

Competitiveness, Innovation Policy, and the Innovation Market Myth: A Reply to Tom and Newberg on Innovation Markets as the "Centerpiece" of "New Thinking" on Innovation

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COMPETITIVENESS, INNOVATION POLICY, AND THE INNOVATION MARKET MYTH: A REPLY TO TOM AND NEWBERG ON INNOVATION MARKETS AS THE “CENTERPIECE” OF “NEW THINKING” ON INNOVATION

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I. TOM AND NEWBERG AND THE INNOVATION MARKET MYTH

A. *Increasing American Competitiveness*

The American antitrust authorities are now, as never before, trying to encourage firms to develop new products and services.¹ The Department of Justice's ("DOJ") current attempt to require the Microsoft Corporation ("Microsoft") to sell its Internet Explorer as a separate product from its Windows operating system illustrates the tremendous effort the authorities are making to regulate firms' competition to innovate.

By encouraging firms to innovate, the authorities have repeatedly said they are making the American economy more productive and more competitive. Because it so important that they do this, the authorities continue, they must make their drive to encourage firms to innovate the focus of their antitrust enforcement efforts. The agencies' current attempt to implement their "new thinking" on innovation is therefore not only the most important development this decade in the field of competition policy, it is also one of the most important developments in the entire field of American economic policy.

B. *Innovation Markets as the "Centerpiece" of this "New Thinking"*

According to at least one authority, the "centerpiece" of the agencies' "new thinking" on innovation are "innovation markets." According to the agencies, "innovation markets" are markets in which firms compete to make new and better products. "Innovation," say the agencies, is itself the product of these innovation markets.

¹ See Thomas N. Dahdouh & James F. Mongoven, *The Shape of Things to Come: Innovation Market Analysis in Merger Cases*, 64 ANTITRUST L.J. 405, 405 (1996) (discussing current trend of innovation market analysis); see also Robert J. Hoerner, *Innovation Markets: New Wine in Old Bottles*, 64 ANTITRUST L.J. 49, 50 (1995) (indicating that agencies' view of innovation markets as markets for research and development); James B. Kobak, Jr. *Running the Gauntlet: Antitrust and Intellectual Pitfalls on the Two Sides of the Atlantic*, 64 ANTITRUST L.J. 341, 351-52 (1996) (discussing difference between United States and European views on antitrust); Richard T. Rapp, *The Misapplication of the Innovation Market Approach to Merger Analysis*, 64 ANTITRUST L.J. 19, 22 (1995) (indicating increased use of innovation markets in antitrust analysis).

C. Congress Creates, Agencies Develop, Innovation Market Concept

Congress created innovation markets when it enacted the National Cooperative Research Act ("NCRA").² The agencies have now further developed the innovation market concept. The agencies developed the idea that firms compete in an innovation market, most importantly, in their 1995 Joint Intellectual Property Licensing Guidelines³ ("I.P. Guidelines"). In the I.P. Guidelines, the agencies stated that in appropriate cases, they will analyze a transaction's "competitive effect in a separate innovation market."⁴ The agencies use their guidelines to establish and explain their policies and priorities. The agencies have clearly shown their intention to regulate competition in innovation markets by choosing to explain their policy of finding innovation market in these guidelines.

Agency officials have also written numerous articles and given many speeches in which they have repeated the I.P. Guideline's assertion that the agencies have regulated competition in innovation markets. These officials have also claimed that the agencies will continue to find innovation markets, and that, to increase the competitiveness of American industry, the agencies must continue to do so.

D. The Innovation Market Myth

Both the antitrust officials and the I.P. Guidelines have created the innovation market myth by repeatedly claiming that the agencies have found innovation markets and that the agencies must do so to upgrade the American economy.⁵ In reality, the agencies have never found an innovation market.

Continuing this tradition of speeches and articles, FTC Officials Willard Tom and Joshua Newberg recently published in the

² See The National Cooperative Research and Production Act, 15 U.S.C. §§ 4301-5 (1993).

³ See U.S. Department of Justice and Federal Trade Commission Antitrust Guidelines for the Licensing of Intellectual Property, 4 Trade Reg. Rep. (CCH) ¶ 13, at 132 (1995).

⁴ *Id.* at §3.2.3.

⁵ Many commentators have assumed that the agencies find innovation markets. See, e.g., Andrew Chin, *The Misapplication of Innovation Markets to Biotechnology Mergers*, 3 B. U. J. SCI. & TECH. L. J. (forthcoming 1997).

Antitrust Law Journal yet another article in which they claim that the agencies have found innovation markets.⁶ In this article, however, these two officials actually acknowledge that in some cases in which other officials have claimed that the agencies found innovation markets, the agencies have in fact not found innovation markets.

This article is perhaps more important than the other articles in which officials have claimed that the agencies have found innovation markets since Tom and Newberg acknowledge that in some case the agencies have in fact not found an innovation market. This acknowledgment is misleading because it reaffirms the innovation market myth by giving credence to innovation market critics in certain cases. Tom and Newberg therefore have continued to propagate the innovation market myth.

These officials cite three cases in which they claim that the agencies have found an innovation market. This article will show, however, that the agencies have not actually found an innovation market in any of these three cases, or in other cases. Consequently, these officials should not continue to propagate the innovation market myth.

II. INNOVATION MARKETS AND THE AGENCIES' "NEW THINKING" ON INNOVATION

A. Introduction

During the past decade, antitrust authorities have intensively studied how firms develop new products and services, as well as how they can use antitrust laws to encourage firms to do so. The agencies' current efforts to encourage firms to innovate represents not only the most important antitrust development of the decade, but also one of the most important developments in the entire field of American economic policy.

⁶ See Willard K. Tom & Joshua A. Newberg, *Antitrust and Intellectual Property: From Separate Spheres to Unified Field*, 66 ANTITRUST L. J. 167, 222 (1997) (discussing introduction of innovation markets).

B. Innovation Markets As the "Centerpiece" of this "New Thinking"

Many people have come to believe that the agencies' attempts to define an innovation market is an integral part of the agencies' efforts to regulate competition to innovate. One authority, Richard Brunell, the assistant editor of the *Antitrust Law Journal*, has claimed that: "The centerpiece of the Clinton Administration's 'new thinking' on innovation was its development of an 'innovation market' approach to merger enforcement; that is, an approach that specifically analyzes the effect of proposed mergers on innovation."⁷

Brunell wrote this while introducing his journal's symposium on innovation markets. He correctly identified the agencies' emphasis upon innovation markets. As another authority has said, the Federal Trade Commission ("FTC") has come to see innovation markets as its "theory de jour."⁸ Additionally, agency officials, such as the head of the Antitrust Division of the Department of Justice, continue to stress the importance of innovation markets.⁹

These writings and speeches have helped to create the innovation market myth. Many authorities, including Brunell, assume that simply because the agencies claim to have found an innovation market, then they have in fact done so. Yet, while the agencies have certainly done much important "new thinking" regarding how firms innovate, they have not made innovation markets "the centerpiece" of this "new thinking."

⁷ See Richard M. Brunell, *Symposium: A Critical Appraisal of the "Innovation Market" Approach*, Editors Note, 64 ANTITRUST L. J. 1, 2 (1995). Brunell's piece introduces a series of articles on innovation markets. *Id.*; see also George A. Hay, *Innovations in Antitrust Enforcement*, 64 ANTITRUST L. J. 7, 8 (1995). Hay presciently observes that "speeches often reflect more what an administration would like to do, or would like its audience to think that it will do, rather than what it has done, is now doing, or will actually do in the near future." *Id.*

⁸ See Joseph Kattan, *Intellectual Property Antitrust Enforcement. Beyond the Guidelines*, ANTITRUST LITIGATOR, Apr. 1995, at 4.

⁹ See Joel I. Klein, *Cross-Licensing and Antitrust Law*, Address Before the American Intellectual Property Law Association (May 1997).

C. "New Thinking" on Competition to Innovate

1. New, Crucial, Focus of Antitrust

Brunnell correctly stated that the antitrust authorities have developed much "new thinking" regarding how firms innovate.¹⁰ The agencies are trying to develop new ways of regulating markets so that competitive forces not only induce firms to lower their prices, but also to develop new and better products. As Brunnell implied, the agencies' attempt to develop the innovation market concept demonstrates how hard the agencies are working to try to use the antitrust laws to encourage firms to innovate.

While the agencies invested a considerable amount of time developing their "new thinking" before the DOJ brought its current action against Microsoft, the Microsoft case has brought this important issue to the public's attention.¹¹ The DOJ's recent attempt to make Microsoft sell its Internet Explorer and Windows operating systems as separate products has shown managers, economists and lawyers how hard the agencies are working to encourage firms to innovate; the action has also led the general public to debate antitrust issues in a way it has not for at least a generation.¹² Indeed, as one writer has said, "[T]he case has the potential to become the most significant in antitrust history."¹³

As the Microsoft case illustrates, when managers create new products and services, and then develop marketing plans to sell these new products and services, they must consider how the antitrust authorities will evaluate their activities. Managers must include the antitrust authorities' "new thinking" into their calculus when they develop their business strategies.¹⁴ But, as

¹⁰ See, e.g., William E. Cohen, *Competition and Foreclosure in the Context of Installed Base and Compatibility Effects*, 64 ANTITRUST L. J. 535, 536 (1996) (examining new lines of analysis in antitrust theory); see also *FTC Staff Report: Competition Policy in the New High-Tech, Global Marketplace*, 64 ANTITRUST L.J. 791, 791 (1996) (discussing new approaches to antitrust law).

¹¹ See *United States v. Microsoft Corp.*, 56 F.3d 1448, 1448 (D.C. Cir. 1995). In this action DOJ seeks to enforce a consent decree it and Microsoft had previously entered. *Id.*; see also <<http://www.usdoj.gov/atr/cases3/micros>>; <<http://www.microsoft.com>>. Microsoft and DOJ both make available, on their websites, all the documents it has filed in this case. *Id.* See generally Mark Furse, *United States v. Microsoft: Ill-Considered Antitrust*, INT'L REV. L., COMPUTERS & TECH., (forthcoming) (1998).

¹² See, e.g., John Cassidy, *The Force of an Idea*, NEW YORKER, Jan. 12, 1998, at 32 (exhibiting degree of attention popular press has paid to Microsoft litigation).

¹³ See Furse, *supra* note 11.

¹⁴ See, e.g., Kevin P. Coyne & Renée Dye, *The Competitive Dynamics of Network-*

one business journal has pointed out,¹⁵ when evaluating how this “new thinking” will affect their business strategy, managers must consider not only the Microsoft case, but also other cases, such as *Ciba Geigy/Sandoz*¹⁶ and *Microsoft/Intuit*.¹⁷ When evaluating these cases, managers and lawyers must not be confused or misled by the innovation market myth.

D. Porter, the Agencies’ “New Thinking,” and the Innovation Market Myth

1. Michael Porter and Competition to Innovate

The agencies often say that they must implement their “new thinking” on innovation so they can increase America’s international competitiveness. To explain how the agencies can use their “new thinking” to increase America’s competitiveness, the authorities often cite Michael Porter’s best selling study, *The Competitive Advantage of Nations*.¹⁸ Not unsurprisingly, Porter’s study found that a firm must innovate to succeed. Porter stressed that innovative firms succeed both at home, and perhaps more importantly, abroad. Thus, Porter concluded, to increase the ability of its firms to succeed in world markets, a nation’s policymakers must increase the ability of its nation’s firms to innovate. Moreover, Porter also explained why governments should use competition policy as an important component of their general economic policy of encouraging firms to innovate.

In *The Competitive Advantage of Nations*, Porter laid the foundation for the antitrust authorities’ “new thinking” on competition to innovate. He not only showed why governments must encourage firms to innovate, but how governments can use competition policy to encourage firms to innovate. Porter said policymakers must ensure that market forces drive firms to innovate

Based Businesses, 76 HARV. BUS. REV. 99, 99 (1998). These writers show how firms can use network effects to develop competitive advantage, and that when firms develop such strategies they must consider how antitrust law affects their strategies. *Id.*; see also William E. Cohen, *supra* note 10, at 536. The author explains why managers must also evaluate whether antitrust authorities may come to believe the firm introduction of new, innovative product for anticompetitive purposes. *Id.*

¹⁵ See, e.g., *Why Bill Gates Should Worry*, ECONOMIST, Dec. 20, 1997, at 106.

¹⁶ See *Ciba Geigy Ltd.*, FTC File No. 961-0055 (March 24, 1997).

¹⁷ See *Microsoft Corp.* Civ. No. 94-1564 (D.D.C. filed April 27, 1995) (explaining hostile takeover strategies of industry giant Microsoft).

¹⁸ See MICHAEL PORTER, *THE COMPETITIVE ADVANTAGE OF NATIONS* 143 (1990).

in order to encourage firms to generate new products and services. Authorities must aggressively enforce the antitrust laws to ensure that market forces drive firms to innovate.¹⁹ Because *The Competitive Advantage of Nations* shows why competition policy must be an important part of a nation's attempts to create innovative firms, American antitrust authorities often cite this work to justify their attempts to develop "new thinking" regarding competition to innovate. In fact, Porter himself endorsed the authorities' view that his work justified their attempts to develop "new thinking" on innovation.²⁰

2. Porter and the Innovation Market Myth

The authorities often cite *The Competitive Advantage of Nations* to justify both their attempts to develop "new thinking" on innovation and their attempts to find innovation markets. By doing so, the agencies have used Porter's well-regarded work to further propagate the innovation market myth. The authorities, however, have created the false impression that Porter endorses innovation markets. While Porter does believe that the authorities should encourage firms to innovate, he has not endorsed the innovation market concept.

Anne Bingaman, head of the DOJ's Antitrust Division when it issued the I.P. Guidelines, stated that *The Competitive Advantage of Nations* showed that "a strong antitrust policy, especially in the area of horizontal mergers, alliances and collusive behavior, [was] essential to the role of upgrading any economy."²¹ She concluded that "the lesson from Professor Porter's book [was]

¹⁹ See *id.* at 662-64.

²⁰ See PORTER, *supra* note 18, at 5. In the post-war era. . ."there has been, and continues to be, a focus in antitrust analysis on price/cost margins, or the ability of an industry to elevate price above cost (allocative efficiency)." *Id.* Indeed, if one examines the Merger Guidelines, this is the central metric by which welfare is determined. *Id.* More recently there has been a growing concern with economies of scale (or static efficiency), driven by Chicago School economics. *Id.* Only scant attention is paid to innovation or progressiveness as an important goal that antitrust policy should concern itself with. *Id.* Most recent discussion of innovation is framed in static efficiency terms, allowing collaboration to avoid waste and duplication of R & D, for example. *Id.* My view is that we must turn this ranking of goals of antitrust on its head. . . . The central focus of antitrust policy, in my view, ought to be on fostering progressiveness, defined broadly to include not only technological innovation but new ways of competing in product, marketing, service, and so on. *Id.* at 5.

²¹ See Anne Bingaman, *The Role of Antitrust in Intellectual Property*, Speech Before the Federal Circuit Judicial Conference (Patent & Trademark Session), Jun. 16, 1994. The DOJ has continued to make this speech, and many of Bingaman's other speeches available on its website <<http://www.usdoj.gov/atr/speeches/index.html>>. *Id.*

that innovation thrives in markets that are competitive.”²²

In this speech, then Assistant Attorney General Bingaman further stated that her department implemented Porter’s policy prescriptions in its actions against General Motors²³ and Flow International,²⁴ two cases in which the DOJ claimed to have found innovation markets. Bingaman said that these two cases showed that “enforcement activities in the merger area also demonstrate that antitrust enforcement has an important role to play in spurring innovation.”²⁵

Furthermore, in 1995, two then-high-ranking DOJ officials also relied heavily on Porter’s work when they explained why the agencies should find innovation markets.²⁶ In their influential law review article, Richard Gilbert and Steven Sunshine carefully analyzed the economic arguments supporting and opposing the agencies’ policy of finding innovation markets. Not surprisingly, these DOJ officials concluded that the agencies should find innovation markets. Gilbert and Sunshine relied most heavily on Porter’s authority in reaching this conclusion.²⁷

Following the Gilbert and Sunshine article, FTC lawyers Thomas Dahdough and James Mongoven wrote another article explaining why the agencies should find innovation markets.²⁸ They explained that the agencies should find innovation markets, among other reasons, to implement Porter’s policy recommendations. According to Dahdough and Mongoven, *The Competitive Advantages of Nations* demonstrated that “innovation

²² See *id.*

²³ See *United States v. Gen. Motors Corp.*, Civ. No. 93-530 (D. Del. filed Nov. 16, 1993).

²⁴ See *United States v. Flow Int’l Corp.* No., Civ. 94-71320 (E.D. Mich. filed Apr. 4, 1994).

