AN ANTITRUST ANALYSIS OF JOINT RESEARCH AND DEVELOPMENT AGREEMENTS IN THE EUROPEAN ECONOMIC COMMUNITY AND THE UNITED STATES

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CONTENTS

I. INTRODUCTION ............................................. 45

II. RESEARCH & DEVELOPMENT ANTITRUST ANALYSIS
    GENERALLY .................................................. 46

III. EUROPEAN ECONOMIC COMMUNITY POSITION ............ 47
    A. E.E.C. Competition Law Generally .................... 49
    B. Individual Exemption Decisions ..................... 51
    C. Block Exemption ..................................... 56

IV. UNITED STATES LAW ....................................... 60
    A. Research Joint Venture Guidelines .................. 61
    B. National Cooperative Research Act of 1984 .......... 64

V. COMPARISON OF E.E.C. AND U.S. R & D ANTITRUST
    ANALYSIS .................................................. 68

VI. CONCLUSION ............................................... 70

I. INTRODUCTION

The purpose of this Article is to provide an overview of some of the more important aspects of the competition rules of the European Economic Community (E.E.C.) and the antitrust laws of the United States as they relate to joint research and development agreements. Due to the ever-changing character of such rules and laws, as well as their interpretation and application, this Article is not an exhaustive study of them or of their underlying policy considerations. Rather, this Article is meant to serve as a

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framework for review and discussion of competition rules and antitrust laws affecting joint research and development agreements, and to highlight similarities and distinctions between the approaches taken by the European Economic Community and the United States.

II. Research & Development Antitrust Analysis Generally

In modern economies, innovation is an important feature of productivity and competitiveness. Innovation requires research, experimentation, and the implementation of new ideas into marketable products, services, or technology. Thus, the ability of firms to engage in such research without fear of antitrust attack is essential to economic growth.¹

Research has been defined very broadly—from "pure" research into fundamental principles, to developmental research focusing on promotional differentiation of a product or marketing considerations.² The results of basic research are generally less predictable and involve more risk than does developmental research.³ Moreover, the results of basic research are less likely to be appropriable and thus are more likely to be widely diffused in the economy, with the possibility of their being the basis of further technological advancement and competitive opportunities for all market participants.⁴

Joint or cooperative research and development by firms, an association, or a joint venture is generally based on legitimate economic reasons, such as the large size or scope of a project, significant inherent risks, or the complementary nature of the cooperating enterprises.⁵ Even though legitimate economic reasons may justify joint research, antitrust issues can and oftentimes do arise; joint research may involve or create market-dominating technology, may be conducted by competitors or potential competitors, or may involve restrictive agreements concerning the use of the result of the research.⁶

The intensity of antitrust concerns toward joint research varies according to the particular arrangement between parties. Positive

³ Id.
⁴ Id.
⁵ Id.
⁶ Id.
factors to be considered include the elimination of wasteful and costly duplication; spreading of risk and avoidance of free-riding; wider dissemination of information; and economies of scale.\textsuperscript{7} In contrast, an arrangement invoking antitrust concern may include market exclusion, where indispensable inputs are made available only to the parties and not to outsiders; collusion to stifle innovation or to suppress competition; and restrictive agreements affecting price, production, or distribution.\textsuperscript{8}

"Pure" basic research, undertaken without ancillary restraints on the use of the end results, will generate less antitrust concern than will developmental or marketing research involving ancillary restraints. Between these two extremes is the "slippery slope" where antitrust analysis plays a significant role, necessitating difficult determinations as to the pro-competitive or anti-competitive effects of the agreement.

III. EUROPEAN ECONOMIC COMMUNITY POSITION

The European Economic Community has treated rather favorably, and in some cases has actually encouraged, joint research and development agreements. The tolerant E.E.C. position reflects two major policy considerations: (1) to encourage cooperation among small and medium-sized firms; and (2) to encourage the development of Community research capabilities to compete more effectively with non-Community firms.\textsuperscript{9} For example, the Commission of the European Community stated in 1982 that increased collaborative research and development was necessary to promote an indigenous European electronics industry.\textsuperscript{10}

The Commission's policy regarding joint research and development agreements was first expressed in the 1968 Notice on cooperation between enterprises,\textsuperscript{11} which encouraged certain research and development agreements. The Commission indicated that agreements for

\textsuperscript{7} B. Hawk, United States, Common Market and International Antitrust: A Comparative Guide 264 (1982).
\textsuperscript{8} Id.
the purpose of conducting joint research generally do not impair competition unless the enterprises are restricted in their own research activities, and the results of the joint research are not made available to all the participants in proportion to their participation.  

As a practical matter, however, the 1968 Notice is far more limited in its coverage than might appear. For instance, the Notice was intended to cover cooperation only between small and medium-sized enterprises; where large enterprises enter cooperation agreements the Notice is not necessarily applicable. In addition, the Notice requires that the sole object of a cooperation agreement between enterprises be research and development. This requirement eliminates agreements involving production or marketing of the results. Reservations might arise, however, even with regard to agreements that do not restrict use of these results, and even if the parties have not excluded the possibility of doing research individually, if they would not be expected to undertake such research independently because of the cost involved or because of lack of success in the past.

The Commission has subsequently announced its position toward joint research and development agreements in annual reports, individual decisions, and adoption in December 1984 of a block exemption for certain joint research and development agreements entered into after March 1, 1985. The block exemption also applies to agreements entered into before the March 1, 1985 effective date, assuming prior notification to the Commission.

