INNOVATION AND COMPETITION

Remarks of

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Words, like currency, rise and fall in public favor. And anyone who engages in public debate is well advised to take the temperature of the word market from time to time. Competition seems to be holding its own, while antitrust is undervalued. But innovation is enjoying a boom.

Everyone is bullish on innovation. That in itself should be a signal for some caution. For there is alway the risk that someone will attempt to water down a sound and much-used term with a counterfeit notion.

So it might pay us to spend a few moments examining the concept of innovation and especially its relation to antitrust.

The word innovation has caught on because there is widespread agreement that Yankee ingenuity has gone stale and that as a nation we are not inventing and producing the way we used to. There has been, though, a dissent or two from the consensus. For example, in the March 1979 issue of Dun's Review, an article entitled "U.S. Innovation: It's Better Than You Think" summarizes a cornucopia of current, innovative research and development. Still, the widely held perception that innovation is in the doldrums is itself sufficient cause for concern.

As you know, the Carter Administration translated its concern over the state of American innovation into a full-dress domestic policy review directed by Jordan Baruch, Assistant Secretary of Commerce for Science and Technology. The FTC participated in that review, and we found it a profitable learning experience.

The process came to fruition on October 31,1979, when President Carter sent Congress a message on innovation. Among other actions, the President directed the Attorney General, the Chairman of the FTC, and the Secretary of Commerce "to initiate discussions with industry about innovation, anti-trust policy formulation, and enforcement." The thrust of this recommendation, the President said, "is to dispel the perception that anti-trust policy inhibits innovation and to improve communication between industry, the Justice Department, and the Federal Trade Commission." I believe we at the FTC were quite sensitive to the importance of innovation even before the Domestic Policy Review: our economists wouldn't let us be any other way. Bill Comanor, the Director of our Bureau of Economics, and Mike Scherer, a past director of the bureau, are two of the country's leading scholars on innovation. They have established and maintained a high level of sensitivity to innovation at the FTC. Still, we are eager to engage in the discussions that the President has called for.

Since the Domestic Policy Review got underway, however, hosannahs for innovation have been sounding forth from so many quarters that I'm beginning to worry. The reason innovation stock is susceptible to being watered is that no one—except for perhaps a Luddite or a businessman afraid of being outmoded—can be against it. At the same time the process of innovation is so elusive that concrete steps to spur it on are hard to come by. I am afraid there may be developing an innovation syndrome among Federal agencies and the business community alike: praise for innovation but little action to support it. Gore Vidal says that when he hears the word love he reaches for his revolver. If I were Jordan Baruch, I'd keep one handy too—loaded with blanks, of course—to use on people who mouth support for innovation but don't present an agenda, and on those who seize upon innovation as a lever for getting more government subsidies at the taxpayer's expense. My own view is that a vigorous competition policy should be a major ingredient in any effort to promote innovation.

Let me begin by positing a broad meaning for innovation. In my view the term encompasses the invention, development, and dissemination of both goods and processes—whether in the form of new technology, services, or even such intangibles as managerial technique. A narrower, technology-bound definition misses too much of the dynamic activity that changes the market place every day.

In an era of short-term trends, future shock, and overnight fads, we might well pause to consider why innovation is lastingly important. For one thing, it seems to lead to increases in productivity. One study estimates that roughly one-third of the rise in output per worker between 1929 and 1957 can be attributed to advances in scientific and technical knowledge. Scherer summarizes the academic literature in this way: "the growth of output per worker in the United States has come predomininantly from the application of new, superior production techniques by an increasingly well-trained work force."

Such increases in productivity, I might add, are an excellent antidote to inflation. As economist Burton Klein points out, "steady increases in productivity can permit increases in money wages without inflation."

Innovation not only increases productive efficiency, it also enhances the quality of products and services. In this way, too, innovation contributes to sustaining and improving the high American standard of living. This aspect of innovation does not readily lend itself to statistics, but I need not read out a litany of Great American Inventions to make the point: Innovation has provided American consumers with comfort, communication, and choices which would not have been possible in a technologically stagnant society.