²⁵ See *id.*

²⁶ See Richard J. Gilbert & Steven C. Sunshine, *Incorporating Dynamic Efficiency Concerns in Merger Analysis: The Use of Innovation Markets*, 63 ANTITRUST L.J. 569, 580 (1995) (discussing Michael Porter’s theories on competition spurring innovation); see also William F. Baxter, *The Definition and Measurement of Market Power in Industries Characterized by Rapidly Developing and Changing Technologies*, 53 ANTITRUST L.J. 717, 728 (1984) (explaining different markets where innovation sparks competition); Joseph Kattan, *Antitrust Analysis of Technology Joint Ventures: Allocative Efficiency and the Rewards of Innovation*, 61 ANTITRUST L.J. 937, 941 (1993) (articulating innovation’s competition concerns for non-products).

²⁷ See Lawrence B. Landman, *The Economics of Future Goods Markets*, 21 W. COMP. L. & ECO. R. 3 (1998).

²⁸ See Dahdough & Mongoven, *supra* note 1, at 406 (indicating need to examine innovation markets in merger analysis); see also Robert J. Hoerner, *Innovation Markets: New Wine in Old Bottles?*, 64 ANTITRUST L.J. 49, 49 (1995) (critiquing innovative market theory and practice).

contributes greatly to international competitiveness.”²⁹ Thus, Dahdouh and Mongoven concluded that agencies should protect competition in innovation markets to increase America’s international competitiveness.

Further, before concluding that innovation markets were the “centerpiece” of the agencies’ “new thinking” on innovation, Richard Brunell explained the economic theories that inspired the agencies’ development of their “new thinking.”³⁰ Brunell explained that Porter led the agencies to develop their “new thinking.” Thus, Brunell implied, Porter inspired the agencies to develop the not only their “new thinking” on innovation, but also the “centerpiece” of this “new thinking,” which he said are innovation markets.³¹

E. Tom and Newberg and the Innovation Market Myth

1. Continuing the Myth

Tom and Newberg continue the agencies’ tradition of writing articles, and giving speeches, in which agency officials claim that the agencies find innovation markets. They, therefore, also continue the agencies’ practice of propagating the innovation market myth started by Gilbert and Sunshine³² and continued by Dahdouh and Mongoven and other agency officials.³³ For example, former FTC Commissioner Varney wrote an oft-cited article in which she also claimed that the agencies have, and will, find innovation markets.³⁴

By continuing to claim that the agencies have found innovation markets, Tom and Newberg continue to propagate the myth that the agencies have indeed found innovation markets. As this article will illustrate, however, the agencies have never found an

²⁹ See Dahdouh & Mongoven, *supra* note 28, at 408.

³⁰ See Brunell, *supra* note 7, at 4.

³¹ See *id.* Along with Porter, Brunell also cited F. M. Scherer. Scherer has done important work, in particular regarding the relationship between market structure and innovation. This relationship, however, does not relate to innovation markets. *Id.*; see also FREDERIC SCHERER, *INNOVATION AND GROWTH: SCHUMPETERIAN PERSPECTIVES* (1984).

³² See Gilbert & Sunshine, *supra* note 26, at 570 (delineating innovation markets).

³³ See Dahdouh & Mongoven, *supra* note 1, at 408 (articulating underpinnings of innovation market analysis).

³⁴ See Christine A. Varney, *Antitrust and the Drive to Innovate: Innovation Markets in Merger Review Analysis*, 9 *ANTITRUST* 16, 19 (1995) (reasoning collusion in highly concentrated innovation market may occur).

innovation market. This article will also show that since the agencies have not found an innovation market, innovation markets are certainly not the "centerpiece" of the agencies "new thinking" on innovation.

2. Harm of the Myth

By continuing to propagate the innovation market myth, Tom and Newberg mislead managers and lawyers. Managers must understand the agencies' "new thinking" on innovation in order to develop and implement their business strategies. If managers, and their legal counsel, misunderstand the agencies "new thinking," then they will recommend steps that are inconsistent with the policy the agencies are actually implementing. For example, lawyers may fear that the agencies will use the innovation market concept to block a particular transaction.³⁵ They may, therefore, recommend that their clients not enter into the relevant transaction. But if the agencies would actually not have used the innovation market concept to block this transaction, then the lawyers would be recommending that their clients not enter into a transaction which may have been not only perfectly legal, but also economically efficient.

In short, the innovation market myth leads managers and lawyers to misunderstand the agencies "new thinking" on innovation. If managers and lawyers misunderstand the agencies' "new thinking," then firms may take actions that are inconsistent with the agencies' actual innovation policy. By continuing to propagate the innovation market myth, Tom and Newberg continue the agencies' unfortunate practice of misleading managers and lawyers.

As Michael Porter said, the United States must develop innovative firms to remain internationally competitive. Policymakers must develop and implement a coherent, reasonable innovation policy to develop these innovative firms. Policymakers will only be able to implement this policy if the firms they are trying to influence understand the policy. Yet, by propagating the in-

³⁵ See *id.* (reasoning attorneys will not know when innovation market will be found or which firms will compete); see also Joseph F. Brodley, *Proof of Efficiencies in Mergers and Joint Ventures*, 64 ANTITRUST L.J. 576, 576 (1996) (concluding efficiency considerations affect merger analysis); Thomas N. Dahdouh, *The Shape of Things to Come. Innovation Market Analysis in Merger Cases*, 64 ANTITRUST L.J. 405, 405 (1996) (explaining innovation market analysis is not designed merely to ensure pro-enforcement outcomes).

novation market myth, the agencies actually confuse firms. They increase the likelihood that firms will act inconsistently with the agencies actual innovation policy. The agencies should, therefore, stop propagating the innovation market myth.

III. CONGRESS CREATES INNOVATION MARKETS

A. Definition

Innovation market analysis assumes that firms compete in a separate market to make new products or provide new services. Clearly, firms compete to sell existing goods and services.³⁶ Just as clearly, firms compete in technology markets by licensing comparable technologies. The innovation market concept hypothesizes that, in addition to these markets, the market to develop new products is itself a separate market which antitrust authorities can identify. Innovation, say the authorities, is itself the "product" of this innovation market.

B. Congress Enacts Statute Creating Innovation Markets

1. National Cooperative Research and Production Act

As far back as 1984, Congress endorsed, if not created, the idea that firms compete in innovation markets. When Congress enacted the National Cooperative Research Act,³⁷ it lowered the antitrust liability of certain joint ventures. In the NCRA, Congress said that when applying the antitrust laws to appropriate joint ventures, the agencies should find, and evaluate competition in what it called "R&D markets," which are innovation markets. Congress instructed the courts and agencies to "take into account all relevant factors affecting competition, including, but not limited to, effects on competition in properly defined, relevant research, development, product, process, and service mar-

³⁶ See Gilbert & Sunshine, *supra* note 26, at 573 (hypothesizing that innovation is form of non-price competition consumers can benefit from); see also Dahdouh, *supra* note 2, at 414 (stating internal consumption of innovation reduces potential reward to other innovators).

³⁷ See The National Cooperative Research and Production Act, 15 U.S.C. §4301 (1993).

kets.”³⁸

2. Legislative History: Strong Endorsement

In the NCRA’s legislative history, Congress explained why it developed the innovation market concept. It also offered the agencies guidance to help them define an innovation market. The Senate Report recognized that Congress created the innovation market concept because it felt that the agencies must protect competition in research and development (“R&D”) to develop competitive firms. The report stated: “Competition is as important in R&D as it is in any other commercial endeavor. Indeed, in many industries, particularly those that are based on rapidly evolving technology, competition in R&D may be crucial to success.”³⁹

The report then offered the agencies guidance in defining an innovation market:

[T]o be included in the relevant R&D market. . . [F]irms need not currently compete with one another at the production or marketing stage. Market shares in current markets or in projected future markets will not be determinative of a firm’s ability and incentive to compete in a relevant R&D market. Rather, the facilities, technologies, and other assets to which firms have access are crucial to evaluating R&D competitiveness.⁴⁰

Thus, the report stated that the agencies should do more than simply evaluate competition in what it called “projected future markets.” The report also indicated that the agencies should not consider a firm’s market share in a future goods market to be “determinative” of the firms’ market share of an innovation market. Instead, when evaluating whether a firm has the incentive and ability to compete in an innovation market, the report stated that agencies should also evaluate the firms’ “facilities, technologies, and other assets.” The report, however, does not say how agencies should evaluate these facilities, technologies and

³⁸ See The National Cooperative Research and Production Act, 15 U.S.C. §4302 (1993). The Act outlines the rule of reason standard which the courts and agencies must sometimes apply. *Id.*

³⁹ See S. REP. NO. 98-427, at 21 (1984), *reprinted in* 1984 U.S.C.C.A.N. 3105, 3131; H. R. CONF. REP. NO. 1044, at 1044 (1984), *reprinted in* 1984 U.S.C.C.A.N. 3105, 3131.

⁴⁰ See *id.*

assets. Nor does the report say how agencies should relate these facilities, technologies, and assets to innovation markets. At best, the report offers the agencies only limited guidance.

3. Congress Did Not Define Innovation Market

More importantly, neither the NCRA nor its legislative history define an innovation market. The NCRA provides that the agencies should protect competition in innovation markets, yet it does not define an innovation market. It simply states that agencies should protect competition in "properly defined" R&D markets. The Senate report offered the agencies some guidance in defining an innovation market, but it still does not define an innovation market.

Congress created the idea that the agencies can and should protect competition in innovation markets in the NCRA. Congress required the agencies to find innovation markets when they evaluate joint ventures subject to the Act. By implication, Congress also endorsed the agencies' current attempts to broadly regulate competition in innovation markets. Revealingly, however, Congress did not define an innovation market. It apparently could not do so.

IV. AGENCIES EXPAND CONGRESSIONAL INTENT

A. Introduction

Although Congress created the innovation market concept, the agencies now apply the concept more broadly than Congress originally instructed. The agencies apply the innovation market concept to many types of transactions in addition to joint ventures subject to the NCRA. The agencies have also attempted to define an innovation market both in their 1995 I.P. Guidelines and in Gilbert and Sunshine's influential article.⁴¹

⁴¹ See Gilbert & Sunshine, *supra* note 26, at 588 (identifying circumstances that hamper and aid innovation market analysis); see also Thomas L. Hayslett III, *Antitrust Guidelines for the Licensing of Intellectual Property: Harmonizing the Commercial Use of Legal Monopolies with the Prohibitions of Antitrust Law*, 3 J. INTELL. PROP. L. 375, 378 (1996) (arguing antitrust law and intellectual property protection have common policy goals).

B. Intellectual Property Licensing Guidelines

In the I.P. Guidelines, the agencies defined an innovation market to a limited extent. The I. P. Guidelines build on the market definition policies of the agencies' 1992 Horizontal Merger Guidelines ("Merger Guidelines").⁴² These Merger Guidelines stated that a firm has market power if it can raise the price of a good without causing a significant number of customers to buy other goods instead. Similarly, the I.P. Guidelines provided that a firm has market power in an innovation market if it can lower its R&D spending without causing other firms to correspondingly increase their R&D investments. The I.P. Guidelines required the agencies to also consider other factors, such as the unique research capabilities of the relevant firms, before concluding that a firm has market power in an innovation market. Additionally, the I.P. Guidelines also required the agencies to consider how the transaction may improve innovation efficiencies.

C. Gilbert and Sunshine's Methodology

In an influential law review article, Gilbert and Sunshine expanded the I.P. Guidelines' innovation market methodology. These two then-high ranking DOJ officials developed a five-step methodology that they contend allowed the agencies to identify an innovation market.⁴³ The five steps of this methodology are:

⁴² See U.S. Department of Justice and Federal Trade Commission 1992 Horizontal Merger Guidelines (1992), 4 Trade Reg., Rep. (CCH) ¶ 13, 104 (1992); see also Joseph Kattan, *After the IP Guidelines: Trends in Intellectual Property Antitrust Enforcement*, 11 ANTITRUST 26, 27 (1997) (using proper merger of Ciba-Geigy and Sandoz to demonstrate technologies were not ready for commercialization within narrow time frame); Lawrence B. Landman, *Did Congress Actually Create Innovation Markets?*, 13 BERKLEY TECH. L. REV. 721, 728 (1998) (discussing market power with respect to prices of goods and ability to buy other goods).

⁴³ See Gilbert & Sunshine, *supra* note 26, at 594-97 (expanding innovation market approach by including assessments of market concentration, competitive effects on incentives and efficiencies); see also Robert P. Taylor & Matthew E. Carswell, *Research into Developing New Idea: Innovation Markets*, in INTELLECTUAL PROPERTY ANTITRUST 1996, 51, at 63 (PLI Patents, Copyrights, Trademarks, & Literary Prop. Course handbook Series No. 449, 1996) (stating arguments against implementation of innovation market approach may be appropriate). But see Andrew Chin, *Analyzing Mergers in Innovation Markets*, 38 JURIMETRICS J. 119, 135 (1998) (finding Gilbert and Sunshine do not suggest procedure for combining evidence about innovation efforts of merging parties with evidence about innovation market structure).

1. Identify Competing R&D Programs

Gilbert and Sunshine acknowledge that the "product" of an innovation market cannot be all the innovations that the relevant firms may be trying to develop. The authors said that competing R&D programs are R&D programs that use the same specific R&D assets, and which, if successful, will allow the relevant firms to make the same future product.

2. Identify Alternative Sources of R&D.

Gilbert and Sunshine then asked the agencies to identify the innovation market's potential competitors. Thus, any firm investing in the relevant R&D, and trying to innovate, is already competing in the innovation market. Therefore, in this step, Gilbert and Sunshine asked the agencies to identify the firms that may, in the future, acquire the relevant R&D assets and try to develop the relevant innovation.

3. Evaluate Competition From Downstream Products

Downstream products are products other firms already sell. The authors ask the agencies to identify these products because, the authors believe, these products will put competitive pressure on an R&D monopolist and encourage or force it to continue to invest in R&D. This step relates very closely to step four.

4. Increase in Competition in R&D.

Gilbert and Sunshine fear that an innovation market monopolist, exercising its monopoly power, will cut back its R&D investments. The authors, therefore, ask the agencies to evaluate an innovation market monopolist's incentives to invest in R&D. The agencies should not approve transactions that would lower firms' incentives to invest in R&D, believe Gilbert and Sunshine.

5. Assess R&D Efficiencies

A transaction may allow the relevant firms to generate the same innovation at lower cost. Gilbert and Sunshine believe that the agencies should evaluate whether the transaction will indeed allow the firms to achieve greater R&D efficiencies.

V. AGENCIES CANNOT APPLY INNOVATION MARKET METHODOLOGY

A. Find a Future Goods Market, Not an Innovation Market

In reality, the agencies cannot use Gilbert and Sunshine's methodology to find an innovation market. The methodology only actually allows the agencies to find a future goods market, not an innovation market.⁴⁴ As the following analysis shows, Gilbert and Sunshine's innovation market methodology is unworkable. It actually allows the agencies to find no more than a future goods market.

1. Identify Competing R&D Programs

The author's first step requires the agencies to identify the relevant firms' competing R&D programs. According to Gilbert and Sunshine, these competing R&D programs require the firms to use the same specific R&D assets, and produce the same future product. However, as innovation market critics have pointed out, if the agencies apply this test broadly, then they will identify firms that will actually never compete against each other as competitors.⁴⁵

The agencies have implicitly acknowledged the validity of this criticism. As the following analysis of decided cases will show, the agencies have only found that firms are competitors if they will actually compete in the future. The agencies have, therefore, avoided applying the innovation market concept in the overly broad fashion which the innovation market critics feared they would. By doing so, however, the agencies have found fu-

⁴⁴ See Landman, *supra* note 42, at 756 (1998) (discussing how agencies have found future goods markets rather than innovation markets). See generally *Special Report, FTC Staff Report: Competition Policy in the New High-Tech, Global Market place*, 64 ANTITRUST L.J. 791, 794 (1996) (illustrating how transaction combining existing innovation effort with competing innovation effort may lessen innovation competition).

⁴⁵ See Richard T. Rapp, *The Misapplication of the Innovation Market Approach to Merger Analysis*, 64 ANTITRUST L. J. 19, 20 (1995) (stating innovation market approach represents leap into unknown, with potential for harm to economic welfare equal to that of any potential benefits); see also Taylor & Carswell, *supra* note 43, at 66 (stating one difficulty in identifying participants in particular R&D market is deciding where to look); Nicholas A. Widwell, *The Crystal Ball of Innovation Market Analysis in Merger Review: An Appropriate Means of Predicting the Future?*, 4 GEO. MASON L. REV. 369, 392 (1996) (listing problems with Gilbert and Sunshine method of determining scope of innovation market).

ture goods markets rather than innovation markets.

2. Identify Alternative Sources of R&D

Gilbert and Sunshine's second step requires the agencies to identify the innovation market's potential competitors. Yet firms investing in the relevant R&D, and trying to develop the relevant innovation, are already competing in the relevant innovation market. Potential competitors into the innovation market are firms that may try to develop the relevant innovation.