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12 Id.
13 The Commission has relied on the 1968 Notice in apparently only one decision concerning joint research. The Eurogypsum decision was rendered soon after announcement of the Notice in 1968. Eurogypsum is a nonprofit association, with members from 16 different countries, of manufacturers of plaster and plaster products, designed to engage in joint research and to promote throughout Europe the development of the plaster and gypsum industry, as well as that of construction materials derived from those products. The Commission found that cooperation among the members in the joint financing and organization of technical and scientific research relating to the production and uses of plaster while disseminating the results obtained did not prevent, restrict, or distort competition. The Commission granted Eurogypsum a negative clearance, indicating it would not challenge the cooperation agreement under article 85(1). Eurogypsum, 11 O.J. EUR. COMM. (No. L 57) 9 (Feb. 27, 1968), COMMON MKT. REP. (CCH) ¶ 9220, reprinted in 1 EUROPEAN ECONOMIC COMMUNITY COMPETITION L. RPTR. [1962-70] 101 (I. Bael & J-F Bellis eds. 1981).
14 1968 Notice, supra note 11, § 1.
15 Id. § 11.
16 Opinion on the draft Commission Regulation concerning the application of Article 85(3) of the Treaty to categories of agreements relating to research and development, 27 O.J. EUR. COMM. (No. C 206) 34 (June 8, 1984).
A. E.E.C. Competition Law Generally

The rules of competition for the Community are set forth in articles 85 to 94 of the Treaty Establishing the European Economic Community.17 This discussion of the E.E.C. rules of competition will be limited to only those sections relevant to joint research and development agreements. Article 85(1) prohibits agreements and concerted practices which restrict or distort competition and which may affect trade between member states;18 under article 85(2) such agreements are void.19 Article 85(3), however, outlines certain circumstances in which the general prohibition may be declared inapplicable.20

The prohibition of restrictive agreements in article 85(1) and the statement that such agreements are void in article 85(2) are directly applicable to member states; no prior decision by a court or other authority is required for their application by national courts.21 Not only can the Commission’s administrative proceedings be used to address infringements of article 85, but companies and private individuals can also bring civil actions before the courts.22 The Commission’s task is to apply the ban on restrictive practices


18 Article 85(1) provides that “the following are prohibited as incompatible with the common market: all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market.” Id. at 47-48.

19 Id. at 48.

20 Article 85(3) provides that the Commission may exempt agreements, decisions, associations of enterprises, and concerted practices falling within article 85(1) when the following four conditions are met:

(i) the agreement contributes to improving the production or distribution of goods or to promoting technical or economic progress;

(ii) consumers receive a fair share of the resulting benefits;

(iii) the restrictions are indispensable to the attainment of the benefits;

and

(iv) the parties are not afforded the possibility of eliminating competition in respect of a substantial part of the products in question.

Id. at 48. Regulation No. 17 outlines the procedure by which the Commission may grant block exemptions in individual cases. Council Reg. (EEC) No. 17 of February 6, 1962, 5 O.J. EUR. COMM. (No. 13) pt. 1., at 204/62 (Feb. 21, 1962), COMMON MKT. REP. (CCH) ¶ 2401. The Council may also authorize block exemptions based upon an appraisal of existing facts. Id.


contained in article 85(1) through its decisions in individual cases; 
to express its views on the application of the ban in cases referred 
to the Court of Justice for preliminary rulings under article 177 
of the E.E.C. Treaty; and to grant exemptions under article 85(3).

To qualify for exemption from article 85(1), an agreement must 
evidence appreciable objective advantages outweighing anticompe-
titive disadvantages. That the agreement is beneficial to the firms 
concerned will not suffice; rather, the positive advantages must be 
assessed as benefitting the economy as a whole. Objective advan-
tages which may compensate for the reduction in competition 
caused by cooperation agreements include reduced manufacturing 
or distribution costs, better utilization of production plants, in-
creased productivity, improved product quality, and an improved 
distribution system.

The "fair share of the resulting benefit" for consumers, as re-
quired by article 85(3)(ii), does not always signify advantages for 
the end-user. The "consumer" may be an industrial or trading 
company, to which "benefit" can be practically any advantage. In 
addition to price reductions, benefits may include quality improve-
ments; an expanded selection of goods; more regular deliveries; 
smoothly operating customer, guarantee, and repair services; and 
improved security of supplies.

The indispensibility test of article 85(3)(iii) signifies that even 
where a restriction of competition is acceptable when viewed as 
part of the entire economic process, the principle of proportion-
ality cannot be disregarded. As a result, the object, substance, and 
effect of the distortion or restriction of competition must not ex-
tend beyond that required by reasonable economic standards to 
attain the benefit sought. Thus, an agreement cannot be ex-
empted under article 85(3) if it enables the parties to eliminate 
competition with respect to a substantial part of the products in 
question. Failure to qualify for exemption may be based on the 
parties' control of the market, the number and position of other 
competitors, the structure of market demand, and the exclusion of 
potential competition.

23 Id.
24 W. Schlieder & H. Schroter, supra note 9, at 9.
25 Id.
26 See Consten and Grundig v. Comm'n, supra note 22; see also Beecham/Parke, 
Davis, 22 O.J. EUR. COMM. (No. L 70) 11, 18-19 (Mar. 21, 1979), COMMON Mkt. 
REP. (CCH) ¶ 10,121.
27 W. Schlieder & H. Schroter, supra note 9, at 10.
B. Individual Exemption Decisions

In assessing the legality of joint research and development agreements, individual exemption decisions under article 85(3) provide an excellent vehicle to review the Commission's evolving position regarding joint research and development ventures. In ACEC-Berliet, the Commission declared an agreement for technical cooperation and joint research and development exempt from article 85(1). The agreement utilized joint research arrangements to design and market a new type of bus with an electrical transmission system. The agreement permitted manufacture and distribution on a large scale. The agreement also provided for cooperation in the form of specialization and division of labor in research as well as manufacture. The joint research produced a new bus with several mechanical and design advantages; as a result, the agreement aided production and promoted technical progress.

The fact that two enterprises jointly conducted the research, each specializing in one aspect of the project, increased the chances that a usable product would result. This likelihood in turn improved the favorable aspects of the agreement. Because there was no restriction, such as a territorial restriction, on the distribution of motor coaches equipped with the electric transmissions, the enterprises had no opportunity to eliminate competition for a substantial part of the product involved.

