

High Definition Television, Joint Production Ventures, and the Antitrust Barrier

David R. Gibson

Follow this and additional works at: <http://scholarship.law.cornell.edu/cilj>

 Part of the [Law Commons](#)

Recommended Citation

Gibson, David R. (1991) "High Definition Television, Joint Production Ventures, and the Antitrust Barrier," *Cornell International Law Journal*: Vol. 24: Iss. 2, Article 7.

Available at: <http://scholarship.law.cornell.edu/cilj/vol24/iss2/7>

This Note is brought to you for free and open access by Scholarship@Cornell Law: A Digital Repository. It has been accepted for inclusion in Cornell International Law Journal by an authorized administrator of Scholarship@Cornell Law: A Digital Repository. For more information, please contact jmp8@cornell.edu.

High Definition Television, Joint Production Ventures, and the Antitrust Barrier*

Introduction

In an address to the Economic Club of New York in February of 1989, Attorney General Dick Thornburgh expressed the following axiom for the emerging economic age:

[M]ore than anything else, where we have been, where we are, and where we are going, derives from an ever-shrinking world economy governed not just by American industrial giants, or by the government of the United States; but governed by the decisions made in corporate board rooms and marketplaces across the oceans, and in national capitals around the world¹

Symptomatic of this new era is the decline of American dominance in many high-technology industries. For example, foreign competitors have driven American industries' share of the domestic phonograph market from ninety percent in 1970 to one percent in 1989, the semiconductor market from eighty-nine percent to sixty-four percent, the audio tape recorder market from forty percent to one percent, and the color television market from ninety percent to ten percent.² The position of American manufacturers in the newly-born global market for high definition television (HDTV) is symbolic of America's waning influence in the high technology area.

HDTV represents a potentially immense market.³ One research group estimates that the value of this market over the next twenty years will exceed \$170 billion.⁴ Although HDTV presents "a sharper picture

* Special thanks to Lisa S. Gibson and Thomas R. Jackson, Esq. of Jones, Day, Reavis & Pogue—Dallas, for their helpful comments and suggestions.

1. Address by Attorney General Dick Thornburgh, Economic Club of New York (Feb. 22, 1989), *reprinted in* 56 *Antitrust & Trade Reg. Rep. (BNA)* 312 (Feb. 23, 1989). Attorney General Thornburgh also noted the increasing complexity of this process incident to the anticipated unification of the European Community in 1992. *Id.*

2. *U.S. Funds Sought for Advanced TV*, N.Y. Times, May 10, 1989, at D1, col. 8, D6, col. 2 [hereinafter *U.S. Funds*].

3. Farnsworth, *The Bush Team Has Competing Ideas on Competing with Japan*, N.Y. Times, June 25, 1989, at E4, col. 1; *see also Small U.S. Firms Challenge Japanese Grip on HDTV*, Wall St. J., Oct. 23, 1989, at B1, col. 3 (predicting a \$30 billion business worldwide within a decade).

4. Farnsworth, *supra* note 3, at E4, col. 1.

comparable in clarity to motion pictures," it is more than just "the next generation of television."⁵ Industry experts claim that HDTV is a truly seminal technology, with broad applications in semiconductors, computers, telecommunications, and manufacturing equipment.⁶ Because of this potential, the American Electronics Association (AEA) warns that "the United States will lose half of its current world-market share in semiconductors and personal computers if it fails to control at least 10 percent of HDTV production."⁷

In an effort to help America break into the HDTV market, a cross section of industry, government, and academic sources have recommended, along with a host of other proposals,⁸ a relaxation of federal antitrust law governing joint research, development, and production.⁹ At the base of this approach lies a facially persuasive, albeit oversimplified, syllogism. American industry cannot enter the HDTV market absent joint research into *and* development of a competitive product.¹⁰ Federal antitrust law prohibits this type of joint enterprise. Therefore, experts argue federal antitrust law must change for American industry to enter the HDTV market.

5. *Antitrust Easing Will Be Proposed to Aid TV Effort*, N.Y. Times, May 4, 1989, at A1, col. 6 [hereinafter *Antitrust Easing*].

6. *E.g.*, *id.* at col. 2; *see also HDTV Will Drive Semiconductor Industry*, 56 *Antitrust & Trade Reg. Rep. (BNA)* 70-08 (May 11, 1989) (statement of Jack D. Kuehler, Vice Chairman, IBM Corp., testimony before Senate Commerce, Science and Transportation Comm., May 9, 1989). HDTV is important not just as a symbol, but as the driving force in a number of industries. *Id.*

7. Farnsworth, *supra* note 3, at E4, col. 2; *see also High Definition Television (Part 2): Hearing Before the Subcomm. on Telecommunications and Fin. of the House Comm. on Energy and Commerce*, 101st Cong., 1st Sess. 14 (1989) [hereinafter *Markey Comm. Hearings II*]. "[U]nless U.S. manufacturers capture a significant share of the future HDTV market, our preeminence in telecommunications and computers will erode." *Id.* (statement of Solomon J. Buchsbaum, Executive Vice President, AT&T Bell Laboratories and chairman of the White House Science Council).

8. The proposals range in substance from very limited, industry-specific subsidies, *see, e.g.*, *U.S. Funds*, *supra* note 2, at D6, col. 5, to a fundamental reordering of macroeconomic priorities aimed at increasing overall competitiveness, *see, e.g.*, ELECTRONIC INDUSTRIES ASSOCIATION'S ADVANCED TELEVISION COMMITTEE, CONSUMER ELECTRONICS: HDTV AND THE COMPETITIVENESS OF THE U.S. ECONOMY, *passim* (Feb. 1, 1989) (recommendations submitted to Congressman Markey, Chairman House Telecommunications and Finance Subcommittee) [hereinafter *EIA REPORT*]. Available from EIA's HDTV Information Center, 1722 Eye St., N.W., Washington, D.C. 20006.

9. *See generally Markey Comm. Hearings II*, *supra* note 7, at 6-7 (statement of Dr. Robert N. Noyce, President and CEO of SEMATECH) (brief overview of the antitrust issue).

10. The domestic industry posits that the plant and equipment necessary to initiate HDTV production would cost more than \$1 billion and is thus beyond the resources of any single American company. *U.S. Funds*, *supra* note 2, at D6, col. 4; *see also Broad Support Seen for Incentives on New TV Technology*, N.Y. Times, May 5, 1989, at D3, cols. 4-5 [hereinafter *Broad Support*] (statement of Albert R. Brashear, Jr., spokesman for Motorola, Inc.). In contrast, SONY has already produced over 400 HDTV sets, *U.S. Funds*, *supra* note 2, at D2, col. 2, and has an experimental HDTV system in operation, Farnsworth, *supra* note 3, at E4, col. 2. Likewise, European manufacturers anticipate debuting their HDTV system in time for the 1992 Olympic Games in Barcelona. *U.S. Funds*, *supra* note 2, at D6, col. 2.

This Note will critique these propositions and argue that, notwithstanding the emergence of a truly global economy, American antitrust law need not be further relaxed. Section I will present the political background against which the debate over relaxing the antitrust laws is set. No commentator suggests that American industry should avoid the HDTV market; rather, the more fundamental debate centers on the appropriate role of the federal government in helping specific industries compete in the global marketplace. Section II will then examine the importance of promoting a strong, domestic HDTV industry. Section III, in turn, will explore both the actual and the perceived barriers American manufacturers face in entering the HDTV market. In addition to the antitrust laws of this nation, manufacturers point to high costs, high risks, and the industrial policy¹¹ of the Japanese Government as major impediments to developing a domestic HDTV industry. Finally, Section IV will examine the existing antitrust laws as they affect the entry of American industry into the HDTV market and argue that no relaxation is necessary to achieve such entry.

I. Political Background: Does the United States Need an Industrial Policy for HDTV?

The HDTV issue derives its peculiar significance largely from the political concern surrounding the American electronic industry's declining competitiveness in both domestic and foreign markets.¹² The President's Commission on Industrial Competitiveness defines competitiveness as "the degree to which a nation, under free and fair market conditions, produces goods and services that meet the test of international markets while simultaneously maintaining and expanding the real incomes of its citizens."¹³ Thus, to be competitive, a nation must be able to sell its goods and services consistently both at home and abroad at prices that produce profits. Whether because of its important role in the U.S. economy,¹⁴ or because of America's fascination with high technology, the American electronics industry's increasing inability to compete in the global marketplace,¹⁵ has sparked interest across Capitol

11. Industrial policy refers to a policy in which the government targets particular industries for help. Farnsworth, *supra* note 3, at col. 2.

12. A comparative analysis of the decline of American competitiveness is beyond the scope of this Note. This decline, however, is indisputable. See, e.g., *U.S. Funds*, *supra* note 2, at D6, col. 2.

13. EIA REPORT, *supra* note 8, at 5 (citing PRESIDENT'S COMMISSION ON INDUSTRIAL COMPETITIVENESS, GLOBAL COMPETITION: THE NEW REALITY (Dec. 1984); COUNCIL ON COMPETITIVENESS, AMERICAN'S COMPETITIVE CRISIS: CONFRONTING THE NEW REALITY (Mar. 1987)). Although this definition presents competitiveness as a national concept, it could also be viewed from the perspective of a single industry or company. Because the American electronics industry's inability to compete has risen to the level of national political concern, a macroeconomic conception of competitiveness seems more appropriate than the more limited microeconomic conception.

14. See *infra* note 69 and accompanying text.

15. Notwithstanding import restrictions in the electronics industry, as well as in many other industries, the dichotomy of domestic and foreign markets is increasingly

Hill. Thus, as the latest innovation in the world of high technology, HDTV naturally attracts the attention of Congress and the Administration.

Strengthening the position of the American electronics industry in the global marketplace stands as a major economic challenge facing the Bush Administration.¹⁶ Two very different approaches to this issue exist. One approach favors a strong industrial policy of government intervention in the form of subsidies, loans, antitrust relief, and other support to industry, while the second approach favors a more hands-off role for the government.¹⁷ The disagreement between proponents of these two approaches is fundamental and will largely determine whether the antitrust laws will be relaxed.

A. Structuring Relief for Multinational Corporations

The first approach, also known as the single-industry approach, presents the further issue of how to structure relief to industries dominated by multinational corporations (MNCs).¹⁸ For example, antitrust relief would benefit all manufacturers *operating* within the U.S. regardless of the predominant nationality of firm ownership. Thus, a Japanese firm operating in the U.S. could use a relaxation of American antitrust laws designed to improve American competitiveness to further improve Japanese competitiveness.¹⁹ Indeed, every benefit flowing to an American manufacturer from a general revision of the antitrust laws would likewise flow to Japanese manufacturers operating in the U.S. Conversely, U.S. Government loans or subsidies would benefit American-owned manufacturers, even though such manufacturers could invest the proceeds of these loans abroad. In fact, if competitiveness is a national concept concerned with the nation's ability to compete rather than with the ability of a particular company to compete,²⁰ "domestic firms can adopt . . . strategies that weaken national competitiveness, while foreign-owned firms operating in the U.S. can adopt comparable strategies that actually strengthen the competitiveness of the United States."²¹ Thus,

artificial. Thus, references in this Note to the "global market" include the domestic market as well. Where it is necessary to perpetuate a distinction in markets, however, this Note will employ the terms "domestic" and "foreign."

16. Farnsworth, *supra* note 3, at E4, col. 1.

17. *Id.* Proponents of the "hands-off" approach argue that government relief is both unfair and a waste of the taxpayers' money. *Id.*

18. EIA REPORT, *supra* note 8, at 7.

19. For a brief discussion of foreign participation in domestic research consortia and suggested criteria for such participation, see *Markey Comm. Hearings II*, *supra* note 7, at 15 (statement of Dr. Solomon J. Buchsbaum).

