41

Competition, Concentration and Competitiveness in the Common Market: Towards an EC Merger Control Regulation

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Table of Contents

Introduction

"The completion of the internal market requires more than the adoption of the legislative measures tabled by the Commission for dismantling the physical, technical and fiscal barriers between countries. For a single dynamic and flexible market, the effects of restrictive business practices or protectionist measures adopted by states must be precluded by a dynamic competition policy" (Sutherland, 1989).

The struggle for global markets between the EC, Japan, and the United States has become an important issue on the agenda of both policy-makers and scholars. To some analysts, EC competition policy is *the* cornerstone of the "Europe 1992" program. In their view, the success of the Single Integrated Market depends largely on the effectiveness of the competition policy of the European Community. This study seeks to contribute to our understanding of the driving forces that can explain the formulation and implementation of past, present and future EC competition policy with respect to mergers and acquisitions.

One key goal of the "Europe 1992" program is to increase the competitiveness of EC enterprises. This goal can be achieved by reducing governmental constraints that protect favored enterprises against open competition. At the same time, competition policy is, according to many analysts, "an important and necessary instrument to ensure an efficient allocation of resources, stimulate enterprises to make an optimal use of their capabilities and encourage firms to develop new research techniques and products and to prevent a distortion of free market competition" (EC, 1989a: 13).

In the past, member states have often used their competition policies for political and nationalistic ends (Colchester and Buchan, 1990). However, the *dirigisme* of past years, and the associated stagnation of the European economy, are now interpreted as a failure to see that competition is the only effective means of developing an innovative, flexible and efficient economy. Governments' tolerance of national champions and encouragement of abusive practices are now condemned, at least in principle. The member states have agreed to authorize the Commission to scrutinize large-scale mergers. This is another example of "spill-over", i.e. the "Europe 1992" program driving the EC beyond what was originally envisaged in the 1985 White Paper. The new 1989 EC Merger Control Regulation provides for the prior notification and control of mergers, acquisitions and joint ventures with a

"Community" dimension. The regulation is a new legal instrument, primarily based on Article 235 of the Rome Treaty, and thus creates new substantive rules which go beyond those provided for in Articles 85 and 86. The adoption of the regulation represents a significant increase of the Commission's powers and a major extension of Community law.

Broadly defined, competition policy is (Rosenthal, 1990: 295):

"... what a government says it wants and what it intentionally does (or refuses to do) to open (or close) its markets to competition and to protect (or fail to protect) competitors in the market against public or private trade restraints that impede the most able and promote the less efficient. It also includes the explicit balance between competition and other values in public decisions significantly affecting markets."

Article 36 of the Rome Treaty identifies several values that may justify restrictions on competition in internal trade in goods between member states, so long as they shall not "constitute a means of arbitrary discrimination or a disguised trade restriction." These values include "public morality, public security, the protection of health and life of humans, animals or plants, the protection of national treasures possessing artistic, historical or archeological value, or the protection of industrial and commercial property." The implementation of the Single Integrated Market program, and the decision in the *Cassis de Dijon* case, laying the basis for mutual recognition of standards, should largely erode the force of most member states' regulations restricting competition on Article 36 grounds (Rosenthal, 1990: 297).

The Rome Treaty provides for the establishment of a system to ensure that competition in the Common Market is not distorted. Although the Council of Ministers controls the timing and final form of directives and almost all regulations, including the merger regulation, the Rome Treaty has ceded primary responsibility for competition policy to the European Commission (hereafter: the Commission). The rules of competition are contained in Articles 85 to 94 of the Rome Treaty. Articles 85 and 86 relate to anti-competitive behavior by enterprises which has an effect on trade between member states. These are the rules which undertakings must be aware of and must comply with in all their commercial dealings. Both Articles are aimed at preserving and enhancing competition rules by different means. Article 85 is directed at agreements or concerted practices between two or more enterprises, whereas Article 86 is aimed at abusive behavior by monopolies or firms with very considerable power (EC, 1989a: 13).

Another aspect of competition policy is the granting of state aid to certain enterprises, which could also distort competition. This aspect, which is dealt with in Articles 92 to 94, is of indirect importance to firms in the sense that if the Commission finds a certain state aid to be illegal, it will intervene against the national government concerned and not against the firm to whom the aid is given. However, in view of the fact that firms might be obliged to reimburse any aids illegally received, it is obviously also of direct relevance for them (EC,1989a: 14).

In this paper I will analyze the evolution of the competition policy of the European Community (EC) regarding mergers and acquisitions from the 1960s until 1990. In the 1960s the EC and various member states promoted cooperation and concentration in the European industry to enable European firms to compete with American firms. During the 1970s the merger boom slowed down significantly and the role of EC policy seemed to be reduced, while national merger policies were predominant. Since the mid-1980s a new merger boom can be witnessed, again stimulated by EC policy.

The interesting "puzzle" for EC policy-makers is to find a balance between allowing mergers for necessary restructuring and rationalization of EC industry, while at the same time protecting and stimulating a competitive environment by preventing abusive corporate behavior and "unhealthy" mergers. In other words, to find a balance between "concentration" and "competition." The final objective of EC competition policy is to create a strong and healthy European industry which will be able to compete in the Single Integrated Market and (outside that market) with American and Japanese firms.

The general research question in this study is:

"How can we explain the variation in the competition policy of the European Community with regard to mergers and acquisitions from the 1960s until 1990?

This broad, general question has been divided into the following more specific subquestions:

(1) *To what extent has the external threat of competition from the United States (in the 1960s and in the 1980s) and Japan (in the 1980s) helped shape EC competition policy concerning mergers and acquisitions?*
(2) *In what way has the internal integration process of the EC affected EC competition policy regarding mergers and acquisitions?*
(3) *What role has the European Court of Justice played in formulating EC competition policy with respect to mergers and acquisitions?*
(4) *How can we explain the evolution of the position of the European Commission toward mergers and acquisitions?*

I will distinguish three different levels of analysis. At the first level, the *member state* level, I focus on member states' positions regarding mergers and acquisitions and the behavior of large corporations. At the second level, the *regional* level, I center on the policies of the European Commission and court rulings by the European Court of Justice. The third level is the *global* level. Here I concentrate on economic and technological developments in the United States and Japan. In the analysis, I will focus extensively on the regional level.

The structure of this paper is as follows. In Chapter 1, The Evolution of the 1989 EC Merger Control Regulation, I center on the evolution of EC policy by focusing on several crucial merger cases (i.e., rulings by the European Court of Justice) which had important implications for the role of the European Commission and the implementation of EC competition policy. The main part of this chapter consists of a review of the new 1989 EC Merger Control Regulation and the way it came about.

In Chapter 2, Concentration Trends in EC Industry, I first examine the structural transformation of EC industry in the 1960s and 1970s. Then I describe and analyze the development of concentration and competition in the Community in more detail.

In Chapter 3, The Competitiveness of EC Industry and the New Regulation, I take a closer look at the declining competitiveness of the EC in the early 1980s vis-a-vis its main rivals the United States and Japan. I also discuss the "theory" on the relationship (as perceived by the Commission) between mergers and raising competitiveness.

Chapter 4, **Summary**, contains an overview of the main findings of this research paper. Finally, in Chapter 5, **Conclusions**, I review the effectiveness of EC competition policy regarding mergers and acquisitions and take a look into the future.

Chapter 1: The Evolution of the 1989 EC Merger Control Regulation

1.1 Introduction

The first draft of a merger control regulation was presented in 1973 by the Commission. It met with opposition from both national governments and businesses -- the governments fearing a new limit on their sovereignty and businesses resenting the risk of another layer of controls. Until the new EC Merger Control Regulation was approved by the Council, the Commission was relying upon imputed merger control authority in Articles 85 and 86 of the Rome Treaty. The political climate changed dramatically in 1987 when the judgment of the European Court of Justice in the Philip Morris case opened up the possibility for the Commission to apply existing competition rules more broadly to mergers. The Commission immediately announced its intention of applying these rules to mergers unless the special merger control regulation were completed as expeditiously as possible.[1]

In 1988 all member states agreed to make progress with this merger control regulation. There was agreement on four points (Martin and Rider, 1988):

1) *The merger control regulation would apply only to major Community-wide concentrations;*
2) *The buyer must make a notification to the Commission in advance and suspend the merger until the Commission approved it;*
3) *Anti-competitive mergers would be prohibited subject to clearance;*
4) *The Commission would be obliged to act quickly.*

Generally speaking, the new EC Merger Control Regulation adopted in December 1989 seeks paramount EC surveillance over mergers with a so-called "Community dimension." Mergers between firms with a combined market share not exceeding 25 percent of a product market in the total Common Market or a substantial part of it are not affected by the regulation.

The merger control regulation is mainly important as a means to supersede partial and inconsistent merger regulation at the member state level (some states, most notably Italy,

[1] The Commission has the right to conduct investigations, bring prosecutions, find liability and impose fines of up to 10 percent of a company's annual worldwide revenues, as well as to obtain injunctions and divestiture orders.

having no merger control or competition regulation at all), especially of large-scale mergers. Second, its objective is to deregulate national merger controls that, it is feared, could be applied restrictively on the basis of non-competition criteria. Various conflicts have occurred between several member states and the Commission about who should be the gatekeeper in determining market access by acquisition in an integrated market.

Pressure for an EC Merger Control Regulation did not come from a desire to stop unwanted mergers that are economically beneficial as much as from an attempt to ensure that mergers were not blocked by either non-efficiency (e.g., political) concerns of individual member states or a barrier of multiple and potentially inconsistent governmental merger reviews (Rosenthal, 1990: 310). In fact, Germany and Great Britain were most concerned that the consideration of non-efficiency merger justifications should not rest with the Commission, thus giving it the power, in effect, to carry out industrial policy. Another major battle in the Council of Ministers with regard to the merger regulation has been over the proper scope of member state exceptions to Commission determinations based on non-efficiency grounds such as national defense, control of the media by nationals, and discouragement of corporate raiders, who, according to national governments, might lack "suitable" qualifications. The differences were partly bridged by providing national competition authorities with an explicit role in the investigation and review of the facts of particular mergers. However, the main problem remained that some member states would give prominence to non-efficiency factors in deciding whether to allow some sensitive mergers, while others would limit the consideration of non-efficiency factors to the most exceptional circumstances.

Before discussing the 1989 EC Merger Control Regulation in more detail, I will first focus on merger control policies in Germany and Great Britain and their relationship with Community law. Then I will briefly review two landmark Court cases (the Continental Can case and the Philip Morris case) which have significantly affected the Commission's powers to investigate mergers in the EC. In the last part of this chapter, several aspects of the new Regulation are discussed, such as member state involvement, compatibility of national and Community law, member state jurisdiction, and the Commission's exclusive powers.

1.2 Merger Control Policies at the Member State Level: Germany and Great Britain

The adoption of merger control as an integral part of competition policy is a comparatively recent development in the European Community. Up until the early 1970s, only Great Britain and the EC (as regards control under the ECSC Treaty) had enacted specific legislative provisions to prevent anti-competitive mergers. During the 1970s and 1980s a number of EC member states have enacted legislation to control mergers for the first time. Present merger control provisions display a great deal of variety from country to country. The main differences arise as regards the criteria for defining or examining mergers (size and market share thresholds), the standards by which is merger is considered desirable or undesirable (a straightforward competition test or wider public interest criteria of which competition is but one, if important, element), and with respect to the procedure (judicial or administrative or some combination of the two and prior or post notification). In Germany, for example, merger policy relies on a prohibition principle based entirely on a competition test. The basic standards for assessing a merger are expressed in relatively simple terms in the legislation itself but have required interpretation and refinement in the judicial or administrative enforcement of the legislation. This has frequently led to the issuance of administrative guidelines to clarify enforcement policies or the terms in which the provisions are drafted. In Great Britain, on the other hand, merger policy requires a case-by-case assessment of a variety of factors before determining whether a merger is acceptable or not. Here, the legislation itself frequently sets out the various considerations in some detail, i.e. five criteria are set out to guide the Monopolies and Merger Commission in its investigation of mergers.

Until 1967, the German government justified its inactivity with respect to merger control by pointing to the necessity of merger control at the European level. It was the rapid increase in merger activity in the late 1960s and early 1970s which led the German government to see the central problem of competition policy as industrial concentration through mergers.[2]

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[2] Since 1973, the merger provisions in the ARC have been amended twice: in 1976, to lay down special provisions for mergers in printing and publishing; and in 1980, when the 4th Amendment was directed in particular at dealing more adequately with conglomerate and vertical mergers and bringing acquisitions of small

Merger control was first instituted in Germany by the Second Act to Amend the Act against Restraints of Competition (ARC) in 1973. Prior to this amendment there existed a notification requirement for merging firms which achieved a 20% share of the relevant market or which were above a certain size, but no power to prevent undesirable mergers.

The ARC provides for a two-stage system of notification for mergers. Pre-merger notification is required if two or more of the parties involved have sales of at least DM 1 billion each. The scope has recently been extended to cover mergers involving one firm with sales of DM 2 billion. Notification is also required after completion of the merger when the enterprises involved alone or together have or obtain a share of 20% or more of a market in Germany or when the firms have world-wide combined sales of DM 500 million or more or employ at least 10,000 persons. The decisive criterion for merger control is the concept of market dominance. A merger is prohibited by the Cartel Office if it is likely to create or strengthen a dominant market position, unless the parties prove that the merger will lead to improvements in competitive conditions which outweigh the disadvantages of market dominance. An enterprise is presumed to be market-dominating if it holds a market share of at least 33%.

In the 1960s the need was felt in Great Britain for a positive policy to encourage mergers where market forces alone were too feeble to produce them, in parallel with another policy to monitor merger proposals which market forces did throw up. Therefore, mergers have been controlled in Great Britain since the 1965 Monopolies and Mergers Act, subsequently repealed by the 1973 Fair Trading Act which reproduced the earlier legislation on mergers with some changes. Originally, the basic criteria for examining a merger was a situation involving the transfer of gross assets of at least 5 million pound or where a merger created or enhanced a monopoly situation (33% market share). Under the Fair Trading Act, the market share criterion was reduced to 25% and in 1984 the gross assets criterion was increased to 30 million pounds. Decisions on merger investigations are taken on a case-by-case basis, rather than applying a rigid set of rules. The judgment exercised in each case

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and medium-sized enterprises by large enterprises within the merger control provisions (OECD, 1984).

is whether the merger concerned raises issues of sufficient public interest to justify an examination. The extent to which competition will be reduced by the merger is a prime consideration, but the concept of public interest embraces other aspects of public policy. The extent to which any diminution of competition is likely to be offset by other factors, such as efficiency gains, the preservation of employment, better management and so on is also taken into account.