Similarly, in Henkel/Colgate, a German firm and a United States firm agreed to coordinate development projects involving certain laundry soaps and detergents. The firms established a research company in Switzerland to coordinate and oversee their research projects. According to their agreement, the results of the joint research would be equally available to both partners and could be used commercially by them without restriction. Each would be entitled to obtain a license for all countries in exchange for a royalty not exceeding two percent.

The Commission approved the agreement because it considered the joint research arrangement very likely to promote technical and eco-

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28 ACEC-Berliet, 11 O.J. EUR. COMM. (No. L 201) 7 (Aug. 12, 1968), COMMON Mkt. REP. (CCH) ¶ 9251.
29 Id.
30 Henkel/Colgate, 15 O.J. EUR. COMM. (No. L 14) 14 (Jan. 18, 1972), COMMON Mkt. REP. (CCH) ¶ 9491.
31 Id.
32 Id. at 15.
nomic progress, and to benefit consumers by increasing competition. Further, the agreement was not accompanied by any restriction on production and distribution. Finally, the Commission found that the risk to competition would be minimal because the firms, although substantial, were not dominant in the relevant market. As a condition to granting its approval, however, the Commission imposed restrictions ensuring that the results of the joint research would not lead to future restrictive practices.

Henkel/Colgate concerned joint activity limited to the research and development stage, where the risks of collusion in downstream markets are less serious and often nonexistent. But as seen in ACEC-Berliet and as demonstrated below, the Commission on several occasions has also exempted arrangements where collaboration extended beyond research and development and into the production and distribution phases.

For example, in Sopelem/Vickers, an agreement between a French company, a British company, and their joint research and development subsidiary was authorized and granted an exemption from article 85(1). The agreement involved technical cooperation, the exchange of research and development expertise, and the “common distribution” of microscopy products. Specifically, the agreement was intended to permit the parties to develop technically advanced and sophisticated microscopes. The parties also sought to standardize their components so as to make them interchangeable and to rationalize their production so as to avoid duplication.

The Commission found that the agreement violated article 85(1) because the parties were competitors, and because their technical cooperation and common distribution through the subsidiary restricted competition in the microscope market. The Commission granted an exemption, however, because of the resulting technical progress and improvements which would benefit consumers. Although the parties enjoyed large positions in their home markets, they had only

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33 Id. at 17-18.
34 Id. at 18.
36 Id. at 53.
37 Id. at 47.
38 Id. at 47-48.
39 Id. at 50.
40 Id.
three percent of the Community market and faced substantial and increasing competition from German and Japanese manufacturers.

Of particular interest is the Commission's reasoning that the entire arrangement would facilitate penetration into areas of the Community into which neither party had gone before. This emphasis on integration of member states' markets is one of the distinguishing characteristics between Community treatment of joint research and development agreements and United States treatment. This emphasis prompts the Commission to be more disposed toward joint research and development ventures across member state lines, even at the risk of eliminating potential competition.\(^\text{41}\)

A further example of the Commission exempting agreements involving collaboration beyond the research and development phase into production and distribution is found in *Beecham/Parke, Davis*.\(^\text{42}\) Two companies agreed in 1973 to conduct research jointly into the long-term treatment of the impairment of blood circulation.\(^\text{43}\) The research was undertaken individually, but with an agreement to exchange results. According to the agreement, exchanges were to continue for the duration of the research and development phase, and in relation to improvements on any product, for the first ten years of its sale. The research stage was terminated in May 1978, but pharmacological and clinical tests necessary to produce a marketable drug continued.\(^\text{44}\)

Pursuant to the agreement, either party could receive nonexclusive royalty-free licenses from the other, with an option to grant sublicenses, regarding any patents or know-how arising from the joint research.\(^\text{45}\) Additionally, both companies could use results of the joint research without territorial or other restrictions, thus giving third parties the opportunity to enter the market upon receiving a license from either party.\(^\text{46}\)

The Commission granted a ten-year exemption from the prohibition of article 85(1)\(^\text{47}\) because the reduction of risk and costs in developing

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41 See W. Schlieder & H. Schroter, *supra* note 9, at 14; see also B. Hawk, *supra* note 7, at 268-69.
42 Beecham/Parke, Davis, 22 O.J. EUR. COMM. (No. L 70) 11 (Mar. 21, 1979), COMMON MKT. REP. (CCH) ¶ 10,121.
43 *Id.* at 12.
44 *Id.* at 15.
45 *Id.* at 13-14.
46 *Id.* at 14.
47 *Id.* at 20.
a valuable new product promoted technical and economic progress. The Commission found that quicker and more efficient access to the new drug would greatly aid consumers. A major portion of the Commission's decision dealt with the indispensability requirement.\textsuperscript{48}

The Commission began with the premise that combined research and development between the parties was desirable. Accordingly, it approved restrictions to promote full cooperation. Its rationale was to discourage solo development so that both parties could commit their full, combined facilities to the project.\textsuperscript{49}

The Commission also approved cooperation after the development stage. It found the agreement to exchange information regarding new dosage forms and production techniques for ten years after initial marketing to be indispensable, reasoning that it ensured that both parties would be able to provide the best possible product at the lowest feasible cost to consumers.\textsuperscript{50} The Commission also noted that an important consideration in granting the exemption was the absence of downstream marketing restrictions.

In 1983 the Commission exempted another joint research and development subsidiary, *Carbon Gas Technologie*,\textsuperscript{51} established to develop and exploit a combined pressure gasification process.\textsuperscript{52} The first stage of the agreement involved research and development, followed by the use of a pilot plant. The second stage envisaged construction of a demonstration plant. One of the parties would then market the developed process. By agreeing not to compete with the joint subsidiary, the parties eliminated competition between themselves. In addition, they undertook to provide the subsidiary all present and future know-how in this field without charge, and agreed that a party withdrawing from the joint subsidiary could not use the know-how for five years.\textsuperscript{53}

The Commission found that these restrictions triggered application of article 85(1). It granted an exemption, however, for several reasons. Primarily, the Commission found the main activities in which the parties were engaged to be complementary to cooperation. Because of the high cost of such a research and development project, the

\textsuperscript{48} Id. at 18-20; see also supra notes 20 and 26 and accompanying text.

