a regulatory system that limited entry and fostered collusive rate-making arrangements. Then, in the space of a few years in the late 1970s, it was completely opened to unregulated competition.

Prior to deregulation, economists studying the industry had concluded that the anticompetitive elements in regulation had kept prices fully 50 percent higher on average than they would have been in an unregulated environment. They identified two potentially important effects of regulation on the price structure. One of these arose from the fact that prices were set proportional to distance, i.e., the price per mile was basically the same or declined gently with distance, much more gently—they argued—than would occur with an unregulated price structure. Deregulation, we expected, would eliminate this particular rigidity. We predicted that long-distance fares would fall more than short-distance fares on average. The second rigidity lay in the failure of regulated prices to take account of anything but distance, even though there is wide variation in the costs of serving different markets. For example, in so-called thick markets where there is a lot of traffic—e.g., New York to **Chicago**—it is relatively easy to run frequent flights with full seats. Consequently, costs per passenger are lower than in thin markets. Since regulated prices took no account of this difference, we expected prices

to fall more in the lower-cost thick markets than in thin markets. However, we regarded these rigidities as a relatively minor detail, because our empirical sense of the magnitudes involved led us to expect prices to decline most everywhere, although to differing degrees.

What has happened? On average, prices have fallen relative to what they would have been under continued regulation. (We need that qualification, because fuel costs rose sharply right after deregulation and we have had continued inflation since 1978 when the industry became fully deregulated. So I am talking about prices relative to those that would be cranked out today by the regulatory rules in place prior to 1978.) But here is our first surprise: so far average prices have fallen perhaps only half as much as we had predicted.

### **Prices and Wages Among Airlines**

A bigger surprise, however, has been in the variety of the response to deregulation. In fact, many prices-especially those in thin and short-distance markets-have not fallen at all, and a few are slightly above regulated levels. In thick, long-distance markets some of the fare reductions have exceeded what we expected. So those rigidities I spoke of are more important than we thought. We are also somewhat surprised at the continuing spread of prices within markets. We expected that, after some period of experimentation, pretty much the same price would be charged by all carriers in a market to all customers-with perhaps some differential for peak-time travel. That has not happened. In many markets, the basic coach

fare seems unaffected by deregulation. The main reason average prices have fallen at all lies in the variety of discounts that have grown up. We did not expect a People's Express price, a weekend special, a 30-day trip price, etc., all to continue coexisting in the same market for very long.

We also underestimated the impact of deregulation on wages. Again, we knew that wages would be under some pressure. But we had observed that in the regulated past a few carriers had managed to escape the regulatory net, and that they had charged sharply lower fares while paying the same wages as their regulated competitors. So we thought deregulation would bring lower fares without great impact on wages. In fact, the new airlines that have grown up under deregulation have frequently hired non-union employees at below union wage levels and pressed their resulting wage advantage into price cuts. As a result, some established carriers have been forced to renegotiate labor agreements at substantially lower wages to remain competitive.

To sum up, much of what economists thought they knew about airline regulation has been proved correct. Prices have come down on average, new firms have entered the field, and the power of labor unions has weakened. But we seem to have underestimated the importance of the uniformities induced by regulation. I say "seem to," because the industry may not have fully adapted to the new deregulatory environment. But if, say, five years from now, basic coach fares remain as high in thin and short-distance markets and a variety of fares continue to coexist in other markets, I think we will have to conclude that we missed an important effect of deregulation.

## **The Complex Story in Freight Transportation**

In freight transportation the story is a bit more complex, but our record is a bit better. Here we knew that regulation had had much the same effect on the trucking industry as on airlines: prices and wages had been kept up. And we expected that on average they would both fall with any substantial move to deregulation. That move came in the late 1970s culminating in a new law in 1980, and prices and wages promptly began going down. Our best estimate at the time was that both prices and wages were perhaps 20 percent higher than they would be in a deregulated environment. And, adjusted for inflation, both have already declined by magnitudes approaching this figure. Much of this is due to the pressure of new entrants. There are now about 10,000 more firms in the industry than in 1979, an increase of 60 percent. Many of these new firms employ non-union workers or are independent owner-operators, and they have been in the vanguard of the move to lower rates. Some of the price and wage effects may be temporary. But on the whole the trucking industry has responded to deregulation about as expected.