20. See *supra* note 13 and accompanying text.

21. EIA REPORT, *supra* note 8, at 7. Given the doctrine of comparative advantage, there is "no simple or necessary relationship between the ownership of firms operating in a nation and [that nation's] competitiveness . . ." *Id.* For a precautionary note about the EIA's sincerity, see Schreiber, *Advanced Television Systems: Getting a Share of the Market for US-Owned Companies* (Feb. 1, 1989), reprinted in 135 CONG. REC. S3481, S3484-85 (daily ed. April 6, 1989) (appended to the statement of Sen. Heinz).

even if the federal government extends relief to the electronics industry, it must carefully tailor its policy to improve America's competitiveness without simultaneously generating offsetting benefits to other nations.

Crafting antitrust legislation in such a precise fashion so as to benefit only the domestic television industry²² would be virtually impossible given the overwhelming multinational flavor of this industry. Of the major manufacturers of television sets in the U.S., Zenith remains the only domestically-owned firm.²³ In 1987, Thomson of France purchased RCA from General Electric, while Philips of the Netherlands bought Magnavox in 1975, and Philco and Sylvania in 1981.²⁴ As of 1987, Zenith, Thomson, and Philips were the "big three" firms in the domestic television market, accounting for roughly half of the color television sets sold in the U.S.²⁵ Moreover, although Japanese and Korean companies dominate the remainder of the market,²⁶ these companies all have substantial investments in U.S. facilities.²⁷ Proponents of relaxing the antitrust laws to spur American entry into the HDTV market have yet to address the multinational character of the television industry.²⁸

22. Effectively there is no domestic television industry at present. See NATIONAL TELECOMMUNICATIONS & INFORMATION ADMINISTRATION, *ADVANCED TELEVISION, RELATED TECHNOLOGIES, AND THE NATIONAL INTEREST* 13, n.9 (Mar. 1989) [hereinafter NTIA REPORT], reprinted in *High Definition Television: Hearing Before the House Comm. on Science, Space and Technology*, 101st Cong., 1st Sess. 67 (Mar. 22, 1989) [hereinafter *Science Comm. Hearings*]. Therefore, references in this Note to the "domestic industry" include potential entrants into the market.

23. EIA REPORT, *supra* note 8, at 36.

24. *Id.*

25. *Id.*

26. *Id.*

27. *See id.* at 37-41.

28. Another critical aspect of the multinational character of the television industry is the high domestic content of color television sets manufactured by foreign companies in the U.S. *Id.* at 36-37. Domestic content refers to the percentage of total cost attributable to nationally manufactured components in a given product line. For example, 70% of the components used in television sets built by Thomson are made in the U.S. by foreign firms. Significantly, the critical electronic circuitry accounts for the bulk of the remaining foreign content. *Id.*

High domestic content, however, by no means indicates American strength in the manufacture of television components. The manufacture of television tubes is a good example. Most producers of television tubes manufactured in the U.S. are owned by foreign firms. See NTIA REPORT, *supra* note 22, at 13, reprinted at 67. The large size and fragile nature of large-screen tubes necessitates domestic production and assembly. *See id.* Because the picture tube represents a major cost of television manufacturing, as use of picture tubes manufactured in the U.S. increased, so did the average domestic content of sets manufactured by foreign-owned firms in the U.S. EIA REPORT, *supra* note 8, at 37. But HDTV may change the extent of American manufacturing. Even though HDTV receivers will likely have larger screens, the domestic content of sets assembled in the U.S. is likely to decline. As more durable flat-screen displays are developed, the size and weight constraints which presently influence foreign producers to locate production or assembly facilities in the U.S. will disappear. NTIA REPORT, *supra* note 22, at 13-14, reprinted at 67-68.

B. Opposition from the Administration

The Bush Administration presents the most significant opposition to an industrial policy favoring either the electronics industry generally or the television industry in particular.²⁹ In November of 1989 the Administration announced plans to cut all federal support for research into HDTV from the 1990 budget.³⁰ Additionally, notwithstanding early speculation that the Administration would support a relaxation of antitrust law,³¹ it "remains opposed to the idea of relaxing antitrust law to spur the competitiveness of *selected* industries in global markets"³² Nevertheless, the Administration did not completely rule out a possible modification of the antitrust laws.³³ In fact, it indicated a desire to broaden the focus of reform "to include a wide range of emerging technologies," rather than to isolate HDTV for special treatment.³⁴

C. Countering Foreign Government Support

Proponents of industrial policy argue that federal government intervention is essential to counter similar intervention by the Japanese Government.³⁵ The Japanese Government clearly employs a strategy of dominating several key technologies.³⁶ "In so doing, it has hurt the cor-

29. The Administration has, however, evinced a willingness to formulate a broader, "industry-led" policy in which the government would play a leading role. Farnsworth, *supra* note 3, at E4, col. 2. In 1989, for example, the Defense Advanced Research Projects Agency (DARPA), the Department of Defense agency primarily responsible for research and development of new weapons technologies, allocated \$30 million for private firm research into HDTV. *Antitrust Easing*, *supra* note 5, at D7, col. 3. The private sector responded significantly to this allocation. Dr. Barry H. Whalen, Senior Vice President of the Microelectronics and Computer Technology Corp., argues that "[t]he fact that DARPA received more than 80 responses to its call for proposals means that there are U.S. firms which are very interested in getting in the high definition business." *Markey Comm. Hearings II*, *supra* note 7, at 21. Of course, the large response could also indicate companies' willingness to profit from government research contracts containing rather nebulous project requirements.

30. *Funds for High-Definition TV Research Expected to Be Cut in Bush Budget Plan*, Wall St. J., Nov. 16, 1989, at B4, col. 3.

31. See, e.g., *Antitrust Easing*, *supra* note 5, at A1, col. 6. This speculation justifiably sprang from Attorney General Thornburgh's speech to the New York Economic Club in February of 1989 in which he expressly called for Congress to relax antitrust laws. See *supra* note 1. Moreover, Secretary of Commerce Robert Mosbacher in an interview conducted in May of 1989 said, "There's a pretty good probability of changing the antitrust laws." *Broad Support*, *supra* note 10, at D3, col. 5.

32. *Boskin Notes Administration Opposition to Selective Relaxation of Antitrust Law*, 56 *Antitrust & Trade Reg. Rep. (BNA)* 747 (May 18, 1989) (emphasis added); see also *HDTV Debate Continues as Subcommittee Meets, Commerce Dep't Broadens Its Focus*, 57 *Antitrust & Trade Reg. Rep. (BNA)* 326 (Sept. 14, 1989) [hereinafter *HDTV Debate Continues*].

33. *HDTV Debate Continues*, *supra* note 32, at 370.

34. *Id.*

35. The Japanese manufacturers are the dominant force in the emerging HDTV market. Therefore, although European manufacturers are far ahead of their American counterparts, this Note focuses more on the Japanese manufacturers and the policies of the Japanese Government than on the European industry and the policies of the EEC.

36. Farnsworth, *supra* note 3, at E4, col. 3.

responding American industries by closing the Japanese market, forcing competitors to trade technology for limited market access and using the sanctuary of its protected domestic market to develop economies of scale."³⁷ This strategy has paid handsome rewards in the color television, automobile, consumer electronics, and semiconductor industries.³⁸ The Japanese now hope to achieve with HDTV what they have already accomplished in other industries.³⁹ Thus, proponents of a strong industrial policy contend that the federal government must take action before the American electronics industry is permanently shut out of the HDTV market.

Opponents of the single-industry approach counter that governments in general are ill-equipped to gauge the wants and needs of the consuming public. As Murray Weidenbaum, former Chief Economic Advisor to President Reagan, contends, "[o]ne thing . . . democratic political systems cannot do well at all is to make critical choices between particular firms and industries."⁴⁰ As an example of the dangers of this approach, opponents of government intervention cite the effort of Japan's Ministry of International Trade and Industry (MITI) in the early 1960s to keep Mazda and Honda *out* of the automobile business⁴¹ — MITI simply underestimated the growth of the export market.⁴² Opponents also argue that the current competitive strength of targeted industries did not result from Japan's industrial policy, but from the rising Japanese Yen which forced companies to improve productivity and cut costs.⁴³ As perhaps the major objection to a single-industry approach, opponents note the danger of a misallocation of scarce capital resources. In a perfectly competitive market, investment funds for research and development tend to flow to those projects most likely to generate a profitable return.⁴⁴ A single-industry approach, however, "could drain investment funds away from crucial projects in more prom-

37. *Id.* at cols. 3-4. Most proponents of an industrial policy do not advocate adopting the extremely protectionist stance of Japan. In the U.S., where consumption drives the economic engine, a strong concern for the consumer prevents such a radical stance. *But cf.* Crane, *Joint Research and Development Ventures and the Antitrust Laws*, 21 HARV. J. ON LEGIS. 405, 409 (1984) (Japanese not oblivious to benefits of competition). Protectionism restricts the consumer's freedom of choice and thus necessarily results in higher prices. However, most proponents of an industrial policy do argue that retaliatory trade barriers should be one component of any trade policy. Indeed, the U.S. has already labelled Japan, along with Brazil and India, an unfair trader as a result of its barriers to sales of American goods. Comment, *Structural Impediments to United States-Japanese Trade: The Collision of Culture and Law*, 23 CORNELL INT'L L.J. 55, 69 n.109 (1990).

38. Farnsworth, *supra* note 3, at E4, col. 4. "Japan's recent success in the semiconductor industry also stems in large measure from a combination of government-backed loans and research subsidies . . ." Crane, *supra* note 37, at 409.

39. Farnsworth, *supra* note 3, at E4, col. 4.

40. *Id.* at col. 5.

41. *Id.* at cols. 4-5.

42. *Id.* at col. 5.

43. *Id.*

44. The market for investment capital rests upon the critical assumption that market actors have perfect information. Conversely, one familiar justification for govern-

ising fields and channel [them] into potential HDTV boondoggles."⁴⁵

II. The Role of HDTV in Improving American Competitiveness

Apart from the single-industry debate in Washington, the validity of HDTV as a panacea for American industry must be examined.⁴⁶ Proponents of fostering a domestic HDTV industry promise a dramatic improvement in America's competitive posture. A careful analysis of the relationship between HDTV, the electronics industry generally, and the economy as a whole supports this claim.⁴⁷

A. High Definition Technology as a Consumer Good

The economic significance of HDTV as a consumer good depends, of course, on generating sufficient demand for the product.⁴⁸ Most analysts argue that, given the right conditions, HDTV will penetrate the household market quite rapidly.⁴⁹ The initial high price is likely to slow

ment intervention is market failure. Thus, misallocation of resources is an empirical issue, which cannot be satisfactorily resolved with theory alone.

45. *Heritage Foundation Study Recommends Antitrust Relief to Ease HDTV Development*, 57 *Antitrust & Trade Reg. Rep. (BNA)* 212 (Aug. 17, 1989) [hereinafter *Heritage Foundation Study*]; see also *Science Comm. Hearings*, *supra* note 22, at 31 (statement of Assistant Secretary of Commerce for Communications and Information Alfred Sikes). One reason the Heritage Foundation recommends antitrust relief is because, as long as it is not industry-specific, such relief avoids the problem of potential misallocation of resources. *Heritage Foundation Study*, *supra*, at 212. To the extent that antitrust law is a restriction on the free market, this conclusion is accurate. However, if antitrust law is really a restriction on market failure, the conclusion that misallocation is avoided is no longer valid.

46. This Note assumes, solely for analytical purposes, that the proponents of the single-industry approach will prevail. If the opponents of the single-industry approach prevail, then the issue of government intervention in the HDTV industry becomes moot. Only after the government decides generally that it must intervene in certain industries does the question of which industries need intervention become relevant.

47. Whether HDTV will *in fact* produce the dramatic repercussions promised is an empirical question which this Note does not presume to answer. This Section merely presents the arguments supporting such a relationship.