\textsuperscript{49} Id. at 21.

\textsuperscript{50} Id. at 18-20.

\textsuperscript{51} *Carbon Gas Technologie*, 26 O.J. EUR. COMM. (No. L 376) 17 (Dec. 31, 1983), reprinted in COMMON MKT. REP. (CCH) ¶ 10,562.

\textsuperscript{52} Id.

\textsuperscript{53} Id. at 17-18.
Commission reasoned that compared with the individual efforts necessary under conditions of competition, cooperation would facilitate and accelerate large-scale industrial application of the specific gasification process being researched, and that consumers would receive a fair share of the resulting benefit.\textsuperscript{54}

Several general conclusions may be drawn from these exemption decisions concerning joint research and development agreements. First, the Commission has readily determined that joint research and development agreements are within the prohibition in article 85(1). This determination is generally based on the fact that because the parties are actual or potential competitors, such agreements would eliminate direct competition between them, at least with respect to research and development. Second, the Commission has closely scrutinized cooperation at the production and marketing stages, which is appropriate given the increased antitrust risks of downstream collusion. Third, the Commission's exemption analysis has focused primarily on the first (promotion of technical or economic progress) and third (indispensability) conditions of article 85(3). Apparently, the Commission views the introduction of new processes and products into the market to be essential to stimulate competition within the common market and to strengthen the ability of European industry to compete internationally.\textsuperscript{55} Cooperation is necessary because it enables parties to share the financial risks involved, and in particular to combine a wider range of scientific and intellectual resources and experience, thus promoting technical and economic progress.

The indispensability requirement has been met where restrictions inherent in the joint research and development agreement are rationally related to the purpose of the collaboration between the parties. The Commission has generally taken a broad view of the requisite relationship between the restriction and the purpose for the collaboration, as evidenced by the decisions discussed above.

The Commission has analyzed the second condition (consumer benefit) and fourth condition (no likelihood of substantial lessening of competition in the product market) in only a cursory manner. This approach indicates that generally the Commission will find the second and fourth conditions satisfied if the first and third conditions have been met. Nonetheless, demonstrating to the Commission why the second and fourth conditions have been satisfied, perhaps by a

\textsuperscript{54} Id. at 19-20.

\textsuperscript{55} See Thirteenth Report, supra note 9, at 37-38, pt. 28.
brief statement of facts would be wise as the Commission consistently includes some mention of these conditions, even if just a conclusive statement of their satisfaction.

Finally, the E.E.C. goal of promoting market integration may provide an additional factor supporting certain joint research and development agreements. The Commission has demonstrated a favorable attitude toward such agreements, particularly between firms from different member states, where intra-Community trade may increase as a result.\(^{56}\)

C. Block Exemption

The Community's normal legislative process is used to apply article 85(3) to various categories of agreements. In response to a Commission proposal, the Council first outlines in a regulation the types of agreements that qualify for exemption, the clauses such agreements must contain, the restrictions of competition they must not contain, and any other conditions that must be satisfied. The Commission then provides details of the block exemption in an implementing regulation. This regulation automatically exempts agreements falling within the block exemption from the ban on restrictive practices contained in article 85(1).\(^{57}\)

Using authority granted in Regulation No. 2821/72,\(^{58}\) the Commission issued Regulation No. 418/85\(^{59}\) applying article 85(3) to certain categories of research and development agreements.\(^{60}\) In January 1984, the Commission published a draft of the proposed block exemption for comments.\(^{61}\) In June 1984, it circulated an amended draft to the European Community's Economic and Social Committee for comments;\(^{62}\) as a result, substantial amendments were made in late summer 1984. The regulation was issued in its final form on December 19, 1984.

\(^{56}\) See Sopelem/Vickers, supra note 35. See generally W. SCHLIEDER & H. SCHROTER, supra note 9.

\(^{57}\) See W. SCHLIEDER & H. SCHROTER, supra note 9, at 11.


\(^{60}\) See supra note 58.

\(^{61}\) 27 O.J. EUR. COMM. (No. C 16) 3 (Jan. 21, 1984).

\(^{62}\) 27 O.J. EUR. COMM. (No. C 206) 34 (June 8, 1984).
1984, entered into force on March 1, 1985, and will be in effect until December 31, 1997.63

The new Regulation 418/85 leaves intact the 1968 Notice on cooperation between enterprises,64 which places cooperation agreements relating only to research and development outside article 85(1), and extends this favorable treatment to research and development agreements authorizing joint exploitation of results. In the new regulation, the Commission has allowed enterprises to extend their cooperation in research and development to joint manufacturing and joint licensing, where appropriate to exploit the results most effectively.65

The regulation covers three types of agreements:

(i) joint research and development of products or processes with joint exploitation of the results of that research and development;

(ii) joint exploitation of the results of prior research and development agreements between the same undertakings; or

(iii) joint research and development of products or processes without joint exploitation of the results if such "pure" research and development agreements fall within article 85(1).66

The notion of "joint exploitation" includes joint manufacturing and joint licensing to third parties, but not joint distribution or sales.67

Under the regulation, joint research and development must be implemented within the framework of a defined program. Joint exploitation is only allowed where know-how resulting from the common research and development contributes substantially to technical or economic progress, and constitutes a decisive demand for the manufacturing of new or improved products. The block exemption is applicable only upon the following conditions:

(i) all the parties have access to the results;

(ii) where there is no joint exploitation, [and] each party is free to exploit independently the results and any pre-existing technical knowledge necessary therefore; and