Many firms may, in the future, try to develop just about any innovation. Firms themselves often do not know what innovations they may try to develop in the future. If the firms themselves do not know what innovations they may try to develop, then the DOJ or the FTC certainly can not know what innovations these firms may try to develop. The agencies can therefore not identify potential competitors into an innovation market.

3. Evaluate Competition From Downstream Products

Since this step relates so closely to step 4, the discussion of step 4 above also relates to this step.

4. Increase in Competition in R&D

Gilbert and Sunshine's fourth step requires the agencies to determine an innovation market monopolist's incentives to innovate. This step requires the agencies to ensure that firms do not use their market power in an innovation market to retard the pace of innovation.

But the agencies cannot evaluate a firm's incentives to innovate. Even an innovation market monopolist may face a strong incentive to innovate. If such a monopolist were the only firm able to develop and sell a new product, such as new life saving drug, they it would certainly face a strong incentive to innovate. If it developed and sold this product, then it would earn monopoly profits.⁴⁶

⁴⁶ See Landman, *supra* note 42, at 756. By preserving competition in future goods market the agencies insure that even when an innovation market monopolist develops the relevant product, it will not monopolize that future market. *Id.*; see also John Shepard Wiley, Jr. et al., *The Leasing Monopolist*, 37 UCLA L. REV. 693, 721 (1990) (explaining monopolist can sell to initial period lows only by lowering price which results in problematic abandonment of monopoly rents).

5. Assess R&D Efficiencies

The authors' fifth step requires the agencies to assess efficiencies. This step asks the agencies to determine what R&D efficiencies, if any, the relevant transaction will create. Yet, in their 1997 amendments to their 1992 Horizontal Merger Guidelines the agencies acknowledge that they can not readily assess R&D efficiencies.⁴⁷

B. Agency Actions

As the analysis of Gilbert and Sunshine methodology implies, the agencies have actually protected competition in a future goods markets rather than an innovation market. Indeed, an analysis of the cases in which the agencies claim to have found innovation markets will confirm this.⁴⁸

1. Early DOJ Actions: Flow International and Wright Medical Technology

The agencies claim to have found innovation markets in many cases. In these cases, however, the agencies have actually only found future goods markets. For example, in *Flow International*,⁴⁹ the DOJ opposed Flow International's attempt to buy Ingersoll-Rand's Waterjet Cutting Systems Division because the combined firm would control 90% of the relevant goods market, and because the DOJ alleged the transaction would harm competition in the future goods market for better ultra-high pressure waterjet intensifier pumps.

Similarly, in *Wright Medical Technology*,⁵⁰ the FTC protected

⁴⁷ See *Revision to Horizontal Merger Guidelines*, available in 1997 WL 166999 1, *1 (acknowledging efficiencies are difficult to verify/quantify because much available information is possessed by merging firms); see also Robert Pitofsky, *Proposals for Revised United States Merger Enforcement in a Global Economy*, 81 GEO L.J. 195, 244 (1992) (arguing efficiency is virtually impossible to measure with respect to R&D); Rapp, *supra* note 45, at 19 (arguing new approach is needed to deal with mergers that harm innovation since conventional product or technology analysis is inadequate).

⁴⁸ See Landman, *supra* note 42, at 721 (extensively analyzing cases in this section).

⁴⁹ See *United States v. Flow Int'l Corp.*, Civ. No. 93-530, 94 (dealing with future goods market analysis).

⁵⁰ See *Wright Med. Tech., Inc.*, 60 Fed. Reg. 480, 480 (1995) (accepting proposed consent agreement providing Wright would grant non-exclusive license of Orthomet/Mayo technology to Mayo); see also Mark D. Whitener, *Competition and Antitrust Enforcement in the Changing Pharmaceutical Marketplace*, 50 FOOD & DRUG L.J. 301, 306 (1995) (commenting on antitrust concerns arising in pharmaceutical mergers including elimination of competition).

the future goods market for the next generation of orthopedic hand implants. The FTC prevented Wright Medical from purchasing its only potential competitor in the future implant market since Wright Medical already controlled 95% of the implant market. [Orthomet as developing the next generation of implant.]

2. General Motors/ZF Friedrichshafen

The DOJ also opposed ZF Friedrichshafen's ("ZF") attempt to purchase General Motors' ("GM") heavy-duty automatic transmission business.⁵¹ ZF and GM were the world's two major manufacturers of heavy-duty automatic transmissions. In the United States, however, the firms competed in only two narrow product markets. The DOJ opposed the sale because it alleged that these firms could only develop better transmissions if they continued to compete against each other in the broad innovation market to make better transmissions,⁵² not just in the two narrow product markets in which they actually competed in within the United States.

But the firms competed in the broad market for many types of heavy-duty automatic transmissions in Europe. Thus, in this case, the firms competed in the broad future goods market, as well as the broad current goods market. The DOJ, however, could not assume jurisdiction over this current goods market. Since it could not assert jurisdiction over the current goods market, it asserted jurisdiction over what it called an innovation market.

The DOJ used the concept of an innovation market to assert jurisdiction over the firms' competition in the European current goods markets. The DOJ should not have tried to assume jurisdiction over this market. It should have let the proper antitrust authority regulate competition in that market. The European antitrust authority was more appropriate than that of the United States.⁵³

⁵¹ United States v. Gen. Motors Corp., Civ. No. 93-530 (D. Del. Filed Nov. 16, 1993).

⁵² See generally Brunell, *supra* note 7, at 2 (noting DOJ expressed concern that merger would eliminate significant rivals for competition).

⁵³ See Landman, *supra* note 42, at 762 (stating DOJ should not have used innovation spillover effects to create doctrine which would give almost any antitrust authority jurisdiction over broad range of transactions).

3. Sensormatic Electric Co.

In another important case, *Sensormatic Electric Co.*, the FTC opposed Sensormatic's attempt to license intellectual property relating to Knogo Corp.'s anti-shoplifting equipment business.⁵⁴ These firms were developing the next generation system of shoplifting detection. This new system would allow manufacturers to imbed the appropriate electronic marker directly into their products. If not removed when a customer purchased an item, these markers would sound the alarms located at the store's exit.

The FTC feared that the licensing agreement would both allow the relevant firms to improperly develop industry standards and lower the firms' incentives to innovate. Manufacturers and retailers could only use the next generation system if their electronic markers and alarms used compatible, standardized technology. The FTC believed that if these two firms worked together, such a standard would be reached, thereby excluding their competitors from the market.

In addition, the FTC also feared that the licensing agreement between the firms would lower the firms' incentive to innovate. The agreement provided that the firms had to inform each other of any improvements made to the relevant technology. The FTC reasoned that because the agreement required each firm to share the results of its R&D efforts with the other, each firm may not make the R&D investments it otherwise would have made. The FTC therefore issued what it felt to be the appropriate order to protect competition in the future goods market for the next generation of anti-shoplifting equipment.⁵⁵

⁵⁴ See *Sensormatic Elec. Corp.*, 60 Fed. Reg. 5428, 5428 (1995) (focusing on market for research and development for future technologies); see also Varney, *supra* note 34, at 19 (noting *Sensormatic* provides good example of innovation markets in understanding all ramifications of competition).

⁵⁵ The complaint, in paragraph 11, refers to the markets for the "research and development of disposal labels." The complaint, therefore, seems to identify a market to develop the ability to develop the new anti-shoplifting equipment (disposable labels) rather than the market for new equipment itself. This complaint, in reality, focuses on the market for the new equipment.

Whenever the agencies regulate future markets they issue orders which relate to the relevant firms' ability to develop the new product, and to compete in the future market. In fact, even when the agencies analyze traditional current markets they still, implicitly, analyze the relevant firms' ability to develop and manufacture the relevant products. Thus, whenever the agencies analyze a current or future market, they, to some extent, analyze the relevant firms' ability to develop and manufacture the relevant product. This complaint, therefore, says explicitly what other companies say implicitly. It actually adds nothing. Further, the agencies can not claim that they have found an innovation market

4. Pharmaceutical Cases

The FTC has often protected competition in future goods market for pharmaceutical products. For example, in *American Home Products Co.*,⁵⁶ the FTC opposed American Home Product's purchase of American Cyanamid in part because the firms were two of only three firms trying to develop rotavirus vaccines.⁵⁷ In this case, the FTC preserved competition in the future goods market for rotavirus vaccines, which did not then exist. Similarly, in *Glaxo PLC*,⁵⁸ the FTC required Glaxo to sell Wellcome's oral antimigrane R&D program before allowing Glaxo to purchase its pharmaceutical rival Wellcome.⁵⁹ The FTC thereby preserved competition in the future goods market for oral antimigrane treatments. When Upjohn and Pharmacia merged, the FTC required these firms to sell specific technology related to their attempts to develop new treatments for solid tumors.⁶⁰ Finally, in *Baxter Int'l Corp.*,⁶¹ the FTC opposed Baxter International's purchase of Immuno International because they were the only firms seeking FDA approval to sell fibrin sealant

in this case simply because they drafted a complaint which says explicitly what other companies say implicitly.

56 *American Home Prods. Corp.*, 60 Fed. Reg. 60807, 60807 (1995) (preserving competition in future goods market for rotavirus vaccines); see also Mark D. Whitener, *Competition and Antitrust Enforcement in the Changing Pharmaceutical Marketplace*, 50 FOOD & DRUG L.J. 301, 305 (1995) (listing five reasons FTC opposed American Home Products- American Cyanamid merger).

57 *Id.*

58 See *Glaxo plc.*, 60 Fed. Reg. 16139, 16139 (1995) (preserving competition in future good market for oral antimigraine treatments); see also Kevin J. Arquit & Richard Wolf-ram, *Mergers & Acquisitions: United States Government Antitrust Analysis and Enforcement*, in 38TH ANNUAL ANTITRUST LAW INSTITUTE, 459, at 550 (PLI Corp. L. & Practice Course Handbook Series No. 1049, 1998) (explaining Glaxo agreed to divest itself of R&D assets in order to gain approval of acquisition of Wellcome); John Temple Lang, *European Community Antitrust Law: Innovation Markets and High Technology Industries*, 20 FORDHAM INT'L L.J. 717, 749 (1997) (noting Glaxo's divestiture of Wellcome's R&D was crucial to merger).

59 See Lang, *supra* note 58, at 749.

60 See *Upjohn Co.*, 60 Fed. Reg. 56153, 56153 (1995) (preserving competition in future goods market for future treatment of solid tumors); see also Taylor & Carswell, *supra* note 43, at 59 (explaining FTC claim that Upjohn and Pharmacia were two of few firms in their particular market).

61 See *Baxter Int'l Inc.*, 62 Fed. Reg. 408, 408 (1997) (preserving competition in future goods market for fibrin sealants); see also Carl Shapiro & Michael Sohn, "Crown Jewel" Provisions in Merger Consent Decrees, 12 ANTITRUST 27, 29 (1997) (claiming FTC was concerned about Baxter/Immuno merger because of potential loss of competition in relevant market); Gearl Sobel, *Exploitation of Patents and the Antitrust Laws*, in TECHNOLOGY LICENSING AND LITIGATION 1996, 683, at 794 (PLI Patents, Copyrights, Trademarks, & Literary Prop. Course Handbook Series No. 477, 1997) (explaining consent order for Baxter/Immuno merger required Baxter to license Immuno's fibrin sealant product to commission approved licensee).

in the United States.⁶² In all of these cases, the FTC protected competition in the future goods market for pharmaceutical products that the relevant firms were attempting to develop but did not yet sell.

5. Ciba-Geigy

Lastly, in its highly publicized *Ciba-Geigy/Sandoz* decision,⁶³ the FTC allowed Ciba-Geigy and Sandoz to merge only after they agreed to license technology relating to their gene therapy research programs.⁶⁴ The FTC feared that the merger of the world's two leading gene therapy researchers would harm competition in the future gene therapy market in two separate ways. First, the FTC feared that the merger would allow the merged firm to monopolize four specific future goods markets, which it identified. Second, the FTC also feared that because Ciba Geigy and Sandoz were the only two firms that controlled both the patent and other intellectual property rights which any firm would need to develop gene therapy products, by joining together these firms could exclude others from the broad gene therapy market. In *Ciba-Geigy/Sandoz*, therefore, the FTC acted both to protect competition in four future goods markets and to regulate how the firms combined intellectual property rights. In this case, however, the FTC did not find an innovation market.

C. FTC Concedes that it Finds Only a Future Goods Market

The FTC staff's noted report on the "High Tech Global Marketplace"⁶⁵ and one FTC Commissioner herself actually agree with this article's analysis. Both authorities acknowledge that the agencies only find future goods markets rather than innovation markets. The staff report made the telling observation that:

In terms of how to define the scope of an "innovation market," the *IP Guidelines* approach of focusing on "research

⁶² See Sobel, *supra* note 61, at 794.

⁶³ See *Ciba Geigy Ltd.*, FTC File No. 961-0055 (Mar. 24, 1997) (preserving competition in future goods market for four specific gene therapies); see also Joseph Kattan, *After the IP Guidelines: Trends in Intellectual Property Antitrust Enforcement*, 11 ANTITRUST 26, 27 (1997) (noting Ciba-Geigy/Sandoz merger broke new ground in alleging adverse impact on innovation competition in gene therapies).

⁶⁴ See *Ciba Geigy Ltd.*, FTC File No. 961-0033 (Mar. 24, 1997).

⁶⁵ See *High Tech Global Marketplace*, *supra* note 10, at 791.

and development directed to particular new or improved goods or processes" seems most useful. One witness suggested that access to specialized assets could also be the basis for identifying substitutable innovation efforts and for assessing the relative competitive significance of market participants. Such an approach has received some attention. This approach might well be sufficient to cabin the agency's analysis, yet the issue ultimately would lead back to the potential existence of a good. This is, in asking whether a firm possessed "specialized assets," one would need to ask: "specialized assets necessary to produce what types of goods?" *At the moment, it seems inevitable that an innovation market will be defined with respect to an ultimate goods market, such as "R&D directed at [a class of products]."*⁶⁶

An "ultimate goods market" is of course a future goods market. Thus, when the agencies define an innovation market "with respect to" an "ultimate goods market," they are in reality defining a future goods market rather than an innovation market.

1. Commissioner Azcuenaga

In a recent speech, FTC Commissioner Mary L. Azcuenaga acknowledged that the agencies find only future goods markets.⁶⁷ The Commissioner stated:

The critiques of the innovation market theory raise serious questions regarding how far it should be pursued, at least given our current knowledge. Nonetheless, the valid criticisms of the theory seem to apply to its application in a broad sense to the concept of innovation. They do not seem to undercut our antitrust concerns for future competition in a *specific product* that is already under development. Almost all the FTC cases have involved research and development by a very few firms of a pharmaceutical product to remedy a particular disease or condition. The Commission has focused on future competition to manufacture and sell the *particular drug* in question and not the general level of research or development in the pharmaceutical industry.⁶⁸

⁶⁶ See *id.* (emphasis added).

⁶⁷ See Mary L. Azcuenaga, *Antitrust and Intellectual Property: Recent Highlights and Uncertainties*, Speech before the American Law Institute-American Bar Association, Apr. 24, 1997, available at <<http://www.ftc.gov/speeches/azcuenaga/ali-aba97.htm>>.

⁶⁸ See Mary L. Azcuenaga, *Panel Discussion on Technological Innovation, International Trade and Competition Policy*, Remarks before the Japan Fair Trade Commission

In her speech, Commissioner Azcuenaga discussed *Ciba Geigy* at length. She recognized that “the breath of the patent may have been a concern.”⁶⁹ But she also said that “another possibility is that the Commission has decided to extend the innovation market theory quite beyond what we have seen before.”⁷⁰ As this article detailed above, however, the FTC did not find an innovation market in this case.

VI. TOM AND NEWBERG: INNOVATION MARKETS TO EVALUATE THE NEXT GENERATION OF PRODUCT

A. Officials Acknowledge that in Several Cases Agencies did not Find Innovation Markets

Tom and Newberg acknowledged that the agencies could have analyzed cases such as the pharmaceutical cases discussed above without finding innovation markets.⁷¹ They acknowledged that when the agencies analyzed cases such as these, “the potential competition doctrine, with a few adjustments, could be used to analyze the competitive effects and would reach similar results as analyzing the transaction’s current effects in an innovation market.”⁷² In previous writings and speeches in which other agency officials developed the innovation market myth, these officials claimed that the agencies found innovation markets in the pharmaceutical cases.⁷³ Tom and Newberg, therefore, made an important concession when they acknowledged that the agencies

50th Anniversary Symposium, Dec. 1, 1997, available at <http://www.ftc.gov/speeches/azcuenaga/japan97.htm> (emphasis added). Commissioner Azcuenaga repeated this analysis in December 1997 when she said that the FTC is “continuing to allege a diminution of competition in research and development markets for specific products.” *Id.*

⁶⁹ See Azcuenaga, *supra* note 68.