National competition laws are not preempted by the Rome Treaty. In fact, Germany and Great Britain have highly developed and enforced national law concerning enterprise competition (see Table 1). The potential for substantive clash between EC and German or British competition law has therefore been significant.[3]

Nevertheless, the solution of any potential conflict of supranational and national competition law demonstrates how much national sovereignty has been given up in the creation of the EC. In the landmark Wilhelm case (1968), such conflict emerged succinctly before the Court of Justice of the EC.[4] Four German producers of dyes were fined by the Bundeskartellamt authorities for price-fixing activities under the German law Against Restraint of Competition (ARC). The German dye producers appealed to the Kartellsenat of the Kammergericht in Berlin. The same 1967 price-fixing activities of the four German firms were the subject of parallel competition law proceedings initiated by the Commission under Article 85. Before the Commission rendered its decision under Article 85 the defendants argued, in light of the possibility of a conflict between Community and German competition law, that the Kammergericht in Berlin could not continue its proceedings against them. The Kammergericht in turn stayed its proceedings and requested an advisory preliminary ruling on that issue from the EC Court of Justice.

The Court of Justice looked at Article 87 of the Rome Treaty, which authorized the Council to define, by regulation or directive, the relationship between national laws and

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[3] This may not be the case with ECSC law, since national competition laws are apparently preempted by the terms of the ECSC Treaty.

[4] This part has been derived from Folsom, 1978: 44-46.

Table 1 Main features of merger control policies in Germany and the United Kingdom

Country	Prior notification		Ex post notification		Quantitative criteria for notification or investigation		Basic criteria for prohibiting mergers	Procedure		Waiting period or time limits for investigation
	compulsory	optional	compulsory	optional	Market share	Absolute size criteria		Administrative	Judicial	
Germany	Yes for certain mergers	Yes	Yes for certain mergers	No	Yes various	Yes, various sales and employment criteria	Creation or strengthening of market dominating position if not outweighed by competitive advantages	Yes by Federal Cartel Office. Authorisation on general public interest grounds by Minister may be given	FCO's decision and authorisation by Minister subject to review by Courts	FCO has four months for pre-merger notification
United Kingdom	No	No	No	No	Yes, 25%	Yes gross assets	Operation against the public interest	Yes, OFT initial assessment, reference to MMC and Ministerial decision	No	MMC investigation -- maximum of 6 months

Source: OECD, 1984

Community law on competition. The Court went on to read Article 87 in conjunction with Article 2, which enumerates certain fundamental Community tasks including the promotion of the harmonious development of economic activities within the Community and came to the following conclusions (Folsom, 1978: 45):

In principle the national authorities in competition matters may take proceedings also with regard to situations liable to be the object of the decision of the Commission... Conflicts between the Community rule and the national rules on competition should be resolved by the application of the principle of the primacy of the Community rule.... The application of national law may not prejudice the full and uniform application of the Community law or the effect of acts in implementation of it.

The Wilhelm case established the principle of concurrent jurisdiction. This means that the parallel application of national and Community law is possible as long as the application of national law does not prejudice against Community law, i.e. Community law takes precedence whenever there is a conflict.[5] In this particular case, the four German firms were fined by the Commission and ordered to cease their price-fixing activities. The Kammergericht in Berlin continued to hold its proceedings in abeyance and eventually, after the Commission's decision was rendered, annulled the violations and fines imposed under German competition law on constitutional and evidentiary grounds.

Several other cases have led to the establishment of the relevant principles of Community law as laid down by the Court.[6] The result of those cases can be summarized as follows (Bellamy and Child, 1987: 40):

(1) National competition laws must be administered in conformity with Community law;
(2) The prohibition of an agreement under Community law will prevail over any authorization granted under national law;
(3) Matters which may involve an infringement of the Rome Treaty may be investigated under national law by the national authorities notwithstanding a pending investigation by the Commission;

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5 However, if the Commission comes to the conclusion that Article 86 does not apply in a certain case, it would still be possible for national authorities to veto a merger if a violation of national merger law is established (EC, Tenth Competition Report, 1981, point 110).

6 Another landmark case with respect to the relationship between Community rules on competition and national competition laws, was the Guerlain case. Because of lack of space, I will not provide specific details of this case.

(4) *The national authorities should take appropriate action to avoid the risk of parallel investigations yielding conflicting results;*

(5) *If the Commission has decided to take no action, there is no objection to the national authorities applying national law;*

Many national and EC analysts perceive increased convergence between EC competition policy and national policies as a desirable development, not only in the interest of the development of the Single Integrated Market but also because concordant national policies could serve as a decentralized back-up system for Community rules. In fact, the EC itself concludes that "although there is no evidence which would indicate that potential contradictions in the respective legislations are detrimental to the development of trade within the Common Market, notably because Community law takes precedence as soon as intra-Community trade is affected, *national legislation has in fact tended to evolve towards the Community rules*" (EC, Tenth Competition Report, 1981: 53).

1.3 Early Developments in EC Merger Policy

Before the adoption of the EC Merger Control Regulation (hereafter: the Regulation), the Commission relied on Articles 85 and 86 of the Rome Treaty to scrutinize mergers and acquisitions in the EC. The Rome Treaty as such did not contain a provision which specifically regulates mergers, or, as known in EC parlance, "concentrations." Merger control at Community level was not perceived to be necessary at the end of the 1950s, and individual member states themselves did not have the legal means to control mergers in those days.

The Commission defined for the first time its position on the application of Articles 85 and 86 to mergers and acquisitions in its Memorandum on the Problem of Concentration in the Common Market (hereafter: the 1966 Memorandum). The main point of this document (which was only a statement and not a piece of legislation with binding effects) was that concentrations were desirable to acquire the necessary size to take advantage of the Common Market and to meet competition from large enterprises outside the EC. The 1966 Memorandum concluded that Article 85 did not apply to concentrations, since it was intended to apply to agreements which determine the market behavior of firms, not to those which structurally change the organization of companies, while Article 86 did apply.

Article 86 prohibits any "abuse" by an undertaking of a "dominant position within the Common Market or a substantial part of the Common Market."[7] Accordingly, the Commission concluded in the 1966 Memorandum that Article 86 may be applied to concentrations which amount to monopolization of a substantial part of the Common Market. It was not until a European merger boom was in progress and extensive studies showed increasing trends toward industrial concentration in the Common Market that the Commission took action under Article 86 in the Continental Can decision of 1972.

1.4 The Continental Can Case

In 1972 the Commission confirmed that Article 86 extended to concentrations in the case of Continental Can. Continental Can, an American firm and the world's largest can producer, created Europemballage in 1970. Europemballage acquired an 85% stake in S.L.W., a German company. This last firm was the leading European producer and had a market share in Germany of about 70%. Europemballage then made a public bid for the shares of T.D.V., the leading Benelux can producer, and acquired 80% of its shares in addition to the 11% it already held.

The Commission condemned Continental Can and its European subsidiary on the basis of Article 86 for an abuse of their dominant position.[8] The Commission reasoned that Continental Can would strengthen its dominant German market position through this Dutch acquisition to the detriment of consumers, and that this amounted to an abuse. Although the European Court of Justice (hereafter: the Court) annulled the Commission's decision

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[7] Note that Article 86 does not prohibit the accumulation of a dominant position; it only prohibits the abuse of that position.

[8] In the United Brands case, the European Court of Justice has defined a dominant position under Article 86 as: "... a position of economic strength enjoyed by an undertaking which enables it to hinder the maintenance of effective competition on the relevant market by allowing it to behave to an appreciable extent independently of its competitors and customers and ultimately of its consumers" (Bellamy and Child, 1987: 390). The Court has held that, barring exceptional circumstances, a large market share is sufficient evidence by itself of a dominant position. In particular, a market share of 80% or over has been regarded as pointing to a dominant position without the need for further evidence while for shares of 40 or 50% further details would be required.

on its facts,[9] it confirmed that an acquiring company abuses its dominant position when it restrains competition to such an extent that the only firms that remain in the market are dependent on the dominant one.[10] This case firmly established that Article 86 applied to a company in a dominant position that acquires a competitor even though Article 86 itself contains no explicit provision to this effect.

In the Continental Can case, the Court, having decided that Article 86 applied to mergers, went on to give little concrete guidance as to *how* it should be applied.[11] The Commission, therefore, proposed the first Draft Regulation on the control of concentrations in 1973 in recognition of the inadequacy of Article 86 as a means of merger control. The Draft Regulation has been substantially revised during the 1980s and became a priority item on the "Europe 1992" agenda.

1.5 The Philip Morris Case

In 1987, the decision by the Court with respect to the Philip Morris case extended the reach of Article 86. However, the Philip Morris case is better known for being the first case in which the Court considered that Article 85 in addition to Article 86 might apply to the acquisition of a minority interest by a competitor if the acquiring company gains substantial influence over the target company.

In this case, the cigarette manufacturer Philip Morris agreed to acquire a 30% interest in its competitor, Rothmans, from its South African parent company, Rembrandt. The Commission exempted this proposed acquisition of a competitor and the Court upheld the Commission's decision despite a challenge by two other tobacco companies. In the past, the Commission had consistently held that an abuse of a dominant position could only occur if

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9 The Court ruled that in defining the relevant product market the Commission had failed to consider the possibility of substitution on the supply side, i.e. the ease with which metal can producers could switch their production to making packaging in more complex shapes for meat and fish.

10 However, in subsequent Article 86 cases, the test for "abuse" has become less stringent. An abuse is now defined as an action that hinders the maintenance of the degree of competition in the market (De Smedt and Vandersanden, 1990: 439).

11 In addition, the Commission has never published clear guidelines which indicate when Article 86 will apply and when it will not in a specific situation.

there was a change in control within the target company. In the Philip Morris case, however, the Court stated that Article 86 not only applied to the acquisition of both legal and de facto control, but also applied when the acquisition of a substantial stake gave the acquiring company influence over the commercial policy of the target company.

Moreover, the Court held that Article 85 could prevent changes in ownership (such as mergers and acquisitions) if these followed from an agreement between companies, whereby one company obtained control or decisive influence in another in such a way as to distort competition (Colchester and Buchan, 1990: 155)

1.6 The Commission's Position after Philip Morris

Following the Philip Morris judgement, the Commission indicated to the Council in 1987 that if agreement on the principle of an a priori merger control regulation was not forthcoming, it would withdraw its proposal and make full use of its powers under Articles 85 and 86. One could argue that the unusually frequent involvement of the Commission in merger cases in 1988 was part of a campaign to be granted clear power to review major mergers. Some analysts suggested, in the aftermath of the Philip Morris case and the other merger matters in 1988, that the climate of uncertainty was such that explicit recognition and regulation of the Commission's powers was necessary (Forrester and Norall, 1989: 250). Furthermore, big industrial lobbies, like UNICE, the European federation of employers, began to see merit in the EC removing this uncertainty and giving the Commission a clearer mandate to control mergers (Colchester and Buchan, 1990: 155).

As a result of these developments, by 1989 the Commission had refined its use of Articles 85 and 86 so that it could intervene in concentrations in the following cases:

1) *Article 86 could be applied if a bidder in a dominant position sought to acquire a competitor and thereby substantially fettered competition in the Community. One example was the intervention by the Commission in the acquisition by British Airways of British Caledonian.*
2) *Also, the Commission could intervene if one competitor acquired a minority shareholding in another competitor so that it obtained either legal or de facto control of that competitor. This was the result of the Philip Morris judgement.*

3) *Article 85 could be applied if two or more competitors established a consortium to bid for a competitor and agreed to divide up the target of the business between themselves. This was the basis for the Commission's intervention in the Irish Distillers case.*

It is clear that the effect of the Commission's increasing and sophisticated use of Articles 85 and 86 gave greater impetus to the debate in the Council on the proposed merger control regulation.

However, the limitations upon the use of Article 86 as a means of merger control were apparent to most parties involved. The principal limitation of Article 86 was that it did not prohibit concentrations that *create* a dominant position, i.e. one of the undertakings involved must already have a dominant position. Other areas where the applicability of Article 86 was questionable were (1) acquisitions in which the dominant company is acquired by a nondominant firm and (2) acquisitions that resulted in market shares below the Continental Can levels.

The application of Articles 85 and 86 to mergers and acquisitions will not automatically cease with the adoption of the new Regulation. The jurisprudence of Articles 85 and 86 will influence the Commission in its application of the Regulation and the Court will certainly use such jurisprudence in conjunction with the Regulation in reviewing the Commission's future decisions. Nevertheless, the precise role of Articles 85 and 86 in EC mergers remains uncertain now that the Regulation has been adopted.

1.7 The Adoption of the 1989 EC Merger Control Regulation

The Commission pressed for the adoption of the Regulation for mainly three reasons (De Smedt and Vandersanden, 1990: 440-441). One of the principal arguments in favor of the adoption of the Regulation was the need to provide effective and speedy review of concentrations at the Community level. The Commission wanted exclusive jurisdiction over the large European mergers and acquisitions with a "Community dimension." To have a Single Integrated Market, the Commission believed that individual member states should not be able to block significant mergers and acquisitions. Therefore, the Regulation would provide a "one-stop shop" for these mergers.

Second, the Commission felt a need for a prior clearance procedure, because often the Commission intervened very late in the merger transaction process. The uncertainty caused by such *ex post facto* intervention was unsatisfactory to the business community. The Regulation would provide a simple and well-defined procedure for large European mergers.

Third, as mentioned previously, the existence of substantive defects in the pre-existing law provided another reason for the Regulation's adoption. The principal test of the Regulation not only prevents the enhancement of pre-existing dominance, but also prevents the creation and the strengthening of a dominant position. Therefore, the acquisition of a dominant company by a nondominant one appears to be conceptually within the scope of the Regulation.