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64 See supra note 11.
67 Thirteenth Report, supra note 9, at 38, pt. 29.
(iii) in the case of specialization in the manufacturing of the new or improved products, each party has the right to distribute those products.\textsuperscript{68}

To ensure the possibility of several independent poles of research in the Community and to maintain effective competition in the markets concerned, the block exemption outlines different conditions according to the competitive position of the parties:

(i) where at the time the agreement is entered into, any of the parties are competitors for products which may be improved or replaced by the results of the research and development, the exemption applies only if their combined production of such product does not exceed 20% of the market;

(ii) where no two or more of the parties are competitors at the time the agreement is entered into, the exemption applies irrespective of market shares;

(iii) after five years of joint exploitation, the exemption continues to apply, whether the parties were initially competitors or not, only if their combined production for the new product does not exceed 20% of the market.\textsuperscript{69}

The regulation also contains a detailed list of permitted restrictions and obligations, such as those aimed at reinforcing cooperation between parties in the field of research and development, and provisions relating to the use of new technology or the granting of limited territorial protection to the parties.\textsuperscript{70} Also listed in detail are provisions which agreements may in no circumstances include.\textsuperscript{71} The regulation further contains an opposition procedure whereby the parties can submit agreements containing restrictions neither expressly exempted nor prohibited by the regulation to the Commission; unless the Commission opposes exemption within six months, such restrictions will be deemed covered by the block exemption.\textsuperscript{72}

Regulation 418/85 forms part of a complete program aimed at strengthening and expanding the existing legislative framework in the antitrust field of European Economic Community law. The regulation reinforces the competitiveness of European industry by encouraging

\textsuperscript{69} Id. art. 3.
\textsuperscript{70} Id. art. 4.
\textsuperscript{71} Id. art. 6.
\textsuperscript{72} Id. art. 7.
and increasing the effectiveness of research and development activity, and by guaranteeing the maintenance of workable competition within the Community.\textsuperscript{73}

The Commission, thus, has taken note of the concerns expressed in industrial circles regarding the obstacles article 85(1) occasionally posed for cooperation agreements in the field of research and development. Prior to issuance of the regulation, restrictive agreements between enterprises were automatically void absent an individual exemption from E.E.C. competition rules by the Commission.\textsuperscript{74} In recognition that individual exemption procedures are lengthy and involve unwelcome publicity, while speed and confidentiality are essential elements of research and development, the regulation grants automatic exemption to research and development agreements that conform to certain conditions.\textsuperscript{75}

The Commission first applied the new regulation in May 1985, in \textit{National Smokeless Fuels},\textsuperscript{76} finding a cooperation agreement in accord with the rules of competition laid down in the E.E.C. Treaty and the block exemption. \textit{National Smokeless Fuels} concerned a research and development agreement between the National Coal Board (NCB), the Central Electricity Generating Board (CEGB), and National Smokeless Fuels (NSF), a NCB subsidiary. NCB is responsible for all coal supplies in the United Kingdom, while CEGB produces virtually all the electricity used in that country. Under the cooperation agreement NSF would be responsible for perfecting new techniques for \textit{in situ} gasification of coal.\textsuperscript{77} NCB was to make available for this purpose certain facilities throughout the term of the agreement, which was in excess of four years. If the research should prove successful, the results would be assigned by NSF to NCB and CEGB, which together would negotiate the terms of licensing to third parties.

NCB and NSF, faced with the expansion of natural-gas production, have all but ceased production of gas using the conventional coal-

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\textsuperscript{73} Draft Block Exemption Regulation for R & D Cooperation Agreements, 1 EUR. COMM. BULL. 21, pt. 2.1.32 (Jan. 1984).

\textsuperscript{74} Block Exemption for R & D Cooperation Agreements, 10 EUR. COMM. BULL. 27, pt. 2.1.44 (Oct. 1983) [hereinafter cited as Block Exemption].

\textsuperscript{75} F. Andriessen (Commissioner responsible for competition policy), The Commission's Proposed Block Exemption Regulation for R & D Cooperation (address given before the International Bar Association), 4-5 (Jan. 27, 1984) (on file at the offices of The Georgia Journal of International and Comparative Law).

\textsuperscript{76} National Smokeless Fuels, (unpublished), 5 EUR. COMM. BULL. 33, pt. 2.1.31 (May 1985).

\textsuperscript{77} Id. at 33-34.
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based method, and CEGB does not produce or market gas. Thus, the parties are not competitors within the meaning of the regulation. Further, NCB and CEGB would under the agreement have the right to exploit and market results of the research jointly. Based on these facts, the Commission determined that their agreement satisfied the tests contained in the research and development agreements block exemption; in short, the common research and development would contribute substantially to technical and economic progress by developing new techniques in the energy sector.78

The Commission has continued to liberalize its competition rules regarding joint research and development agreements, as evidenced by its implementation and application of the new block exemption. As a result, companies complying with the regulation will receive absolute legal protection for joint research and development agreements — a strong incentive for technical and economic progress in the E.E.C.

IV. United States Law

Competition is both a cause and an effect of new and improved products, services, and productive processes. Competition encourages investment in research because the firm that fails to invest in research risks losing business to rivals introducing better or more economical products. United States antitrust policy strives, therefore, to maintain competitive markets in order to encourage innovation, in an effort to promote further competition.79

The legality of a joint research and development venture under United States antitrust law depends upon such factors as the nature of proposed research, the identity of parties, the particular industry, and the restraints on conduct imposed in connection with the project.80 Evaluation of the effect of the joint research on competition generally involves application of section 1 of the Sherman Act81 and section 7 of the Clayton Act.82 Section 7 of the Clayton Act prohibits the acquisition of the stock or assets of another "where in any line of commerce or in any activity affecting commerce in any section of

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80 Id. at 3.
the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly." Joint research ventures come within the coverage of section 7 when any participant acquires assets of another participant, whether in the form of tangible property, patent rights, or other property rights, or when the participants create a separate entity in which at least one participant acquires an equity interest, and it can be reasonably anticipated that the new entity will itself engage in either commerce or activity affecting commerce.