⁷⁰ See *id.*

⁷¹ See Tom & Newberg, *supra* note 6, at 223-24 (1997) (discussing pharmaceutical cases).

⁷² See *id.* at 223. On the following page, however, the authors go on to say that: “One might want to make further adjustments in order to capture innovation effects in those markets (i.e. the elimination of the competition to develop the drugs, not just the competition between the drugs once developed and approved), but one would not necessarily need the concept of innovation markets if one preferred instead to expand modestly the scope of the potential competition doctrine.” *Id.* at 224.

⁷³ See, e.g., Dahdouh & Mongoven, *supra* note 1, at 406. In previous writings and speeches in which other agency officials developed the innovation market myth, these officials claimed that in these cases the agencies did find innovation markets. *Id.*

could have analyzed these cases without finding innovation markets.

Despite this acknowledgment, however, Tom and Newberg still claimed that the agencies have found innovation markets. The authors stated that in "cases involving competition to produce the next-generation product, where the contours of that product are not completely clear, are harder to analyze without the innovation market concept."⁷⁴ The authors then discussed three cases, *Ciba Geigy/Sandoz*, *Sensormatic*, and *GM/ZF*, in which they implied that the agencies applied innovation market analysis. Tom and Newberg did not actually say that the agencies found innovation markets in these cases. As this section makes clear, the agencies did not find innovation markets in these cases.

B. Agencies did not Find Innovation Markets

1. *Ciba Geigy/Sandoz*

a) Firms not Trying to Develop Next Generation Product

The authors implied that the agencies must use innovation markets to analyze cases in which "the contours of the next generation product are not completely clear."⁷⁵ The authors pointed to *Ciba Geigy/Sandoz* as an example of the existence of an innovation market. The authors therefore implied that the FTC analyzed a transaction in which the relevant firms were trying to develop the next generation of a product.

In *Geigy/Sandoz*, however, the relevant firms were not trying to develop the next generation of a product. The relevant firms were trying to develop an entirely new class of products. The four specific future goods markets identified by the FTC were all related to new gene therapy treatments.⁷⁶ The broader market, which the FTC also regulated in this case, was the broad market for new gene therapy products. As the FTC itself said, "no gene

⁷⁴ See Tom & Newberg, *supra* note 6, at 224.

⁷⁵ See *id.* at 224 (stating at time of merger, gene therapy products were not available in U.S.); see also FTC News Release, Dec. 17, 1996, available at <<http://www.ftc.gov>> (explaining gene therapy is new treatment mechanism).

⁷⁶ See *Ciba Geigy Ltd.*, FTC File No. 961-0055 (Mar. 24, 1997), Complaint at IV.

therapy product has yet been approved by the FDA for commercial sale.”⁷⁷ The FTC did not expect Novartis, the merged firm, to begin selling gene therapy products for approximately four years.⁷⁸ In this case the FTC did not regulate the next generation of any product.

b) FTC Regulates Combination of Intellectual Property Rights

(1) Did Not Find Innovation Market

a) Introduction

Rather than regulating the next generation market, the FTC protected competition in four specific future goods markets, and also prevented the merging firms from improperly blocking access to the broad gene therapy market. The FTC feared that the merged firm, Novartis, would control such a broad array of patents and related intellectual property that it would be able to stop other firms from entering this broad gene therapy market.

Tom and Newberg implied that the FTC must find an innovation market to support an order preventing a merger that they perceived would block access to the broad gene therapy market. This conclusion is not premised on sound reasoning. The FTC could protect competition in the broad gene therapy market without finding an innovation market in this case, and it in fact did so. The FTC stopped the merging firms from combining their intellectual property rights in a manner it felt would be anti-competitive without finding an innovation market.

b) Do Not Explain Methodology

Tom and Newberg did not explain the methodology they believed the FTC used to find an innovation market. Indeed, the authors only implied that the agencies found an innovation market in this case. As discussed previously, Gilbert and Sunshine’s innovation market methodology only allows the agencies to find

⁷⁷ *See id.*

⁷⁸ *See id.* “The first regulatory approvals for commercial sales of gene therapy products, expected by the year 2000, will most likely be in the area of cancer treatment of brain tumors.” *Id.*

future goods markets, and not innovation markets.⁷⁹ Therefore, if Tom and Newberg believe that the FTC found an innovation market in this case, then they must explain the methodology the agencies used to find this innovation market. Unfortunately, however, the authors failed to explain the methodology they believe the FTC applied.

c) Improperly Combining Intellectual Property Rights

Finally, and perhaps more fundamentally, the authors simply do not explain why the FTC must have found an innovation market in this case to support its order. In its Analysis of Proposed Consent Order to Aid Public Comment ("Analysis to Aid Public Comment"), the FTC explained that the merger would give Novartis an "unmatchable portfolio of intellectual property assets that are necessary to commercialize gene therapy products,"⁸⁰ and that "the merger may heighten barriers to entry by resulting in one entity holding so extensive a portfolio of patents and patent applications, of uncertain breadth and validity, as to diminish its incentives to license, thus impeding the ability of other gene therapy researchers and developers to continue developing their products."⁸¹

The FTC therefore offered a simple and direct explanation for its actions. The FTC said that it required Novartis to license its technology because it wanted to insure that Novartis would not have such a broad portfolio of intellectual property rights that it could block access to the relevant market. To ensure that Novartis did not have such a broad intellectual property portfolio, the FTC did not need to find an innovation market. Tom and Newberg therefore made this case seem more complex than it actually is. The FTC did not need to find an innovation market to respond to its antitrust concerns in this case because it could have responded to these concerns in other ways.

⁷⁹ See Landman, *supra* note 42, at 725-26; see also Nicholas A. Widnell, Comment, *The Crystal Ball of Innovation Market Analysis in Merger Review: An Appropriate Means of Predicting the Future?*, 4 GEO. MASON L. REV. 369, 380 (1996) (indicating that in innovation market analysis competition between companies that produces no direct revenue).

⁸⁰ See FTC, Analysis of Proposed Consent Order to Aid Public Comment 410 [hereinafter Analysis to Aid Public Comment].

⁸¹ See *id.* at 411; see also Microsoft Corp., Civ. No. 94-1564 (D.D.C. filed Apr. 27, 1995) Complaint at VII (discussing how merger may lessen competition and create monopoly).

d) Improperly Combine Production Facilities Claim Inaccurate

The authors implied that the FTC acted, not only to protect competition in the four specific future goods markets and in the broad future gene therapy market, but also to stop the firms from combining their production facilities in an anticompetitive manner:

While there were many firms doing innovative research in the field, all the firms other than Ciba and Sandoz were pursuing their research with the understanding and expectation that, if they were to make any breakthroughs, they would commercialize those breakthroughs by joint venturing or contracting with either Ciba or Sandoz or by selling either their specific rights or their entire companies to Ciba or Sandoz.⁸²

But the Analysis to Aid Public Comment cited by Tom and Newberg does not support this conclusion.⁸³ The Analysis to Aid Public Comment, however, makes two observations that seem to support Tom and Newberg's conclusion at first glance. The Analysis stated that Ciba and Sandoz were the only two firms that had both the broad patent portfolios and commercialization skills required by any firm to market gene therapy products. Additionally, the Analysis to Aid Public Comment further stated that the two merging firms were "rival centers" that licensed intellectual property rights in return for "marketing and other rights."⁸⁴

Having made these observations, however, the Analysis to Aid Public Comment contradicts Tom and Newberg. "Competitors already have (to varying degrees) the hard assets, *e.g.* production facilities, researchers and scientists, needed to compete. Rivals and other scientists confirm that licensing would enable them to develop gene therapy products and replace the competition lost due to the merger."⁸⁵ Thus, the FTC acknowledged that competitors could produce any gene therapy product they may develop. What these competitors lacked, however, was access to the intellectual property needed to first develop these new gene

⁸² See Tom & Newberg, *supra* note 6, at 227.

⁸³ See Analysis to Aid Public Comment, *supra* note 80, at 412.

⁸⁴ See *id.* at 411.

⁸⁵ See *id.*

therapy products.

In addition, the FTC order further showed that the FTC did not fear that the merger would harm other firms' ability to commercialize any gene therapy product they may develop. The FTC ordered Novartis to license various intellectual property rights. The FTC did not order Novartis to help its competitors commercialize, as opposed to develop, gene therapy products in any way.⁸⁶

The FTC naturally issues orders that it believes will correct antitrust problems. The FTC believed that ordering Novartis to license this intellectual property would help Novartis' competitors develop gene therapy products. It did not issue the order to help Novartis' competitors commercialize any gene therapy product. Clearly, the FTC acted because it feared that the merger would harm other firms' ability to develop gene therapy products. Thus, contrary to Tom and Newberg's assertions, the FTC did not fear that the merger would harm other firms' ability to commercialize their gene therapy products in this case.

Finally, Tom and Newberg failed to explain why, even if the FTC feared that the merger would harm other firms' ability to commercialize their products, this would lead the FTC to find an innovation market. If Novartis were able to stop other firms from commercializing the products they developed, then it would be blocking these firms access to the market. If this were the case, then the FTC should have issued an order granting Novartis' competitors access to the relevant market. But to do this, the FTC would not need to find an innovation market.

In relation, the authors do not explain how Gilbert and Sunshine's innovation market methodology helped the FTC issue an order granting other firms access to the relevant market. Gilbert and Sunshine's innovation market methodology in no way relates to the problem of one firm blocking other firms' access to the relevant market. Thus, even if the FTC did believe that Novartis could stop its competitors from commercializing their products, the FTC could not have used innovation market

⁸⁶ See Tom & Newberg, *supra* note 6, at 227. The authors discuss the possibility that another firm may commercialize a "breakthrough." *Id.* The authors do not make clear whether "breakthrough" refers to a product or merely the technology to make this product. *Id.* This discussion assumes the authors mean a product. *Id.* However, even if the authors do mean the technology to make a product, and not the product itself, this section's analysis would not change.

analysis to correct this problem.

Tom and Newberg therefore incorrectly described the FTC's reasoning. The FTC did not believe that others firms needed Ciba Geigy, Sandoz, or Novartis' help to commercialize their gene therapy products. The FTC did not fear that the merger would stop these firms from commercializing their technological "breakthroughs." Rather, the FTC feared that the merger would stop the firms from developing these breakthroughs in the first place. For this reason, the FTC issued the its order.

c) Inconsistent with Baxter

(1) Tom and Newberg Acknowledge FTC did not Find
Innovation Market in *Baxter*

Further, the authors' analysis of *Ciba Geigy* is inconsistent with their analysis of *Baxter International*.⁸⁷ Tom and Newberg acknowledged that the FTC could have analyzed *Baxter* without finding an innovation market.⁸⁸ Yet, they did not explain how they distinguished *Baxter International* from *Ciba Geigy*. In fact, it does not appear that they can.

In *Baxter International*,⁸⁹ the FTC reviewed Baxter's purchase of Immuno International. The FTC found, among other things, that the transaction raised competitive problems relating to fibrin sealants.⁹⁰ At the time of the merger, no firm sold fibrin sealants in the United States. The FTC alleged that Baxter and Immuno were two of only a few firms seeking approval to sell fibrin sealants in the United States.

The authors included *Baxter International* among the cases in which they believed the FTC regulated future markets for "new" drugs.⁹¹ In this case the relevant firms were two of only a few trying to develop the same new drug. As Tom and Newberg ac-

⁸⁷ See *Baxter Int'l Inc.*, 62 Fed. Reg. 408, 408 (1997); see also Tom & Newberg, *supra* note 6, at 224 (stating innovation market analysis is most helpful where firms compete to produce next-generation product).

⁸⁸ See Tom & Newberg, *supra* note 6, at 223-24. *Baxter* was one of the series of pharmaceutical cases which the authors acknowledged that the agencies could analyze without finding an innovation market.

⁸⁹ 62 Fed. Reg. 408 (1997).

⁹⁰ Fibrin sealants help stop bleeding, and help wounds heal.

⁹¹ See Tom & Newberg, *supra* note 6, at 224. Since firms already sold fibrin sealant in Japan and Europe, in this case the FTC may actually have only regulated a future goods market for the next generation of an already existing drug. *Id.*

knowledgeed, the FTC responded to the antitrust problem it saw without finding an innovation market in this case.

Yet, the FTC faced the same situation in *Ciba Geigy* that it faced in *Baxter International*. In *Ciba Geigy*, as in *Baxter International*, the relevant firms were two of only a few trying to develop the relevant new drug. In both of these cases, the FTC saw an antitrust problem, and therefore regulated the relevant future goods markets. Tom and Newberg cannot distinguish these cases simply on the ground that the FTC found four future goods markets in *Ciba Geigy* and only one such market in *Baxter*.

(2) In Both Cases FTC Regulated Combining of Intellectual Property Rights

Moreover, Tom and Newberg cannot distinguish these cases because the FTC regulated how the firms combined their intellectual property rights in *Ciba Geigy*. In *Ciba Geigy*, the FTC regulated how the relevant firms combined their intellectual property rights. And because the FTC did so, *Ciba Geigy* indeed differs from many other future goods market cases.

In *Baxter International*, the FTC also regulated how the firms combined their intellectual property rights. Regarding entry into the fibrin sealants market, the complaint stated that “[t]he existence of broad patents governing the formulations and the manufacture of such products make new entry both difficult and unlikely.”⁹² Thus, in both *Ciba Geigy* and *Baxter International*, the FTC regulated how the relevant firms combined their intellectual property rights. Thus, while *Ciba Geigy* differed from other future goods markets cases, so too does *Baxter International*. *Baxter International* and *Ciba Geigy* differ from the other future goods market cases in exactly the same way but they do not differ from each other.

In *Ciba Geigy*, the FTC ordered the relevant firms to license a broader array of intellectual rights than it did in *Baxter International*. This difference, however, does not allow Tom and Newberg to distinguish these two cases. In *Ciba Geigy*, as the Analysis to Aid Public Comment makes very clear, the FTC feared that Novartis’ would be able to use its broad intellectual

⁹² See *Baxter Int’l Inc.*, 62 Fed. Reg. at 408.

property portfolio to block access to the relevant market.⁹³ It, therefore, ordered the merged firm to license the appropriate intellectual property rights.

In *Baxter International*, the FTC similarly feared that the firms would be able to block access to the relevant market if they combined their intellectual property rights. Thus, in *Baxter International*, the FTC ordered the merged firm to license the appropriate intellectual property rights as well. Tom and Newberg cannot distinguish these cases simply because in *Ciba Geigy* the FTC ordered the merged firm to license a broader array of intellectual property rights. While the facts of *Ciba Geigy* required the FTC to order the merged firm to license a broader array of intellectual property rights than it did in *Baxter International*, the FTC enforced the same underlying principle in both cases in the same way.

d) Commissioner Azcuenaga

(1) May Have Found Innovation Market

In a recent speech, Commissioner Azcuenaga discussed *Ciba Geigy* in great detail. The Commissioner said that “the language of the complaint and the remedy suggest that the breath of the patent may have been a concern.”⁹⁴ As discussed above, the FTC did indeed fear that the merger would give Novartis an overly broad portfolio of patent and other intellectual property rights.

The Commissioner also implied, however, that the FTC may have found an innovation market in this case. The Commissioner said, “another possibility is that the Commission has decided to extend the innovation market theory quite beyond what we have seen before.” But, said the Commissioner “the precise concern is not well described in the complaint.”⁹⁵

The Commissioner is certainly correct about her observation the FTC did not adequately explain its actions in this case. Close examination of Commissioner Azcuenaga’s analysis, how-

⁹³ See Analysis to Aid Public Comment, *supra* note 80; see also Azcuenaga, *supra* note 68 (discussing breadth of relevant market).

⁹⁴ See Azcuenaga, *supra* note 67. See generally Complaint, *supra* note 76 (containing language of complaint); Analysis to Aid Public Comment, *supra* note 80 (containing language of remedy).

⁹⁵ See Azcuenaga, *supra* note 67.

ever, reveals no evidence suggesting that she actually believed that the FTC found an innovation market in this case.

(2) Criticizes Remedy

In her speech, the Commissioner repeated her criticism of the FTC decision in *Ciba Geigy* that she had offered in her partial dissent in the *Ciba Geigy* case itself.⁹⁶ Commissioner Azcuenaga questioned why the FTC ordered Novartis to grant non-exclusive licenses of the relevant intellectual property, particularly of the so-called Anderson patent. The Commissioner acknowledged this was a very broad patent issued by the U.S. Patent and Trademark Office. Commissioner Azcuenaga noted that the Patent and Trademark Office had the responsibility and the particular expertise to issue patents. This Office decided to issue this broad patent. The Commissioner concluded that the FTC, which lacks both the relevant responsibility and expertise, should not second guess the Patent and Trademark Office.