48. See *Science Comm. Hearings*, *supra* note 22, at 25 (statement of Rep. Boehlert). Representative Boehlert, an avid supporter of governmental support for HDTV, cautions, "history is full of advances that found no market—from telephones that transmit pictures to quadrophonic sound." Conversely, he also relates the story of Harry Warner, who reputedly reacted to his brother's suggestion of adding sound to silent pictures with the immortal line, "Who the hell wants to hear actors talk?" *Id.*; see also Schreiber, *supra* note 21, *reprinted at* S3484-85 (discussing the potential of the HDTV market).

49. NTIA REPORT, *supra* note 22, at 9, *reprinted at* 63. A number of factors will affect the rapidity with which HDTV will penetrate the household market. Among these are such obvious elements as price, quality, consumer incomes, and the availability, quality, and prices of complimentary products and services. Two less obvious but far more important factors are the widespread availability of the equipment and infrastructure necessary to distribute and receive HDTV programming and the spectrum standards adopted by the relevant governmental entities. *Id.*

The role of broadcast standards presents a completely separate topic of analysis. See generally, *High Definition Television: The International HDTV Standard-Setting Process*

market penetration; however, one analyst notes that "HDTV sets, in current dollars, will cost no more than monochrome sets in 1947 or color sets in 1954."⁵⁰ Moreover, "as we proceed down the learning curve, the price of sets will fall to a model increment over conventional receivers of the same picture size."⁵¹ Indeed, a study commissioned by the Department of Commerce projects that over ninety percent of U.S. households will purchase an HDTV receiver within twenty years after introduction of the product.⁵² Similar studies by the American Electronics Association and the Electronic Industries Association support this estimate.⁵³ Based on these estimates and projections, it seems quite likely that HDTV will create a strong household demand and will eventually replace the modern color television set as the receiver of choice. As discussed in the introduction to this Note, the potential value of the entire HDTV market is immense.⁵⁴ In attaching a dollar value specifically to the household market for HDTV, the Commerce Department study analyzed two different diffusion scenarios. The first scenario, premised on "sluggish" diffusion, projects a total market value of between \$1 and \$5 billion within fifteen years after introduction.⁵⁵ The second scenario, premised on "rapid" diffusion, projects a cumulative value of \$25 to \$51 billion over the same fifteen-year period.⁵⁶ Assuming "rapid" diffusion⁵⁷ and accepting the midpoint of the high and low estimates, the Commerce Department expects the cumulative value of the household market to exceed \$100 billion within twenty years after intro-

and the Role of International Standards on U.S. Competitiveness: Hearing Before the Subcomm. on Int'l Scientific Cooperation of the House Comm. on Science, Space, and Technology, 101st Cong., 1st Sess. 33 (1989); Schreiber, *supra* note 21, *reprinted at* S3481. There is no technical necessity of using any given standard, but receivers must be manufactured to meet whatever standard is chosen. Professor Schreiber of the Massachusetts Institute of Technology argues that historically these standards have been used to control markets. *Id.* at S3485. The Europeans, for example, have been able to retain much more of their domestic television industry than has the U.S. largely because of their choice of broadcast standards. *Id.* The Japanese advocate global adoption of their NHK system for use in HDTVs. *Id.* at S3484. Professor Schreiber contends that "while a U.S.-generated standard would not guarantee U.S. participation [in the HDTV market], a Japanese standard would make it harder for American companies to have any market share at all." *Id.* at S3485.

50. Schreiber, *supra* note 21, *reprinted at* S3484.

51. *Id.* Professor Schreiber expressly conditions this prediction on the adoption of appropriate broadcast standards. *Id.* at S3486 n.5.

52. DARBY ASSOC., ECONOMIC POTENTIAL OF ADVANCED TELEVISION PRODUCTS (Apr. 1988), *cited in* NTIA REPORT, *supra* note 22, at 10, 11, *reprinted at* 64, 65. The Darby report developed a model using the growth histories of other consumer electronics such as color televisions, home computers, satellite receiving antennae, stereo audio systems, and very large-screen, projection television receivers. *Id.*

53. *Id.* at 10, *reprinted at* 63.

54. *See supra* notes 3-5 and accompanying text.

55. NTIA REPORT, *supra* note 22, at 11, *reprinted at* 65.

56. The Commerce Department's assumption of the "rapid diffusion" scenario follows from its conclusion regarding market penetration, *supra* note 52 and accompanying text, and is supported by various other projections, *supra* notes 49-53 and accompanying text.

57. NTIA REPORT, *supra* note 22, at 11, *reprinted at* 65-66.

duction with annual sales within the same period exceeding \$15 billion.⁵⁸

B. Other Benefits of High Definition Technology to the Electronics Industry

Focusing on household consumption alone grossly underestimates the full potential of the HDTV market.⁵⁹ As Dr. Barry Whalen of MCC⁶⁰ argues, “[t]he view of high definition systems merely as passive receptors that will give consumers a better picture on their television sets is much too limiting—high definition systems represent key, generic technology.”⁶¹ Many non-entertainment products require the use of video images of extremely high resolution, clarity, and fidelity.⁶² These are precisely the qualities HDTV offers. Thus, HDTV has vast potential downstream application in computers, satellite photography, remote sensing and monitoring, command and control displays, surveillance and security, and medical diagnostics and imaging.⁶³ While there are no estimates of the dollar value of high definition technology in non-entertainment applications, such applications clearly represent a substantial additional market which must be included when projecting the true value of HDTV.

As HDTV technology improves the quality and capability of various downstream products, demand for those products will increase.⁶⁴ As product demand increases, demand for components will increase as well.⁶⁵ Because HDTV, like many electronic products, is semiconductor

58. *Id.* at 11, *reprinted at* 66. One element of this immense household market is the new economic value arising out of existing film production libraries. “[A]n entire new generation of video cassettes are likely to be created from the existing movie library in the new [HDTV] format . . .” *Id.* at n.7.

59. See Schreiber, *supra* note 21, *reprinted at* S3484.

60. Microelectronics and Computer Technology Corp.

61. *Markey Comm. Hearings II, supra* note 7, at 18. Dr. Whalen used the term “systems” rather than “television” to better express the full breadth and scope of the technological advancements high definition imaging offers. He proposes to expand the view of this technology to “include advanced software programming, transmission systems, receiver and processor architecture, and digital imaging technology.” *Id.*

62. NTIA REPORT, *supra* note 22, at 6, *reprinted at* 60.

63. *Id.* For a graphic depiction of the potential downstream applications of HDTV technology, see *id.* (chart). Dr. Whalen suggested the following visualization: We must think of the doctor viewing images of the brain to understand the effects of a head injury; we must think of the aircraft designer being able to visually represent how a change to a wing or flap design will effect the aerodynamic properties of an airplane; we must think of the officers aboard a carrier having realistic and reliable information with which to make better decisions while in battle.

Markey Comm. Hearings II, supra note 7, at 18. Recent events in the Persian Gulf further underscore the HDTV potential.

64. Cohen, *The Consequences of Failing to Develop a Strong HDTV Industry in the United States, reprinted in* 135 CONG. REC. S3481, S3482 (daily ed. April 6, 1989) (Economic Policy Institute Briefing Paper, appended to statement of Sen. Heinz).

65. *Id.*

intensive,⁶⁶ the demand for semiconductors should rise sharply as high definition technology spreads through the electronics industry.⁶⁷ This increased demand would yield a significant competitive advantage to firms which produce semiconductors for HDTV and similar products.⁶⁸ Thus, as high definition technology spreads throughout the electronics industry, the entire industry will benefit.

The electronics industry plays an important role in the national economy.⁶⁹ It employs more people than any other manufacturing industry in the U.S..⁷⁰ Unfortunately, "American companies have withdrawn little by little from [this] market leaving [the country] with virtually no presence in this booming field."⁷¹ Electronics imports constitute an increasingly larger fraction of the U.S. trade deficit,⁷² clearly evincing American industry's retreat. It is against this background that the full import of high definition technology begins to emerge. A general rise in demand throughout the industry, spurred by the widespread use of high definition technology, would likely precipitate a concomitant increase in both profitability and domestic employment.⁷³ Conversely, failure to develop a strong HDTV industry could result in a \$225 billion trade deficit in electronics alone by 2010 and a loss of more than two million

66. NTIA REPORT, *supra* note 22, at 7, *reprinted at* 51; *see also* Cohen, *supra* note 64, at S3462 (noting the increased use of semiconductors necessitated by the incorporation of HDTV technology into products such as personal computers).

Semiconductors are essential to the production of a vast multitude of products ranging from industrial robots and computers to video games and VCRs. Beyond the role of necessary components in other products, semiconductors also serve as a "major source of innovation in products and processes throughout the economy." EIA Report, *supra* note 8, at 25-26.

67. *See* NTIA REPORT, *supra* note 22, at 7, 15-17, *reprinted at* 61, 69-71; Cohen, *supra* note 64, at S3482. The importance of high definition technology to the semiconductor industry cannot be overstated.

The ability and interest of U.S.-based semiconductor firms to service markets for consumer-related semiconductors [has] virtually disappeared. By the mid-1980s, only six percent of the semiconductor production in the United States went to consumer applications, whereas in Japan, 40 percent did. In dollar terms, this meant that Japan was producing 7.2 billion consumer chips in 1987 while the U.S. produced only 0.9 billion. The corresponding figure for Europe was around four billion.

EIA REPORT, *supra* note 8, at 31. "Because HDTV requires extremely complex circuitry, production of sophisticated chips will generate massive revenues for the semiconductor industry." 135 CONG. REC. E996 (daily ed. Mar. 23, 1989) (statement of Rep. Brown).

68. NTIA REPORT, *supra* note 22, at 7, *reprinted at* 61.

69. 135 CONG. REC. H731 (daily ed. Mar. 21, 1989) (statement of Rep. Mineta).

70. *Markey Comm. Hearings II*, *supra* note 7, at 34 (testimony of Dr. Noyce).

71. *See* 135 CONG. REC. H730 (daily ed. Mar. 21, 1989) (statement of Rep. Boehlert).

72. *Id.*

73. *Id.* at H731 (statement of Rep. Mineta). *See generally* DARBY ASSOC., ECONOMIC POTENTIAL OF ADVANCED TELEVISION PRODUCTS (Apr. 1988), *reprinted in High Definition Television: Hearings Before the Subcomm. on Telecommunications and Fin. of the House Comm. on Energy and Commerce*, 101st Cong., 1st Sess. 62, 94-97 (1989) [hereinafter *Markey Comm. Hearings III*].

jobs per year.⁷⁴

III. Actual and Perceived Barriers to American Industry's Entry into the HDTV Market

Many barriers, both real and perceived, stand between American firms and the emerging HDTV market. Two such barriers, according to the domestic electronics industry, are the relatively high research, development, plant, and equipment costs;⁷⁵ and the extent to which foreign competition is bolstered by large-scale government support.⁷⁶ Industry leaders argue that the only way to overcome these obstacles is through joint production of HDTV receivers.⁷⁷ The industry further contends that American antitrust laws are overly restrictive and thus inhibit joint production.⁷⁸ Accordingly, the best way to foster American entry into the HDTV market is to relax the antitrust laws to allow joint production and marketing of HDTV systems. This Section will briefly examine these alleged barriers to determine their validity, while Section IV will specifically analyze whether antitrust law in fact bars domestic entry into the HDTV market.⁷⁹

A. High Costs and High Risks

The precise costs and risks associated with American industry's entry into the HDTV market are unknown. The AEA claims that the investment in factories and equipment necessary to begin HDTV production would cost in excess of \$1 billion.⁸⁰ However, this figure is deceptive. An AEA proposal to Congress apparently contemplated a consortium, consisting of over thirty firms including such corporate giants as AT&T, IBM, and Motorola,⁸¹ joining forces to construct a nationwide system of manufacturing facilities.⁸² Notwithstanding consistent claims that no firm could enter the market alone,⁸³ the potential cost to a single firm

74. Cohen, *supra* note 64, at S3482.

75. *U.S. Funds*, *supra* note 2, at D6, cols. 4-5. The American Electronics Association claims that the factories and equipment necessary to start an HDTV operation would cost in excess of \$1 billion and would thus be beyond the resources of any single manufacturer. *Id.*

76. *Id.* at col. 5.