A joint research project that is purely contractual and does not involve the acquisition of any asset does not come within the scope of section 7. Such a venture, instead, would be subject to section 1 of the Sherman Act. Section 1 bars every contract, combination, or conspiracy in restraint of trade or commerce among the several states, or with foreign nations. The standard for assessing the legality of a joint research agreement under section 1 of the Sherman Act is similar to that of section 7 of the Clayton Act. As a practical matter, therefore, the legality of a joint research and development venture under United States antitrust law depends more on the facts and form of analysis rather than on the precise legal standard involved.

A. Research Joint Venture Guidelines

In 1980, the United States Department of Justice issued Research Joint Venture Guidelines which suggest an antitrust analysis for research joint ventures focusing on three points:

(i) effects of the essential elements;
(ii) collateral restrictions upon the venturers or outsiders; and
(iii) limitations on access to the venture or to its results.

In analyzing the effect of joint research on competition, the Guidelines suggest that the appropriate starting point is market structure. If the participants' market shares are so minimal that they could be merged without being challenged, such ventures are presumptively lawful, absent unreasonably restrictive collateral restraints.

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87 Id. at 4.
Further, joint research among firms in noncompeting industries will seldom raise antitrust concerns. If the venture falls outside the safe harbors mentioned above, however, consideration of the nature of and justification for the joint research project will be necessary. In this regard, "pure" basic research is viewed more favorably than developmental or marketing research. Reasonable justifications for joint research include inadequate financial resources, inherent risks, and economies of scale. Additional considerations involve whether significant entry barriers are present, as well as the scope and duration of the project.

The second part of the analysis under the Guidelines, where the essential elements are not on balance anti-competitive, examines collateral restraints upon participants or outsiders that unreasonably restrain competition. Certain agreements among competitors are conclusively presumed to be unreasonable (e.g., price-fixing, market divisions, tying arrangements, and group boycotts); these agreements are per se illegal. Other collateral restrictions reasonably related to the joint research arrangement are judged by a "rule of reason." Such a judgment involves full factual inquiry into the purpose and effect of the restraint. Collateral restrictions subject to the "rule of reason" are lawful if the following conditions are met:

(i) if the restrictions are reasonably ancillary to a lawful main purpose of the agreement;

(ii) if they have a scope or duration no greater than necessary to achieve that purpose; and

(iii) if they are not part of an overall pattern of restrictive agreements that has unwarranted anticompetitive effects.

The final aspect of analysis of a joint research venture is whether denial of access to the venture or to technology developed by it has a significant anticompetitive impact. Antitrust problems arise when the venture becomes the key to competing effectively in markets served by the participants, and when excluded firms cannot practically or effectively duplicate the research efforts. Under these circumstan-

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88 Id. at 6.
89 Id. at 15.
90 Id.
91 Id.
92 Id. at 21. The access need not be completely free; for instance, the venture may charge a reasonable royalty.
ces, United States antitrust law may mandate access to the venture or its results on reasonable terms. 93

Analogous to the Commission’s individual exemption decisions, under the business review procedure of the United States Department of Justice, a person or organization may submit a proposed course of action to the Antitrust Division and receive a statement whether the Division would challenge that action.

In 1983, the Department of Justice issued such a business review clearance for the proposed Center for Advanced Television Studies and the participation of its members in the anticipated activities of the Center. 94 The decision is noteworthy because it evidences a trend by the Justice Department away from the rigid application of competition analysis set forth in its 1980 Research Joint Venture Guidelines and toward a “rule of reason” analysis. This trend was carried forward and subsequently incorporated into the National Cooperative Research Act of 1984 (NCRA). 95

The purpose of the Center would be to promote exclusively basic, as opposed to applied, research in sophisticated television sciences by experts at independent academic institutions. The research would focus on the definition of the ideal television production, transmission, and display system, rather than on the improvement or development of commercial products. In addition, the research would be impossible without collaboration. Moreover, no research would be undertaken where it would be commercially feasible for any two members to undertake such a project alone, unless combination of the participants’ efforts would achieve substantial economies of scale. 96

The academic institution performing the research, the Massachusetts Institute of Technology (MIT) with respect to the first project, would have the option of retaining title to all technology, including patents, in which case members of the Center would receive a nonexclusive, unrestricted license. 97 Members could conduct independent research

93 Id.
94 Business review clearance for the proposed Center for Advanced Television Studies and participation of its members in the center’s anticipated activities, U.S. Department of Justice - Antitrust Division (Sept. 22, 1983) (on file at the offices of The Georgia Journal of International and Comparative Law) [hereinafter cited as Television Clearance].
96 Television Clearance, supra note 94, at 2.
97 Id. at 4.
but could not discuss price, costs, and technology sharing agreements not directly related to the Center's projects.98

The Justice Department indicated that it would not challenge formation of the Center or its activities under United States antitrust law. Specifically, the Department stated that joint research and development ventures can be pro-competitive if they either increase efficiency by permitting participants to secure economies of scale or scope, or result in research and development that otherwise would be unperformed.99 The Justice Department emphasized, however, that a joint venture by firms controlling a substantial percentage of a relevant market would be anti-competitive if it facilitated collusion among members to restrict output and increase prices, or reduced independent research efforts and stifled innovation. Nonetheless, the basic nature of the research and the relationships among member firms of the Center, and between the firms and MIT indicated that the formation and anticipated activities of the Center were unlikely to have such anticompetitive consequences.

The significance of this clearance is that the Department chose to blend potential competition concerns, as suggested by the 1980 Research Joint Venture Guidelines, with more traditional "rule of reason" concerns which emphasize benefits and result in a weighing of factors. Further, the clearance suggests that the Justice Department is taking a more tolerant view of joint research and development ventures under United States antitrust laws. Enactment of the National Cooperative Research Act of 1984 confirmed the Department's evolving position toward joint research and development ventures.