The new Regulation is the result of a compromise between the Commission and the member states concerning several key issues.[12] In other words, tension between national and Community authorities rose in debates about when a proposed merger would have a "Community dimension" such that it would fall within the scope of the Regulation. The primary obstacle to merger control in the EC has been determining where the member states' authority to control mergers affecting their interests ends and where the EC's authority to control mergers affecting the Community begins.

The Commission wanted the threshold for attaining a Community dimension to be low, whereas the large member states, particularly Germany and Great Britain, wanted it to be high. Countries like Spain and Portugal, on the other hand, wanted to encourage rapid mergers to catch up economically with the larger member states.[13] In discussing the Draft Regulation in the Council, Portugal, Italy and the Netherlands felt that the ECU 5 billion

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[12] For an overview of the progress of the Regulation see the drafts published since 1973: O.J.1982, C36/3; O.J.1984, C51/8; O.J.1986, C324/5; O.J.1988, C 130/4; and O.J.1989, C 22/14.

[13] In the draft published in January 1989 (O.J. 1989, C 22/14), the Commission was still proposing an aggregate turnover threshold of ECU 1 billion, a Community turnover threshold to be satisfied by each of at least two participants of ECU 100 million and exclusion of the Regulation where all of the parties in question realized more than three-quarters of their turnover in the same member state (Venit, 1990: 8).

threshold was too high.[14] Germany, Great Britain, and France, on the other hand, argued that a ECU 2 billion threshold (proposed by the Commission) was too low. Because the thresholds were so controversial, the Regulation provides that they will be reviewed within four years and may be amended by a qualified majority of the Council.[15]

The treatment of concentrations that fall below the Regulation's high thresholds no doubt constitutes the greatest defect of the new Regulation. The repeal of Regulation 17 indicates that the original intention may have been to relegate control of such concentrations to national authorities.[16] However, the Commission has indicated that it intends to reserve the right to apply Articles 85 and 86 to concentrations below the Regulation's thresholds where the aggregate worldwide turnover of the parties is ECU 2 billion or more and the Community-wide turnover of at least two of the parties is ECU 100 million or more.

Furthermore, the criteria for assessing "compatibility" were the source of intense debate. A divergence of views was visible between those member states like Germany and Great Britain (with whom the Commission has sided on this issue) which insisted on limiting the assessment of concentrations to pure competition law concerns and those member states like France, which preferred a more "dirigiste" approach, or which stressed the need to take into account the less developed regions of the Community.

At first glance, the Regulation appears to adopt the German and British point of view, as it states that a concentration will be declared compatible if it does not create or strengthen a dominant position which would significantly impede competition in the Common Market or a substantial part thereof. However, the Regulation also directs the

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14 Member states agreed later that they may refer a proposed merger which falls below the thresholds to the Commission. Member states which lack national merger control legislation pressed for lower thresholds which would automatically refer mergers within their national borders to the Commission. They accepted higher levels in exchange for an amendment permitting the Commission, at a member state's request, to regulate mergers lacking a Community dimension.

15 The Commission still believes that ECU 2 billion is the appropriate level and intends to press for reduction to that level when the thresholds are reviewed.

16 Regulation 17 gave the Commission the right to investigate concentrations and impose substantial fines on corporations.

Commission to consider the need to preserve and develop effective competition in the Common Market in view of actual or potential competition from both EC and non-EC companies and "the development of technical and economic progress provided that it is to consumers' advantage and does not form an obstacle to competition" (De Smedt and Vandersanden, 1990: 446). According to some analysts, this means that the Regulation allows the Commission to consider, when evaluating the effects of a concentration in the Community, the need of Community firms to increase their competitiveness in order to meet international competition on markets within or outside the Community.[17] For example, it seems that the need to meet international competition has played a significant role in the Commission's assessment in the GEC-Siemens/Plessey case. In sum, regional and industrial policy considerations may still enter the review process.[18]

Finally, Germany insisted on (and obtained) the inclusion of a provision concerning distinct national markets which has the potential for giving rise to considerable member state interference in the process of controlling mergers and acquisitions, even if, subject to review by the Court, the Commission ultimately retains the power of decision.

The new Regulation applies only to mergers having a "Community dimension."[19] Community dimension is defined in terms of sales, i.e., the Regulation applies when three conditions are fulfilled:[20]

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17 Thus one might, for example, conceive the Commission condoning a merger of large European silicon chip manufacturers on less than strictly competition grounds if it benefits the European silicon chip industry as a whole.

18 For example, see Recital 13 which refers to the fundamental objectives listed in Article 2 of the Rome Treaty and the need to strengthen the Community's economic and social cohesion.

19 Council Regulation (EEC) No.4064/89 of 21/12/89 on the control of concentrations between undertakings, 32 Official Journal of the European Communities (No.L395) 1 (1989). See also EC, "Community merger control law," in: Bulletin of the European Communities, Supplement 2/90.

20 Banks and financial institutions are subject to different rules. Rather than by sales, the measure is calculated on one-tenth of their assets according to a special formula. For insurance companies, the equivalent of sales for purposes of these calculations shall be based on the value of premiums received.

(1) *The aggregate worldwide sales of all the companies involved exceeds ECU 5 billion;*
(2) *The aggregate Community-wide sales of at least two of the companies exceeds ECU 250 million;*
(3) *Each of the companies cannot exceed more than two-thirds of its aggregate Community-wide sales within one and the same member state.*

Article 2 of the Regulation describes how the Commission will analyze a proposed merger or acquisition. It states that " a concentration which creates or strengthens a dominant positions as a result of which effective competition would be significantly impeded in the common market or in a substantial part of it shall be declared incompatible with the common market."[21] The criteria adopted for determining whether this is the case are:

(1) *The market position and economic and financial power of the firms concerned;*
(2) *The possibilities of choice of suppliers and consumers;*
(3) *The access to supplies or markets;*
(4) *The structure of the markets affected, having regard to international competition;*
(5) *The barriers to entry (legal or de facto);*
(6) *The trend of supply and demand for the goods and services concerned.*

The Regulation does not give any indication of the weight to be attached to the different criteria. In Article 86 cases, the Court has stated that market share is not the sole criterion for assessing dominance, although in some cases it appears to have relied heavily on this factor. The cases reported in the annual reports on competition policy would appear to indicate that the Commission will attach importance to the analysis of the structure of supply and demand to determine whether large market shares translate into market power. As a general rule, it appears that the importance of criteria other than market share will normally decrease as market share increases.

One of the most important features of the Regulation is its prior notification procedure. The relevant parties must notify the Commission one week after the conclusion of an agreement or "after the announcement of the public bid, or the acquisition of a controlling interest." The Regulation grants the Commission the power to veto a proposed merger.

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21 The presumption exists that when merging firms do not have a market share of over 25% in the Common Market as a whole or in any substantial part of it, they are unlikely to impede effective competition and would therefore not be blocked.

When a merger has already been implemented, the Commission may require the merged companies or assets to be separated.

The Regulation allows member states to apply their own competition laws and procedures to mergers and acquisitions in two types of situations. Additionally, in a third type of situation a member state may intervene on the basis of noncompetition criteria. First, if a merger or acquisition either does not exceed the relevant sales thresholds, or is so concentrated in one member state that it constitutes a domestic transaction rather than a transaction with a Community dimension as defined by the Regulation, then that member state may process the merger or acquisition under its own national laws.

Second, under the so-called "German Clause," the Commission has the right to grant a member state the authority to examine a transaction when the member state has persuaded the Commission that the proposed transaction will have a harmful effect on competition within a section of the domestic market that represents a distinct market of that member state.[22]

Third, the member states have the right (under article 21) to take proper action when necessary to protect legitimate interests not otherwise safeguarded by the Regulation. These legitimate interests include national security, pluralism of the media, and prudential rules applying to financial institutions. In addition, a member state may invoke other legitimate interests, but only with the approval of the Commission.

There are several situations in which the Commission's attempts to obtain exclusive jurisdiction may be challenged by member states. The first situation is one in which the Commission performs its (preliminary or full) investigation and determines that, although a concentration falls within the scope of the Regulation, it does not raise serious competition problems and therefore the Commission will declare the transaction compatible with the Common Market. In theory, if the Commission has exclusive jurisdiction, there should be no further investigation. However, at least one national competition authority, the Office of Fair Trading in Great Britain, has expressed the view that it has the right to

22 However, the Regulation also provides that the Commission may refuse to transfer the matter to the member state in question and to continue to process such a transaction (De Smedt and Vandersanden, 1990: 444).

intervene, and possibly veto, the acquisition of a British company on competition grounds even after the Commission has given its approval (De Smedt and Vandersanden, 1990: 447).

Also, a member state may veto a Commission-approved merger for reasons other than the legitimate interests permitted under article 21 (3).[23] It is not clear what would happen if the Commission failed to recognize the alleged public interest of the member state, and the member state subsequently chose to ignore the Commission's opinion.

[23] The final paragraph of article 21 (3) reads: "Any other public interest must be communicated to the Commission by the member state concerned and shall be recognized by the Commission after an assessment of its compatibility with the general principles and other provisions of Community law before the measures referred to above may be taken. The Commission shall inform the member state concerned of its decision within one month of that communication."

Chapter 2: Concentration Trends in EC Industry

2.1 Introduction

The process of establishing an EC Merger Control Regulation, as described in chapter 1, is linked to concentration trends within EC industry. As I will show in this chapter, one can identify a cyclical trend with respect to concentrations in the EC. Several studies have shown that mergers and acquisitions account for a significant proportion of increases in concentration (OECD, 1984). Therefore, I analyze, in the second part of this chapter, merger activity in the EC since the early 1970s. Also, I discuss the effect of these mergers on the overall concentration rate in the EC and the possible danger that (large-scale) mergers pose to healthy competition in the Common Market.

2.2 The Structural Transformation of EC Industry in the 1960s and 1970s

In the 1960s European firms were outperformed by American firms which was attributed by several analysts to the small size of European firms. Policy-makers and industrialists were obsessed with the relatively small size of European firms compared to American and (later) Japanese rivals, and with the differences in performance widely thought to be associated with that size difference (De Ghellinck, 1988). Therefore, national industrial policies at the time sought to exploit the link between size and competitiveness which was widely believed to exist. It was generally felt that the competitiveness of the European industry had to be raised.

In the realm of policy, the need was strongly felt to set up "a framework allowing European undertakings to acquire the size and means to confront industrial dinosaurs" (Geroski and Jacquemin, 1984: 345). Industrial policy at the time aimed at transforming the EC into an oligopolistic market creating European super-firms which could compete with American giants. Hence, in order to enable these super-firms to have access to a sufficiently large internal market to enjoy the economies of scale of large output, the European Community (EC) focused on breaking down intra-Community trade barriers. This strategy involved a surprising tolerance of the possible unfavorable effects of highly concentrated market structures. Indeed, the challenge of such scale economies was felt to be so strong that many policy-makers were willing to sacrifice potential diversity of products by encouraging the concentration on a relatively small range of goods.

According to welfare analysis textbooks, any efficiency gains from large size must be set against the welfare cost of a larger deadweight burden of monopoly, arising because prices are driven above the marginal costs of producing goods. High levels of concentration might lead to a failure to realize the optimum allocation of resources between industries. Another adverse consequence concerns the internal efficiency of firms. Control over price and profit from either dominant firms or collusive behavior may well reduce the pressure to pursue the continuous improvement of products and processes which is brought about by competition. In practice, however, EC policy-makers believed that the gains were likely to exceed the costs for three reasons (Geroski and Jacquemin, 1988: 299). First, economies of scale were thought to be large and ubiquitous, enabling potentially large cost reductions throughout the economy. Second, a series of empirical studies had shown that the deadweight burden of monopoly was small. Finally, it was widely believed that the integration of the European market would allow the new super-firms to realize the desired economies of scale without undue concentration and market power.

This viewpoint meant a green light for mergers which transformed the corporate structure of the European industry in the 1960s. Weak anti-merger laws, their even weaker implementation, and the occasional enthusiastic government promotion of particular mergers fueled the merger boom and accelerated the transformation of the European economy (De Ghellinck, 1988: 134). As shown in Table 2, this merger boom consisted predominantly of horizontal mergers between competing firms in the same industry.

The principal result of the merger boom was that the largest firms' share in overall Community economic activity increased substantially. The merger boom led to a substantial increase of concentration in the European industry during the 1970s. In 1976, the 100 largest corporations in the EC accounted for about 30 percent of the output and employment, and about 30 percent of EC exports were internal transactions carried out between these 100 firms (Geroski and Jacquemin, 1984: 358). The 50 largest companies

Table 2 Merger activity in five European nations

Country	Period	Coverage	Number of Mergers	Percentage		
				Horizontal	Vertical	Other
Sweden	1946–69	Mining and Manufacturing	1,800	79.8	7.6	12.6
France	1950–72	Manufacturing and Distrib.	565	48.3	24.7	27.0
W. Germany	1970–77	All	2,091	72.3	15.2	12.5
UK	1965–77	All	1,562	74.0	4.0	21.0
Netherlands	1958–70	Manufacturing	1,021	62.4	11.6	26.0

Source: Mueller (1980)

alone increased their share of manufacturing output from 15 percent in 1965 to 25 percent in 1979 (Locksley and Ward, 1979).

National government policies promoted concentration well into the 1970s which led to competition between large national firms, supported in diverse ways by their governments, and to fragmentation of the internal market. As a consequence of the fragmentation of the Common Market, aggregate concentration developed without any similar increase in competition. Big "national champions" enjoying substantial market power were created. Member states supported their national champions with *ad hoc* financial aid for social and employment reasons, and protected the dominant positions of these firms by means of market restrictions and favored positions. This *ad hoc* financial aid did not help to rationalize and restructure weak industrial sectors but in fact prolonged and extended sectoral crises because of its distortion effect on competition. Protected by their national governments and relatively shielded from the challenges of new rivals, these national champions neither felt the pressure to leave a declining industry nor the necessity to innovate (De Ghellinck, 1988). Hence, they were unable to respond rapidly to the structural shocks that occurred in the 1970s.

According to the Commission, there had been a appreciable increase in both market concentration and in overall concentration during the 1960s and 1970s in the EC. In the period up to the mid-1970s, many dominant market positions were established. In many national markets within the EC, leading firms acquired market shares of over 50%. Nearly 250 national markets were counted where the top firm had a market share of more than 25%, and approximately 100 where the top firm had more than a 50% market share (EC, Seventh Competition Report, 1978: 206).