77. In fact, the electronics industry would apparently prefer federal loans and subsidies. *See id.* This solution is, however, beyond the scope of this Note.

78. *See, e.g., Antitrust Easing*, *supra* note 5, at D7, col. 2.

79. Whether or not joint production is, in fact, necessary to American industry's entry into the HDTV market, the antitrust laws are properly viewed as a third barrier because they may increase the risk facing a potential market entrant.

80. *U.S. Funds*, *supra* note 2, at D6, cols. 4-5. The AEA also calls for an additional \$300 million to be channeled into the industry's research effort through DARPA. *Id.* at col. 5.

81. *See id.* at D1, col. 6.

82. *See id.* at D6, col. 5.

83. *See, e.g., Broad Support*, *supra* note 10, at D3, col. 5 (statement of Albert Brashear, Motorola, Inc.).

entering the market has yet to be determined.⁸⁴ Until a realistic cost figure for a single firm's entry into the market is advanced, it is virtually impossible to assess the industry's claim that the risk of entry is too high for one firm to bear. To encourage antitrust revisions and other governmental assistance, industry spokesmen confidently project a multi-billion dollar market,⁸⁵ capable of both revitalizing the domestic electronics industry and reasserting America's competitive might in the global economy. How a market so immense and so promising could be so risky as to utterly preclude single-firm entry remains a mystery. Congress has apparently failed to consider the implications of the data put before it by the American electronics industry. In essence, a great deal of ink has been spilled in newspapers, in industry reports, and by the Congressional Printing Office, apparently without adequate attention to the validity of the claims raised by the electronics industry.

The high cost claimed by the electronics industry has certainly not hampered all domestic efforts to enter the HDTV market—research and development seems to be proceeding apace. In April of 1989, for example, scientists at the David Sarnoff Research Center demonstrated the first broadcast system for HDTV that is compatible with existing sets.⁸⁶ While this by no means indicates that the domestic industry is ready to compete in the global marketplace, it will allow the FCC to develop domestic broadcast standards without waiting for overseas development.⁸⁷ Moreover, while the major American manufacturers may have all but conceded the HDTV receiver market to Japan and the EEC, small domestic manufacturers are challenging foreign firms in developing the flat-screen technology essential to HDTV production.⁸⁸ Indeed, "almost all of the basic technology relating to high-definition television has come from U.S. laboratories."⁸⁹ On the software side, Eastman Kodak has developed "a converter that can transform conventional motion picture film into high-definition video."⁹⁰ Thus, while American

84. Perhaps it is significant that Zenith, the only major domestic producer of television sets, did not contribute to the funding of the AEA's report, although a Zenith spokesman later said that the report "appear[ed] consistent with our position." *U.S. Funds*, *supra* note 2, at D6, col. 5.

85. See, e.g., *Kodak Enters HDTV Market with Converter for Movie Film*, Wall St. J., Oct. 23, 1989, at B4, col. 4 [hereinafter *Kodak Enters HDTV Market*].

86. *Antitrust Easing*, *supra* note 5, at D7, col. 2.

87. *Id.*

88. *Small Firms Challenge Japanese Grip on HDTV*, Wall St. J., Oct. 23, 1989, at B1, col. 3.

89. *Id.* at col. 4. Peter Brody, President of Magnascreen Corp. and formerly of Westinghouse, says that Japanese firms sit poised to snatch HDTV technology as fast as American labs develop it, thus suggesting that the most fundamental problem may be one of adequately protecting intellectual property.

90. *Kodak Enters HDTV Market*, *supra* note 85, at B4, col. 3. Ironically, Japan's first major move into the software side of the HDTV industry was Sony's purchase of Columbia Pictures for \$3.5 billion. See 135 CONG. REC. S15896 (date?) (testimony of Daniel Burstein before the Senate Banking Committee) (appended to statement of Sen. Wirth).

industry may face high barriers to entering the HDTV market, those barriers are apparently not prohibitive in every segment of the market.

Before any change in the antitrust laws should be considered, much more concrete information about entry costs is needed to make rational legislative decisions. At a minimum, precise estimates of such costs should be demanded. Furthermore, these estimates should be broken down into the different submarkets of HDTV. For example, the software market, the receiver market, and the flat-screen display market may each present distinct barriers and opportunities, to say nothing of the many non-entertainment markets. Such additional information should also be sought from more objective sources than the electronics industry. A staggering amount of information supporting the absolute need for joint production ventures in order to enter the HDTV market derives from industry sources.⁹¹ Obviously, the electronics industry is in the best position to ascertain the precise costs of entry, and the figures claimed by the industry may well be accurate. But to change the antitrust laws based solely upon the claims of an industry with an economic interest in changing these laws is foolish.

B. Foreign Competition, Industrial Policy, and Antitrust Law

Unlike the costs of entry, foreign government support of HDTV producers is well documented.⁹² For example, the Commerce Department estimates that the Japanese have spent over \$1 billion on HDTV research alone.⁹³ Industry analysts argue that, because of this type of governmental support of foreign industry, "it is no longer logical for [the U.S. federal government] to avoid supporting those industries that are critical to the future growth and development of [its] industrial base."⁹⁴ As Professor Schreiber of MIT points out, "in Japan and Europe, where most [HDTV] development has been done, no one expects industry to do it by itself. In both places, government has taken an active role in planning, coordinating, and funding research and development activities in government and private laboratories."⁹⁵

91. Even the Commerce Department's study relies to a large measure on statistics provided by the Electronics Industries Association of Japan.

92. See, e.g., *U.S. Funds*, *supra* note 2, at D6, col. 5; see also NTIA REPORT, *supra* note 22, at 18, reprinted at (\$54 million in aid allocated by MITI to research and develop flat-screen display panels).

One significant disadvantage American firms face in virtually every industry is the grossly one-sided trade barriers erected around such potentially lucrative markets as Japan and Korea. See, e.g., Farnsworth, *supra* note 3, at E4, col. 6. In terms of flat-screen display panels, domestic manufacturers face tariffs of up to 15% when selling panels in Japan, whereas Japanese panels enter the U.S. duty-free. *Small Firms Challenge Japanese Grip on HDTV*, Wall St. J., Oct. 23, 1989, at B2, col. 4.

93. *Small Firms Challenge Japanese Grip on HDTV*, *supra* note 92, at B1, col. 4.

94. Cohen, *supra* note 64, at S3483.

95. Schreiber, *supra* note 21, reprinted at S3484. But see *Science Comm. Hearings*, *supra* note 22, at 24 (statement of Rep. Boehlert) (The Japanese government funds only 2% of industrial research, while the U.S. government funds 35% of domestic industrial research).

Clearly then, American industry does face the prospect of entering a market dominated by what amount to government-industry partnerships.⁹⁶

That foreign industry enjoys governmental support, however, does not necessarily translate into an increased entry barrier for American firms. Initially, the bulk of foreign governmental assistance occurs at the research and development stage of a product's evolution. Both the Commerce Department's estimate and Professor Schreiber's observation refer to governmental support of research and development, not of production. Once a Japanese product reaches the market there is little evidence of further government funding. Moreover, just as the Japanese have benefitted from American technological advances, American firms can benefit from Japanese innovations. As Japanese electronics firms put high definition receivers on the market, they simultaneously put technological information on the market.⁹⁷ Japan's investment in its own industry's research and development efforts may therefore decrease the costs American industries face in similar endeavors.⁹⁸ The American electronics industry has yet to establish that Japan's investment in HDTV research and development actually raises barriers to the HDTV market for American firms. Clearly, government support minimizes the possibility of undercapitalization. But, until a definite link is established between Japan's aid to its industry and American firms' inability to enter the HDTV market, it would be inappropriate to conclude that such foreign assistance warrants a relaxation of American antitrust law.

Finally, the American electronics industry argues that foreign antitrust laws permit joint HDTV-production ventures among foreign firms, while American antitrust law prohibits such ventures. As a result, the electronics industry contends that American firms suffer an unnecessary comparative disadvantage. In fact, foreign laws differ dramatically in this respect. The EEC, for example, completely protects from antitrust scrutiny joint production ventures involving firms holding market shares

96. One additional factor which the American electronics industry points to as a justification for government assistance is the amount of private capital foreign firms have invested in HDTV. "Japan's electronic industry has spent more than \$500 million on HDTV and has just announced a program to spend another \$700 million just on the development of advanced HDTV screens." 135 CONG. REC. H730 (daily ed. Mar. 21, 1989) (statement of Rep. Mineta). Similarly, "European consortia are spending \$100 to \$200 million a year on their development programs." *Id.* One possible conclusion to be drawn from these figures is that, contrary to what the domestic industry claims, the factories and equipment necessary to enter the HDTV market do not cost \$1 billion. A second possible conclusion is that foreign firms are willing to risk private capital for research and development to reap the promised rewards notwithstanding the availability of government funds. Put another way, in the words of Lawrence A. Kudlow, Chief Economist at Bear, Stearn & Company, "An industry which cannot get normal private bank loans and credits is not worthy of government assistance." *U.S. Funds, supra* note 2, at D6, col. 4.

97. See E. SULLIVAN & H. HOVENKAMP, *ANTITRUST LAW, POLICY AND PROCEDURE* 295 (1989).

98. *Id.*

of twenty percent or less.⁹⁹ Conversely, Japan rarely permits joint production ventures at all.¹⁰⁰ As for U.S. antitrust law, the prospect of treble damages arguably discourages joint manufacturing generally.¹⁰¹ For example, to a businessperson contemplating entering a production consortium, perceived antitrust vulnerability can be as real a barrier to entry as actual antitrust vulnerability. The validity of this argument is the focus of Section IV.

IV. Must American Antitrust Law Be Relaxed to Foster American Industry's Entry into the HDTV Market?

This Section argues that existing antitrust laws would not prohibit joint HDTV production ventures and therefore concludes that no change in current antitrust law is necessary.

The joint venture is perhaps one of the most nebulous forms of business association. *Black's Law Dictionary* defines a joint venture as a "one-time grouping of two or more persons in a business undertaking . . . [that] does not entail a continuing relationship among the parties."¹⁰² Such a broad definition includes everything from cartels to trade associations to partial mergers.¹⁰³ In essence, it covers "all of antitrust except, perhaps, some single firm attempts to monopolize or monopolizing conduct."¹⁰⁴ Likewise, a joint venture can be formed for virtually any purpose: to buy, sell, research, explore, promote, license, regulate, produce. Labelling a business arrangement a "joint venture" does little to further antitrust analysis.¹⁰⁵

99. *Heritage Foundation Study*, *supra* note 45, at 212.

100. *Rill Asserts Administration Is Still Working on Joint Production Ventures*, 57 *Antitrust & Trade Reg. Rep. (BNA)* 370 (Sept. 21, 1989) (testimony of Claude E. Barfield, Dir. of Science and Technology Policy Studies, American Enterprise Institute). Japan does allow joint research and development, but joint research and development and joint production are distinct situations which should not be confused. *Id.*

101. *Antitrust Easing*, *supra* note 5, D7, col. 2.

102. BLACK'S LAW DICTIONARY 753 (5th ed. 1979). "The very definition of a joint venture is unclear. More than a simple contract yet less than a merger . . . the key element is continuity . . . [of the] association of two or more persons to carry on as co-owners an enterprise for one or a series of transactions." Brodley, *The Legal Status of Joint Ventures under the Antitrust Laws: A Summary Assessment*, 21 *ANTITRUST BULL.* 453, 454 (1976) (quoting J. TAUBMAN, *THE JOINT VENTURE AND TAX CLASSIFICATION* 83 (1957)). For a more precise functional definition of a joint venture, see Brodley, *Joint Ventures and Antitrust Policy*, 95 *HARV. L. REV.* 1523, 1526 (1982) [hereinafter Brodley, *Joint Ventures*].