If we can agree that innovation is one of the most vital abstract nouns in the business lexicon, let us move on to consider how it happens. If we look carefully at the literature on innovation, we can discern a pattern in its occurrence. Quite commonly, a small firm is responsible for the initial invention. Generally, developing the new idea to the point of everyday usefulness requires raising substantial capital. Often the originating firm does not have the ability to raise this sum, and a larger firm must take over the invention in order to make it marketable. And there are some innovations which make such heavy fiscal demands that only daring middle-sized firms or relatively large firms can make them workable.

Obviously, there are exceptions to this pattern, but it finds ample support in the literature. Its implication, I take it, is that innovation will thrive best in an economy characterized by diversity—diversity in firm size, firm structure, management style, marketing techniques, and the like.

Additional economic evidence tell us something about the relationship of market structure and innovation. A highly-concentrated market—one dominated by a monopolist or a band of tightly interacting and non-competing oligopolists—is not conducive to innovation, largely because these market structures are generally characterized by high entry barriers and weakened incentives to capture a large advantage via changes in the status quo. Nor does a totally fragmented or atomistic market structure appear to promote innovation. Innovation seems to be best-served in markets that avoid these two extremes.

In light of these economic findings I would like to make an assertion: antitrust and current competition policy promote innovation. This assertion echoes one of the conclusions that President Carter drew from the Domestic Policy Review. Let me explain the reasoning behind it.

The fundamental purpose of antitrust is to encourage fair competition in the American economy. To the extent that we have discretion, at the FTC we try to focus particularly on moving largely noncompetitive markets into a state of at least moderate competitiveness and on keeping competitive markets from lapsing into a noncompetitive state. Our policies are well-calculated to avoid those extreme industry structures that retard innovation. Without seeking to promote atomism, we attempt to temper monopolistic or oligopolistic power and to move industries toward a state of healthy rivalry—the state in which, the evidence shows, innovation tends to flourish.

We are particularly alert to the existence of unnecessarily high entry barriers. As Mike Scherer has observed, "new entrants contribute a disproportionately high share of all really revolutionary new industrial products and processes." The mere threat of entry and competition from outsiders can prompt established firms to innovate defensively. The threat of competition provides what economist Burton Klein calls "the hidden foot"—comparable to Adam Smith's "invisible hand"—which prods the established firm to innovate.

Let me be a little more specific in explaining the place of innovation in our consideration of antitrust investigations and cases at the FTC. Each investigation that we consider is evaluated by a committee composed of lawyers and economists. The matter goes to the appropriate committee in the form of a staff memo which summarizes the preliminary evidence, identifies the issues, and makes an action recommendation. The committee discusses the matter thoroughly and gives innovation its due weight: with the help of this committee the Director of the Bureau of Competition makes a decision as to whether to continue the investigation. In turn, the Commission itself weighs innovation as a substantial factor in many situations in deciding whether to authorize issuance of subpoenas or complaints and in fashioning a remedy when a violation of law has been established. Innovation is one of several goals—such as competitive prices, business efficiency, and efficient resource allocation—that are kept in mind throughout the enforcement process.

I have touched upon firm size and market structure as they relate to innovation and the FTC's competition policies. I would like at this point to move on to a related topic, which might be called <u>internal firm structure</u>. One of the interesting side effects of paying attention to innovation is that it rivets one's attention on the firm—not on whole industries, price theory, or macroeconomics, but on the firm, the unit within the ecosystem of innovation where decisions about actual innovations must be made. I want to say a special word about innovation and the kind of firm that has come to be known as the conglomerate.

Last year Al Dougherty, Director of the FTC's Bureau of Competition, presented a legislative proposal which would limit large-firm growth through conglomerate mergers. Subsequently, the Commission expressed its support for the basic concept of this proposal. The specific language which Dougherty presented would not bar such mergers. Rathers, it would countenance them—insofar as is consistent with current antitrust law—but subject to an important proviso: the acquiring firm would have to divest itself of one or more viable entities of aggregate size comparable to that of the acquired firm. In other words, it is a policy that allows merger—but not significant growth by merger—for the largest of the nation's corporations.