2.3 A Closer Look at Concentration Trends in the EC

Overall concentration is a measure of the importance of the largest firms in the economy (De Jong, 1988). It expresses the relative weight of the X largest firms in the total economy or manufacturing industry. It is important to point out that the rate of overall concentration does not provide us with a direct measure of intensity of competition or an indication of control. Enhanced concentration and greater competition may go hand in hand, unless concentration becomes very high.

In theory, high concentration facilitates consciously interdependent behavior, including parallel pricing and the restriction of output. Monopolistic and oligopolistic practices are more likely and competitive behavior less likely where a few firms account for a major share of an industry's output, compared to a situation where even the largest firms are relatively unimportant. However, the degree of competition in an industry also depends on such factors as the existence of both technical barriers to entry, of which economies of scale and patents tend to be the most significant, and artificial barriers created by the firms themselves such as exclusive dealing relationships and selective pricing policies.

One can distinguish several time periods in the development of overall concentration in the European Community. In the first period, from 1950 until 1960, overall concentration in the EC rose slowly, with the exception of Great Britain where the share of the 100 largest firms in manufacturing net output increased from 22% in 1948 to 33% in 1958. In Germany, with its rapidly expanding economy, the tendency towards higher overall concentration was rather insignificant (De Jong, 1988: 3).

In the 1960s, however, overall concentration in the EC increased significantly. In Great Britain, the share of the 100 largest manufacturing firms (in net output) rose from 33% in 1958 to 40% in 1970 (Hannah, 1983: 180). In Germany, the overall concentration rate jumped from 30% in 1959 to 39% in 1966 for the 50 largest manufacturing firms and from 37% to 45% for the 100 largest manufacturing firms (De Jong, 1988: 4).

In the early 1970s, overall concentration in the EC rose sharply again, although it dropped after 1974. The development of concentration differed from country to country. For example, in Great Britain the share of the 100 largest manufacturing firms hardly rose (Hannah, 1983: 180), but in Germany the share of the 100 largest firms in total sales (not only manufacturing) rose from 21.7% in 1972 to 24.2% in 1978 (De Jong, 1988: 4). However, since this increase was primarily due to the six leading firms, and these top firms did not enlarge their share further between 1978 and 1982, overall concentration probably came to a standstill in Germany in the late 1970s.

Nevertheless, in the late 1970s and early 1980s, there was again a sharp upward movement in the overall concentration rate in the EC, mainly due to a spectacular rise in energy prices which helped oil and coal mining companies improve their rankings in the share of the 100 largest firms. This trend was reversed after 1983 and by 1986 it seemed that overall concentration in the EC was on the same level as in the mid-1970s.

A number of factors tend to lead to an increase in market concentration. In the first place, there may be an increase in the size of firms due to internal growth by existing firms, especially by those which were already large. Growth can be achieved by the expansion of existing plants, possibly due to exploitation of scale economies, or by the construction of additional plants. Increased concentration may also be occasioned by increases in the size of firms by means of mergers and various forms of takeover of rival firms in the same industry.[24] In these cases, in particular, firms which already hold a sizeable market share often have considerable advantages over smaller firms regarding their ability to expand their production and sales. In addition to possible technological advantages, larger firms are more likely to possess economic and financial advantages. Readier access to capital, perhaps at lower cost, enables them to expand and acquire production capacity. Studies in Canada, Great Britain and the United States have concluded that mergers account for a varying but significant proportion of increases in concentration (OECD, 1984).

In the next section I will examine merger activity in the EC since 1970. I will also discuss the consequences of this merger activity for the overall concentration rate in the EC and the potential threat of mergers and acquisitions to competition in the Common Market.

2.4 Merger Activity in the EC (1970-1988)

In its Annual Reports on Competition Policy, the EC provides data on merger activity

[24] A distinction is often made between "merger" and "takeover", where merger is used to describe the process of voluntary fusion between two or more companies, and takeover usually means the acquisition of control through share purchase without the agreement of the directors of a company (OECD, 1974: 5).

between corporations since 1973.[25] This merger series shows a relative stability during the 1970s as a result of diverging trends. In Germany, merger activity increased to a peak in 1980, while the number of British mergers dropped significantly after 1973 and only started to rise again in the 1980s (see Figures I, II and III). In general, since 1983 merger and takeover activity is again rising.

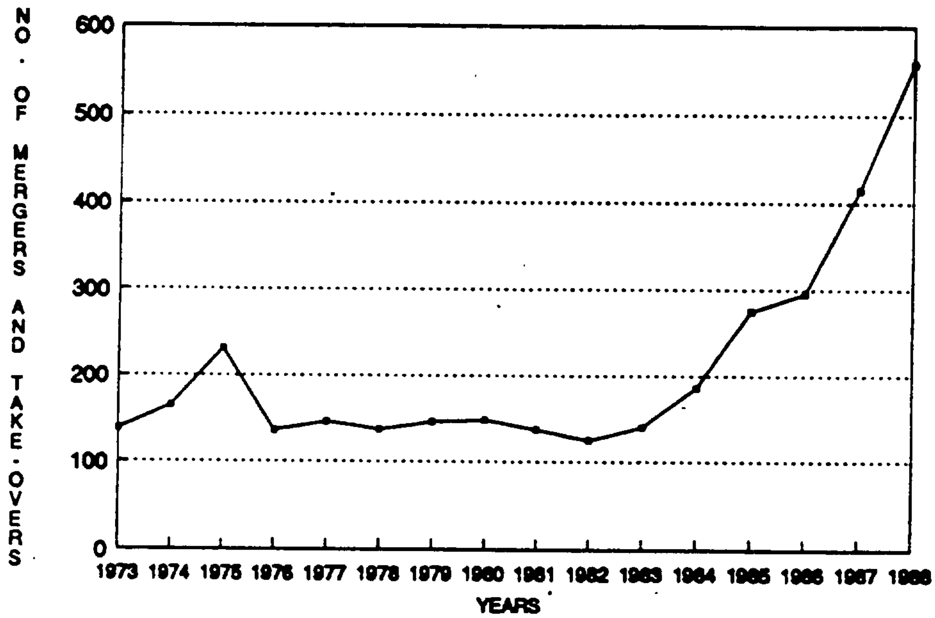
At the end of the 1970s, a slight tendency towards the internationalization of firms, markets, products and consumer habits at Community level could be witnessed. In its Ninth Competition Report, the Commission reported that "the same transnational firms are coming more and more to occupy the same places in the same product markets in more than one member state" (EC, Ninth Competition Report, 1980: 141). Looking at the developments over the last 10 years, the Commission concluded that (EC, Ninth Competition Report, 1980: 142):

1) *There was a long-term growth of oligopoly: in various markets the number of firms operating showed a steady and striking fall;*
2) *There was gradual but continuous growth, in both absolute and relative terms, in the size of industrial production units, and even more so in the size of trading units (large-scale distribution, notably food and drink);*
3) *There was a development of a new form of oligopolistic specialization at transnational level in which elements of competition were closely bound-up with elements of technical or commercial cooperation and quasi-monopolistic rigidity.*

According to the Commission, the increase in merger activity since 1983 suggested that the trend towards increasing concentration of industry in the Community was still continuing. Increase in merger activity in 1985 in the industry was accounted for entirely by national (up 45%) and Community (up 51%) operations. In general, a trend towards internationalization of the links forged by European firms emerged. This development had a positive side, i.e. it reflected the increased integration of the European market and indicated more widespread technology transfer both between Community states and from non-member states.

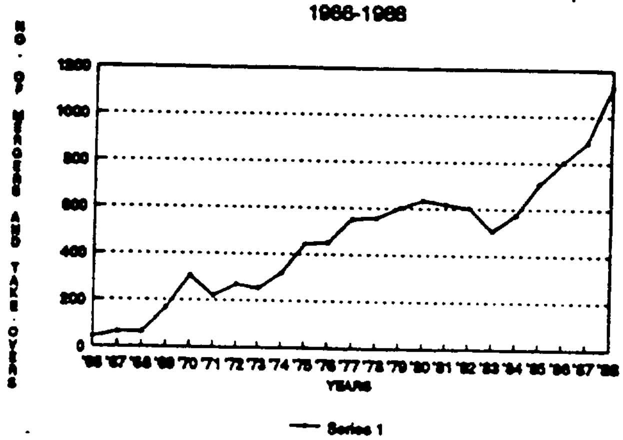
[25] Empirical data stem from information available on the 1,000 largest firms in the EC. Sources were daily newspapers and periodicals selected among the most important in the member states. Therefore, the numbers published do not necessarily include *all* the operations that have been taken place in the Community. However, they should offer a fairly realistic picture of trends (EC, Eighth Competition Report, 1979: 177).

FIGURE I: LARGE MERGERS AND ACQUISITIONS IN THE EC, 1973-1988



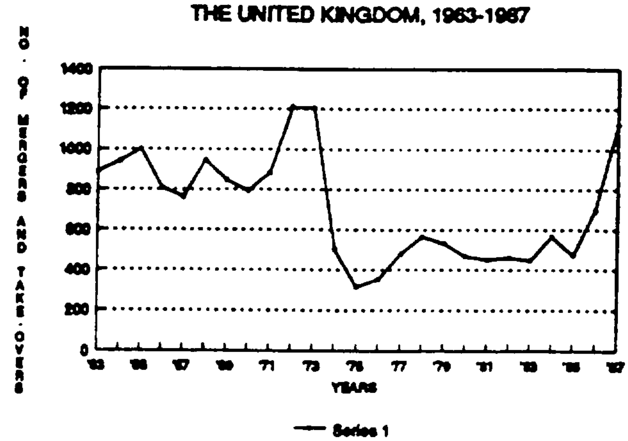
SOURCE: EC, ANNUAL COMPETITION REPORTS

FIGURE II: MERGER ACTIVITY IN GERMANY, 1966-1988



SOURCE: OECD, 1988

FIGURE III: MERGER ACTIVITY IN THE UNITED KINGDOM, 1963-1987



SOURCE: OECD, 1988

In 1986, the total number of industrial mergers was again up, but the increase (9%) was less than in previous years. All the increase was accounted for by Community and international operations. This was different from the data found for the period 1982-1984, when purely national mergers had increased much faster than those involving other Community or non-Community firms. The internationalization of merger activity was especially marked in the chemicals industry, and in the food and drinks industry.

However, absolute figures for mergers do not automatically permit conclusions as to the trend of concentration in an industry. The impact of mergers on concentration mainly depends on the size of the firms involved and whether the industry is already highly concentrated (for example, chemicals, vehicles, and transport equipment). Mergers between large firms will obviously have different effects from those between small firms. With this in mind, an important development in 1986 was that the sharpest increase in mergers occurred in the largest size category, i.e. among firms with a combined turnover of over ECU 1 billion, unlike previous years when smaller-scale mergers increased most. Moreover, 75% of the mergers among the largest firms were horizontal mergers, which increased the danger of a reduction in the intensity of competition. These findings demonstrated the threat to competition posed by an increase in concentration resulting from mergers especially those involving very large firms. They also pointed to the need for Community control of mergers.

In 1987, the number of mergers was again up and by a higher margin (34%) than in 1986. The increase in merger activity was accounted for by national operations (up 46%) and Community operations (up 45%). The operations in the largest size category accounted for 57% of the total, as against 48% in 1986. As mentioned previously, this could lead to an increase in overall concentration in the Common Market. This evolution was particularly marked in the chemicals, food and drink, metal and vehicles, and transport equipment industries, where sharp increases were observed in the operations of the largest-size category. As far as the host country of the large-scale mergers was concerned, Great Britain was first with 50 cases, followed by France (41) and Germany (37).

In 1988, merger cases continued their upward trend, increasing by 26% during 1988. This increase was accounted for entirely by international (up 241%) and Community (up 48%) operations, whereas the number of national mergers remained virtually unchanged. *This rise in Community and international mergers shows strategic market positioning by companies, in anticipation of the Single Integrated Market.* Operations among firms with a combined turnover exceeding 1 billion ECU accounted for 70% of the total as compared to 57% in 1987. Large-scale mergers were prominent in the chemicals, food and drink, metal, and construction sectors. Also, a significant number of cases involved firms with a combined turnover exceeding ECU 5 billion (108 cases) and ECU 10 billion (60 cases), thereby marking increases of 61% and 94% respectively, in 1988.