The same can be said of the rail industry, where the main regulatory innovation has been freedom to change rates in an industry where new firms are unlikely to enter. Here is where the rigidities of the previous system assume considerable importance. Railroads are uniquely efficient in transporting high volumes of freight over long distances, but the regulated rate structure did not reflect those specific efficiencies. Rates were, as in airlines, more or less proportional to distance—for both rails and

trucks. This resulted in rail rates that were at once below costs in short-haul and low-density markets and above costs in long-haul and high-density markets.

We in Chicago are served by a government-owned railroad-Conrail-which is a creature of this rate system. Its predecessor-Penn Central-was driven to bankruptcy in large part by unremunerative short-haul rates. At the same time, long-haul rail rates were so high that trucks, though not as cost efficient as rails in many long-haul markets, could siphon off this potentially lucrative traffic. Since 1980, the railroads have been given the freedom to raise the short-haul rates and lower the high long-haul rates. They have done both. As a result, lines like Conrail have become smaller but more viable. Long-haul roads have begun winning back traffic from trucks, so that for the first time in memory long-haul rail traffic is a growth industry. The once very real prospect that the whole railroad industry would have to be nationalized and operated under subsidies of perhaps 20 billion dollars per year has receded. New methods, like piggyback, combining the flexibility of trucks with the low long-haul costs of railroads, which were inhibited by the rigidities of the regulated rate structure, have flourished. But not everybody has gained from these developments. Who are the major losers? 1) Rail workers for one. The demand for their services has fallen as traffic has shifted from the more labor intensive, short-haul markets to long-haul markets. 2) Truckers operating in the long-haul markets have lost-as have 3) some shippers in short-haul markets who have had to replace lost rail service with more expensive truck services. None of this was unexpected,

and no honest analyst of deregulation argued that it would bring all benefits and no costs. By and large, though, the move to deregulation in transportation has worked about the way we thought it would. But the deregulatory plant is yet fragile. There is considerable discretion still left to the regulators to reverse course, particularly in trucking. So it is premature to conclude that the initial effects are permanent.

### **Tentative Deregulation in Telecommunications**

In telecommunications, the move to deregulation has been much more tentative than in the other two industries I have discussed. Indeed, it is almost accidental. The deregulation has been concentrated in long-distance telephone markets, and it began as a by-product of the rigidities of the regulated rate structure combined with the emergence of new technology.

To understand what has happened, it helps to understand the traditional telephone technology. It works something like a railroad. Messages are put through a network of switches at one end, where they are sorted and sent on their way via a cable "main line" to another switching complex, where they are sorted and delivered. The sorting and switching costs are the main costs, the transportation charges relatively low. So a call within Chicago costs more per mile than a call from Chicago to Milwaukee, which in turn costs more per mile than a call from Chicago to San Francisco. There is another analogy with railroads and, for that matter, airlines: the telephone regulators have not been very sensitive to these economies of distance, so they set rates more or less propor-

tional to distance, rather than decreasing sharply the rate per mile as the distance increased. The result is that the margin of price over cost was highest in long-distance markets.

In the case of the railroads, just as soon as a national highway network was put in place, this sort of rate structure led to the growth of an over-the-road trucking industry. In telecommunications, the enabling technology was microwave and satellite communications. These cut the transport costs to next to nothing and enabled competitors to jump in. Where do you suppose they jumped? Just as did the truckers-into the lucrative long-distance markets with the highest prices relative to costs.

Once a process like this gets going, it is hard to stop the previous rate structure from unraveling. The only way to do it is to prevent the new technology from entering in the first place and thereby force the high long-distance rates down. But I do not believe technology or politics will permit the regulators to do this. Substantial new entrants are already on the scene, and they are not going to quietly accept any restrictions on their future growth. To prevent further entry would be merely to encourage a proliferation of privately owned microwave nets whose surreptitious dealings with the public would be hard to monitor without outrageous invasion of privacy. If I am right about this, the outcome of the deregulatory process can be predicted easily. Long-distance rates will fall toward costs and short-distance-that is, local rates-will rise, just as deregulation of railroads has led to a decrease in long-haul rates and a rise in short-haul rates. The similar technologies and the similar rigidities in

the regulated rate structure imply similar results from deregulation.