I believe that the recent merger wave raises two socio-political concerns of great moment: (1) a reduction in the number of independent decisionmakers and (2) an absolute increase in the power of the merging firms. And I base my own support for the legislation I have outlined in significant part on my assessment of these two concerns.

Some critics of this proposal have objected that it does not allege that conglomerate mergers are anticompetitive. They apparently would prefer that even in the legislative arena Federal decisionmakers should wear blinders which narrow their field of vision to classical micro-economic issues. I disagree. Political and economic power have always been intertwined. Indeed, in framing the antitrust laws Congress had both kinds of power in mind. Thus, we would be derelict if we did not call attention to the political and social sides of a merger wave which has become one of the most significant recent economic trends.

There is not a great deal of evidence as to how conglomeration per se—as opposed to growth in firm size—relates to inventiveness, but the evidence we have does not suggest any increase in innovation. Indeed, as John Kenneth Galbraith suggests:

> There is not the slightest reason to believe that after being absorbed by the conglomerate, the small enterprise is more innovative, more efficient, more effective, or more profitable than before. If anything, the evidence is in the other direction.

If we change somewhat the relationship we have been discussing—that between conglomerate-firm structure and innovation—to that between large firm size and innovation, we find more evidence. Economists have found that giant corporations often do not pull their weight when it comes to originating significant innovations themselves. Moreover, what innovations they do produce tend to be less than revoluntionary. As economist Oliver Williamson has written, "research conducted in most large industrial laboratories favors minor improvement inventions rather than major new inventions."

There is some indication that large firms <u>can</u> do something for innovation other than inventing. As Professors McClintock and Hunt have written in a study prepared for us, "large organizations may be well equipped, through their organization forms and/or their considerable resources, to develop the innovations of others and to cope efficiently with routine decision situations." In other words, the large firm may have a particular knack for taking somebody else's innovation and running with it. This is an important part of innovation if—as I think we must—we consider the dissemination phase to be a crucial part of the process. In this vein some have suggested that antitrust policy should make allowances for a large firm's acquiring a small, high-technology firm as a vehicle for disseminating the latter's innovations. This suggestion carries some force. Yet in fact, because the enforcement agencies rarely concern themselves with mergers involving a small firm, this is not often a real issue. Moreover, the conglomerate-merger approach which Al Dougherty has proposed specifically exempts conglomerate acquisitions worth less than $100 million—a ceiling which should be high enough for virtually any small, high-technology firm.

Given this background, it seems to me that the Bureau of Competition's conglomerate merger proposal does not interfere with innovation. Indeed, the approach of allowing mergers so long as an independent entity replaces the newly-acquired firm should allow the large, acquiring firm to do what it does best—that is, to develop existing innovations—while at the same time introducing a new player, the divested entity, into the marketplace.

One can hardly speak about innovation and competition policy without referring to the subject of today's conference, the regulation of industry. Many critics argue that the policies pursued by such regulatory agencies as the Interstate Commerce Commission, Federal Communications Commission, and the Department of Energy, have stifled technological change. One way in which this effect may have occurred, it is argued, is through a lack of sensitivity to the benefits of vigorous competition. The FTC has made numerous appearances before such agencies to argue in behalf of competitive solutions to regulatory problems. The Congress is now considering legislation which would elevate competition to a major role in such agencies' decision-making. I believe that such reform could be most supportive of innovation, particularly since it might well lower entry barrriers and bring an influx of lean and hungry new entrants, with their innovative ideas, into American industries which may have grown too comfortable in their regulated status.

Despite the general agreement between our competition policies and innovation which I have been describing, it has been suggested that in certain instances the FTC has acted in a way that discourages innovation. I can't get into specific, pending cases, of course, but one area on which our critics have focused is our no-fault monopoly proposal.