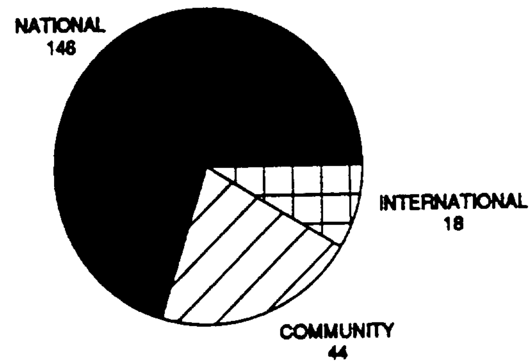
In sum, three important observations can be made with respect to merger activity in the period 1970-1988:

1) *A merger boom has developed after 1986. In fact, it is possible to speak of a second merger wave in the European Community;*

2) *The main difference in merger activity between the first merger wave (1960s-1970s) and the second one in the 1980s is the fact that the first merger wave mainly involved national mergers whereas the second wave includes an increasing number of Community and international mergers. This change points to the internationalization and to some extent to the globalization of the European economy (see Figures A and B).*

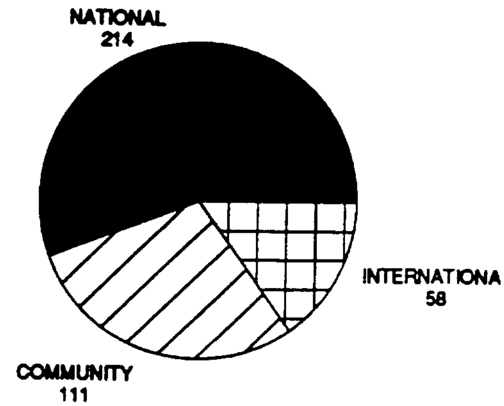
3) *The increasing number of large-scale mergers (44% of total industrial mergers in 1985; 48% in 1986; 57% in 1987; 70% in 1988) poses a potential threat to undistorted competition in the Common Market and emphasizes the need for an EC Merger Control Regulation (see Figures C and D).*

FIGURE A: NATIONAL, COMMUNITY AND INTERNATIONAL MERGERS IN THE EC, 1985



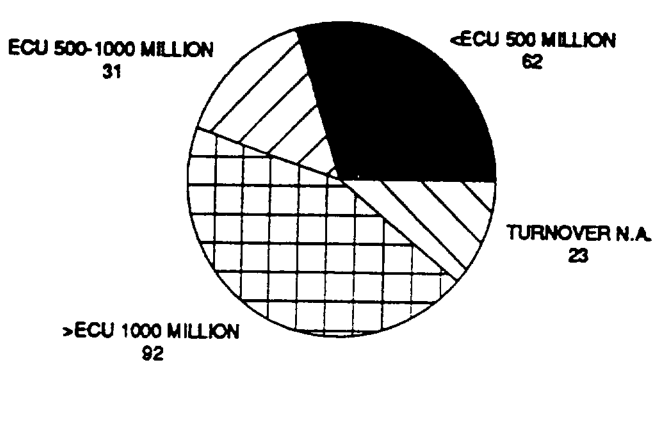
SOURCE: EC, COMPETITION REPORT, 1986

FIGURE B: NATIONAL, COMMUNITY AND INTERNATIONAL MERGERS IN THE EC, 1988



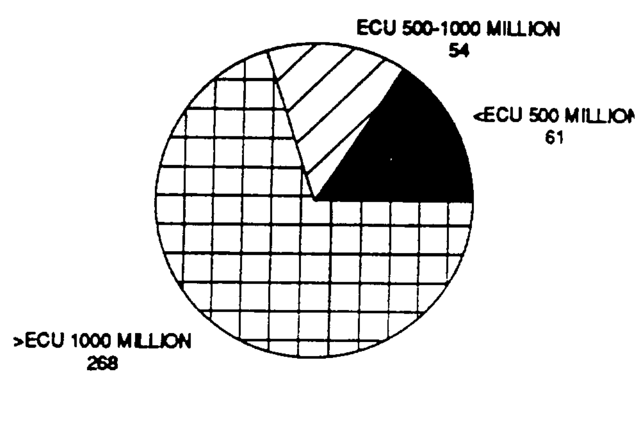
SOURCE: EC, COMPETITION REPORT, 1989

FIGURE C: BREAKDOWN OF INDUSTRIAL MERGERS BY COMBINED TURNOVER, 1985



SOURCE: EC, COMPETITION REPORT, 1986

FIGURE D: BREAKDOWN OF INDUSTRIAL MERGERS BY COMBINED TURNOVER, 1988



SOURCE: EC, COMPETITION REPORT, 1989

Chapter 3: The Competitiveness of EC Industry and the New Regulation

3.1 Introduction

In the 1960s, European firms often lost market share to American firms which was attributed by policy-makers to the smaller size of European firms. One could argue that both policy-makers and industrialists were obsessed in those days with the small size of European firms compared to their American rivals, and with the differences in performance widely thought to be associated with that size difference (De Ghellinck, 1988). Therefore, national industrial policies at the time sought to exploit the link between size and competitiveness which was widely believed to exist. It was generally felt that in this way the competitiveness of the European industry could be raised. During the 1960s, EC and national authorities allowed European firms to merge although the possible unfavorable effects of highly concentrated market structures were known. Due to weak merger control regulations, their weak enforcement and sometimes enthusiastic government promotion, a merger boom developed.

In the early 1980s, concern over the competitiveness of the European industry arose again from a general feeling that the Community was losing the race against its main competitors, the United States and Japan. Several factors contributed to this feeling (EC, 1982: 7):

(1) *The decline of a number of traditional industries which, in the past, provided the mainstay of economic prosperity. This decline was by no means exclusive to the Community but some of its competitors, especially Japan, seemed to have adjusted better;*

(2) *The changing structure of world trade. The emergence of newly industrializing countries (NICs) as direct competitors for a wide range of markets intensified the pressure for change but the enduring nature of the recession hampered the necessary switch into alternative areas;*

(3) *The recognition of the importance of the new technologies to "post-industrial" society and the awareness that other countries, like the United States and Japan, were further advanced than the Community in the commercial application and development of these technologies.*

EC policy-makers feared that the Community as a whole would remain heavily committed to exporting a wide range of medium-technology industrial products where its competitiveness was threatened both on price and on innovation. Those member states and industries where the industrial structure was weakest were in danger of losing production capacity, employment and exports, a trend which was clearly taking place in several parts of the Community.

In this chapter I will discuss the concept "competitiveness" and analyze the changing competitive position of the EC vis-a-vis the United States and Japan between 1973 and 1985/86. I will show that, measured by several indicators, EC's industrial competitiveness was indeed declining. Furthermore, I will closely examine the effects of mergers on competition and competitiveness by using four criteria, i.e. demand growth, import penetration, economies of scale and technological content. In the last part of the paper I will discuss how the decline of EC's industrial competitiveness will affect the implementation of the new EC Merger Control Regulation.[26]

3.2 Main Indicators of Competitiveness of EC Industry

A country's industrial competitiveness rests on its ability to retain and expand its shares of world markets and to maintain a balance on its domestic market between imports and national output that is compatible with its export performance (EC, 1985: 11). Since 1973, the rate of growth of world demand for industrial products slowed down, intensifying international competition as each manufacturer has struggled to hold on to or increase market shares. Demand for some manufactured products with a high new-technology content (strong-demand sectors) has, however, been extremely firm, expanding by 6-7% a year in volume terms, or two or three times faster than demand for other products.[27]

26 The analysis in the second part of this chapter, regarding the link between EC merger policy and the Community's industrial competitiveness, has to a large extent been based on studies undertaken by Jacquemin, Buigues, and Ilzkovitz (1989) and Jacquemin (1990).

27 Generally, it is possible to distinguish three categories of demand for industrial products (EC, 1985). First, strong-demand sectors are those sectors where international demand expands sharply, by an average of 7% or more in volume terms each year despite slowdowns in economic activity. Products in this category have a pronounced new-technology content, for example, electrical equipment and electronics, information technology

Those countries well placed to meet this demand, particularly because of their competitive edge, were certain to enjoy a more satisfactory growth performance.

An analysis of the performance of the Community's industry during the period 1973-1985/86 shows that the European industry was unable to take advantage of the opportunities offered. In the case of strong-demand products, it managed neither to satisfy fully the needs of European consumers, nor to expand its outlets worldwide. As a result, in terms of internal demand in the EC, the rate of penetration by high-technology products from outside the Community rose from 10% to 20% between 1973 and 1985. In 1985, the corresponding figures for the United States and Japan were 15% and 5% respectively. At the same time, in spite of an increased export drive, the EC's share of the world market (in value terms) contracted from 27% in 1973 to 25.5% in 1985. The shares accounted for by American and Japanese producers stagnated and expanded respectively.[28]

This analysis of trade flows paints a fairly accurate picture of conditions in the European industry in the mid-1980s. In the high-technology sectors (electrical equipment and electronics, information technology and automated office machinery, precision and measuring equipment, and chemicals and pharmaceuticals), European products were not sufficiently competitive, which led to a growing import dependence on products manufactured in the United States and Japan.

On the other hand, EC producers performed best in markets for the more traditional, industrial, but weak-demand products, and they were concentrating more and more on exporting their products where competition was less keen (other OECD countries, state-trading countries, OPEC countries). This increase in emphasis on products that are less

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and automated office equipment, chemicals and pharmaceuticals. In the second category, <u>moderate-demand sectors</u>, demand shows an average 2-3% increase a year with marked differences between countries and sectors. Examples of industries in this category are rubber and plastics, transport equipment, food, drink and tobacco, and industrial machinery. In <u>weak-demand sectors</u> demand grows by 1-1.5% a year. This trend is discernible primarily in the intermediate industries such as steel, metal ores and metal goods, building materials, textile, leather and clothing industries.

28 Since the market shares by value are calculated on the basis of exports measured in current dollars, the movements in a currency's relative exchange rates play an important part in the trends observed. If one looks at the trends of exports by volume, the EC's performance falls midway between that of the United States and Japan (EC, 1989: 41).

sensitive to economic activity and that have lower value-added content almost certainly contributed to the lower growth rates observed in Europe and to a deterioration in the employment situation in industry, which was particularly worrying to the EC since the Community was far more dependent on international trade than its competitors.

In order to assess the competitiveness of the EC over the period 1973-1985/86 I will now analyze in greater detail (1) the cover rates for domestic demand, (2) the export market shares, (3) the export specialization, and (4) the geographical breakdown of industrial exports of the EC, the United States and Japan:

(1) Cover Rates for Domestic Demand

A country's domestic demand is met either by domestic production or by imports. In an open economy, consumers have the choice between domestic and foreign products according to a number of criteria like price and quality. It follows that domestic producers have to be at least as competitive as foreign producers in their own markets to be able to sell their products. Furthermore, many analysts view a strong home base as an essential precondition for being capable of competing for global markets (EC, 1985: 16).

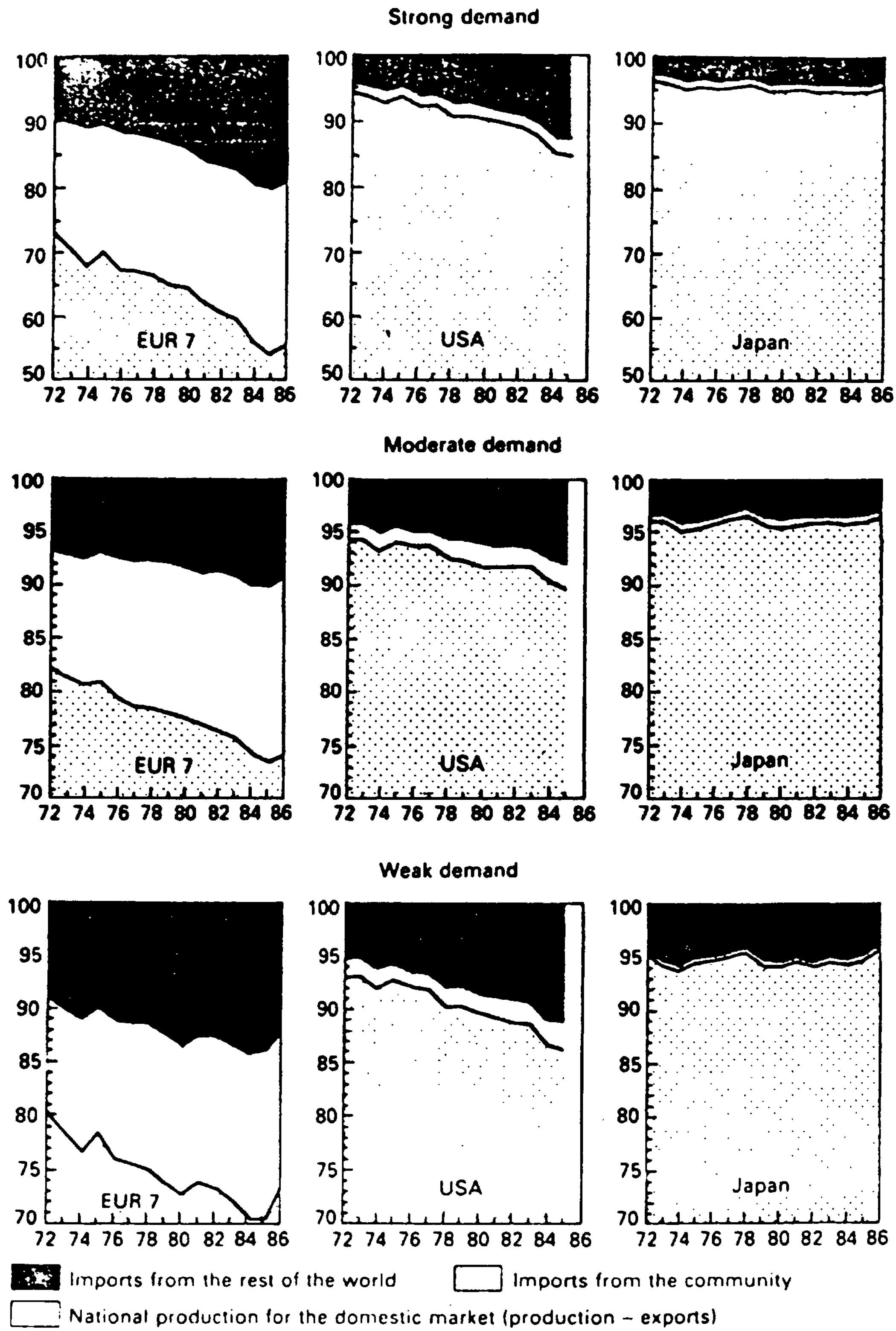
In the strong-demand sectors, the difference between the EC, on the one hand, and the United States and Japan was striking in the 1980s.[29] In 1984, for example, less than 60% of member states' domestic consumption was accounted for by domestic output, compared to 85% in the United States and 95% in Japan (see Figure 1). From 1973 until 1984, this figure dropped 14 percentage points in the EC, against 4 points for the United States and 1 point for Japan. In the weak-demand sectors, on the other hand, the Community was able to resist extra-European imports much better. Here the penetration rate increased by only 3 points.

(2) Export Market Shares

Between 1973 and 1984, the Community's market share with respect to industrial exports fell steadily (down almost two market share points). In the OECD area, the Community

[29] The EUR 7 countries are: B, D, DK, F, I, NL, UK.

Figure 1 Satisfying domestic demand for strong-, moderate- and weak-demand products



Source: Buigues and Goybet, 1989

lost 4 market share points in the strong-demand sectors, almost 3 points in the moderate-demand sectors and gained 3 points in the weak-demand sectors (see also Figure 2).[30] The recovery started in 1984 and between 1984 and 1986[31] the Community regained 1 market share point in all sectors.

As for the United States, after 1981 its market share steadily declined until 1986 by nearly 4 points in five years. The decline was visible across the whole range of industrial products (between 1981 and 1986, a 3.6 point loss on strong-demand products and a 5.2 point loss on moderate demand products (Buigues and Goybet, 1989: 236). From 1979 until 1984, Japan saw a 5.5 point increase in its market share for industrial products. Since 1984, Japan's share of this market has stagnated at a high level of around 17%. Over the long run (1973-1986), the weak-demand sectors were the only ones where its market share was stagnant, while the gains in market share in the strong-demand sectors amounted to 8.3 points (EC, 1989: 41).