The Commissioner further noted that the FTC should not use this merger to regulate the breadth of this one patent. While antitrust law allows the FTC to regulate how firms combined related patents, it did not allow the FTC to issue an order relating to the Andersen patent because the firms were not combining related patents. Sandoz controlled the Anderson patent, but *Ciba Geigy* controlled no comparable patent. Thus the firms were not combining comparable patents. Commissioner Azcuenaga concluded that the FTC therefore did not have authority to issue an order relating to the singular Anderson patent.

The majority clearly rejected Commissioner Azcuenaga's argument.⁹⁷ Apparently, the majority believed that the law authorized it to order Novartis to license the Andersen patent. First, the majority appears to have reasoned that it was ordering Novartis to license, not just the Andersen patent, but a series of patents and intellectual property rights. Secondly, the majority appears to have reasoned that in the economic context this case presented to it, it was appropriate, and, therefore, within its authority, to issue the order it did in fact issue.

⁹⁶ See *Ciba Geigy Ltd.*, FTC File No. 961-0055 (Mar. 24, 1997).

⁹⁷ See *id.*

(3) Commissioner and Majority Do Not Discuss Innovation Markets

(a) Introduction

Commissioner Azcuenaga and the majority were not arguing about whether the FTC should find an innovation market in this case. Neither the Commissioner nor the majority actually discussed innovation markets. Neither said that it believed that in this case the FTC should find an innovation market. The Commissioner and the majority are simply discussing the FTC's authority to issue orders relating to patents. Neither side argued that the FTC should find an innovation market.

(b) Commissioner Does Not Believe FTC Should Have Found an Innovation Market

Commissioner Azcuenaga certainly did not believe that in this case the FTC should have found an innovation market. In her partial dissent, the Commissioner suggested that rather than order Novartis to license the Anderson patent and other intellectual property, the FTC should have ordered Novartis to sell the shares it owned of various firms that were performing gene therapy R&D. For the FTC issue this order, it need not find that Ciba Geigy and Sandoz competed in an innovation market.

(c) FTC Did Not Find an Innovation market

(i) Commissioner Raises Possibility

Not only did Commissioner Azcuenaga not believe that the FTC found an innovation market in this case, but neither did the FTC itself. Commissioner Azcuenaga raised the possibility that the FTC found an innovation market in this case in her speech. The Commissioner said:

Another possibility is that the Commission had decided to extend the innovation market theory quite beyond what we have seen before. Perhaps the Commission identified a narrow and specific competitive concern related to the Anderson patent. This alternative is a possibility because the complaint alleges increased barriers to entry and altered incentives to license patents, but the precise concern is not well

described in the complaint.”⁹⁸

In this passage the Commissioner did not describe her concerns particularly well. The Commissioner may mean that the innovation market that the FTC conceivably found related to the “narrow and specific competitive concern related to the Anderson patent.” Alternatively, “this narrow and specific concern” may be separate from the innovation market which the FTC may have found. The Commissioner could have meant that the “narrow and specific concern” gave the FTC an alternative reason to act, in addition to its decision to act because it found an innovation market.

If the Commissioner meant that the “narrow and specific competitive concern related to the Anderson patent” offered a separate basis than the innovation market concept upon which the FTC could act, then the Commission has not offered any explanation regarding how, why, or what extent, the FTC may have found an innovation market.

But even if the Commissioner did mean that the FTC’s concerns relating to the Anderson patent may have lead it to find an innovation market, she still does not explain herself very well. The Commissioner does not explain how the FTC’s concern regarding a patent could lead it to find an innovation market. Innovation markets supposedly help the agencies regulate competition between two or more firms who are both trying to innovate. Innovation, not patents, are the supposed “product” of innovation markets.

(ii) FTC Did Not Find an Innovation Market

The FTC expressed concern over the breadth of the Anderson patent. The FTC feared that this overly broad patent would allow Novartis to block access to the relevant market. But the FTC did not, and could not, use innovation market analysis to resolve the antitrust problems it perceived regarding the breadth

⁹⁸ See Azcuenaga, *supra* note 67. The Commissioner said: “Another possibility is that the Commission had decided to extend the innovation market theory quite beyond what we have seen before. Perhaps the Commission identified a narrow and specific competitive concern related to the Anderson patent. This alternative is a possibility because the complaint alleges increased barriers to entry and altered incentives to license patents, but the precise concern is not well described in the complaint.” *Id.*

of the Anderson patent. Commissioner Azcuenaga did not explain why, if the FTC stopped Novartis from using a broad patent for anti-competitive purposes, it must therefore have found an innovation market. Indeed, this conclusion does not follow logically.

Nor does it logically follow, as the Commissioner implies that it does, that the FTC found an innovation market in this case because "the complaint alleges increased barriers to entry and altered incentives to license patents." Regarding barriers to entry, whenever any court or agency analyzes the scope and breath of any patent or patent acquisition, it will almost invariably discuss barriers to entry and incentives to innovate. The agencies and courts regulate how firms acquire patents exactly because they fear that if firms acquire too broad a patent portfolio, they may use it to create barriers to entry to the relevant market.

Regarding altered incentives to license patents, supporters of innovation market methodology argue that it allows the agencies to regulate firms' incentives to innovate. These supporters do not even claim that innovation market analysis allows the agencies to regulate firms incentives to license technology.⁹⁹

Thus, Commissioner Azcuenaga has not explained why the FTC may have found an innovation market in this case.¹⁰⁰ The Commissioner herself does not believe that the FTC should have found an innovation market in this case. Therefore, while Commissioner Azcuenaga and the other Commissioners disagreed about the Commission's authority to issue orders relating to patents, particularly the Anderson patent, there is no evidence that indicates that the FTC found an innovation market in this case.

⁹⁹ See Landman, *supra* note 42, at 756. Even if one accepted the notion, which Commissioner Azcuenaga does not say, that in *Ciba Geigy* the FTC feared that the agreement would lower Novartis' incentives to innovate, it still does not follow that the FTC found an innovation market in that case. *Id.* The agencies stop firms from using patents, and other intellectual property rights, to monopolize markets because the agencies fear that, as monopolists, the firms will face a lesser incentive to innovate. *Id.* Therefore, whenever the agencies analyze the scope and breath of any patent or patent acquisition they inevitably consider the relevant firms' incentives to innovate. *Id.*

Further, in this case, as in all these so-called innovation market cases, the FTC could not analyze the merged firm's incentives to innovate, at least not in the manner innovation market analysis requires. *Id.* The FTC could not analyze *Ciba Geigy's* incentive to suppress technology. *Id.*

¹⁰⁰ See Azcuenaga, *supra* note 68 (noting FTC may have found innovation market in *Ciba-Geigy*).

2. Sensormatic

a) Imply FTC Found an Innovation Market

Tom and Newberg believe that the FTC found *Sensormatic* “harder to analyze without the innovation market concept.”¹⁰¹ The authors therefore imply that the FTC found an innovation market. The authors are of course wrong about this case as well. In this case the FTC did not find an innovation market.

b) Case More Complex than Tom and Newberg Acknowledge

Sensormatic was actually more complex than Tom and Newberg describe. Both parties involved in this case were trying to develop the next generation anti-shoplifting system. Knogo had patented the technology, called SuperStrip technology, to be used in its new system.

As the transaction was originally planned, Kongo was sell Sensormatic all of its assets outside of North America. Knogo also planned to sell to Sensormatic the exclusive right to its SuperStrip patents in North America and worldwide. Knogo would, however, continue to use its SuperStrip technology within North America. Finally, the parties agreed to grant each other royalty-free cross-licenses, in which each firm agreed to tell the other of any improvements either may make to the SuperStrip technology.

Thus, the “successor corporation to Knogo’s business,”¹⁰² would continue to do business in North America. Sensormatic, however, did not acquire Knogo’s North American business.¹⁰³ Accordingly, Tom and Newberg inaccurately described the case when they spoke of “Sensormatic’s acquisition of Knogo.”¹⁰⁴ For all practical purposes, Knogo¹⁰⁵ and Sensormatic simply entered into a cross-licensing agreement¹⁰⁶ regarding North America.¹⁰⁷

¹⁰¹ See Tom & Newberg, *supra* note 6, at 224-25.

¹⁰² See Sensormatic Elec. Corp., 60 Fed. Reg. 5428, 5429 (1995).

¹⁰³ See *id.* at 5430-31 (indicating Sensormatic acquired all of Knogos assets outside of North America); see also Bryan R. Dunlap, *A Practical Guide to Innovation Markets*, 9 ANTITRUST 21, 26 (1995) (discussing Sensormatic merger).

¹⁰⁴ See Tom & Newberg, *supra* note 6, at 224; see also Chin, *supra* note 43, at 120.

¹⁰⁵ See Sensormatic Elec. Corp., 60 Fed. Reg. at 5430. Technically, Sensormatic was Knogo’s successor corporation. *Id.*

¹⁰⁶ See Sensormatic Elec. Corp., 60 Fed. Reg. at 5430 (indicating merger obligated them to grant cross-licenses to each other).

The FTC essentially analyzed the Knogo-Sensormatic licensing agreement. The FTC found that this licensing agreement would affect the future goods market for the next generation of anti-shoplifting equipment. The complaint defined this future goods market rather awkwardly.

c) FTC Did Not Find an Innovation Market

(1) Awkward Market Definition

The complaint defined the relevant market as that for the “research and development of disposable labels developed or used for source labeling and the research and development of processes to manufacturer disposable labels.”¹⁰⁸ “Disposable labels” and “source labels” are the terms the complaint used to describe the next generation of anti-shoplifting equipment.¹⁰⁹

The complaint defined the market rather awkwardly. The complaint did not define the relevant market as the future market for the relevant *product*. Rather, the complaint defined the relevant market as the market for research and development to *develop* disposable labels or source labels. Since disposable labels and source labels are the next generation of anti-shoplifting equipment, the complaint effectively defined the relevant market as the market for the research and development of the next generation of anti-shoplifting equipment.

The FTC appeared to be drafting its complaint in a manner compatible with Gilbert and Sunshine’s innovation market methodology.¹¹⁰ But just as Gilbert and Sunshine’s innovation

¹⁰⁷ See *High-Tech Global Marketplace*, *supra* note 10, at 791. The FTC staff also inaccurately referred to this as a merger case. *Id.*

¹⁰⁸ See *Sensormatic Elec. Corp.*, 60 Fed. Reg. at 5430; see also Kevin J. Arquit & Richard Wolfram, *Mergers and Acquisitions: U.S. Antitrust Analysis and Enforcement*, in 38TH ANNUAL ANTITRUST LAW INSTITUTE, 459, at 552 (PLI Corp. L. & Practice Course Handbook Series No. 1049, 1998) (explaining thought process which comprised FTC market definition); Chin, *supra* note 43, at 127 (noting substance of FTC’s complaint regarding market).

¹⁰⁹ See *Sensormatic Elec. Corp.*, 60 Fed. Reg. at 5430. “Disposable labels, says the complaint, are “labels affixed to or embedded in retail merchandise and used in conjunction with hard goods EAS systems.” *Id.* The Complaint says that “source labeling means the process by which manufacturers, packagers, or independent wholesalers apply disposable labels to retail merchandise or its packaging.” *Id.*

¹¹⁰ See Andrew Chin, *supra* note 43, at 135 (discussing Gilbert and Sunshines innovation market approach); see also Jonathan Baker, *Fringe Firms and Incentives to Innovate*, 63 ANTITRUST L.J. 621, 639-41 (1995) (discussing market structure and industry innovation).

market methodology only defined a future goods markets, the complaint in this case only defined a future goods market in this case.

The complaint defined programs that were both trying to develop the same future product as competing research programs. Thus, just as the first step of Gilbert and Sunshine's innovation market methodology can only define, as competing R&D, R&D relating to the same specific future product,¹¹¹ so too can the complaint in this case only define competing R&D as R&D relating to the same specific future product.

In this case the FTC found that the relevant research programs competed against each other only because it also found that both research programs were trying to develop the same specific future product. Thus, the FTC anticipated that if the relevant firms did not enter into their transaction, then they would probably compete against each other in the future. The FTC, therefore, saw that this transaction may raise antitrust problems in the relevant future goods market. Consequently, the FTC actually regulated competition in the relevant future goods market.

In many cases the FTC has alleged that the relevant firms competed in the market for "research, development, manufacture and sale of [a product]."¹¹² In this case the FTC only alleged that the firms competed in the market for "research and development." It does not follow, however, that simply because the FTC took the words "manufacture and sale" out of its complaint, that it therefore found an innovation market. In fact, the more logical conclusion is the FTC should have included the words "manufacture and sale" in its complaint.

(2) Anticompetitive Use of Patents and Standards

The FTC feared that the parties' licensing agreement would harm competition in two ways. First, the FTC feared that the cross-licensing provision would lower the firms' incentive to in-

¹¹¹ See Taylor & Carswell, *supra* note 43, at 55 (summarizing Gilbert & Sunshine's five step approach).

¹¹² See, e.g., Upjohn Co., 60 Fed. Reg. 56153, 56153 (1995). See generally Ann Bingaman, *Antitrust and Innovation in a High Technology Society*, Address at the Celebration of the 60th Anniversary of the Founding of the Antitrust Division, Jan. 10, 1994, reprinted in 7 Trade Reg. (CCH) ¶50, 128 at 48, 998.

novate.¹¹³ Second, the FTC feared that the parties' agreement would allow them to develop standards that they could use to keep other firms out of the relevant market. The FTC, however, could respond to both of these competitive concerns without finding an innovation market.

Regarding the cross-licensing agreement, it does not follow that simply because the FTC found that the firms improperly agreed to tell each other of improvements either may make to the SuperStrip technology, that the FTC therefore found an innovation market. The FTC has occasionally found that cross-licensing provisions improperly lower firms' incentive to innovate. The FTC certainly has the authority to make such a finding,¹¹⁴ and can do so without finding an innovation market.

Regarding the development of standards,¹¹⁵ the FTC apparently feared that if these two firms worked together, then they could develop the standard which would allow manufacturers' markers and retailers' sensors to work together. Since the next generation system would allow manufacturers to directly imbed the marker that would activate retailers' sensors into their products, manufacturers and retailers must use compatible markers and sensors.

The FTC feared that, after developing this standard, Knogo and Sensormatic could use their control of this standard to improperly exclude other firms from the future goods market.¹¹⁶

113 See *Sensormatic Elec. Corp.*, 60 Fed. Reg. at 5430. The complaint alleges that the transaction would lower only Knogo's incentive to innovate. *Id.* The complaint does not allege that the transaction would lower Sensormatic's incentive to innovate. *Id.* The article, however, assumes that the FTC feared that the agreement would lower each firm's incentive to innovate. *Id.*; see also Landman, *supra* note 42, at 777 (discussing how agencies found future goods markets); Rapp, *supra* note 45, at 77 (summarizing cross-license provision of Sensormatic merger).

114 See, e.g., *I.P. Guidelines*, *supra* note 42, at § 5.4.

115 See Dahdouh & Mongoven, *supra* note 1, at 426-27. The complaint in this case does not allege that the parties' agreement would allow them to develop, and improperly use, this standard. *Id.* Several FTC officials have, however, claimed that in this case the FTC did indeed fear that the firms would use this standard improperly. *Id.* When Tom and Newberg explain this case they certainly do not contradict what these other FTC officials have said. *Id.* In fact, they seem to support their colleagues. *Id.* This article, therefore, assumes that the FTC did indeed fear that the firms would improperly develop and apply this standard. *Id.* The article shows that even if the FTC did act to stop the firms from improperly applying this standard, it did so without finding an innovation market. *Id.*; see also Landman, *supra* note 42, at 756 (regarding agencies discovery of future goods markets instead of innovation markets); Tom & Newberg, *supra* note 6, at 224-25 (examining Sensormatic merger); Varney, *supra* note 34, at 189 (discussing collusion in innovation markets).

116 See *Sensormatic Elec. Corp.*, 60 Fed. Reg. at 5430. The complaint actually only

The FTC, of course, stopped these firms from improperly excluding other firms from the market. Therefore, the FTC acted to regulate how the firms were developing the appropriate standard in this case. But the agencies often regulate how firms develop standards.¹¹⁷ To do this the FTC, once again, need not have found an innovation market.

d) FTC Acknowledges That in This Case it Did Not Find an Innovation Market

(1) "High-Tech Global Marketplace"

In two separate passages in its report on the "High-Tech Global Marketplace,"¹¹⁸ the FTC staff acknowledged that the FTC found a future goods market rather than an innovation market. The FTC staff acknowledged this, firstly, in the passage quoted *supra* in which the FTC staff acknowledged that when it analyzes these so-called innovation market cases it actually protects competition in "ultimate goods markets." The FTC, however, decided this case before it issued this report. The FTC staff was well aware of this case when it made this acknowledgement.