The no-fault or no-conduct monopoly proposal is complex, but I will sketch it very briefly. The FTC has proposed some changes in section 2 of the Sherman Act. In essence, these changes would permit the government to seek structural relief against a firm having substantial and persistent monopoly power which is not justified by patents or efficiencies of scale. The proposal, whose concept has also been endorsed as worthy of Congressional consideration by the National Commission for the Review of Antitrust Laws and Procedures, would eliminate the necessity of proving that the firm acquired or maintained that power through reprehensible conduct. By the same token, a no-conduct action would not involve criminal sanctions and would not serve as a basis for private treble-damage actions. Structural relief, where feasible, would be the preferred remedy.

The proposal is premised both on perceptions and on a policy judgment. The perceptions are two. First, respected observers attribute more than one-third the length and expense of several sampled monopolization cases to the litigation of conduct issues. Second, rarely have courts fashioned effective structural relief in monopolization cases.

The policy judgment is that substantial and persistent monopoly power that cannot be justified by patents or efficiencies is objectionable in itself, regardless of how it was acquired or maintained. What matters is the restoration of a workably competitive market, which is the most favorable environment for new entrants and innovation. By eliminating the element of conduct and at the same time removing the criminal and treble-damage penalties from such cases, I believe we will save time and resources while serving the goals of antitrust.

There has been some confusion, however, about the relationship of this proposal to innovation. It is important to note at the outset that the proposal does recognize a defense based upon patents and would not allow the imposition of relief that would result in the loss of substantial economies in research and development. In addition, to be subject to challenge under the proposal, a firm would have to have monopoly power for a period of at least 5 years—a period which would thus be added to the 17-year patent term. The importance of such a persistence period in preserving incentives to innovate and compete has been stressed by Professors Areeda and Turner, who point out in their antitrust treatise, "It is very doubtful that any firm not yet possessing monopoly power would subdue its competitive effort because of the remote possibility that it would not only win a monopoly but hold it long enough (at least 17 years if a patent creates the monopoly) to provoke a suit for equitable relief." Moreover, the no-fault proposal is still being studied and refined by FTC staff. There are at least two ways to make the final proposal more sensitive to the role of innovation in the attainment and preservation of market power. One would be to lengthen the period during which a monopoly can persist before it becomes objectionable. The second would be to permit a defense for monopoly power based on recent but unpatented innovation. The ultimate proposal that emerges may adopt one or both of these approaches.

My conclusion, then, is that a carefully-formulated no-conduct monopoly proposal should not deter firms from innovating. Incidentally, it may also prompt firms to rely more on the patent process as a means of legitimizing their market shares instead of holding onto their innovations as trade secrets. Such a development could be expected to lead to wider dissemination of know-how and increased technological cross-pollination. Finally, I might note that there is little reason—and even less economic evidence—to think that dominant firms protected by high entry barriers are innovators. Indeed, the dissipation of such monopoly power is likely to stimulate innovation in the affected market.

Let me touch briefly upon a couple of projects the FTC is undertaking in order to spur innovation.

First, we are taking a look at the Federal tax laws. The relationships between tax policy and competition—and hence innovation—are not well understood. But there seem to be ways in which the tax laws may retard innovation. For example, our tax policy appears to discourage large firms from spinning off small entities. Yet, as I have already mentioned, small, new firms consistently originate a disproportionate share of important innovations. Although it is not clear that "spun" firms will necessarily share the propensity of small firms to innovate, the relationship is one that bears watching. We are studying these and other aspects of tax policy in order to improve the climate for competition and innovation

We are also devoting some thought to the complex matter which the historian Alfred Chandler refers to as "strategy and structure." Innovation is a function of corporate strategy, and we are beginning to study firm strategy and the ways in which it is affected by various firm and industry structures. New research into the connection between internal firm organization and competition might be helpful in the development of policies relating to merger enforcement and conglomerate growth.

These are a few ways, then, in which competition policy can be directed in order to foster innovation. But, again, let me stress that it is our day-to-day policies—the cases we bring, the positions we espouse—which are most conducive to those market characteristics that encourage new players with new products and new ways of making them. If certain observers of the FTC have failed to notice that our policies promote innovation, it may be our fault for not communicating the connection. We've always been interested in promoting innovation. And we're glad that the word market has finally recognized its importance.