103. See Pitofsky, *Joint Ventures under the Antitrust Laws: Some Reflections on the Significance of Penn-Olin*, 82 *HARV. L. REV.* 1007, 1007 (1969) [hereinafter Pitofsky, *Joint Ventures*].

104. Pitofsky, *A Framework for Antitrust Analysis of Joint Ventures*, 74 *GEO. L.J.* 1605, 1605 (1986) [hereinafter Pitofsky, *Framework*]; see also P. AREEDA, *ANTITRUST ANALYSIS* ¶ 361, at 360 (2d ed. 1974) (joint venture is an expansive notion). See generally Note, *A Definitional Test for Joint Ventures*, 31 *WAYNE L. REV.* 1251 (1985) (reviewing judicial attempts at defining a joint venture and proposing a definition applicable to the antitrust context).

105. See Brodley, *Joint Ventures*, *supra* note 102, at 1524; Pitofsky, *Framework*, *supra* note 104, at 1605-06. "[P]rocompetitive and anticompetitive possibilities are so

The joint venture contemplated by the American electronics industry would entail the cooperative production of high definition products by a large number of companies,¹⁰⁶ perhaps even a nationwide consortium. The industry argues, however, that the possibility of suffering an award of treble damages under the antitrust laws¹⁰⁷ inhibits the formation of such a joint venture.¹⁰⁸ Firms generally contend that antitrust law does not clearly delineate between permissible and prohibited cooperation.¹⁰⁹ Even if the law does not prohibit joint production ventures, when industry executives perceive a threat from the antitrust laws, they tend to avoid such cooperative endeavors at the margin. For example, extensive testimony before Congress antecedent to passage of the National Cooperative Research Act of 1984¹¹⁰ indicated that industry avoided joint research and development ventures due to the uncertainty of antitrust laws.¹¹¹ One industry spokesman noted that "even among those who believe that our antitrust laws do not—or at least under reasonable application should not—inhibit cooperation in R&D, there is general agreement that many business executives perceive such laws as significant barriers to joint research. They thus shy away from such activities"¹¹² Thus, uncertainty surrounding the application of the antitrust laws may inhibit legitimate undertakings.¹¹³

great that attaching the label 'joint venture' . . . tells one virtually nothing useful about the likely legality of an arrangement under the antitrust laws." *Id.*; see also Note, *supra* note 104, at 1251 (addressing precisely this problem).

106. *U.S. Funds*, *supra* note 2, at D6, col. 5.

107. Section 4 of the Clayton Act, 15 U.S.C. § 15 (1988), provides that any damages awarded under any of the antitrust laws of the U.S. shall be trebled.

108. *Antitrust Easing*, *supra* note 5, at D7, col. 2.

109. "[A] common assertion of American business for many years has been that '[u]ncertainty as to what is and what is not legal often forces business decision-makers to turn down profitable ventures in order to avoid costly and time-consuming court determinations.'" Crane, *supra* note 37, at 411 (quoting *The Present State, Current Theory and Trends of International Antitrust Laws: Hearings Before the Subcomm. on Antitrust and Monopoly of the Senate Comm. of the Judiciary*, 93rd Cong., 1st & 2d Sess. 1418 (1973 & 1974)). Indeed, as one industry spokesman noted, "[i]n dealing with legal questions, business executives can live with almost any arbitrary rule—they won't like it, but they can adjust to it. But they abhor uncertainty." *Id.* at n. 29 (quoting *Japanese Technological Advances and Possible United States Responses Using Research Joint Ventures: Hearings Before the Subcomm. on Investigations and Oversight and the Subcomm. on Science, Research and Technology of the House Comm. on Science and Technology*, 98th Cong., 1st Sess. 191, 264 (1983) (statement of Steven Olson, Assoc. Gen. Counsel of Control Data Corp.)); see also Brodley, *Joint Ventures*, *supra* note 102, at 1534 (courts and commentators have yet to articulate a single approach to the analysis of joint ventures under the antitrust laws).

110. 15 U.S.C. §§ 4301-05 (1989).

111. See generally Comment, *The National Cooperative Research Act of 1984: A New Antitrust Regime for Joint Research and Development Ventures*, 1 HI-TECH L.J. 133, 140-41 (1986) (Act designed to assuage industry's concern regarding uncertainty of antitrust laws application to joint research and development ventures).

112. S. REP. NO. 427, 98th Cong., 2d Sess. 4, reprinted in 1984 U.S. CODE CONG. & ADMIN. NEWS 3105, 3106-07 (statement of Steven Olson, Assoc. Gen. Counsel of Control Data Corp.).

113. Pitofsky, *Framework*, *supra* note 104, at 1605.

The electronics industry's apprehension regarding the application of the antitrust laws to joint HDTV production ventures raises several distinct questions. If the industry's perception is valid and the antitrust laws do substantially inhibit cooperative HDTV production, do the laws need to be changed to encourage joint production or is HDTV joint production sufficiently anticompetitive to justify maintaining the status quo? Conversely, if the industry's perception is invalid and the antitrust laws do not inhibit cooperative production of HDTV and related products, then the question becomes whether the law should be changed to alter perceptions or perceptions should be changed while retaining existing law.

A. The Sherman Act

Section one of the Sherman Antitrust Act¹¹⁴ prohibits "[e]very contract, combination . . . or conspiracy, in restraint of trade or commerce"¹¹⁵ Because virtually every commercial contract can be read to restrain trade or commerce,¹¹⁶ the Supreme Court has construed the Act to prohibit only those restraints which by their nature, purpose, or effect are unreasonably anticompetitive.¹¹⁷ Courts thus apply a rule of reason to determine whether a business arrangement violates the Sherman Act.¹¹⁸ As a combination within the scope of the Sherman Act,¹¹⁹ joint ventures have generally been accorded rule-of-reason treatment

114. 15 U.S.C. §§ 1-11 (1989).

115. *Id.* at § 1.

116. *See* *Chicago Bd. of Trade v. United States*, 246 U.S. 231, 238 (1918); *United States v. Topco Assoc.*, 405 U.S. 596, 606 (1972).

117. *Standard Oil Co. v. United States*, 221 U.S. 1, 60 (1911); *United States v. American Tobacco Co.*, 221 U.S. 106, 109, 115-16 (1911).

118. *Topco*, 405 U.S. at 606-07 (citing *Standard Oil*, 221 U.S. at 1). A rule of reason analysis minimally includes "consideration of the facts peculiar to the business in which the restraint is applied, the nature of the restraint and its effects, and the history of the restraint, and the reasons for its adoption." *Id.* at 607 (citing *Chicago Bd. of Trade*, 246 U.S. at 238).

In contrast to the rule of reason, certain restraints have been found so inherently anticompetitive as to be unreasonable per se. *Northern Pac. Ry. Co. v. United States*, 356 U.S. 1, 5 (1958). Among those practices which have been held unreasonable per se are: horizontal price fixing, *United States v. Socony-Vacuum Oil Co.*, 310 U.S. 150 (1940); tying arrangements, *International Salt Co. v. United States*, 332 U.S. 392 (1947); concerted refusal to deal, *Klor's, Inc. v. Broadway-Hale Stores, Inc.*, 359 U.S. 207 (1959); horizontal market allocations, *White Motor Co. v. United States*, 372 U.S. 253 (1963); and retail price maintenance, *Albrecht v. Herald Co.*, 390 U.S. 145 (1968). Although the rationale behind some of these categories is questionable, plaintiffs strive to characterize challenged restraints as deserving of per se treatment. Once a plaintiff proves a per se violation, any pro-competitive elements of the arrangement become irrelevant. Conversely, defendants struggle to characterize the challenged restraints as not deserving per se treatment, thus enabling them to proffer redeeming pro-competitive virtues.

119. *Pan Am. World Airways v. United States*, 371 U.S. 296 (1963). "Joint ventures may be combinations in violation of the antitrust laws." *Id.* at 307 (citing *Timken Roller Bearing Co. v. United States*, 341 U.S. 593, 598 (1951)).

when attacked under section one.¹²⁰ Because most joint ventures offer substantial pro-competitive benefits as well as anticompetitive risks, analysis under the rule of reason is appropriate.¹²¹

On the pro-competitive side, a joint production venture, like a merger, may create substantial efficiencies of integration without eliminating the parent firms.¹²² The venture may achieve economies of scale or synergies resulting from the joint use of complementary resources.¹²³ It may also provide "capital formation advantages that result from risk sharing."¹²⁴ And, of course, the distribution of risks among parent firms may facilitate entry into new markets that would be prohibitively risky absent a joint venture.¹²⁵

Obviously, not every joint venture will produce pro-competitive benefits. Indeed, given the relatively lenient treatment joint ventures receive under the antitrust laws,¹²⁶ the "joint venture" label may mask otherwise clearly anticompetitive behavior.¹²⁷ Consequently, anticompetitive risks must be weighed against pro-competitive advantages.

120. "[C]ombinations such as mergers, joint ventures, and various vertical agreements, hold the promise of increasing a firm's efficiency and enabling it to compete more effectively. Accordingly, such combinations are judged under a rule of reason . . ." *Copperweld Corp. v. Independence Tube Corp.*, 467 U.S. 752, 768 (1984) (dicta); see also *NCAA v. Board of Regents of Univ. of Okla.*, 468 U.S. 85 (1984); *Broadcast Music, Inc. v. CBS*, 441 U.S. 1 (1979); *Appalachian Coals, Inc. v. United States*, 288 U.S. 344 (1933); *Chicago Bd. of Trade v. United States*, 246 U.S. 231 (1918); Pitofsky, *Joint Ventures*, *supra* note 103, at 1045; Note, *supra* note 104, at 1253-55; Brodley, *Joint Ventures*, *supra* note 102, at 1535-36. Even though a joint venture may be accorded rule of reason treatment, the activities of the venture may nevertheless be subjected to per se treatment. See, e.g., *Arizona v. Maricopa Medical Soc'y*, 457 U.S. 332 (1982) (maximum price fixing scheme promulgated by joint venture held unlawful per se); *Timken*, 341 U.S. at 593 (global market allocation by joint venture held unlawful per se).

121. Brodley, *Joint Ventures*, *supra* note 102, at 1525.

122. Pitofsky, *Framework*, *supra* note 104, at 1606; see also Brodley, *Joint Ventures*, *supra* note 102, at 1528 (a joint venture can achieve many of the advantages of a merger with fewer disadvantages).

123. Pitofsky, *Framework*, *supra* note 104, at 1615; see, e.g., *Northwest Wholesale Stationers, Inc. v. Pacific Stationery & Printing Co.*, 472 U.S. 284, 295 (1985) (wholesale purchasing cooperative permitted economies of scale in both purchase and warehousing of wholesale supplies).

124. Pitofsky, *Framework*, *supra* note 104, at 1615.

125. *Id.* at 1606-07; Note, *supra* note 104, at 1256. "[A]t least in some market settings, joint ventures serve useful purposes by permitting independent enterprises to combine capital, tangible assets, know-how, sales organizations, and the like in order to surmount the difficulties of entry and expansion in new markets." Pitofsky, *Joint Ventures*, *supra* note 103, at 1008; see also *In re Brunswick Corp.*, 94 F.T.C. 1174 (1979), *aff'd and modified on other grounds sub nom.*, *Yamaha Motor Co. v. FTC*, 657 F.2d 971 (8th Cir. 1981), *cert. denied*, 456 U.S. 915 (1982). "The combined capital, assets, or know-how of two companies may facilitate entry into new markets and thereby enhance competition, or may create efficiencies of new productive capacity unachievable by either alone." *Brunswick*, 94 F.T.C. at 1265.