In another passage, the FTC staff acknowledged for the second time that the FTC had found a future goods market in this case. In its introduction to the section of the report in which it discussed *Sensormatic* and related cases, the FTC report specifically stated: "Each innovation effort was directed toward development of a specific product."¹¹⁹ The FTC staff was correct. But

alleges that the transaction would "decreas[e] the number of research and development tracks for disposable labels to be designed or used for source labeling." *Id.* However, other authorities have made it clear that in this case the FTC feared that the transaction would allow the firms to develop the appropriate standards, and to then anticompetitively block access to the relevant market. *Id.*; see also *High-Tech Global Marketplace*, *supra* note 10, at 798 (indicating agencies should apply scrutiny to effects of conduct on standards); Dahdouh & Mongoven, *supra* note 1, at 427 (examining possible effects of collusion in developing standard); Landman, *supra* note 42, at 721 (discussing innovation markets).

¹¹⁷ See James J. Anton & Dennis A. Yao, *Standard-Setting Consortia, Antitrust, and High-Technology Industries*, 64 ANTITRUST L. J. 247, 249 (1995) (explaining effects of standards in antitrust cases); see also Cohen, *supra* note 10, at 568-69 (discussing implications of standards). See generally Dahdouh & Mongoven, *supra* note 1, at 407 (1996) (summarizing FTC standards and giving historical perspective on innovation markets).

¹¹⁸ See *High-Tech Global Marketplace*, *supra* note 10, at 791; see also Bryan Gruley, *FTC to Weigh Cost Savings in Mergers*, WALL ST. J., June 3, 1996, at A3 (discussing cost savings antitrust analysis).

¹¹⁹ See *High-Tech Global Marketplace*, *supra* note 10, at 794.

since each innovation effort was directed toward development of a specific product, the agencies actually regulated the future markets for these specific products. Thus, as the report implicitly acknowledged, the FTC actually regulated Knogo and Sensormatic's competition in the future goods market for the next generation of anti-shoplifting equipment.

(2) Commissioner Azcuenaga

FTC Commissioner Azcuenaga agreed with the FTC staff report. She has also acknowledged that the FTC analyzed a future goods market in this case. In fact, the Commissioner acknowledged not only that the FTC found a future goods market, but also that existing law already gave the Commission all the authority it needed to act in this case. According to Commissioner Azcuenaga, the FTC did not need to, and did not, find an innovation market to take necessary action in this case.

(a) FTC Found a Future Goods Market

Commissioner Azcuenaga certainly believed that the FTC found a future goods markets, not a innovation market. Since *Sensormatic* was decided, Commissioner Azcuenaga has reiterated this point in three speeches. In a speech quoted at length previously, the Commissioner said the criticism of the innovation market approach does not "undercut our antitrust concerns for future competition in a specific product."¹²⁰ In another speech, which the Commissioner, she said that the FTC is "continuing to allege a diminution of competition in research and development markets for specific products."¹²¹

The Commissioner also repeated this acknowledgment in yet a third speech.¹²² In this speech Commissioner Azcuenaga dis-

¹²⁰ See Azcuenaga, *supra* note 67.

¹²¹ See Azcuenaga, *supra* note 68.

¹²² See Mary L. Azcuenaga, Speech Before the American Law Institute-American Bar Association Antitrust/Intellectual Property Claims in High Technology Markets, Jan. 25, 1996. In this speech the Commissioner actually made many of the same points as does this article. Her remarks are therefore worth quoting at length. In this speech the Commissioner said that:

Much of the criticism of research and development markets appears to be based on the incorrect perception that the Commission is evaluating competition in pure research among laboratories, but this is not the case. I think that I and perhaps others have been remiss in the past by accepting and using the terms "innovation markets"

cussed *Sensormatic* in quite some detail. And in the speech the Commission acknowledged that the FTC protects competition in future goods markets. These three speeches, together, therefore confirm Commissioner Azcuenaga's belief that the FTC protected competition in a future goods market, not in an innovation market, in *Sensormatic*.

(b) Existing Law Sufficient

Commissioner Azcuenaga also apparently believed that existing law authorized the FTC to act in *Sensormatic*. Contrary to *Ciba Geigy*, the Commissioner did not claim that the FTC lacked the requisite authority to order Knogo to grant *Sensormatic* only a non-exclusive license to its SuperStrip technology. In fact, the Commissioner issued a dissenting opinion in this case. The Commissioner questioned other aspects of the FTC's decision.¹²³ But the Commissioner did not question the FTC's power to act in this case. Thus, Commissioner Azcuenaga believed that traditional antitrust law already gave the FTC all the power it needed

and "research and development markets" without qualification. This may be the source of a great deal of the confusion about and opposition to so-called innovation markets or research and development markets. By definition, we cannot predict true innovation. But that is not what our cases are about. Our casual use of the term "research and development market" actually refers to cases that allege research and development in a particular product that we have been able to define with some degree of specificity and that can be foreseen with reasonable certainty. This is what I have called the market for future products. Our "research and development" complaints always contain a definition of research and development that is tied to a very specific product market.

Analyzing a merger that involves a future product market is not very different from analyzing one that involves a market for existing products. In the pharmaceutical industry, for example, when a market is defined as a product that is approaching the end of development and regulatory review, the participants in the market are the companies that have those product-specific research & development projects. In the cases that the Commission has brought, only a small number of firms participated in the market, and other firms that were likely to have the same research capabilities lagged many years behind the market participants in the specific product markets at issue. Under these circumstances, it is easy to understand what the market is and to see that the market is highly concentrated. In contrast, it may be much more difficult even to identify who is doing pure research in a field. Some chemist in China may have just realized an incredible scientific breakthrough, the implications of which could change an entire industry in the next ten years, and we may have no way of knowing that. But we can find out which firms are working through the FDA approval process for particular drugs.

Id.

¹²³ See *Sensormatic Elec. Corp.*, 60 Fed. Reg. 5428, 5428 (1995). The Commissioner dissented because, she said, the FTC had defined both the product market and the geographic market too narrowly. *Id.*

to regulate the future goods market found in this case.¹²⁴ Commissioner Azcuenaga did not believe that the FTC needed to resort to the novel legal theory that the firms competed in an innovation market to issue its order.

e) Tom and Newberg: May Not Compete in Future Goods Market

Tom and Newberg stated that, unlike in the pharmaceutical cases, the FTC could not regulate the future goods market in this case. The authors state that firms may never compete in a future goods market; "it may be that only one of the two research paths would succeed, so that no future goods market competition would be eliminated."¹²⁵

(1) Does Not Justify Finding Innovation Market

Whenever the agencies protect competition in a future goods market, they protect competition that may never arise. It is always possible that one or more of the firms investing in the relevant R&D will not actually develop the products they are trying to develop. Thus, the FTC should not regulate all possible future goods markets. The FTC should only regulate those future goods markets in which the relevant firms are likely to compete.

By and large, the agencies have only regulated future goods markets in which the relevant firms were indeed likely to compete.¹²⁶ If Tom and Newberge were correct in stating that in this case "only one of the two research paths would succeed, so that no future goods market competition would be eliminated,"¹²⁷ then the firms were not likely to compete in a future goods market. On the other hand, perhaps a little more accurately, the firms may not have been likely enough to compete in a future goods market for the FTC to have regulated this mar-

¹²⁴ In fact, the Commissioner's support for the general idea that the FTC finds future goods markets indicates that she believes that currently existing law, such as the potential competition doctrine, gives the FTC all the authority it needs to act in all these cases, except, of course, in *Ciba Geigy*.

¹²⁵ See Tom & Newberg, *supra* note 6, at 225.

¹²⁶ See generally Taylor & Carswell, *supra* note 43, at 63 (regulating competing firms).

¹²⁷ See *id.*

ket. If this were the case, then the FTC should perhaps have not regulated the firms' competition in the future goods market.

Tom and Newberg imply, however, that if the firms were not likely to compete in a future goods market, then, rather than not regulate this transaction at all, the FTC should instead have used innovation market methodology to regulate this transaction. This not a reasonable suggestion. If the firms were not likely to compete in the future goods market, then the FTC should not have regulated the firms' possible competition in the future goods market. The FTC should most certainly not, for this reason alone, instead regulate the firms' theoretical competition in an innovation market.

(2) Can Not Find Innovation Market Simply Because No Future Goods Markets

Tom and Newberg imply that, since the FTC could not regulate the firms' competition in the future goods market, it should have instead regulated the firms' competition in the related innovation market. But the agencies should only find an innovation market if they are able to apply the appropriate methodology; they should never find an innovation market simply because they cannot regulate competition in a related future goods market.

In this case, the FTC could not find an innovation market because it could not apply the Gilbert and Sunshine's most developed innovation market methodology. In this case, for example, the FTC could not apply the first step of Gilbert and Sunshine's methodology. As discussed *supra*, the complaint actually defined, not a market in which "innovation" was the product, but rather one in which the relevant product was a product both firms were trying to develop.

The FTC could also not satisfy the fourth step of Gilbert and Sunshine methodology. In this case the FTC could not properly analyze the firms' incentives to innovate. In fact, the FTC's concerns in this case lead to inconsistent conclusions regarding the firms' incentives to innovate. On the one hand, the FTC feared that the firms would develop standards that would allow them to keep others out of the relevant market. The FTC, therefore, implicitly believed that the firms would face a strong incentive to

innovate. If the firms developed these standards, and excluded others from the market, then the firms could earn monopoly rents.

On the other hand, the FTC also feared that the cross-licensing provision would lower the firms' incentives to innovate. The FTC's analysis, therefore, demonstrated its belief that this transaction would both increase and decrease the firms' incentives to innovate. As a result, the FTC could not apply the fourth step of Gilbert and Sunshine's innovation market methodology. Therefore, it could not find an innovation market in this case.¹²⁸

3. GM/ZF

a) Issue is Jurisdiction

In this case, the DOJ assumed jurisdiction over the broad current goods market for heavy-duty automatic transmissions. In the United States, General Motors and ZF Friedrichshafen competed not in this broad current market, but in two narrow current markets. The firms competed in the broad market only in Europe. The DOJ, however, used the innovation market concept to essentially assume jurisdiction over the broad European heavy-duty automatic transmission market.

Tom and Newberg believe that the DOJ acted appropriately in this case. The DOJ acted correctly because the agency could not allow the world's two leading manufactures of heavy-duty automatic transmissions to combine their businesses. If it had done so, then American consumers would have suffered because the transaction would have forced them to buy transmissions of poorer quality than they would otherwise have been able to buy.
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b) Regulatory Anarchy

Contrary to Tom and Newberg's opinion, however, the DOJ should not have assumed jurisdiction in this case. Firms throughout the world compete, not only on price, but also on

¹²⁸ See Landman, *supra* note 42, at 756. For a more detailed analysis showing that the FTC could not apply Gilbert and Sunshine innovation market methodology to this case. *Id.*

¹²⁹ See Tom & Newberg, *supra* note 6, at 225-26 (discussing effects of merger between GM's Allison division and ZE Friedrichshafen).

quality, features, and innovation. If two firms in any part of the world combine their businesses, their transaction may very well affect firms and customers located in other parts of the world. The transaction may, in particular, lessen the competitive pressure on other firms to innovate. These other firms may be in any part of the world.

Antitrust authorities throughout the world, however, cannot assert jurisdiction over any transaction that may lessen the competitive pressure to innovate on firms located within their jurisdiction. If the authorities did so, then all antitrust authorities throughout the world could assert jurisdiction over just about all transactions. Regulatory anarchy would rule.

c) Jurisdiction in Europe

In this case, the firms competed in the broad heavy-duty automatic transmission market in Europe. Thus, the appropriate European antitrust authority, and *not* the United States DOJ, should have assumed jurisdiction over this transaction. Further, this European authority would have been very reluctant to allow Europe, and the world's, only two major heavy-duty automatic transmission manufacturers of combine their businesses. Thus, while responding to its own legitimate concerns regarding the current goods market, this authority would also have responded to the DOJ's concerns regarding the future goods market and the firms' competition to innovate.

C. Tom and Newberg Cannot Identify "Next Generation" of Product

1. No Clear Line Divides "New" From "Next Generation" Products

Tom and Newberg imply that the agencies should have found innovation markets in all three of these cases because the agencies should find innovation market in cases in which "the contours of the next generation product are not completely clear are harder to analyze without the innovation market concept."¹³⁰ But Tom and Newberg cannot apply this test. These authors

¹³⁰ See *id.* at 224.

have great difficulty distinguishing between truly “new” products and other products, which, although new, these authors consider merely “next generation” products.

Most firms develop products that, while “new,” are actually improved versions of products already being sold by these firms. No clear line divides these “next generation” products from truly “new” products. For example, the authors say that the FTC could have analyzed *Glaxo/Wellcome* without finding an innovation market.¹³¹ The authors therefore believe that in *Glaxo/Wellcome* the FTC analyzed a truly “new” product, and not the next generation of a product. In that case Glaxo and Wellcome competed in the future goods market to develop the oral form of the antimigrane drug, which did not exist yet. Since Glaxo already sold an injectable form of the drug, the firms’ joint effort to develop an oral form of the drug was viewed as an improvement on the drug Glaxo already sold. They were, therefore, actually trying to develop the next generation of the product.

Similarly, although Tom and Newberg believe that the FTC could analyze *Baxter* without finding an innovation market, the FTC seems to have analyzed, not a “new” product, but rather the next generation of an already existing product in this case as well. Here, both firms were trying to develop fibrin sealants that could be sold in the United States. No firm yet sold fibrin sealants in the United States, but firms did sell fibrin sealants in Japan and Europe.¹³² Thus, the product the firms were trying to develop and sell in the United States was presumably an improved version of the fibrin sealants firms already sold in other countries. Thus, in this case as well, the firms were trying to develop the next generation of the product.

2. Tom and Newberg Methodology Unworkable

Tom and Newberg imply that the agencies should use both innovation market methodology and what these authors call expanded potential competition analysis. According to these authors, the agencies should first determine whether the relevant firms are trying to develop a truly “new” product, or merely the next generation of an already existing product. If the rele-

¹³¹ See *Glaxo plc.*, 60 Fed. Reg. 16139, 16140-41 (1995).

¹³² See *Baxter Int’l Inc.*, 62 Fed. Reg. 408, 408 (1997) (discussing fibrin sealant case).

vant firms are trying to develop an entirely new product, then the agencies should apply what the authors call "expanded potential competition analysis." But if the relevant firms are trying to develop the next generation of an already existing product, then the agencies should apply innovation market methodology.

However, as the preceding examples have shown, Tom and Newberg were unable to distinguish between "new" and next generation products. Firms develop products that are, to varying degrees, "new." No clear line divides "new" from merely "next generation" products. So, if Tom and Newberg are not able to distinguish between "new" and "next generation" products, then the agencies will also not be able to do so. The agencies will not be able to determine if products, which do not even exist yet, are "new" or "next generation" products.

While the agencies cannot find innovation markets in cases involving the next generation of a product as Tom and Newberg would have them do, they need not do so. As one writer has said:

Where the innovation is evolutionary rather than revolutionary, so that the product being traded in the future is simply a more advanced version of the product being traded today or where the innovation is aimed at improving the process for producing an existing product, I see no reason why the traditional antitrust analysis is inadequate to do the job [of protecting competition].¹³³

VII. MICROSOFT/INTUIT AND OTHER CASES

Tom and Newberg do not say that the cases they mention are the only cases in which the FTC found, or may have found, innovation markets. Other writers have suggested that the agencies found innovation markets in other cases. In particular, Richard Lande and Sturgis Sobin have suggested that in other cases not discussed in this article, the agencies have found innovation markets.¹³⁴ Stewart Pomerantz have also made similar sugges-

¹³³ See Hay, *supra* note 7, at 14.

¹³⁴ See Robert H. Lande & Sturgis M. Sobin, *Symposium: High Technology, Antitrust & The Regulation of Competition, Reverse Engineering of Computer Software and U. S. Antitrust Law*, 9 HARV. J. L. & TECH. 237, 255 (1996) (finding U.S. government sought to prevent acquisitions in innovation markets); Azcuenaga, *supra* note 67 (finding innovation market in American Home Products case although commission did not so call it).

tions.¹³⁵ Of these cases, the most prominent¹³⁶ is *Microsoft/Intuit*.¹³⁷

A. *Microsoft/Intuit*

1. Facts

Lande and Sobin say that this case is “an example of an instance where an innovation market is relevant to antitrust analysis.”¹³⁸ Here, the DOJ would not allow Microsoft to buy its software rival, Intuit. Intuit made and sold Quicken, the world’s leading personal finance software. Microsoft sold Microsoft Money, Quicken’s main competitor. Obviously aware of the DOJ’s antitrust concerns, Microsoft planned not only to buy Intuit, but also to transfer the “code” of Microsoft Money, and related intellectual property, to a competitor, Novell. Microsoft, however, intended to integrate the Intuit employees who developed Quicken into its own personal finance software business.