## **Losers and Winners in Telecommunications**

Many of you no doubt wonder why I have not mentioned the restructuring of AT&T in connection with any of this. Aren't local rates being forced up because your local telephone company no longer has access to AT&T's profits on long-distance service?

Basically, my answer is no. The divestiture has very little to do with any of this. Those long-distance profits are being eroded by entry and continued technological improvement in long-distance communication.

AT&T-in its present or past form-would have to respond by lowering long-distance rates. Perhaps the divestiture will speed up that process a bit, but the basic direction of change is unaffected by it; rates are being pushed toward costs in all dimensions of telecommunications. As in freight transportation, this will produce some winners and some losers. The big winners will be heavy users of long-distance service. The losers will be users of local service, and anyone else who benefited from the former rigidities of the regulated structure.

Let me give just one other example of such a beneficiary. It costs more to serve a remote location in the countryside than to serve one here in Chicago; the reason is that to hook our friend in the country into the system requires more line to be installed and maintained. I am no expert on the history of Illinois Bell's rate structure, but I bet that our friend did not pay the full costs of serving him. He may well have paid the same rates as you. That kept him from com-

plaining about outrageously high telephone bills, while it cost each of us in Cook County an imperceptible sum to hold his rates down. One by-product of the general move to cost-based rates will be rather unpleasant increases in rates to remote locations. In Illinois this has already begun. For the first time in our recent history, we have different basic local service rates for city, suburban, and rural locations-and the latter are highest.

Perhaps by now you can see the general lessons I think we have learned from these three cases. No analysis of the effects of regulation or deregulation can be complete without paying attention to the uniformities induced by regulation. These typically involve rates which are divorced from the variety of costs involved in serving different types of customers. Deregulation works to break down these uniformities and produce rates more closely related to costs. By and large, economists have understood this. If we have been wrong in predicting the outcome of some aspects of deregulation-as I suggested might be the case with airlines-it is precisely because we underestimated the force of these regulatory uniformities.

### Regulation Often Begets Deregulation

Most economists are trained to admire prices that reflect costs, and, as a result, they have tended to support policies aimed at less regulation. They are quick to tell you how important cost-based prices are for the efficient allocation of resources. But, in our admiration for efficiency and our resulting support for deregulation, we may have overlooked the genuine political value of the reg-

ulatory propensity for breaking the link between prices and costs. This allows some customers to benefit greatly while the costs are spread among large groups, each of whom pays very little. The result is that, even if regulation creates monopoly rents, some customers will have reason to add their political weight to support the regulatory enterprise. The corollary of this is that the efficiencies of deregulation will not be evenly distributed. There will be winners and losers. The monopoly rents will be diminished. As a result, owners of some trucking companies and some airlines as well as workers in these industries will lose. The rate structure will change in important ways. If you travel long distances by air, consume goods transported long distances, or like to talk to your friends in California, you will gain from deregulation. If you do all these things over shorter distances or in remote locations, be ready to pay more.

Another important lesson I think we can learn from recent history is that the seeds of deregulation are often planted by the same uniformities that are often so politically attractive. Rail rates unrelated to costs beget a trucking industry whose inroads in long-haul markets eventually force deregulation of rail rates. Telephone rates in which payments for local service come partly from long-distance profits beget new long-distance technologies which force a cost-based realignment of all phone rates. And so forth. This lesson too has a corollary: it's hard to go back home again. Once the new resources and employees attracted by the old rate structure become substantial, the political and economic costs of evicting them and restoring the *status quo ante* will become almost intolerable. So, I think the effects of deregulation are essen-

tially irreversible—at least for a while. I say “for a while” because many of us never expected the change of the past decade to have been as great as it has been. Perhaps the most important lesson we should all have learned from this experience is that we should never say “never” again.