126. Note, *supra* note 104, at 1253-54.

127. See, e.g., *Timken*, 341 U.S. at 593.

Nor do we find any support in reason or authority for the proposition that agreements between legally separate persons and companies to suppress competition among themselves and others can be justified by labeling the

On the anticompetitive side, joint ventures increase the risk of collusion,¹²⁸ the loss of potential competition,¹²⁹ and market exclusion.¹³⁰ Parent firms may tend to "stifle what would otherwise be independent future growth of the joint venture or one of the parents."¹³¹ The joint venture may also confer significant market power on the parents.¹³² And, of course, the joint venture almost necessarily eliminates competition between the parent firms "with respect to the activities for which the joint venture was organized."¹³³ Thus, if society is to realize the enhanced competition joint ventures may provide, courts must carefully

project a "joint venture." Perhaps every agreement and combination to restrain trade could be so labeled.

Id. at 598.

128. E. SULLIVAN & H. HOVENKAMP, *supra* note 97, at 294; *see, e.g.*, *United States v. Minnesota Mining & Mfg. Co.*, 92 F. Supp. 947 (D. Mass. 1950) (joint venture used to exchange information). Professor Pitofsky refers to this risk of collusion as "spillover" effects with respect to competition among the parent firms. Pitofsky, *Framework*, *supra* note 104, at 1608. Professor Brodley argues that the risk of collusion poses the greatest anticompetitive danger "because a joint venture can provide a singularly effective vehicle for cartelization." Brodley, *Joint Ventures*, *supra* note 102, at 1530.

129. E. SULLIVAN & H. HOVENKAMP, *supra* note 97, at 294; *see also* *United States v. Penn-Olin Co.*, 378 U.S. 158 (1964) (joint venture challenged under section 7 of Clayton Act). *See generally* Pitofsky, *Joint Ventures*, *supra* note 103 (discussing the doctrine of potential competition in light of *Penn-Olin*).

130. E. SULLIVAN & H. HOVENKAMP, *supra* note 97, at 294; *see also* *Timken*, 341 U.S. 593 (joint venture used to divide world markets); *United States v. Imperial Chem. Indus.*, 100 F. Supp. 504 (S.D.N.Y. 1951) (joint venture used to divide world markets).

131. Pitofsky, *Framework*, *supra* note 104, at 1608. The Supreme Court has observed that "[r]ealistically . . . parents would not compete with their progeny." *Penn-Olin*, 378 U.S. at 168. Moreover, Professor Pitofsky points out that "the parents usually will agree, expressly or implicitly, not to compete directly with their joint venture, and each parent has the capacity to block the joint venture from expanding into fields in which the parent earns profits." Pitofsky, *Framework*, *supra* note 104, at 1610; *see, e.g.*, *United States v. Pan Am. World Airways*, 193 F. Supp. 18 (S.D.N.Y. 1961) (parent's suppression of competition from joint subsidiary held unlawful under Section 2 of the Sherman Act), *rev'd on other grounds*, 371 U.S. 296 (1963).

Several commentators and courts have focused on the issue of parental control. Professor Pitofsky, for example, argues that the degree of integration should be a key determinant of a joint venture's reasonableness. The Eighth Circuit, in *Yamaha Motor Co. v. FTC*, 657 F.2d 657, 980 (8th Cir. 1981), required that a joint venture "bring to the market an additional independent decisionmaker . . ." Another commentator argues that "[s]ociety and commerce are not benefited if the same economic efficiencies could have been obtained without taking [the] risks associated with joint ventures." Note, *supra* note 104, at 1260.

132. *See, e.g.*, *Associated Press v. United States*, 326 U.S. 1 (1945); *see generally* Pitofsky, *Framework*, *supra* note 104, at 1607, 1612-13 (discussing rights of access to joint ventures possessing substantial market power). The risk of the creation of market power through the formation of a joint venture is clearly similar to the risk of market exclusion. *See supra* note 130 and accompanying text. In both cases, non-participating firms are placed at an unfair competitive disadvantage. Notwithstanding this similarity, the two risks are distinct in that the former risk fails to address those situations in which a parent firm already has substantial market power. *See, e.g.*, *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263 (2d Cir. 1979), *cert. denied*, 444 U.S. 1093 (1980).

133. Pitofsky, *Joint Ventures*, *supra* note 103, at 1012.

scrutinize challenged ventures to ensure that pro-competitive benefits outweigh anticompetitive risks.

An industrywide HDTV consortium, as envisioned by the American electronics industry, would likely withstand scrutiny under the Sherman Act. The advantages and disadvantages specific to such a venture indicate that on balance it likely would prove to be pro-competitive, and hence, a reasonable restraint on competition.

1. Potential Pro-Competitive Benefits of an Industrywide HDTV Consortium

A consortium formed to produce an American HDTV system for the global market would offer most of the pro-competitive benefits mentioned above.¹³⁴ The integrative efficiencies available through careful selection of venture partners could be substantial. For example in February of 1989, AT&T and Zenith launched a joint venture to produce HDTV technologies.¹³⁵ This particular venture benefits from the complementary “technological prowess” of both parent firms.¹³⁶ AT&T provides telecommunications and microelectronics experience,¹³⁷ while Zenith presumably contributes the experience in and basic facilities for television manufacturing. Although either parent, given adequate resources, could have purchased or developed expertise similar to that of the other parent,¹³⁸ the joint venture form eliminates the costs and business disadvantages of such acquisitions. Thus by combining complementary expertise, the AT&T/Zenith joint venture is better able to overcome the technological barriers to entering the HDTV market than either parent independently. Because HDTV draws on a variety of distinct technologies, i.e., semiconductors and flat-screen displays, and has many potential applications,¹³⁹ the possible integrative efficiencies available through an industrywide consortium are substantial.

134. “Full integration, and hence the *highest level of likely efficiencies*, usually occurs where two companies agree to create a completely new facility for the manufacture and sale of a product.” Pitofsky, *Framework*, *supra* note 104, at 1619 (emphasis added).

135. *Markey Comm. Hearings II*, *supra* note 7, at 13 (statement of Mr. Buchbaum, Exec. V.P., AT&T Bell Laboratories).

136. *See id.* at 15.

137. *See id.* Because AT&T expects HDTV receivers to be “interconnected to the national telecommunications network the way telephones, data terminals and computers are interconnected today,” the AT&T/Zenith joint venture should be well poised to take advantage of two distinct aspects of the HDTV market, the receiver market and any networking applications. *See id.* at 14.

138. *See Pitofsky, Joint Ventures*, *supra* note 103, at 1014-15.

While the[] advantages [of complimentary resources] can be obtained by a single company at a price—funds can be acquired in the capital market, patent licenses or distribution contracts can be negotiated, unpatented “knowledge” can be purchased outright or hired, a secure source of raw materials can be obtained through long-term contracts—the joint venture format may still be preferred.

Id.

139. *See supra* notes 6 & 63 and accompanying text.

An industrywide consortium formed for the production of HDTVs would also offer significant capital formation and risk sharing advantages.¹⁴⁰ From the perspective of private lenders and the equity markets, the broader expertise and capital base of a multi-firm joint venture would likely make the joint venture a more attractive investment than a single company's individual attempt to enter the HDTV market.¹⁴¹ From the perspective of the parent firms, a joint venture would spread risk over several firms and thus make entry much more likely.¹⁴² Consider, for example, the joint licensing ventures challenged in *Broadcast Music, Inc. v. Columbia Broadcasting System*.¹⁴³ Individual holders of copyrighted musical compositions formed Broadcast Music (BMI) and the American Society of Composers, Authors, and Publishers (ASCAP) as clearinghouses for licensing compositions. Combined, the two agencies held nonexclusive licenses to virtually every domestic copyrighted composition.¹⁴⁴ A firm, such as CBS, would purchase a blanket license, usually from BMI and ASCAP, which authorized using any composition in the licensing agency's repertoire. In explaining the barriers facing individual copyright holders, the Supreme Court observed that "those who performed copyrighted music for profit were so numerous and widespread, and most performances so fleeting, that as a practical matter it was impossible for the many individual copyright owners to negotiate with and license the users and to detect unauthorized users."¹⁴⁵ The Court found that the joint licensing ventures substantially lowered sales and enforcement costs and thus created efficiencies completely unavailable to the individual copyright holders.¹⁴⁶ The proposed HDTV consortium could produce benefits comparable to the blanket licensing agreements in *BMI*. If the entry costs are as substantial as claimed, an industrywide consortium formed to produce high definition technolo-

140. "Joint ventures are particularly appropriate vehicles to undertake projects involving high risks, technological uncertainty, and high information costs." Crane, *supra* note 37, at 415; see also Brodley, *Joint Ventures*, *supra* note 102, at 1529.

141. See Pitofsky, *Joint Ventures*, *supra* note 103, at 1014. "To take an extreme example, market prospects for a new service or product may be so forbidding that no single enterprise could secure financing for . . . independent entry." *Id.*

142. See, e.g., *id.* Although the question of whether a firm would have entered the market absent a joint venture involves complicated issues of proof, see generally *id.* at 1024-28, as a "practical business matter a joint venture may on occasion facilitate market entry." *Id.* at 1015. In the Sherman Act context, therefore, to the extent the availability of the joint venture form enhances the possibility of entry by several firms not currently in the market, the enhanced prospect of entry should always be considered a pro-competitive benefit of the venture. Conversely, however, any concomitant decrease in possible independent entry is an anticompetitive disadvantage. In the Clayton Act context, the possibility of independent entry takes on a much larger role.

143. 441 U.S. 1 (1979).

144. *Id.* at 5.

145. *Id.* at 4-5.

146. *Id.* at 21. On remand, the Second Circuit held that the blanket licensing ventures did not create an unreasonable restraint because the individual transaction costs were too high for individual licensing to work competitively. *CBS, Inc. v. American Soc'y of Composers, Authors & Publishers*, 620 F.2d 930 (2d Cir. 1980), *cert. denied*, 450 U.S. 970 (1981).

gies would likely spur entry that might be impossible for any single firm acting individually.

Whether an industrywide HDTV consortium would yield economies of scale is uncertain. HDTV manufacturing will almost certainly be technology intensive.¹⁴⁷ The optimal productive capacity of a manufacturing facility capable of meeting the technological needs of HDTV production, however, presents an empirical question far beyond the scope of this Note. Nevertheless, the electronics industry has argued that economies of scale enjoyed by foreign firms are one of the barriers to entry to the HDTV market.¹⁴⁸ If this is true and the average cost of one large foreign firm is lower than the average cost of numerous small domestic firms, then an industrywide HDTV consortium would yield another pro-competitive advantage by achieving economies of scale unavailable to the individual parent firms.

2. *Anticompetitive Risks of an Industrywide HDTV Consortium*

The anticompetitive aspects of joint HDTV production appear minimal.¹⁴⁹ First, the risk of collusion between parent firms entering the HDTV market is limited. As a matter of economic logic, collusion between parent firms can restrain trade only when those firms are in the same market.¹⁵⁰ Where parent firms are not in competition, there is no motivation to collude. Because Zenith is the only significant domestic television manufacturer, firms participating in an HDTV consortium are likely to come from many different segments of the electronics industry.¹⁵¹

When competing firms enter the same joint venture, the risk of collusion increases.¹⁵² It would be naive to suggest that joint ventures have not been used to mask collusive behavior.¹⁵³ However, as Professor Pitofsky argues "there are so many opportunities for competitor collaboration already available to business managers so inclined that it seems unwarranted to give much weight to the additional opportunity supplied by regular meetings among representatives of the parent com-

147. See, e.g., NTIA REPORT, *supra* note 22, at 15-16, reprinted at 32-33 (comparing the memory capability of an HDTV receiver to that of a one megabyte Apple Macintosh computer).

148. Significantly, the industry has not claimed that economies of scale are the primary barrier. Indeed, it is the industrial policies of Japan and the EEC that the industry points to as the most significant barriers. See *supra* notes 92-95 and accompanying text.

149. Loss of potential competition is primarily a concern of the Clayton Act and therefore will be discussed in subsection 2, *infra*, rather than in this subsection which focuses on the Sherman Act.