2. Lande and Sobin: Microsoft May Not Control Employees

Lande and Sobin say that the DOJ did not approve this transaction because it would not allow Intuit’s software developers to join forces with Microsoft. While these authors are correct, they overemphasize this aspect of this complex transaction.

In agreement with Lande and Sobin, the DOJ did feel that Intuit’s employees rather than its intellectual property gave Intuit its competitive advantage. The DOJ therefore believed that if Microsoft took control of these employees, it would be able to incorporate Intuit’s main competitive strength into its business. Further, the DOJ also felt that Novell could not adequately com-

¹³⁵ See Stewart A. Pomerantz, *A Lawyers Ramble Down the Information Superhighway: Recent Antitrust Developments and a Selective Antitrust Perspective on the Information Superhighway*, 64 *FORDHAM L. REV.* 808, 835 (1995) (stating how firm’s conduct may allow it to fall within definition of innovation markets).

¹³⁶ See *Why Bill Gates Should Worry*, *supra* note 15, at 106 (stating FTC has determined that in technology industries innovation is as important as price).

¹³⁷ See *United States v. Microsoft Corp.*, 56 F.3d 1448, 1448 (D.C. Cir. 1995) (finding entry of antitrust consent decree was in best interest of public).

¹³⁸ See Lande & Sobin, *supra* note 134, at 255 (arguing Microsoft’s proposed acquisition of Intuit is one example of antitrust analysis); see also Jay Dratler, Jr., *Microsoft as an Antitrust Target: IBM in Software?*, 25 *SW. U. L. REV.* 671, 672 (1996) (stating that Microsoft is target of antitrust analysis).

pete against Microsoft.¹³⁹ After its acquisition of Intuit, Microsoft would not only be a very effective competitor, but it only intended to transfer to Novell its own, presumably inferior, intellectual property. Thus, the DOJ would not allow Microsoft to buy Intuit.

3. Other Barriers to Entry: Installed Customer Base

a) Intuit's Extensive Base of Customers

But these authors overemphasize the significance that the DOJ placed on the opportunity this transaction gave Microsoft to exploit the skills of Intuit's software developers. The authors acknowledge that the DOJ opposed this transaction only "partly" because it did not want Microsoft to control Intuit's employees. The authors do not explain, however, the other reasons why the DOJ opposed this transaction.

In this case, the DOJ believed that Intuit competed so effectively because it had developed such a highly skilled team of software developers *and* because it had developed such a large base of Quicken customers. The DOJ's complaint clearly indicated that it considered one of Intuit's primary competitive strengths to be this large base of customers.¹⁴⁰ This large base allowed Intuit to generate a steady stream of revenue as it continued to sell to these customers upgrades of its Quicken software. The DOJ concluded that this revenue stream would allow the owner of Quicken, be it Intuit or Microsoft, to finance its R&D to develop even better software. By continuing to develop better software, Quicken's owner would be able to continuously sell a product so superior that it would dominate its market.

The DOJ also felt that Intuit's installed base of customers gave it a considerable competitive advantage in other ways as well. For example, the installed customer base gave Intuit a reputation for quality and reliability that encouraged yet more consumers to purchase Quicken.¹⁴¹ Thus, the DOJ concluded that In-

¹³⁹ See *Microsoft Corp.*, 56 F.3d at 1448 (explaining transfer to Novell of some Microsoft assets would not enhance Novell's ability to compete); see also Lande & Sobin, *supra* note 134, at 255, n.63 (noting transfer would not include any human resources).

¹⁴⁰ See *Microsoft Corp.*, 56 F.3d at 1448 (articulating idea that Intuit's database was well-established and major strength).

¹⁴¹ See *id.* (finding most customers purchase software technology based on reputation); see also Lande & Sobin, *supra* note 134, at 255 n.63 (elaborating on Microsoft de-

tuit's customer base gave it a very significant competitive advantage. This customer base created a barrier to entry that Intuit's competitors would have great difficulty overcoming.¹⁴²

b) With Intuit's Customer Base, Microsoft Could Monopolize the Market

In its complaint, the DOJ also discussed Microsoft's considerable abilities to compete in the general personal computer software market.¹⁴³ The DOJ concluded that Microsoft was the only firm that could seriously challenge Intuit's leading position in the personal finance software market. DOJ feared that if Microsoft, instead of competing against Intuit, combined its considerable ability to compete in the general market with Intuit's ability to compete in the personal finance market, then it would create a business against which no other firm could compete.

Thus, the DOJ believed that Intuit competed so effectively because it had developed such highly skilled software developers and because it had developed such an extensive base of Quicken users. If Microsoft were able to incorporate these competitive advantages into its personal finance software business, and were able to eliminate Intuit as a competitor, then, the DOJ concluded, Microsoft would monopolize the personal finance software market.

4. The DOJ Tried to Anticipate Future Market Development

In *Microsoft/Intuit*, the DOJ analyzed the personal finance software market. It analyzed both the current and future markets for this specific product. The DOJ, however, did not find an innovation market. The DOJ analyzed the current personal fi-

scription of Intuit personnel as most important asset it would acquire in merger).

¹⁴² See Cohen, *supra* note 10, at 536. The author put forth the idea that with increasing returns, one technology ultimately wins the entire market & drives others out. *Id.*; *High-Tech Global Marketplace*, *supra* note 10. The DOJ may also have feared that the Intuit's large installed base of customers would have encouraged other, new customers, to also purchase Quicken. *Id.* These new customers may have chosen to purchase Quicken, not simply because the program had proven its reliability, but also because so many other people used the program. *Id.* These new customers may have wanted to purchase the same program which many other people used, so they could easily exchange files with these other users. *Id.* This concern is a part of the agencies "new thinking." *Id.* In this case, however, DOJ did not allege that such network effects created a barrier to entry. *Id.*

¹⁴³ See *Microsoft Corp.*, 56 F.3d at 1448 (explaining Microsoft's position as powerful and successful competitor in software industry).

nance software market quite extensively, and in fact concluded that the current market participants were engaged in a "bloody share war."¹⁴⁴

In this case the DOJ also tried to anticipate the development of the personal finance software market. It tried to determine how this transaction would affect these developments. In particular, the DOJ analyzed how this transaction would affect the market for software that allowed consumers to access their bank accounts from their homes. This new software would allow consumers to use their home computers to manage their financial affairs in a much more complex manner than they could using the then-current generation of personal finance software.

One could call this future personal finance software market either the market for next-generation of the software, or a market for an entirely new product. The DOJ, however, did not have to make this distinction.¹⁴⁵ The DOJ opposed this transaction because it felt that if Microsoft, with its already considerable strengths in the general software market, acquired Quicken, with its considerable strengths in the personal finance software market, then Microsoft would be able to dominate the current and future markets for personal finance software.

5. The DOJ Did Not Find an Innovation Market

This case raised very interesting questions. Lande and Sobin, for example, queried whether the DOJ could stop a firm from combining, not patents or other intellectual property rights, but the employees who develop these patents and intellectual property rights. The DOJ's analysis also raised other interesting questions, particularly regarding if and how a product's extensive base of customers created barriers to entry to current and future markets.

Interesting though they may be, these questions do not relate to innovation markets. Gilbert and Sunshine's innovation market methodology will not help the agencies answer the interesting questions this case raises. Lande and Sobin do not describe any innovation market methodology that the DOJ may have

¹⁴⁴ See *id.* (quoting Intuit's Chairman's opinion of likely merger effects).

¹⁴⁵ This case shows, yet again, that the agencies can not distinguish between next generation products and new products. The case also shows that Tom and Newberg offer no logical reason why the agencies should make this distinction.

used to find an innovation market. In short, DOJ raised many interesting questions in this case, but it did not find an innovation market.

B. Other Cases

Lande and Sobin list one other case, *Silicon Graphics*,¹⁴⁶ in which the agencies found an innovation market. Pomerantz identified *Silicon Graphics* as one of three other cases in which the agencies found innovation markets. The agencies did not find an innovation market in this case.

1. Silicon Graphics

Lande and Sobin,¹⁴⁷ Pomerantz,¹⁴⁸ and an FTC Commissioner¹⁴⁹ have said that in this case the FTC found an innovation market. In this case the FTC reviewed Silicon Graphics' acquisition of Alias Research, Inc. ("Alias"), and Wavefront Technologies, Inc ("Wavefront"). Alias and Wavefront were two of world's three largest developers of entertainment graphics software. Silicon Graphics made the powerful workstation computers that operated the sophisticated software Alias and Wavefront produced.

Silicon Graphics therefore operated in a related, but different, market from the one in which Wavefront and Alias competed; Silicon Graphics competed in a vertically related market. Therefore, the FTC used vertical foreclosure theory¹⁵⁰ to analyze this transaction. It did not use Gilbert and Sunshine's innovation market methodology.

¹⁴⁶ See *In re Silicon Graphics Inc.*, FTC File No. 951-0064 (1995).

¹⁴⁷ See Lande & Sobin, *supra* note 134, at 255-56 (arguing FTC used innovation market analysis in analyzing *Silicon Graphics*).

¹⁴⁸ See Pomerantz, *supra* note 135, at 836, n.860 (stating FTC enforcement efforts in *Silicon Graphics* are example of innovation market theory).

¹⁴⁹ See Roscoe B. Starek, *Innovation Markets in Merger Review Analysis: The FTC Perspective*, Remarks Before the Continuing Legal Education Seminar, Feb. 23, 1996, available in 1996 WL 120855, at *1 (finding innovation market analysis is now officially used by DOJ and FTC and was applied in *Silicon Graphics*); see also *Hightech Global Marketplace*, *supra* note 10, at 791 (noting innovation market analysis provides one appropriate framework in which to analyze mergers likely effects on competition although not always appropriate).

¹⁵⁰ See *Silicon Graphics*, FTC File No. 951-0064 (1995) (Commissioner Mary L. Azquenaga's dissent) (stating commission reliance on vertical foreclosure theory to impose requirements might be inefficient).

2. Oerlikon-Burhle Holding¹⁵¹

In this case, the FTC analyzed Oerlikon-Burhle Holding's purchase of Leybold AG. The FTC found antitrust problems in the markets for turbomolecular pumps and compact disc metallizers. Both firms already competed in both of these markets. The firms, therefore, competed in current goods markets.

The FTC alleged, however, that because the acquisition would allow the combined firm to monopolize the market, the firms would not innovate as quickly as they otherwise would. But the agencies always stop firms from monopolizing markets in part because they believe that if the firm monopolizes the market, then it will not innovate as well as it otherwise would have. And to stop a firm from monopolizing a market the agencies do not need to find an innovation market.¹⁵² In this case, therefore, the FTC acted to stop a firm from monopolizing a market without finding an innovation market.

3. Adobe Systems¹⁵³

In *Adobe Systems*, the FTC analyzed the market for "professional illustration software." In this case, therefore, the FTC analyzed a very specific current goods market. The FTC feared that the acquisition would allow the purchaser, Adobe Systems, to monopolize this specific market. Again, the FTC alleged that the acquisition would allow the purchaser to monopolize the relevant market. The FTC alleged that if the purchaser obtained its monopoly, then it would not innovate. Nevertheless, while the FTC should of course stop firms from obtaining monopolies, it can do so without finding innovation markets.

C. Lande and Sobin Skeptical of Innovation Markets

Although Lande and Sobin say that the DOJ found an innovation market in both *Silicon Graphics* and *Microsoft/Intuit*, they do not support the innovation market concept. These authors do not believe that the agencies can actually apply innovation market methodology:

¹⁵¹ See *In re Oerlikon-Burhle Holding AG.*, FTC File No. 941-0054 (Nov. 18, 1994).

¹⁵² See Landman, *supra* note 27, at 3.

¹⁵³ See *In re Adobe Systems Inc.*, FTC File No. 941-0059 (Aug. 5, 1994).

“[D]espite the recent attention paid to both technology and innovation markets, there are enormous practical difficulties in the application of these concepts to real cases. . . . Moreover, the concepts have yet to be applied rigorously and directly in any actual federal antitrust decision, making it difficult to assess what role they are likely to play. . . .”¹⁵⁴

This skepticism is well placed.

VIII. INNOVATION MARKETS AND THE AGENCIES’ “NEW THINKING” ON INNOVATION

A. *Implementing “New Thinking” Without Finding Innovation Markets*

The agencies have not found innovation markets in any of these cases. Instead, the agencies have preserved competition in markets in which one or more of the relevant products did not yet exist. Therefore, they have preserved competition in future goods markets and in doing so, implemented their “new thinking” on innovation.

In several of these cases, however, the agencies have stopped firms from using intellectual property rights or standards, to anticompetitively block access to the relevant market. Thus, while the agencies do implement their “new thinking” on innovation when they protect competition in future goods markets, these cases have allowed the agencies to implement other aspects their “new thinking.” But as the agencies implemented these other aspects of their “new thinking” in these cases, they did so without finding an innovation market. This implies then that the agencies can implement their “new thinking” on innovation without finding innovation markets.

This section analyzed three significant cases in which the agencies not only found future goods markets, but also implemented other aspects of their “new thinking.”

¹⁵⁴ See Lande & Sobin, *supra* note 134, at 256 (discussing differences that could arise from use of technology or innovation market, such as time frame within which to assess competitive effects); see also Alvin R. Chin, *The Misapplication of Innovation Market Analysis to Biotechnology Mergers*, 3 B.U. SCI. & TECH. L.J. 6, 6 (1997) (proposing that where there is uncertainty in defining relevant market, innovation market analysis may be appropriate).

1. Sensormatic

In *Sensormatic*, the FTC feared that if the relevant firms combined their businesses as they originally planned, then they would be able to develop, and impose on the market, the relevant standard. Before they could use the next generation of anti-shoplifting equipment, manufacturers and retailers would have to agree on the standard electronic system they would use in their markers and sensors. The FTC feared that if Knogo and Sensormatic developed this standard, then they would use it to keep other firms out of the market.

The FTC therefore feared that the firms would use this standard to improperly erect barriers to entry to the relevant market. The FTC certainly should ensure that firms do not improperly erect such barriers. In the last several years the FTC has aggressively worked to eliminate barriers. It has done so as part of its "new thinking" on innovation.¹⁵⁵ Thus in this case the FTC implemented its "new thinking" on innovation without finding an innovation market.

2. Microsoft/Intuit

In this case, the DOJ would not allow Microsoft to buy Intuit. The DOJ feared that if Microsoft combined its considerable business skills with Intuit's particular competitive advantages in the market for personal finance software, then no firm would be able to compete against Microsoft. In blocking this transaction DOJ also implemented the agencies' "new thinking" on innovation, but once again did so without finding an innovation market.

a) Software Developers Crucial Asset

The DOJ feared that, in two separate ways, this transaction would harm competition. First, the DOJ feared that Microsoft would become too strong a competitor if it took control of Intuit's software developers. Microsoft originally intended to transfer to Novell the intellectual property relating to its own personal finance software. Doing so, however, would not satisfy the DOJ's competitive concerns. The DOJ felt that these software developers gave Intuit a very significant competitive advantage. Thus,

¹⁵⁵ See, e.g., Cohen, *supra* note 10, at 556-57 (arguing that by precluding compatibility by setting standards competitor excludes rivals from competition).

even if Microsoft transferred its intellectual property rights, it would still retain the services of these software developers, and would therefore still be able to monopolize the market, DOJ believed.

In this case, therefore, the DOJ enforced the antitrust and intellectual property laws in an aggressive and very unusual manner. By doing so it implemented its "new thinking" on innovation without finding an innovation market.

b) Installed Base of Customers as Barrier to Entry

The DOJ also opposed this transaction because it did not want Microsoft to gain access to the large base of customers Intuit had developed. The DOJ believed that this large customer base also gave Intuit a substantial competitive advantage. This customer base allowed Intuit to earn a steady stream of revenue, as it sold these customers Quicken upgrades. Intuit could then use this revenue stream to finance yet more Quicken upgrades. In this way, the DOJ concluded, Intuit would always be able to sell a product wherein other firms would have great difficulty competing.

The DOJ felt that if Microsoft, with its already considerable competitive strengths, was able to control this revenue stream, then no other firm would be able to compete against Microsoft. No firm could develop personal finance software which could compete against a Quicken that Microsoft continuously improved. Thus, the DOJ concluded, this transaction would allow Microsoft to monopolize the relevant market.

Again, the DOJ enforced the antitrust laws in a unique, and aggressive, manner. It stopped Microsoft from erecting barriers to entry which it believed no firm could surmount. Once again, as it did so, the DOJ implemented its "new thinking" on innovation without finding an innovation market.

3. Ciba Geigy/Sandoz

In *Ciba Geigy/Sandoz*, the FTC also implemented its new thinking on innovation, and, once again, did so without finding an innovation market. In this case the FTC protected competition in four future goods markets. It also stopped Novartis from improperly erecting barriers to entry to the future, broad, gene

therapy market.