(3) Export Specialization

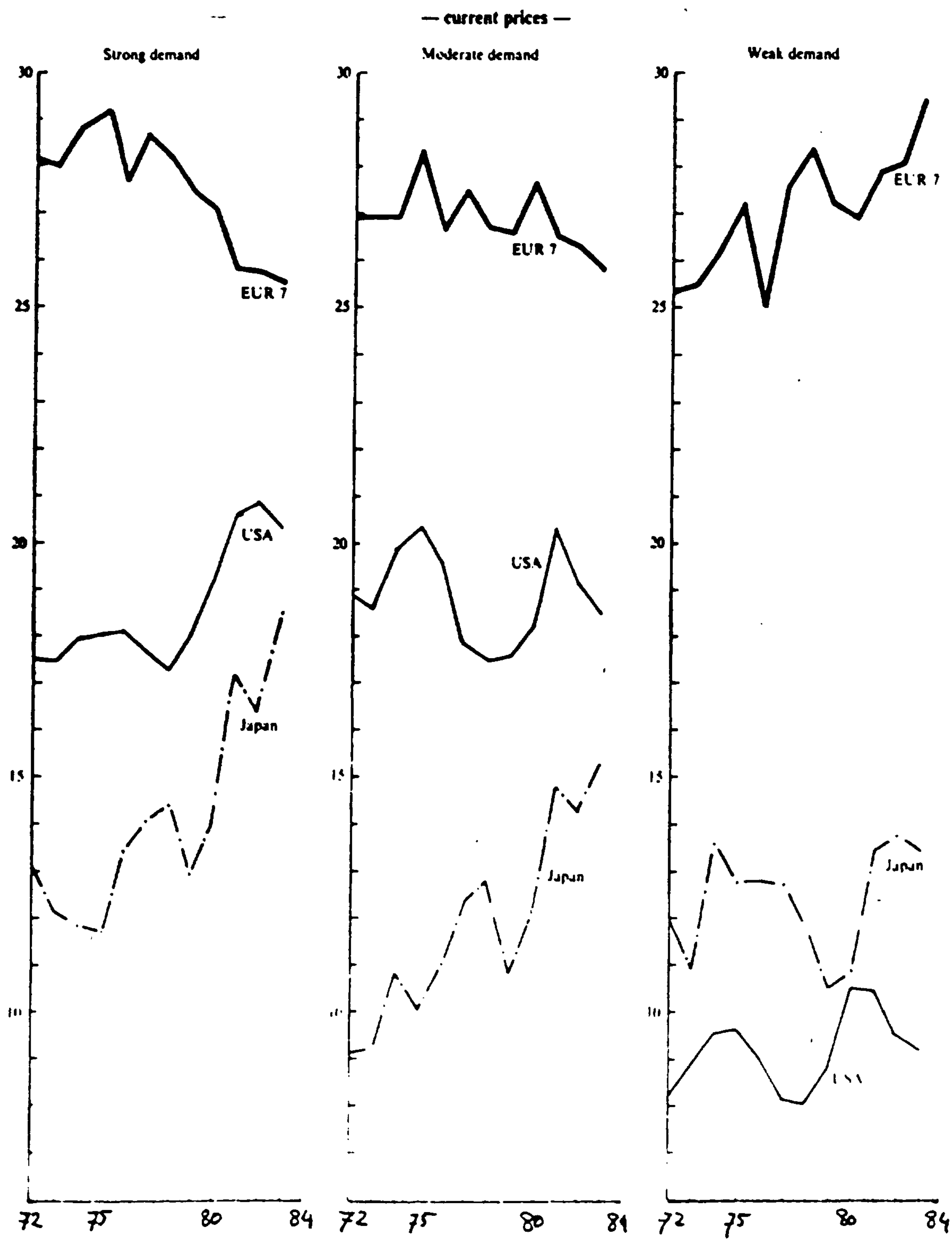
Moreover, an analysis of the patterns of export specialization of the United States and Japan between 1973 and 1986 shows a striking difference with that of the Community as a whole (see Table 3).[32] The former economies have been highly specialized in the strong-demand and moderate-demand sectors, while the degree of specialization in the weak-demand sectors has either been very low (United States) or decreased significantly in Japan. The degree of export specialization in the EC, on the other hand, has been low in the strong-demand and moderate-demand sectors (specialization coefficient is substantially less than 1 for electronic and electrical equipment and for data-processing and office equipment), and actually growing in the weak-demand sector (specialization coefficient is significantly higher than 1 for leather, footwear, non-metallic ores, and metal products). This development has

30 For example, a drop of 4 market share points means a drop from 28 percent to 24 percent.

31 Most recent figures available are the 1986 figures.

32 See also Appendix A for a definition of the export specialization index.

Figure 2 Export market shares (OECD area)



Source: EC, Volimex, 1985

Table 3 Export specialization of the EC, the United States and Japan compared to the OECD zone

EUR 10[1]		Level 1986	Variation[2] 1986/73
1. Miscellaneous industrial products	WD	1.7	−0.0
2. Leather, footwear	SD	1.4	+0.2
3. Metal products	WD	1.3	+0.2
4. Industrial machinery	MD	1.3	0.0
5. Non-metallic ores	WD	1.2	−0.2
6. Chemicals	SD	1.2	+0.0
7. Textiles, clothing	WD	1.1	+0.2
8. Foodstuffs	MD	1.0	+0.1
9. Rubber, plastics	MD	1.0	−0.1
10. Iron, steel and metallic ores	WD	0.9	−0.1
11. Electric and electronic equipment	SD	0.9	−0.1
12. Transport equipment	MD	0.9	−0.1
13. Motor vehicles and cars	MD	0.8	−0.3
14. Data-processing, office precision equipment	SD	0.7	−0.1
15. Paper, packaging	MD	0.6	+0.1
Strong demand	(SD)	1.0	−0.1
Moderate demand	(MD)	1.0	−0.1
Weak demand	(WD)	1.0	+0.2

USA		Level 1986	Variation[2] 1986/73
1. Transport equipment	MD	2.6	−0.2
2. Data-processing, office precision equipment	SD	1.6	+0.2
3. Industrial machinery	MD	1.1	−0.1
4. Electric and electronic equipment	SD	1.1	+0.0
5. Chemicals	SD	1.1	+0.0
6. Foodstuffs	MD	1.1	−0.0
7. Paper, packaging	MD	0.9	−0.0
8. Motor vehicles and cars	MD	0.8	−0.3
9. Rubber, plastics	MD	0.8	−0.0
10. Metal products	WD	0.6	−0.0
11. Non-metallic ores	WD	0.6	+0.0
12. Miscellaneous industrial products	WD	0.6	−0.0
13. Iron, steel and metallic ores	WD	0.5	−0.0
14 Textiles, clothing	WD	0.4	+0.0
15. Leather, footwear	WD	0.3	+0.1
Strong demand	(SD)	1.2	+0.1
Moderate demand	(MD)	1.1	−0.1
Weak demand	(WD)	0.5	−0.1

Japan		Level 1986	Variation[2] 1986/73
1. Electric and electronic equipment	SD	1.9	+0.2
2. Motor vehicles and cars	MD	1.7	+0.7
3. Data-processing, office precision equipment	SD	1.5	−0.1
4. Transport equipment	MD	1.1	−1.5
5. Iron, steel and metallic ores	WD	1.0	−0.4
6. Industrial machinery	MD	0.9	+0.3
7. Rubber, plastics	MD	0.7	−0.2
8. Metal products	WD	0.7	−0.4
9. Non-metallic ores	WD	0.6	−0.1
10. Miscellaneous industrial products	WD	0.6	−0.2
11. Textiles, clothing	WD	0.5	−0.6
12. Chemicals	SD	0.5	−0.2
13. Leather, footwear	WD	0.2	−0.3
14. Paper, packaging	MD	0.2	−0.0
15. Foodstuffs	MD	0.1	−0.1
Strong demand	(SD)	1.2	−0.1
Moderate demand	(MD)	1.0	+0.1
Weak demand	(WD)	0.7	−0.4

[1] Extra-EC trade for the Community of Ten.
[2] Variation: difference in the specialization indices between 1986 and 1973.

NB: Export specialization:

$$\frac{\text{exports from one branch of a country's industry}}{\text{that country's total exports}} \Big/ \frac{\text{total exports from that branch for the OECD zone}}{\text{total OECD exports}}$$

Source: EC, 1989b

been a source of growing concern for EC policy-makers.

If one takes a closer look at the trend in markets shares by product, it follows that the EC has lost considerable ground with regard to electrical and electronic equipment (minus 3.7 points), cars (minus 3 points), and office and data-processing equipment (minus 1.6 points), i.e. products for which there is a strong demand or those linked to growth in investment (see Table 4). The EC has improved its market share in sectors such as leather and footwear (plus 6.8 points), wood and furniture (plus 5.1 points), and textiles and clothing (plus 4 points), i.e. products for which demand is stagnant or declining and where competition from the NICs is intense.

In sum, the EC's production capacity has centered on improving its export position in the weak-demand sector.

(4) Geographical Breakdown of Community Industrial Exports

In 1983, the value of strong-demand and moderate-demand products exported to the OECD area represented only 34% of total Community exports to third countries, while the corresponding figures for Japanese and American exports were 45% and 51% respectively (see Table 5). In 1972, these figures were 42% for the Community, 39% for Japan and 56% for the United States. These figures indicated the problems experienced by European firms trying to maintain their market shares on the most demanding markets.

Furthermore, Table 5 also provides insight in the trade imbalance between Japan, on the one hand, and the United States and the EC, on the other hand. Thus, while Japan accounted for 12.6% of the Community's imports of manufactures in 1983, only 2.4% of the Community's industrial exports in 1983 went to Japan. Looking at the United States-Japan trade imbalance, the situation was even worse. The table shows that while Japan accounted for 29.5% of the American imports, only 8.3% of the United States' exports found their way to the Japanese market.

From Table 5 one can draw the conclusion that the EC was lagging behind its main rivals the United States and particularly Japan. This situation continued to exist throughout the 1980s.

Table 4 Gains and losses in export market shares over the period 1979-1986

(Changes in EC share of total OECD exports)

Gains (+) and losses (−) in the Community's market shares in non-EC countries over the period 1979-86[1] (in descending order)

Branches	Losses	Branches	Gains
Electrical equipment and supplies	−3,7	Leather and footwear	+6,8
Motor vehicles and cars	−3,0	Wood, furniture	+5,1
Rubber and plastic products	−2,3	Textile products and clothing	+4,0
Other transport equipment	−2,1	Minerals and non-metallic mineral-based products	+2,8
Other industrial products	−1,7	Paper articles, printed articles	+1,7
Office machines, data-processing equipment, precision, optical and other similar instruments	−1,6	Chemicals	+1,5
Metal products, excluding machines and transport equipment	−1,2	Ores and ferrous and non-ferrous metals other than fertile and fissile materials	+1,3
Industrial and agricultural machinery	−0,5	Foodstuffs, beverages and tobacco-based products	+0,7

[1] The market share is defined as EUR 10's worldwide exports compared with the OECD countries' worldwide exports.

Source: EC, 1989b

Table 5 Geographical breakdown of industrial exports in 1983 (in US dollars)

(%)

EUR 10[1]	Exports SD	Exports MD	Exports WD	Exports Total industry
OECD	14,5	19,8	14,3	48,5
USA	3,6	6,9	4,4	14,9
Japan	0,9	0,9	0,7	2,4
Rest of OECD	10,0	12,0	9,2	31,2
Developing countries	12,5	20,1	10,8	43,4
South-East Asia	1,2	1,4	0,9	3,5
Africa	1,5	2,7	0,9	5,1
Total East Eur.	1,7	2,6	2,0	6,3
Total OPEC	4,7	8,5	4,5	17,8
Latin America	1,6	2,2	0,8	4,6
Other	1,8	2,7	1,7	6,1
Rest of world	3,1	3,2	1,7	8,1
Total	30,1	43,1	26,8	100

USA	Exports SD	Exports MD	Exports WD	Exports Total industry
OECD	22,9	28,1	8,2	59,2
Japan	3,5	3,2	1,6	8,3
EUR 10	10,9	8,9	2,7	22,5
Rest of OECD	8,5	16,0	3,9	28,4
Developing countries	13,2	15,8	4,3	33,2
South-Est Asia	4,2	2,7	0,9	7,8
Africa	0,6	1,1	0,2	1,8
Total East Eur.	0,3	0,4	0,1	0,7
Total OPEC	2,4	5,1	1,2	8,7
Latin America	5,1	5,6	1,9	12,6
Other	0,6	0,9	0,0	1,6
Rest of world	1,8	5,0	0,7	7,6
Total	37,9	48,9	13,2	100

Japan	Exports SD	Exports MD	Exports WD	Exports Total industry
OECD	21,6	23,1	6,8	51,4
USA	11,5	13,8	4,2	29,5
EUR 10	6,6	4,8	1,2	12,6
Rest of OECD	3,5	4,5	1,4	9,3
Developing countries	12,5	16,6	11,5	40,6
South-East Asia	5,7	4,1	3,8	13,7
Africa	0,5	1,4	0,3	2,1
Total East Eur.	0,5	0,8	1,0	2,4
Total OPEC	3,4	6,5	4,0	13,8
Latin America	1,0	2,5	0,5	4,0
Other	1,4	1,3	1,9	4,6
Rest of world	2,8	3,0	2,1	8,0
Total	36,9	42,7	20,4	100

[1] Extra-Community trade for the Community of Ten.
NB SD = strong demand; MD = moderate demand; WD = weak demand.