150. See Pitofsky, *Framework*, *supra* note 104, at 1609-10 (providing examples of collusion within an industry between competing joint venture parents).

151. The AT&T/Zenith joint venture stands as a good example. As firms in two completely unrelated product markets, the prospect of collusion between AT&T and Zenith are minimal. See *supra* notes 135-38 and accompanying text.

152. See generally Brodley, *Joint Ventures*, *supra* note 102, at 1530-31 (discussing mechanics of collusion).

153. See, e.g., *supra* note 130.

panies in connection with the joint venture's business affairs."¹⁵⁴ Moreover, any risk of collusion should be discounted by its possible effect on competition. Given the weak competitive position of the domestic electronics industry relative to foreign producers,¹⁵⁵ successful collusion between parent firms in competition with one another is unlikely.¹⁵⁶ In summary, any increased risk of collusion through participation in a joint HDTV production venture poses little danger to competition and, standing alone, does not outweigh the substantial pro-competitive benefits of such a venture.

Similarly, an industrywide HDTV consortium would present little risk of excluding competitors from the HDTV market. Excluding a competitor from the market generally requires market power.¹⁵⁷ A domestic HDTV consortium would have little market power given existing foreign competition. Even if such a consortium did develop substantial market power, current antitrust jurisprudence provides rights of access to exclusive joint ventures under certain circumstances.¹⁵⁸ Additionally, should parent firms use their position in the HDTV joint venture to exclude competitors in their primary markets,¹⁵⁹ current antitrust law is

154. Pitofsky, *Joint Ventures*, *supra* note 103, at 1033.

155. *See supra* note 2 and accompanying text.

156. It is important to recall that participation in a joint venture does not preclude an independent challenge to collusive behavior between parent firms. For example, should IBM and Apple conspire through their participation in a joint HDTV venture to raise the price of computer software, their collusion would be subject to the most rigorous *per se* analysis, *United States v. Soconoy-Vacuum Oil Co.*, 310 U.S. 150, 224 n.59 (1940), notwithstanding the fact that the joint venture would enjoy the benefit of the more forgiving rule-of-reason treatment.

157. *See* Brodley, *Joint Ventures*, *supra* note 102, at 1532. Consider the development joint venture challenged in *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263 (2d Cir. 1979), *cert. denied*, 444 U.S. 1093 (1980). Kodak held a monopoly in the photographic film market but not in the camera market. Sylvania approached Kodak with an offer to jointly develop a revolutionary "magicube" flash device. As a condition to Kodak's participation in the joint venture, Kodak prohibited Sylvania from disclosing the "magicube" technology to other camera manufacturers, *Berkey*, 603 F.2d at 300 (General Electric later approached Kodak with proposals for a similar new flash), thus effectively excluding them from the market for cameras capable of using the "magicube" flash device. The jury found this exclusionary behavior an unreasonable restraint of trade in violation of the Sherman Act. *Berkey Photo, Inc. v. Eastman Kodak Co.*, 457 F. Supp. 404, 410 (S.D.N.Y. 1978).

158. *See* *Associated Press v. United States*, 326 U.S. 1 (1945); *United States v. Terminal R.R. Ass'n of St. Louis*, 224 U.S. 383 (1912). "[A] joint venture cannot exclude competitors from participation in the venture itself, nor deny access to the output of the venture if such participation or access is critical to the survival of those competitors." *Crane*, *supra* note 37, at 421; *see also* *United States v. American Tel. & Tel. Co.*, 524 F. Supp. 1336, 1352-53 (D.D.C. 1981) (firm controlling critical facility or "strategic bottleneck" must provide access to competitors on "fair and reasonable terms"); *cf.* *Interface Group v. Massachusetts Port Auth.*, 816 F.2d 9 (1st Cir. 1987) (limiting right of access to an essential facility to actual and potential competitors). *See generally* E. SULLIVAN & H. HOVENKAMP, *supra* note 97, at 590-92. *But see id.* at 340-41 (suggesting that joint ventures producing new products should not be treated as a group boycott).

159. An example of such a practice is predatory pricing.

equipped to handle such anticompetitive behavior¹⁶⁰ without affecting the legality of the joint venture.¹⁶¹ Thus, the possibility of HDTV joint ventures excluding competition from the HDTV market does not raise a significant anticompetitive barrier.

Firms participating in an industrywide HDTV consortium are also unlikely to "stifle what would otherwise be independent future growth of the joint venture or one of the parents"¹⁶² because of the structure of the television industry and the probable composition of a joint HDTV production venture. First, a parent firm competing in a market other than television would not be threatened by a highly competitive HDTV consortium.¹⁶³ On the contrary, because HDTV promises to be a technology driver, parent firms are more likely to push the consortium to maximum competitiveness. By stifling the competitive growth of the joint venture, the non-television parent risks losing both consortium profits and the technological innovations flowing from the venture. Indeed, these innovations are a primary justification for forming an HDTV consortium in the first place.¹⁶⁴ It is simply economically illogical for a parent firm, not threatened by the competitive posture of the consortium, to hamper the flow of innovative technologies which may give it a competitive advantage in its own markets. Second, even if a parent firm was in direct competition with the HDTV consortium, i.e., a firm that manufactures television sets, it is doubtful that such a firm could seriously stifle the competitive posture of the consortium. In an industrywide venture, the threatened parent is but one voice out of many. Thus, the pro-competitive interests of non-television parent firms would mitigate the anticompetitive interests of a threatened parent. Furthermore, should one parent succeed in stifling the growth of the joint venture "there is adequate authority under the antitrust laws to deal effectively with the problem."¹⁶⁵ The likely composition of an industrywide HDTV consortium, however, stands as the most significant protection against a parent firm stifling the joint venture's competitive abilities.

In summary, the Sherman Act does not present a major threat to the formation of an industrywide HDTV consortium. Under this Act courts typically apply the rule of reason standard to joint ventures and balance the pro-competitive benefits of the joint venture against the anticompetitive risks. On balance, an industrywide HDTV consortium would offer substantial pro-competitive benefits, while the anticompetitive risks are minimal. Included among the likely benefits are significant integrative efficiencies derived from the combination of parent firms'

160. See 15 U.S.C. §§ 1, 2, & 45 (1988).

161. See Brodley, *Joint Ventures*, *supra* note 102, at 1534.

162. Pitofsky, *Framework*, *supra* note 104, at 1607.

163. "[T]he probability of . . . stifling . . . will tend almost to disappear as that relationship approaches being purely conglomerate." Pitofsky, *Joint Ventures*, *supra* note 103, at 1037-38.

164. See *supra* notes 61-63 and accompanying text.

165. Pitofsky, *Joint Ventures*, *supra* note 103, at 1038.

complementary resources, capital formation and risk sharing advantages which lower entry barriers and thus foster additional competition and economies of scale. Furthermore, the likely composition of an HDTV consortium, the structure of the American television industry, and the nature of the HDTV market mitigate any anticompetitive risks of collusion, market exclusion, or stifling of joint venture or parent firm growth. As long as parent firms avoid patently anticompetitive activities such as price fixing, market allocation, and boycotting, a joint HDTV production venture is unlikely to violate the Sherman Act.

B. The Clayton Act

While the Sherman Act attacks anticompetitive behavior after the fact, Congress intended the Clayton Act to arrest anticompetitive behavior in its incipiency.¹⁶⁶ Section 7 of the Clayton Act outlaws corporate amalgamations of any kind¹⁶⁷ which have a tendency "substantially to lessen competition" in any "line of commerce" in any "section of the country."¹⁶⁸ Because a joint venture is in effect a quasi-merger,¹⁶⁹ it is subject to independent challenge under the Clayton Act.¹⁷⁰ While the same general considerations apply in both merger and joint venture cases,¹⁷¹ a joint venture is not controlled by precisely the same criteria as a merger or conglomeration.¹⁷² "The merger eliminates one of the participating corporations from the market while a joint venture creates a new competitive force therein."¹⁷³ Nevertheless, a joint venture which withstands scrutiny under the Sherman Act may be invalid under the Clayton Act.¹⁷⁴

166. *United States v. General Dynamics Corp.*, 258 F. Supp. 36, 60 (S.D.N.Y. 1966).

167. *United States v. Philadelphia Nat'l Bank*, 374 U.S. 321, 342 (1963); *see also* *Brown Shoe Co. v. United States*, 370 U.S. 294 (1962) (fountainhead of most analysis under Section 7).

168. 15 U.S.C. § 18 (1988).

169. Pitofsky, *Joint Ventures*, *supra* note 103, at 1007.

170. *United States v. Penn-Olin Chem. Co.*, 378 U.S. 158 (1964) (first direct challenge of a joint venture under Section 7 to reach the Supreme Court). "The joint venture, like the 'merger' and the 'conglomeration,' often creates anticompetitive dangers. It is the chosen competitive instrument of two or more corporations previously acting independently and usually competitive with one another." *Id.* at 169.

Penn-Olin involved a joint venture formed by Pennsalt Chemicals and the Olin Mathieson Company to produce and market sodium chlorate in the Southeastern United States. Pennsalt manufactured sodium chlorate in other parts of the U.S., while Olin Mathieson produced a number of chemicals other than sodium chlorate. *Id.* at 162-63.

171. *Id.* at 170.

172. *Id.*

173. *Id.*

174. *See, e.g., id.* at 161. Prior to the Supreme Court's decision in *Penn-Olin*, joint ventures challenged under the Sherman Act were seldom found unlawful, even if they amounted to outright price fixing or market allocation cartels. Pitofsky, *Joint Ventures*, *supra* note 103, at 1018.

1. *Area of Effective Competition*

To invalidate a joint venture challenged under the Clayton Act, a plaintiff must demonstrate “a ‘tendency’ toward monopoly or the ‘reasonable likelihood’ of a substantial lessening of competition in the relevant market”¹⁷⁵ The first step in analyzing a joint venture’s legality is to ascertain its relevant product and geographic markets.¹⁷⁶ A product market defined solely as HDTV receivers would be unreasonably narrow.¹⁷⁷ Indeed, because the “outer boundaries of a product market are determined by the reasonable interchangeability of use . . . between the product itself and substitutes for it,”¹⁷⁸ the relevant product market should minimally include all television receivers.¹⁷⁹ To fully evaluate the competitive effects of an industrywide HDTV consortium,¹⁸⁰ the relevant product market should be broader and include the full spectrum of high definition applications ranging from HDTV receivers to medical imaging equipment.¹⁸¹ While high definition technology may have many end uses, “high definition” represents but one industry, with one group of competitors.¹⁸² As long as the primary technology remains the same, the particular product mix at any given time is of little consequence for antitrust purposes.¹⁸³ As to the relevant geographic market,

175. *Penn-Olin*, 378 U.S. at 171. An actual restraint on competition need not be proved. *Id.*

176. *See id.* at 161-62; *see also* *Brown Shoe Co. v. United States*, 370 U.S. 294, 324 (1962) (proper definition of the market is a “necessary predicate” to examination of competition affected by a horizontal merger).

177. “[I]t is improper ‘to require that products be fungible to be considered in the relevant market.’” *United States v. Continental Can Co.*, 378 U.S. 441, 449 (1964) (quoting *United States v. DuPont*, 351 U.S. 377, 394 (1956)). Consider, for example, staples and paper clips. Both products serve the same purpose—they bind papers. Obviously, however, they are not completely interchangeable. Each product will have particular end uses that cannot be satisfied by the other. Papers needing permanent binding might require staples, while paper clips would be inappropriate. Nevertheless, staples and paper clips would quite likely be considered together as one product market because they are substantially competitive across a broad spectrum of uses.

178. *Brown Shoe*, 370 U.S. at 325.

179. HDTV is, after all, projected to ultimately replace the present generation of television receivers. *See supra* note 52 and accompanying text.

180. *See Continental Can*, 378 U.S. at 457.

181. *See supra* notes 6, 59-63 and accompanying text.