In this case the FTC would not let the merged firm, Novartis, retain sole control of, among other intellectual property rights, the so-called Anderson patent. The FTC feared that if Novartis retained sole control of this very broad patent, then it would be able to block access to the broad gene therapy market. To develop gene therapy products Novartis' competitors would need to use technology included within this broad patent. The FTC feared that if Novartis controlled this broad patent, while also controlling so many other intellectual property rights that firms must also use to develop gene therapy products, then it would be able to stop other firms from developing gene therapy products. It would be able to block access to the future gene therapy market. The FTC therefore ordered Novartis to license the Anderson patent and other intellectual property.

In this case the FTC expanded its authority to regulate the process by which firms acquired and combined intellectual property rights. The FTC required Novartis to license the Anderson patent even though, before the merger, Sandoz alone owned this patent. The FTC therefore required Novartis to license the patent even though the merging firms did not combine intellectual property rights to create this broad patent. The FTC expanded the law regulating the acquisition and combination of intellectual property rights by issuing this order.

Commissioner Azcuenaga dissented from the FTC decision in this case exactly because she did not believe that the law authorized the FTC to require Novartis to license the Andersen patent. By rejecting Commissioner Azcuenaga's argument, the other FTC Commissioners therefore clearly enforced the anti-trust laws very aggressively. In doing so, these Commissioners implemented their "new thinking" on innovation. But, once again, they did so without finding an innovation market.

4. Conclusion

In all these cases, the agencies implemented important aspects of their "new thinking" on innovation. And in all these cases the agencies did so without finding an innovation market. In these cases the agencies regulated future goods markets, and also regulated the relevant firms' attempts to erect barriers to entry

to these future goods markets. In these case the agencies feared that the relevant firms were improperly erecting barriers to entry, and the agencies therefore stopped the firms from erecting these barriers.

By preventing these firms from erecting barriers to entry, the agencies implemented important aspects of their "new thinking" on innovation. In the last several years the agencies have studied, in great detail, how market imperfections such as a large customer base, or the market's need to develop standards, may lessen the pressure on firms to innovate. These studies have led the agencies to develop "new thinking" regarding how they can enforce the antitrust and intellectual property laws to correct for these market imperfections.

In the three cases this section analyzed the agencies have indeed tried to correct for these market imperfections. In these cases the agencies have enforced the antitrust and intellectual property laws in ways which, the agencies hope, will lower barriers to entry and increase pressure to innovate. But the agencies have done this without finding an innovation market.

Commissioner Azcuenaga probably had this "new thing" in mind when she raised the possibility that the FTC found an innovation market in *Ciba Geigy*. The Commissioner said that the FTC may have found an innovation market in this case "because the complaint allege[d] increased barriers to entry and altered incentives to license patents."¹⁵⁶ The Commissioner correctly implied that when trying to lower barriers to entry in this case the FTC was implementing its "new thinking" on innovation. The Commissioner should not have suggested, however, that the implementation of its "new thinking" required the FTC to find an innovation market.¹⁵⁷

¹⁵⁶ See Azcuenaga, *supra* note 67 (quoting Commissioner's mention of complaint alleged in *Ciba-Geigy*); see also William J. Baer, *New Myths and Old Realities: Perspectives on Recent Developments in Antitrust Enforcement*, Remarks Before the Bar Association of the City of New York (Nov. 16, 1997), available in 1997 WL 728608, at *5 (discussing how Ciba Geigy/Sandoz merger would have diminished incentives and ability of other firms to develop competing products); *FTC Accord in Ciba Geigy and Sandoz Merger to Prevent Slow Down in Gene Therapy Development and Preserve Competition in Corn Herbicides, Flea Control Markets*, available in 1996 WL 721688, at *2 (stating Novartis would be required to grant licenses to any entity requesting one).

¹⁵⁷ See Azcuenaga, *supra* note 68 (noting that Commission has applied innovation market theory to benefit consumers).

IX. TOM AND NEWBERG OVERLY EXPAND ANALYSIS

A. Tom and Newberg Call For Broad Expansion of Analysis

Tom and Newberg imply that the agencies should broaden their analysis beyond simply evaluating competition in future goods markets. To analyze competition in future goods market the agencies apply the "potential competition doctrine."¹⁵⁸ Tom and Newberg believe that the agencies should expand this doctrine so they can analyze more than just future goods markets. The authors say:

One might want to make further adjustments [to the potential competition doctrine] in order to capture innovation *effects* in those markets (i.e. the elimination of the competition to develop the drugs, not just the competition between the drugs once developed and approved), but one would not necessarily need the concept of innovation *markets* if one preferred instead to expand modestly the scope of the potential competition doctrine.¹⁵⁹

When Tom and Newberg say that the agencies should analyze innovation *effects* ("competition to develop the drugs") they, in reality, say that the agencies should regulate competition beyond competition in the future goods market (which is "competition between the drugs once developed and approved"). The authors, however, do not define these "innovation effects."¹⁶⁰

Because the authors do not define these "innovation effects,"

¹⁵⁸ See, e.g., *In re Roche Holdings Ltd.*, 113 F.T.C. 1086, 1086 (1990) (stating Commissioner has accepted consent agreement on doctrine of potential competition).

¹⁵⁹ See Tom & Newberg, *supra* note 6, at 224 (noting difficulty in analysis of cases involving competition to produce next-generation products absent innovation market theory). [Emphasis in original]

¹⁶⁰ See *id.* at 224 n.275. When Tom and Newberg refer to "innovation effects" they may be referring to what one European Commission official has called "competition in R&D." *Id.* If so, then Tom and Newberg may have made the same claim regarding the American agencies that John Temple Lang seems to have made regarding the European Commission. *Id.* Temple Lang has said that the European Commission regulates "competition by two companies in R&D directed towards the same goal." *Id.* Temple Lang therefore implies that the European Commission can regulate "competition in R&D" in addition to regulating competition in a future goods market. *Id.* However, just as the American authorities have regulated no more than future goods markets, so too has the European Commission regulated no more than future goods markets. *Id.*; see also J. Temple Lang, *European Community Antitrust Law: Innovation Markets and High Technology Industries*, 20 FORDHAM INT'L L.J. 717, 760-61 (1997). Dr. John Temple Lang is the Director of the Directorate for Information, Communication and Multimedia of DG IV of the European Commission. *Id.*

they do not explain how they believe the agencies should regulate these effects. The authors do not, for example, explain the methodology they believe the agencies should use, instead of innovation market methodology, to analyze these "innovation effects." Similarly, the authors do not explain how they would "expand" the potential competition doctrine.

Tom and Newberg are certainly correct when they say that firms compete, not only on price, but also to innovate. But the authors are apparently unwilling to accept the reality that the agencies can not regulate all forms of competition to innovate. Tom and Newberg will not accept the reality that unless the firms are likely competitors in a future goods market, then, the "innovation effects" the firms' competition may generate, or, what others have called the firms' "competition in R&D," is competition in too abstract a sense for the agencies to have ever been able to regulate.

B. Tom and Newberg Should Apply Porter's True Policy Prescriptions

1. To Encourage Firms to Innovate, Porter Advocates Aggressive Antitrust Enforcement

Instead of advocating that the agencies either find innovation markets or analyze "innovation effects," Tom and Newberg should simply accept that, to implement the economic policies the agencies want to implement, they need only find future goods markets. Tom and Newberg should recognize that when the agencies protect competition in future goods markets they actually implement Porter's economic policy. In fact, by suggesting that the agencies try to regulate these "innovation effects," the authors are actually advocating that the agencies implement a competition policy which goes beyond the policy Porter recommends.

In *The Competitive Advantage of Nations* Porter recommends that authorities vigorously enforce antitrust laws. If the authorities ensure that markets are competitive, then, Porter says, they will ensure that market forces drive firms to innovate. If firms innovate, then, Porter concludes, they will make better

products and will succeed in world markets.¹⁶¹ Then Assistant Attorney General for Antitrust, Anne Bingaman recognized this when she cited *The Competitive Advantage of Nations* for the ideas that "active domestic rivalry is strongly associated with international success," and that "a strong antitrust policy, especially in the area of horizontal mergers, alliances and collusive behavior, is essential to the role of upgrading any economy."¹⁶²

a) Porter Implicitly Supports Protecting Competition in Future Goods Markets

Porter, therefore, supports the general idea that the authorities should use the antitrust laws to encourage firms to innovate. He does not, however, necessarily support the notion that the agencies should find innovation markets. Nor does Porter necessarily support the idea that the agencies should regulate what Tom and Newberg call "innovation effects." In fact, when the agencies protect competition in future goods markets they implement Porter's policy prescriptions at least as much as when they try to regulate "innovation effects," or when they try to regulate competition in innovation markets.

When the agencies protect competition in future goods markets they are doing what Porter recommends in *The Competitive Advantage of Nations*. They are enforcing the antitrust laws aggressively. They are ensuring that market forces pressure firms to innovate.¹⁶³ The agencies are therefore encouraging American firms to develop superior products, which they can then sell on world markets. They are therefore using the antitrust laws, just as Porter says they should, to enhance America's international competitiveness.

When the agencies protect competition in future goods market they are also doing what Porter recommends in the journal *Antitrust*. They are using the antitrust laws to promote, what Porter then called "progressiveness." They are using the antitrust laws to ensure that market forces drive firms to innovate. They do, as Porter says they should, make fostering innovation the focus of

¹⁶¹ See Gilbert & Sunshine, *supra* note 26, at 573 (discussing position that society benefits from research and development); Dahdouh & Mongoven, *supra* note 1, at 408 (discussing idea that innovation accounts for large share of economic growth).

¹⁶² See Bingaman, *supra* note 21.

¹⁶³ See Landman, *supra* note 27, at 3.

antitrust enforcement.

As the agencies do this they, as Porter implies they should, expand the scope of the antitrust laws. While they do not expand this doctrine as much as Tom and Newberg may like, they have expanded it to the extent that in an important case that established the precedent that the agencies can protect competition in future goods markets,¹⁶⁴ one FTC Commissioner dissented because she believed the FTC had expanded the potential competition doctrine too far.¹⁶⁵

Thus, when the agencies protect competition in future goods markets they do everything they say they need innovation markets to do. They implement the economic policy Porter recommends and they also expand the law and enforce it aggressively. The agencies also encourage firms to innovate and, therefore, implement their "new thinking" on innovation. They do all this without finding an innovation market. The agencies, therefore, can clearly implement their "new thinking" on innovation without finding an innovation market. The agencies should, therefore, protect competition in future goods markets and should stop propagating the innovation market myth.

X. NCRPA'S INABILITY TO "PROPERLY DEFINED" AN INNOVATION MARKET

In the National Cooperative Research and Production Act Congress instructed the agencies to protect competition in innovation markets. Congress told the agencies to protect competition in what it called "properly defined" innovation markets. In the Act, Congress could not define an innovation market. Additionally, since Congress passed the Act the antitrust agencies have also not been able to "properly define" an innovation market. As this article has shown, the innovation market which the agencies have "properly defined" is actually a future goods mar-

¹⁶⁴ See *In re Roche Holdings Ltd.*, 113 F.T.C. 1086, 1086 (1990) (dissenting opinion of Commissioner Owen) (discussing elimination of competition in relevant markets); see also Dahdouh & Mongoven *supra* note 1, at 430 n.101 (discussing Roche Holdings as hybrid involving both potential competition and innovation market theories); Hoerner, *supra* note 1, at 56-58 (discussing use of innovation market theory to attack conglomerate mergers as in Roche Holdings).

¹⁶⁵ See Hoerner, *supra* note 1, at 56 (noting Commissioner's position that there was substantial doubt about prospective entrants willingness and ability to enter market not now performing competitively).

ket.

This is so even though, in NCRPA's legislative history, Congress told the agencies not to find future goods markets.¹⁶⁶ Yet, despite this admonition, when the agencies protect competition in future goods markets they actually implement the policy Congress told the agencies to use innovation markets to implement.

Congress enacted the NCRPA to encourage American firms to succeed in world markets. When the agencies protect competition in future goods markets they not only enforce the policies Porter recommended in *The Competitive Advantage of Nations*, they also enforce the economic policies which lead Congress to enact the NCRPA. They encourage American firms to succeed in world markets. Thus, even when the agencies use future goods markets rather than innovation markets to enforce the NCRPA, they implement the economic policies that Congress told the agencies to use innovation markets to implement.

CONCLUSION

A. Agencies Have not Found an Innovation Market

The American antitrust authorities have never found an innovation market. The agencies can not apply either Gilbert and Sunshine's innovation market methodology, or the IP Guidelines' less developed innovation market methodology. The agencies will only be able to find an innovation market if they can develop a methodology that will allow them to find an innovation market. The agencies have not been able to develop this methodology, and have therefore not been able to find an innovation market.

Without finding an innovation market, the agencies have analyzed many cases in which the relevant firms were investing in R&D to try to develop the same new product. In *Wright Medical/Orthomet*, for example, the FTC regulated the future goods market for better orthopedic hand implants. In this case the FTC would not allow the world's leading orthopedic hand implant manufacturer to purchase its only potential competitor. In *GM/ZF* the DOJ claimed to, but actually did not, regulate the

¹⁶⁶ See *id.* "The purpose of the reports. . . is to inform. . . of the effect of the NCRPA on the competitiveness of the U.S. in key technological areas of research, development, and production." *Id.*

innovation market for improved heavy-duty automatic transmissions. In this case the DOJ actually regulated the relevant future goods market. It did so because it did not have jurisdiction over the relevant current goods market, which was in Europe.

Moreover, as Tom and Newberg themselves correctly recognize, the FTC has, without finding an innovation market, analyzed many transactions in which the relevant firms were trying to develop, but had not yet developed, the same pharmaceutical product. In these cases as well the FTC regulated competition in future goods markets. Thus, in *American Home Products/American Cyanamid* the FTC preserved competition in the future goods market for rotavirus vaccines. In *Upjohn/Pharmacia* the FTC preserved competition in the market for future treatments for solid tumors. In *Glaxo/Wellcome* the FTC preserved competition in the future market for oral antimigraine treatments. In *Ciba-Geigy/Sandoz* the FTC preserved competition in the future goods markets for the four specific gene therapy markets it identified. And in *Baxter/Immuno* the FTC preserved competition in the future fibrin sealant market.

B. The Innovation Market Myth

Although the agencies have not found an innovation market, many agency officials claim that the agencies have found such markets. These officials have created the innovation market myth.

Tom and Newberg are the latest officials to propagate the innovation market myth. Yet these officials claim that in only three cases, *Ciba Geigy*, *GM/ZF*, and *Sensormatic*, have the agencies found an innovation market. These officials, therefore, acknowledge that in several other cases, in which other agency officials have claimed that the agencies have found innovation markets, the agencies did not in fact find such markets.

Yet these officials also continue to propagate the myth. Even in the three cases in which these officials claim that the agencies have found innovation markets the agencies have, in reality, not found innovation markets.

C. Innovation Markets, Future Goods Markets and the Agencies' "New Thinking" on Innovation

In several of the cases in which Tom and Newberg, and others, claim that the agencies found innovation markets, the agencies have, in fact, not found innovation markets. In these cases the agencies have instead found future goods markets, and have also acted to stop firms from improperly erecting barriers to entry to various markets. In these cases, therefore, the agencies implemented their "new thinking" on innovation not only when they found future goods markets, but also when they prevented the firms from erecting barriers to entry.

For the past several years the agencies have acted aggressively to stop firms from improperly erecting barriers to entry. The agencies fear that these barriers will shield firms from competitive pressures to innovate. In several cases the agencies have not only found future goods markets, but have also implemented this "new thinking" regarding barriers to entry. Thus, in *Sensormatic* the FTC would not allow the relevant firms to develop standards in a way which would allow them to block entry into the future goods market. In *Microsoft/Intuit* and *Ciba Geigy* the agencies would not allow the relevant firms to use intellectual property rights in a way which would anticompetitively block access to the relevant market.

In these cases the agencies implemented their "new thinking" regarding competition to innovate, but did so without finding an innovation market. Innovation markets are, therefore, not, as one writer has suggested, the "centerpiece" of the agencies' "new thinking" on innovation.

D. When the Agencies Protect Competition in Future Goods Markets They Implement Porter's Economic Policy

When the agencies protect competition in future goods markets they implement the economic policy Porter recommends. When the agencies protect competition in these future goods markets they ensure that competitive pressures force firms to innovate. They, therefore, ensure that firms will develop better

products and succeed on world markets.

Tom and Newberg, and other agencies officials, should therefore not advocate that the antitrust agencies either find innovation markets or try to regulate "innovation effects." These officials should simply accept that when the agencies protect competition in future goods markets they implement the policy prescriptions which these officials incorrectly say they must use innovation markets to implement. These officials should therefore protect competition in future goods markets. They should do so when applying the antitrust laws generally, and when enforcing the NCRPA. They should not propagate the innovation market myth.