Source: EC, 1985

3.3 An Assessment of the Competitiveness of EC Industry

On the basis of a comparison of the economic performances in the EC, the United States and Japan from the early 1970s up until the mid-1980s, one can reach the following conclusions:

(1) *The EC did not perform as well as its trading partners in the growth sectors, i.e. those most closely linked to new technologies, and its competitiveness in those sectors deteriorated both on world markets and on the internal market.*

(2) *In contrast, in the EC, the weak-demand sectors, or those less subject to the pressures of international competition maintained, if not improved their positions. This shift towards products less sensitive to a recovery in economic activity contributed, to an important extent, to the worsening of the employment situation in the 1980s.*

In the EC, weak-demand products accounted for a greater proportion of exports than in Japan or the United States. The EC exported less to Japan than the United States and less to the United States than Japan. Moreover, EC exports to OPEC countries accounted for a high proportion of its sales abroad, making it very dependent on income movements in the oil-producing states. In the expanding Third World markets of Latin America and South-East Asia, the EC had a weaker market position than the United States (strongest in Latin America) and Japan (strongest in South-East Asia). Only in the OECD area -- excluding the Community, the United States and Japan -- in the state-trading countries and in Africa did EC firms perform better than American and Japanese firms.

In 1985, the Commission concluded in a report on the competitiveness of European industry that "by specializing in products that are in least demand and by channelling a large share of its exports to the least profitable markets, the Community is losing market shares to the United States and Japan in a sector with a high value-added content" (EC, 1985: 28). The notion that EC's industrial competitiveness has declined since the 1970s (especially in the strong-demand, or high-technology sector) has influenced EC policy-making with respect to mergers in certain areas. In the next section I will therefore address the question of how the EC will use its new mandate under the EC Merger Control Regulation regarding concentrations in the European industry.

3.5 The Link between EC Merger Policy and the Goal of Raising the Competitiveness of EC Industry

In general, one can distinguish between mergers and acquisitions ("concentrations") which are likely on balance to have beneficial effects (large efficiency gains) and those for which the overall effect is likely to be negative (high risk of reduction of competition). Concentration data can provide an indication of industries which might be the primary candidate for close examination under merger control regulations. One commonly used ratio with respect to measuring concentration is the CR-4 ratio. CR-4 is a concentration ratio expressing the share of the 4 largest firms in the aggregate sales of an industry. Generally, analysts perceive a potential threat to competition when CR-4 exceeds 50% or CR-8 exceeds 70%. In those cases, one should assess whether competition is threatened by examining the behavior of firms on these markets. These ratios are also useful in indicating those industries where any further merger activity should be scrutinized very closely. Moreover, the ratios might be used to demonstrate the need for the strengthening of competition legislation where it is felt to be inadequate to deal with any problems produced by concentration. However, I have also explained that a high degree of concentration does not necessarily have to lead to a reduction in competition (see chapter 2).

Jacquemin, Buigues and Ilzkovitz have provided four criteria other than concentration data to assess the effects of mergers (Jacquemin, Buigues and Ilzkovitz, 1989). These criteria are <u>demand growth</u>, <u>import penetration</u>, <u>economies of scale</u>, and <u>technological content</u>. Some of these criteria point to two aspects of competition that have become more important in the last decade, i.e. the internationalization of competition and the role of technology. For many markets, it is fair to say that competition nowadays operates on a global scale, i.e. the relevant geographic market is no longer national but covers the industrialized world, and particularly the "triad" of Europe, the United States and Japan. From a Community perspective, it is essential that EC firms strengthen their position on the global market by establishing a strong base for the internationalization of their operations on the EC market (Jacquemin, Buigues and Ilzkovitz, 1989: 24). Furthermore, for more and more industries the main thrust of competition comes from technological progress and the ability to employ new technology to open up new markets. Again, from a Community perspective, in high-technology sectors, where the cost and complexity of technological development are often beyond the means of firms operating only on their domestic market, the necessity of encouraging cooperation between firms, especially by promoting large-scale European projects, is apparent.

The first indicator, demand growth, is a key component of the competitive environment of firms.[33] Generally, the danger of a reduction of competition is greater in mature or declining industries, because in such industries firms are more eager to increase their market share to compensate for the slower growth and to gain a better control over their costs. Consequently, firms react strongly to new entry because the slow growth reduces their ability to absorb a new firm; the incumbent firms will try to eliminate their weaker competitors. Conversely, in a growing industry the danger of a reduction of competition is less, since many new entries are attracted to the market, and entry is relatively easy because the existing firms have no real advantage in terms of cost, experience and reputation (Jacquemin, Buigues and Ilzkovitz, 1989).

The second indicator, import penetration, concerns the degree of openness to international trade of a market. Many empirical studies have indicated that competition from imports substantially limits the market power of domestic producers (Jacquemin, 1982). It may be assumed that the danger of a reduction of competition is greater in industries relatively closed to international trade, whether from within or outside the Community.

The third indicator, economies of scale, might be considered a barrier to new entrants and thereby reduce competition, but on the other hand, it may point to a possibility of efficiency gains as the size of the firms increases. In this paper I will consider the existence of economies of scale as an argument in favor of concentration.

The fourth indicator, technological content, can be used to argue in favor of mergers in high-technology industries. These industries are highly R&D-intensive and because of the divisibilities in research and development up to certain thresholds firms require a sufficient

[33] See Appendix B for a description and definition of all four criteria.

scale of operation before they can undertake research programs (Jacquemin, 1990: 545). Other reasons for cooperation between European firms in these industries are that it increases the resources available and so encourage the undertaking of more ambitious projects which single firms cannot afford, and it also helps avoid duplication and may stimulate transfers of technology, thus speeding up the dissemination of innovation (Jacquemin, Buigues and Ilzkovitz, 1989: 25).

With these four indicators, one can construct a matrix (see Figure 3) which allows for the classification of industries into four groups (Jacquemin, Buigues and Ilzkovitz, 1989: 26-32):

Group 1:

Industries in which mergers present a danger of a reduction in competition without any likelihood of efficiency gains; this group includes metal goods, furniture, paper and rubber goods, paints and varnishes, and tobacco companies. Here demand is not growing and there is little international competition, which means that there exists a danger of reduction of competition. Moreover, as economies of scale are often modest and the technology is relatively static, the economic benefits of mergers in this category do not outweigh the negative effects.

Group 2:

Industries in which mergers should produce neither efficiency gains nor a danger of reduction of competition; this group includes steel, industrial and agricultural machinery, clothing, leather and leather goods, and toy industries. Here, substantial restructuring has already taken place and further concentration through mergers offers little prospect of additional efficiency gains, although the danger of a reduction of competition is slight, because of strong competition from imports.

Group 3:

Industries in which mergers offer potential efficiency gains without a danger of reduction in competition; industries in this category include advanced materials, chemicals and pharmaceuticals, telecommunications, electronics, and the motor and aerospace industries. Here, demand is growing, leading to uncertainties in market positions. Also, global competition reduces the danger of a reduction in competition. In these industries, EC firms need to become more efficient to improve their global performance. In the consumer electronics industry, for example, the low rate of exploitation of economies of scale by European manufacturers partly explains why their production costs are often 20-35% higher than those of their Japanese competitors (EC, Fourteenth Competition Report, 1985). Furthermore, the performance of EC firms has so far been hindered by the fragmentation of the Common Market. This might

Figure 3 **Illustration of an industrial classification according to the expected effects of a merger on competition and efficiency**

Danger of reduction of competition (degree of trade openness and growth rate of demand)	Prospects of efficiency gains (scale economies and technological content)	
	Weak	Strong
Strong	*examples:* tobacco products metal goods	*examples:* electrical plant and machinery railway rolling stock
Weak	*examples:* textile and clothing leather goods	*examples:* telecommunications computers

Source: Jacquemin, 1990

explain why the top five European firms tend to be significantly smaller than their American counterparts and in two industries (computers and electronics) are even smaller than any of the top five Japanese companies (see also Figures 4, 5, and 6).

Group 4:

Industries in which mergers may simultaneously produce efficiency gains and an increase of monopoly power. Two types of industries belong to this group, those heavily dependent on the public sector (heavy electrical plant, railway equipment), and parts of the food and drinks industry. The industries here might benefit considerably from greater concentration but also present a real danger of monopolization since they are already concentrated and demand is growing slowly.

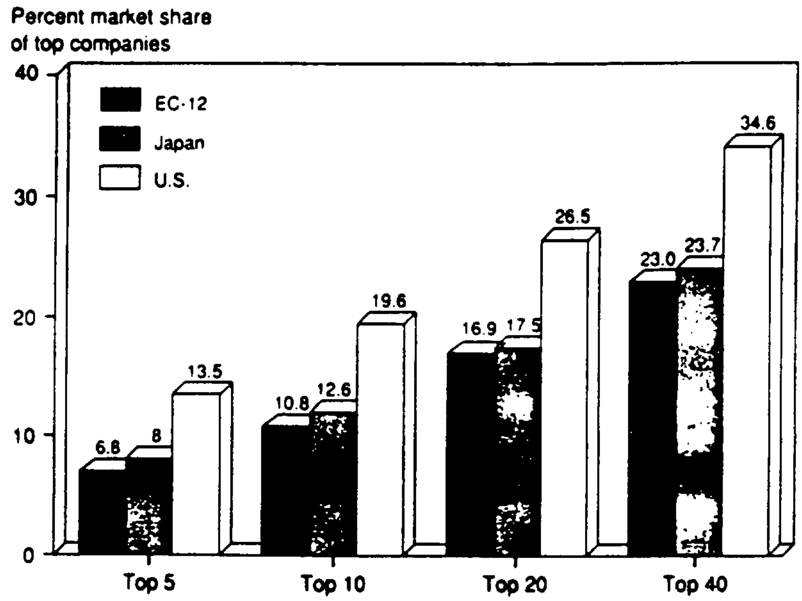
With this classification in mind, one can argue that mergers between firms of Group 3 should be allowed and in some cases even promoted. Looking at the merger activity in Group 3 (growth) industries, an analysis over the period 1982-1987 shows that these industries have a number of features that set them apart from other groups (Jacquemin, Buigues and Ilzkovitz, 1989: 42):

1) *Surprisingly, although these types of mergers often produce substantial efficiency gains, the number of mergers and acquisitions has in fact risen significantly less quickly in growth sectors than in the rest of the industry.*[34]
2) *In strong-demand growth industries, European firms tend to prefer mergers with partners from other countries. In these industries 32.5% of mergers involved Community mergers, compared with only 16.8% for industries with static demand growth, while 14% involved international mergers in strong-demand sectors against 6.1% in low-demand sectors.*

These findings suggest that the EC Merger Control Regulation might be used to make a clear distinction between operations in growth (and generally technology-intensive) industries and mature or declining industries. Ample opportunity still exists for further European consolidation within the new standard, even in such highly concentrated industries as chemicals and electronics. The Commission's positive encouragement of mergers for the purpose of promoting competition is further shown by an EC chart that identifies several industries which describes the potential welfare gains from exploiting economies of scale

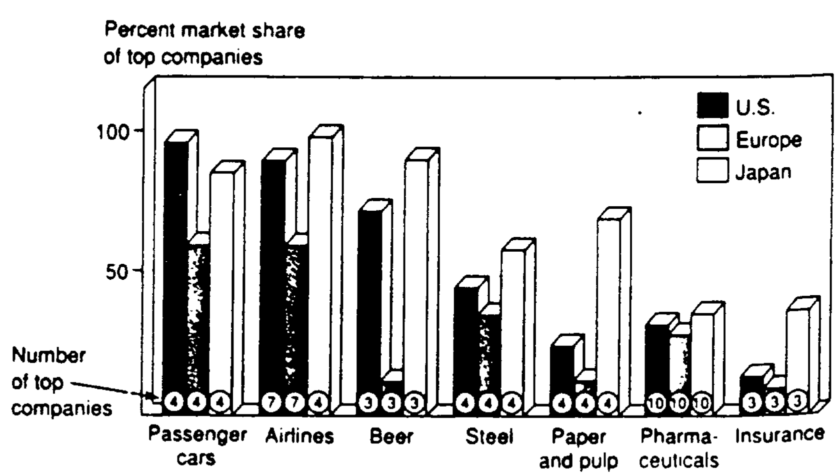
[34] A possible explanation for this phenomenon could be that so far market demands have been so strong that profitability is maintained by the existing firms and pressures for mergers might increase when growth slows down while competition remains.

Figure 4 **Market share of the largest manufacturing firms in the EC, Japan, and the United States, 1986**



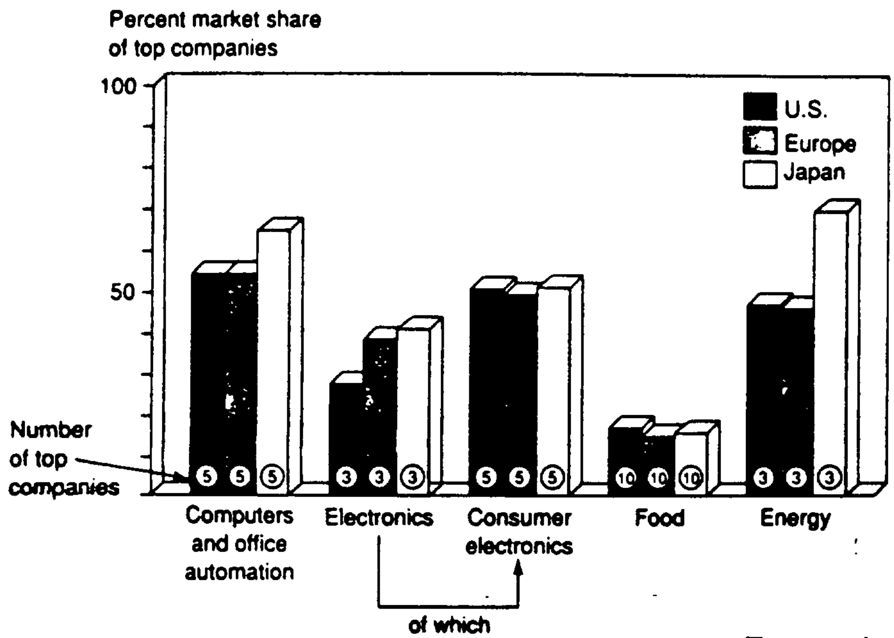
Source: Jacquemin, Buigues and Ilzkovitz, 1989

Figure 5 **Industries with European concentration lower than Japan and the United States, 1986**