B. National Cooperative Research Act of 1984

The National Cooperative Research Act of 1984 (NCRA) was intended to eliminate, or at a minimum to lessen, perception that United States antitrust laws deterred competitive joint research and development activity.100 Congress recognized that the paucity of clear antitrust guidelines had discouraged valuable joint research and development activity.101 Congress further realized that the perception of exaggerated antitrust risks would continue to deter desirable joint research activity unless it clarified the essential difference between

98 Id. at 4-5.

99 Id. at 6-7.


101 Id.
beneficial joint research and development activities and the kind of collusive conduct properly condemned by United States antitrust laws.\textsuperscript{102} Congress expressly noted, however, that in specific instances a joint research and development venture or its conduct may on balance be anti-competitive, and provided safeguards against this potential. Thus, the Act limits its benefits to a "joint research and development venture," as specifically defined in the Act.\textsuperscript{103}

The principal change to antitrust laws effected by the Act is that "a joint research and development venture shall not be deemed illegal \textit{per se}; such conduct shall be judged on the basis of its reasonableness, taking into account all relevant factors affecting competition . . . ."\textsuperscript{104}

\textsuperscript{102} Id.

\textsuperscript{103} The Act defines "joint research and development venture" as:

(A) theoretical analysis, experimentation, or systematic study of phenomena or observable facts,

(B) the development or testing of basic engineering techniques,

(C) the extension of investigative findings or theory of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, prototypes, equipment, materials, and processes.

(D) the collection, exchange, and analysis of research information, or

(E) any combination of the purposes specified in subparagraphs (A), (B), (C), and (D), and may include the establishment and operation of facilities for the conducting of research, the conducting of such venture on a protected and proprietary basis, and the prosecuting of applications for patents and the granting of licenses for the results of such venture, but does not include any activity specified in subsection (b).

\textsuperscript{104} Id. § 2(b).


(1) exchanging information among competitors relating to costs, sales profitability, prices, marketing, or distribution of any product, process, or service that is not reasonably required to conduct the research and development that is the purpose of such venture,

(2) entering into any agreement or engaging in any other conduct restricting, requiring, or otherwise involving the production or marketing by any person who is a party to such venture of any product, process, or service, other than the production or marketing of proprietary information developed through such venture, such as patents and trade secrets, and;

(3) entering into any agreement or engaging in any other conduct —

(a) to restrict or require the sale, licensing, or sharing of inventions or developments not developed through such venture, or

(b) to restrict or require participation by such party in other research and development activities, that is not reasonably required to prevent misappropriation of proprietary information contributed by any person who is a party to such venture or of the results of such venture.

Thus, the Act expressly directs courts to apply a "rule of reason" in examining joint research and development ventures, as defined in the Act. The Act also provides voluntary procedures for notifying the Justice Department and the Federal Trade Commission of a proposed joint research and development venture, thereby limiting damages for claims arising out of conduct within the scope of the notification to actual damages, rather than treble damages normally allowable in civil antitrust actions. Finally, the Act provides for an award of attorney fees to a substantially prevailing claimant, including the defendant's attorney fees if the claim or the claimant's conduct during the litigation was frivolous, unreasonable, without foundation, or in bad faith.

Soon after enactment of the National Cooperative Research Act, the Justice Department applied the Act in a business review clearance sought by DCTECH Research Centers, Inc. DCTECH proposed formation of a $220 million research and development limited partnership in the machine tool industry to research and develop technically advanced machine tool systems. DCTECH would contract out machine tool research and development projects to universities, independent research organizations, machine tool manufacturers, and to itself.

Under the arrangement, the partnership's research and development efforts would focus primarily on: (1) the creation of two prototype "on-call," fully automated flexible manufacturing systems — one for conventional materials and the other for exotic, composite, and ceramic materials; and (2) the development of an industry-wide data base facility that would include information on machine tool technology, equipment, and software operations. In its role as general partner, DCTECH would be assisted by an advisory council of representatives from the machine tool industry. None of the advisory council members would be obliged to invest in the partnership, and

105 Id.
109 Id. at 2.
could pursue individual research and development efforts. In addition, DCTECH would at its option be the exclusive marketing agent for any technology developed by the venture.\textsuperscript{110}

The Justice Department concluded that the purpose of the partnership was to conduct needed research and development in the machine tool industry. Because it found such a goal consistent with United States antitrust law and policy as applied to joint research and development ventures, the Department chose not to challenge formation of the partnership.\textsuperscript{111}

In another recent business review clearance, the Justice Department again applied a "rule of reason" analysis, this time to a proposed joint research venture known as the Pump Research and Development Committee (PRADCO).\textsuperscript{112} PRADCO, to be comprised of the manufacturers of centrifugal pumps, will research the reliability and performance of centrifugal pumps used by utilities to feed water into electric utility plant boilers. The pumps are large, highly engineered, custom designed, and expensive. Typically sold to sophisticated purchasers, the pumps are critical to the efficient operation of utilities; when a utility's pumps malfunction, the utility typically must purchase electricity elsewhere at premium prices. Although reliability and efficiency are critical, pump manufacturers have been disinclined to make significant investment in research and development because of an industry-wide depression. Thus, PRADCO would fund forms of basic research that otherwise would go unperformed in the industry, or else would be done to a significantly lesser extent.

On a day-to-day basis, PRADCO would be managed by an independent contractor serving as operating officer. Overall supervision would be conducted by a board of managers comprised of one representative of each venture partner. None of the members of this board would have, or could previously have had, pricing or marketing responsibility for his company.\textsuperscript{113}

\textsuperscript{110} In addition, advisory council members would have the rights to obtain licenses to the developed technology. In this event, the marketing efforts of the advisory council members would be conducted separately from DCTECH and from one another. \textit{Id.} at 1-2.