182. Even if the HDTV industry eventually split into distinct manufacturing groups (for example, HDTV manufacturers, flat-screen display manufacturers, and medical imaging equipment manufacturers), the capacity of manufacturers of one type of high definition product would have to be factored into the product market definition of other types of high definition products. For example, a sufficient increase in the quantity demanded of HDTV receivers could encourage manufacturers of medical imaging equipment to retool their factories to produce HDTVs.

183. “Where the area of effective competition cuts across industry lines, so must the relevant line of commerce; otherwise an adequate determination of the merger’s true impact cannot be made.” *Continental Can*, 378 U.S. at 457.

To illustrate the importance of proper market definition, consider the Supreme Court’s decision in *Continental Can*. This case involved, among other things, a dispute over the proper product market definition in a merger between a manufacturer of metal cans and a manufacturer of glass containers. The government argued for ten

high definition systems would most likely be sold on a global market. However, because the antitrust laws are concerned with competition within the U.S., limiting the relevant geographic market to the U.S. seems appropriate.¹⁸⁴ In summary, to fully examine the competitive effects of an industrywide HDTV consortium the relevant product market should include high definition systems generally, and the relevant geographic market should encompass the entire U.S.¹⁸⁵

2. Substantial Lessening of Competition

Once the area of effective competition is defined,¹⁸⁶ the impact of the joint venture on this area of competition must be analyzed as of the time of suit.¹⁸⁷ The formation of a joint venture may lessen competition in the relevant market in two ways. First, the venture may eliminate the possibility of any of the parent firms independently entering the market, thus affecting actual competition.¹⁸⁸ Second, the venture may eliminate the competitive effect of a parent firm sitting on the edge of the market poised and ready to enter the market, thus affecting potential competition.¹⁸⁹ The practical result of these considerations is that a court will

separate product market definitions including the can industry, the glass container industry, and a number of end-use product markets, i.e., beer containers. The Supreme Court, however, held that because of the "existence of a large area of effective competition between the makers of cans and the makers of glass containers," the appropriate product market included both metal and glass containers. *Id.* at 456. The Court held, "complete inter-industry competitive overlap need not be shown." *Id.* at 457. In both the metal and the glass container industries, the form of the final product could differ, while serving essentially the same purpose—packaging. Likewise, in the HDTV industry the particular end use may be radically different, while serving essentially the same purpose—ultra-high resolution graphic imaging. See *supra* note 62 and accompanying text.

184. See, e.g., *Continental Can*, 378 U.S. at 447 (geographic market consisted of the entire U.S.).

185. Whatever the product or geographic market, foreign competition must be factored in. Some courts have been reluctant to consider foreign competition, but such reluctance in the market for high definition systems would be utterly unsupported in light of the overwhelming multinational flavor of the electronics industry in general and the television industry in particular.

186. *Brown Shoe*, 370 U.S. at 294 (discussing the area of effective competition).

187. *Penn-Olin*, 378 U.S. at 168; *United States v. E. I. DuPont de Nemours & Co.*, 353 U.S. 586, 607 (1957); see also *Continental Can*, 378 U.S. at 458 (merger must be viewed functionally in context of a particular market, including its structure, history, and probable future).

188. Pitofsky, *Joint Ventures*, *supra* note 103, at 1013; Pitofsky, *Framework*, *supra* note 104, at 1609.

189. "The existence of an aggressive, well equipped and well financed corporation engaged in the same or related lines of commerce waiting anxiously to enter an oligopolistic market would be an substantial incentive to competition which cannot be underestimated." *Penn-Olin*, 378 U.S. at 174; see also *FTC v. Proctor & Gamble Co.*, 386 U.S. 568 (1967) (merger between Proctor & Gamble and Clorox Chemicals Co. invalidated because Proctor & Gamble's presence on the edge of the liquid bleach industry exerted a significant competitive influence on the market). See generally *Tenneco, Inc. v. FTC*, 689 F.2d 346 (2d Cir. 1982) (discussing two types of potential competition).

As to whether a parent firm would have entered the joint venture's market absent the joint venture, some courts look to that firm's subjective intentions, see, e.g., *Ten-*

determine the legality of a joint venture by looking at the relevant market and speculating as to whether the market is less competitive with the joint venture than it would have been without the joint venture.

In an effort to simplify this speculative task, Professor Pitofsky argues that where no parent firm competes in or is a likely entrant into the market served by the joint venture, the venture should be treated as legal per se.¹⁹⁰ In such a case, the joint venture definitionally "adds a new competitor and productive capacity where none otherwise would have existed."¹⁹¹ If HDTV production is, in fact, too costly for domestic firms to enter the market individually, then according to Professor Pitofsky's reasoning, an industrywide consortium should be legal.¹⁹² There are, however, at least two practical problems with this analysis. First, courts have not adopted this approach, and second, it is uncertain whether entry is too costly for individual firms. Nevertheless, if the prohibitive cost claims of the electronics industry are valid,¹⁹³ then even under the Clayton Act's vague standard it is almost inconceivable that a joint HDTV production venture would be judged to substantially lessen competition in the HDTV market—for precisely the reason Professor Pitofsky stated.

Even assuming that at least one firm in an industrywide HDTV consortium would have entered the HDTV market on its own, a successful challenge to the consortium is unlikely. Since the Supreme Court's decision in *Penn-Olin*,¹⁹⁴ courts have severely restricted the availability of the potential competition doctrine.¹⁹⁵ To show a substantial lessening of competition¹⁹⁶ in the joint venture's market, a plaintiff must prove that (1) the market in which the joint venture operates is non-competitive,¹⁹⁷ (2) other competitors in the market would have perceived the nonentering parent as a likely potential entrant,¹⁹⁸ (3) the nonentering parent would have been one of the most likely entrants into the relevant mar-

neco, Inc. v. FTC, 689 F.2d 346 (2d Cir. 1982); and B.A.T. Indus., 104 F.T.C. 852, 927-28 (1984), while other courts examine the issue from an objective perspective, i.e., what would a reasonable firm have done under the circumstances. See *In re Grand Union Co.*, 102 F.T.C. 812, 1057-60 (1983); and *In re Heublein, Inc.*, 96 F.T.C. 385, 585-86 (1980). See generally Pitofsky, *Joint Ventures*, *supra* note 103 (arguing in favor of an objective approach).

190. Pitofsky, *Framework*, *supra* note 104, at 1609.

191. *Id.*

192. In such a case there would be no loss of actual or potential competition.

193. See *supra* note 10 and accompanying text.

194. 378 U.S. 158 (1964).

195. See Pitofsky, *Framework*, *supra* note 104, at 1609.

196. Whether one firm entered the joint venture's market on its own or as a parent of the joint venture, there would be but one actual competitor. As such, the only way in which competition could be lessened is through the elimination of the potential competition from firms which decline to enter the market because of the joint venture.

197. Pitofsky, *Framework*, *supra* note 104, at 1609. If the market were competitive, then the presence or absence of one additional firm would be irrelevant.

198. *Id.* If the firms in the relevant market were unaware of a potential competitor's threat, then the competitor would have no impact on the market participants' behavior.

ket,¹⁹⁹ and (4) the nonentering parent would likely have had a substantial pro-competitive effect on the market had it not entered the joint venture.²⁰⁰ If the structure of the emerging HDTV market mirrors the current television market, then it will likely be highly competitive.²⁰¹ As a result, any challenge to a domestic HDTV joint venture would likely fail on the potential competition test's first prong. Assuming that the market was not competitive, a plaintiff would likely falter on the second requirement. The American electronics industry's loud proclamation of its inability to individually enter the HDTV market²⁰² lessens the probability that Japanese or European manufacturers would perceive American firms as potential market entrants. The current status of the domestic television industry²⁰³ reinforces this point. Thus, challenging a joint venture under Section 7 of the Clayton Act would present a daunting task for an aggrieved plaintiff.²⁰⁴

Assuming the claims of the American electronics industry are valid,²⁰⁵ Section 7 of the Clayton Act poses no real danger to U.S. firms hoping to enter the HDTV market through the formation of an industry-wide HDTV consortium. Section 7 only prohibits joint ventures which tend substantially to lessen competition. The nonexistence of a domestic high definition industry and the competitive nature of the emerging high definition market create a virtual safe harbor from Clayton Act liability. Domestic firms that have sufficient resources to enter the HDTV market on their own, but are unwilling to enter the market except in the form of a joint venture, face greater liability risks under Section 7. Even these risks, however, are minimal.

199. *Id.* If several firms on the edge of the relevant market had a pro-competitive effect on the market, the presence or absence of any one firm on the edge would make little difference to the market participants' behavior. As fewer and fewer firms remain on the edge of the market, this requirement becomes progressively easier for a plaintiff to prove.

200. *Id.* at 1610 (citing *United States v. Marine Bancorporation*, 418 U.S. 602 (1974)).

201. See Schreiber, *supra* note 21, reprinted at S3484.

202. See *id.*

203. See *id.*

204. Even if a loss of potential competition were likely to result from the formation of a joint venture, Professor Brodley argues that there may be no net competitive loss.

The joint venture as a new economic actor provides an actual addition to competition that must be weighed against anticompetitive effects that are only probabilistic. Moreover, joint venture entry is immediate, whereas the hypothesized potential entry by parent firms may occur only after some delay. This factor defers and reduces the benefits of the new entry. It follows that potential competition injury alone will seldom make a joint venture competitively suspect

Brodley, *Joint Ventures*, *supra* note 102, at 1532 (citation omitted). See generally R. POSNER, *ANTITRUST LAW: AN ECONOMIC PERSPECTIVE* 113-17 (1976) (joint venture unlikely to cause significant loss of potential competition).

205. See *supra* note 10 and accompanying text.

Conclusion

High definition television represents an immense market in which the U.S. electronics industry should participate. The primary entry barrier, according to the electronics industry, is that no individual firm can afford the start-up costs. To overcome these prohibitive costs, the industry proposes to form a consortium to produce and market high definition systems. The U.S. electronics industry points to the industrial policies and antitrust laws of Japan and the EEC as additional evidence of the need for a joint venture approach in the U.S. The domestic electronics industry claims that these policies and laws allow foreign manufacturers to form precisely the type of cooperative endeavors necessary to enter the emerging HDTV market. Conversely, the industry complains that the antitrust laws of the U.S. prohibit the formation of an industrywide HDTV consortium. Accordingly, the industry contends that these laws must be relaxed, or the American electronics industry will simply be unable to enter the lucrative HDTV market, thus further eroding the declining competitive position of the U.S. in global markets.

A closer examination of U.S. antitrust law indicates that these laws are in actuality not a barrier to the formation of an industrywide HDTV joint venture. Under the rule of reason analysis, the pro-competitive aspects of an HDTV consortium substantially outweigh any anticompetitive risks. Therefore, such a venture would likely withstand a challenge under the Sherman Act. Similarly, assuming the claims of the electronics industry are valid, the formation of an industrywide consortium to produce high definition systems could not conceivably substantially lessen competition in the HDTV market. An HDTV consortium would therefore likely survive a challenge under the Clayton Act as well. In the final analysis, American antitrust laws present no real barrier to the formation of an industrywide HDTV joint venture. On the contrary, the antitrust laws were enacted to foster competition,²⁰⁶ and this goal fully accords with the American electronics industry's goal of entering the HDTV market through the formation of an industrywide HDTV consortium to produce high definition television and related products.

David R. Gibson

206. "[T]he freedom guaranteed each and every business, no matter how small, is the freedom to compete—to assert with vigor, imagination, devotion, and ingenuity whatever economic muscle it can muster." *United States v. Topco Assoc.*, 405 U.S. 596, 610 (1972); *see also United States v. Philadelphia Nat'l Bank*, 374 U.S. 321 (1963). "Congress determined to preserve our traditionally competitive economy." *Id.* at 371. As long as a joint venture furthers the aims of competition, then the antitrust laws pose no barrier to the formation of such a venture.