\textsuperscript{111} \textit{Id.} at 2.

\textsuperscript{112} Business review clearance for the proposed formation of a joint venture, known as the Pump Research and Development Committee (PRADCO), to conduct research into the reliability and performance of centrifugal pumps, U.S. Department of Justice - Antitrust Division (July 5, 1985) (on file at the offices of the \textit{Georgia Journal of International and Comparative Law}).

\textsuperscript{113} \textit{Id.} at 3.
The Justice Department concluded that the proposed venture could produce significant pro-competitive benefits since PRADCO would focus on basic research, with each member free to use the results competitively. In fact, if the research should prove successful, competition among boiler feed pump manufacturers ultimately could be enhanced, and presumably the public would benefit through lower prices and/or more efficient pumps. Thus, the Department found that the venture posed no significant countervailing threat to competition in existing products or in future products outside the scope of the venture. The nature of competition in the pump industry and the project's structural safeguards concerning exchange of competitively sensitive information insure that PRADCO would not facilitate collusion among the parties with respect to such products.

Based on these considerations, the Justice Department indicated that it would not challenge the formation of PRADCO, since PRADCO would relate exclusively to research and would not involve expansion into joint product production. The joint venture goal was found consistent with both United States antitrust laws as applied to joint research and development ventures, and with the policy that underlies those laws, as clarified by the NCRA.

Like the E.E.C., the United States Government has determined that joint research and development ventures should be encouraged as a positive force for competition and efficiency. Increased joint research and development activity is viewed as aiding the domestic economy and enhancing international trade. Toward this end, rigid application of competition analysis as outlined in the 1980 Research Joint Venture Guidelines has been abandoned, or at least superseded. The NCRA provides the Justice Department and courts with the ability to apply antitrust laws in a manner allowing a balancing of pro-competitive and anti-competitive factors in joint research and development ventures. Utilizing such "rule of reason" analysis represents a significant step forward for technical and economic progress in the United States.

V. COMPARISON OF E.E.C. AND U.S. RESEARCH AND DEVELOPMENT ANTITRUST ANALYSIS

Both the European Economic Community and the United States desire to encourage, or at least not to discourage, cooperation in

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114 Id. at 5.
115 Id.
116 Id. at 5-6.
research and development. The European Economic Community, however, is prepared generally to go further in exempting such agreements or ventures from its competition rules than the United States is from its antitrust laws.

The E.E.C. block exemption gives enterprises complying with its terms absolute legal protection. Additionally, the exemption applies to research and development agreements between enterprises in all sectors of the economy and extends to production of the products arising out of the research and development. Where agreements cover production, cooperation may take the form of specialization or joint production within the framework of a joint venture. The exemption further covers joint subcontracting of all or part of the production.117

In contrast, the National Cooperative Research Act of 1984 does not provide that a joint research and development venture complying with its conditions is necessarily valid, but merely confirms that it cannot be deemed illegal per se.118 The United States Justice Department or courts must as a result weigh pro-competitive effects of an agreement against its anti-competitive effects. Thus, the E.E.C. block exemption provides greater legal certainty for research and development agreements coming within its terms.

The NCRA provides for immunity only from treble damages, while simultaneously providing for the recovery of actual damages and prejudgment interest if the venture is as a whole anti-competitive.119 By comparison, treble damages are unavailable for antitrust infringements in the E.E.C., and the block exemption provides complete immunity from fines and private suits for agreements coming within its terms.

The NCRA conditions immunity from treble damages in all cases, however, on full prior disclosure of the joint research and development venture to the Justice Department and the Federal Trade Commission.120 Details of the venture must then be published in the Federal Register, subject to certain disclosure safeguards.121 By comparison, the block exemption only provides for notification of research and development cooperation if there are additional restrictions of com-

117 Block Exemption, supra note 74.
118 See supra note 104.
119 See supra note 106.
121 Id.
petition not contained in the regulation.\textsuperscript{122} The block exemption neither provides for official publication of notified agreements, nor grants the public a right of access to information filed with the Commission.

In addition, the protection granted under the NCRA only covers research and development up to experimental production and testing of models, prototypes, equipment, materials, and processes. The block exemption goes further by exempting joint manufacturing and joint licensing of products arising out of the research and development.

VI. \textbf{Conclusion}

The complexity of the E.E.C. competition rules and the United States antitrust laws prevents comprehensive discussion of all their potentially relevant aspects. The E.E.C. and the United States have sought to identify and encourage research and development agreements or ventures in a somewhat similar manner. At the same time, though, the E.E.C. has adopted a more far-reaching set of regulations and rulings exempting such agreements from its competition rules than has the United States.

The E.E.C. exempts a research and development agreement from its prohibition of restrictive agreements if the agreement evidences appreciable objective advantages outweighing anti-competitive disadvantages. The Commission has demonstrated a favorable attitude toward research and development agreements, not limiting itself merely to application of E.E.C. competition rules, but setting policy in the field as well. Further, the E.E.C. applies a block exemption regulation waiving the prohibition of restrictive practices in cases of certain agreements concerning research and development of products or processes up to the stage of industrial application and the exploitation of products resulting from the research and development.

The United States seeks to encourage research and development agreements or ventures by abandoning its prior application of the rigid standards set forth in the 1980 Research Joint Venture Guidelines. The United States applies its antitrust laws in a manner allowing a balancing of pro-competitive and anti-competitive factors in such agreements or ventures. Further, the United States provides that upon notification of a proposed joint research and development venture to appropriate authorities, damages will be limited to actual damages.

and prejudgment interest if the venture is as a whole determined to be anti-competitive.

This Article does not suggest that one approach is better than the other; rather, it provides an overview and a comparison of the more important aspects of the competition rules of the E.E.C. with the antitrust laws of the United States as they relate to research and development agreements. Which of the two approaches will provide more substantial encouragement to technical and economic progress if the E.E.C. and the United States are viewed as competitors remains to be seen.