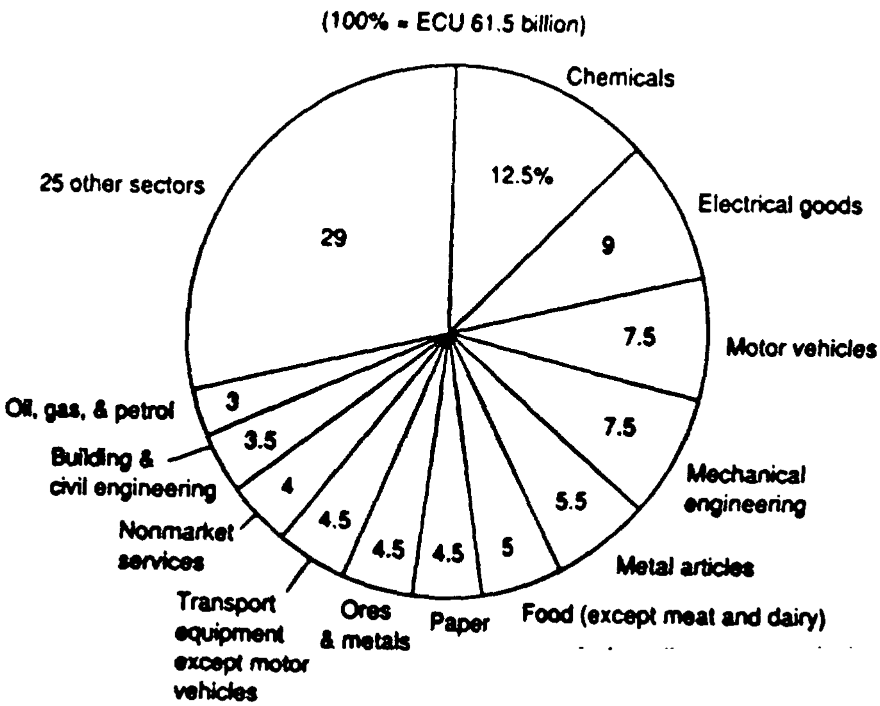
Source: McKinsey and Co. analysis and estimates, 1986, as quoted in Rosenthal, 1990

Figure 6 **Industries with European concentration intermediate between Japan and the United States, 1986**



Source: McKinsey and Co. analysis and estimates, 1986, as quoted in Rosenthal, 1990 (see Figure 7). In general, it appears that mergers in Group 3 have the best chance of being allowed by the Commission since (a) the European market leaders in these sectors are smaller than their international competitors and (b) European firms have lost market share in third country markets and on the Community market in these industries.

Figure 7 Potential welfare gains from exploiting economies of scale



Source: Michael Emerson and others, "The Economics of 1992, "European Economy, no. 35 (Luxembourg: European Communities Directorate-General for Economic and Financial Affairs, March 1988), p.185

Chapter 4: Summary

The increase in merger activity since the 1960s has stimulated some European countries to devise merger control policies (e.g., Germany and Great Britain). The potential for substantial conflict has been significant since national competition laws are not preempted by the Rome Treaty. However, the European Court of Justice ruled in two landmark cases that although parallel application would be allowed, Community law would take precedence whenever a conflict would occur.

In the absence of the direct power to regulate mergers, the Commission applied two antitrust provisions, Articles 85 and 86, of the Rome Treaty to merger activities in limited circumstances. However, it was not until a European merger boom was in progress and extensive studies showed increasing trends toward industrial concentration in the Common Market that the Commission took action under Article 86 in the Continental Can decision of 1972. In this case, the Court did in fact confirm that Article 86 applied to mergers.

Nonetheless, in recognition of the inadequacy of Article 86 as a means of merger control, the Commission proposed (in 1973) its first Draft Regulation, but this attempt failed. The next important step on the way to a Community level merger control regulation was the Court's decision in the Philip Morris case, which granted the Commission the right to apply Article 85 in addition to Article 86 to mergers. This legal development encouraged the Commission to press harder for an EC Merger Control Regulation. Such a regulation was adopted in 1989.

The 1989 EC Merger Control Regulation is the result of intense debate within the Council over the last three years. It is clear that the adoption of the new Regulation in 1989 represents a significant increase of the Commission's powers and a major extension of Community law. However, it is also clear that member states still possess various legal means to challenge the Commission's jurisdiction.

Therefore, the success of the Regulation depends to a large extent on the behavior of national authorities, particularly in Germany and Great Britain. Without their cooperation, the Regulation could in fact become an obstacle to large mergers and acquisitions and hinder the rationalization of EC industry and the drive toward the Single Integrated Market.

The process of establishing an EC Merger Control Regulation is linked to concentration trends within EC industry. Looking at these concentration trends between 1950 and 1990, one can distinguish four time periods. From 1950 until 1960 overall concentration in the EC rose slowly. In the 1960s, however, overall concentration in the EC increased significantly. In the early 1970s, overall concentration in the EC rose sharply again, although it dropped after 1974. In the late 1970s and early 1980s, there was again a sharp upward movement in the overall concentration rate in the EC.

Mergers accounted for a significant proportion of increases in concentration. With respect to merger activity in the period 1970-1988, three important observations can be made. First, a merger boom has developed after 1986. Second, the main difference in merger activity between the first merger wave (1960s-1970s) and the second one in the 1980s is the fact that the first merger wave mainly involved national mergers whereas the second wave includes an increasing number of Community and international mergers. Third, the increasing number of large-scale mergers poses a potential threat to undistorted competition in the Common Market and emphasizes the need for an EC Merger Control Regulation. With this potential threat in mind, one should note that one of the key goals of the "Europe 1992" program is to raise the competitiveness of EC industry.

During the early 1980s, concern over the competitiveness of the Community's industry arose from a general perception that the EC was losing market shares to the United States and Japan. A comparative analysis of the economic performances in the EC, the United States and Japan from the early 1970s up until the mid-1980s shows that the EC lost territory vis-a-vis its main rivals in the strong-demand sectors, i.e. those most closely linked to new technologies, and its competitiveness in those sectors worsened both on world markets and on the Internal Market. In the weak-demand sectors, on the other hand, the EC improved its position.

Generally, one can distinguish between concentrations which are likely to have beneficial effects (large efficiency gains) and those for which the overall effect is likely to be negative (high risk of monopolization). Using four criteria (demand growth, import penetration, economies of scale, and technological content), one can construct a matrix which provides a typology of industries (Jacquemin, 1990).

It appears that industries in which mergers offer potential efficiency gains without a danger of reduction in competition (like advanced materials, chemicals and pharmaceuticals, telecommunications, electronics, and the motor and aerospace industries) have the best chance of being allowed by the Commission since (a) the European market leaders in these sectors are smaller than their international competitors and (b) European firms have lost market share in third country markets and on the Community market in these industries.

Chapter 5: Conclusions

In anticipation of the completion of the Internal Market in 1992, EC and non-EC corporations are scrambling for the best possible strategic market positions for an, in the eyes of many analysts, unprecedented era of European prosperity. A second merger wave is under way which will lead to a dramatic restructuring of the Community's industry during the 1990s. The EC, in particular the Commission, fosters this rationalization process of EC industry since it believes that this is a necessary development in order to provide European firms with a strong home (read: European) market base which will enable these firms to become global competitors. It seems that if one has to single out one independent variable in this research paper to explain the EC's merger policy since the 1960s, it would have to be the competitiveness of EC industry vis-a-vis the United States and Japan.

Although not included in the 1985 White Paper because it is covered in the Rome Treaty, an active competition policy concerning mergers and acquisitions is a crucial component in the drive toward the Single Integrated Market. Since the mid-1980s, the Commission has played an active role in stimulating corporate alliances and collaborations in several industries. The main reasons behind this policy have been discussed in previous chapters. At this point I would like to review the philosophy of EC policy-makers who consider the emergence of large European companies a high priority on their agenda, especially in strong-demand sectors where inefficiencies should be eliminated and economies of scale are to be gained. In their view, the creation of new European superfirms provide the key to success on global markets.

Critics have argued that the Commission's view of the "Europe 1992" program is too static, i.e., focusing on once-off gains from rationalization. Porter, for example, argues that the Commission's view of international competition is flawed and in fact threatens one of the basic goals of the "Europe 1992" program, i.e. raising the competitiveness of EC industry (Porter, 1990b: 17). According to Porter, the size of the home market is far less important than its character. He asserts that "static efficiencies due to economies of scale at home count for far less than the ability to innovate and upgrade" (Porter, 1990b: 17).

One core element of Porter's analysis is that a nation's competitiveness depends on the capacity of its industry to innovate and upgrade.[35] Porter asserts that competitive advantages do not stem from static efficiencies but instead "from improvement, innovation and the ability relentlessly to upgrade comparative advantages to more sophisticated types" (Porter, 1990b: 17). Companies gain advantage against the world's strongest competitors because of home pressure and challenge. They benefit from having strong domestic rivals, aggressive home-based suppliers, and demanding local customers. Porter found that the most competitive industries in all the European countries he examined were those where capable national rivals were pressuring each other to advance: German cars and chemicals; Swiss pharmaceuticals and heating controls; Italian clothing and factory-automation equipment (Porter, 1990a). In contrast, widespread collaboration signified decline.

With the creation of the Single Integrated Market in 1992, firms are rapidly merging and forming alliances in order to limit the risk of going under, and governments allow such corporate behavior. Yet Porter asserts that "European consolidation being justified as enhancing competitiveness" is nonsense (Porter, 1990b: 17). Though some rationalization of European industry might be desirable, mergers and alliances among large competitors should be prohibited. Also, mergers that enable firms to gain a large share of a national industry should be banned. Regarding large-scale research-and-development consortia, Porter argues that "the evidence is clear that research-and-development cooperation succeeds only if it represents a small proportion of firms' overall research activity and there is ample competitive pressure to force active independent efforts" (Porter, 1990b: 19). Policies encouraging direct collaboration between competitors -- especially large ones -- are flawed. In my opinion, Porter's analysis brings up some valid arguments *against* the basic philosophy of EC competition policy.

Still other critics have criticized the contents and text of the new Regulation. They argue that the criteria for identifying the creation or the reinforcement of a dominant position are "unsystematic" and that they "need to be fleshed out by guidelines elucidating their content and their use" (Jacquemin, 1990: 548). For example, the use of firm size as

[35] Ultimately, this will decide which country will have the biggest market share in a given market.

a criterion is questionable both on economic and legal grounds. One should always consider size within the context of the relevant market. Furthermore, the EC threshold of ECU 5 billion is in some cases so high when compared with the total value of EC production that a complete monopolization would not fall within the scope of the Regulation, while for other sectors the figure is relatively low.

In addition, there are several other important issues pertaining to the new 1989 EC Merger Control Regulation that need to be examined more thoroughly, besides the issues raised above.

The first issue concerns the legal aspects of EC merger policy, i.e., as I explained in Chapter 1 there exists uncertainty about the way national and Community authorities will interpret the new Regulation and how they will respond to the new situation. The danger of a potential clash in the near future between German and British officials on the one side, and Community officials on the other side, is lurking.

Second, it is uncertain whether the Commission will be apolitical enough to use a "strict" competition criterion for its decisions on proposed mergers.

Third, another controversial issue involves the external implications of the Regulation. For example, it is still unclear how the Commission will exercise its powers regarding mergers outside the EC with a "Community dimension." The Commission can find itself investigating a largely U.S. merger simply because it involves at least two companies with a turnover of more than ECU 250 million inside the EC.

Fourth, there is uncertainty about whether the Commission will use the reciprocity clause included in the Regulation to seek a mandate to negotiate away restrictions applied to EC corporations attempting to acquire businesses in a third country (e.g., Japan).

Finally, on a more general level, an economic analysis of mergers and acquisitions in Europe and their overall long-term effect on competition, concentration and competitiveness seems necessary. One could use the classification matrix of Chapter 3 as a starting point and see if it fits previous decisions made by the Commission on proposed mergers. Future research could also focus, along the lines of Porter's analysis, on the EC's perspective on restructuring the Community's industry and assess its strengths and weaknesses.

BIBLIOGRAPHY

Barav, A. and D.A. Wyatt (eds.), Yearbook of European Law, Volume 8, (Oxford: Clarendon Press; New York: Oxford University Press), 1988

Bellamy, L. and G.D. Child, Common Market Law of Competition, London, 1987

Buigues, P. and P. Goybet, "The Community's Industrial Competitiveness and International Trade in Manufactured Products" in: Jacquemin, A.P. and A. Sapir (eds.), The European Internal Market, (Oxford: Oxford University Press), 1989, pp.227-250

Calingaert, M., The 1992 Challenge From Europe: Development of the European Community's Internal Market, (Washington, D.C.: National Planning Association), 1989

Coffey, P. (ed.), Main Economic Policy Areas of the EC, (Martinus Nijhoff Publishers: The Hague), 1983

Coffey, P. (ed.), Main Economic Policy Areas of the EEC - Towards 1992, (Dordrecht, The Netherlands: Kluwer Academic), 1988

Colchester, N. and Buchan, D., Europower: The Essential Guide to Europe's Economic Transformation in 1992, (Random House: New York), 1990

Defraigne, P., "Towards Concerted Industrial Policies in the EC" in: A. Jacquemin (ed.) European Industry: Public Policy and Corporate Strategy, (Oxford: Clarendon Press; New York: Oxford University Press), 1984, pp.368-377

De Ghellinck, E., "European Industrial Policy against the Background of the Single European Act" in: P. Coffey (ed.), Main Economic Policy Areas of the EEC - Towards 1992, (Dordrecht, The Netherlands: Kluwer Academic), 1988, pp.133-156

De Jong, H.W.(ed.), The Structure of European Industry, (The Hague: Martinus Nijhoff Publishers), 1988

De Smedt, P. and G. Vandersanden, "The EC Merger Control Regulation" in: Hastings International and Comparative Law Review, Vol.13, Spring 1990, pp.437-451

Durand, M. and C. Giorno, "Indicators of International Competitiveness: Conceptual Aspects and Evaluation" in: OECD Economic Studies, Autumn 1987, No.9, pp.148-183

EC, Annual Report on Competition Policy, Brussels, 1972-1989

EC, The Competitiveness of the Community Industry, Luxembourg, 1982

EC, "Competitiveness of European Industry: Situation to Date" in: European Economy, Vol.25, September 1985, pp.9-36

EC, First Survey on State Aids in the EC, Brussels, 1988

EC, EEC Competition Policy in the Single Market, Brussels, 1989a

EC, "International Trade of the EC: A Review of Certain Aspects of the External Trade of the Community" in: European Economy, Vol.39, March 1989b

EC, "Community merger control law," in: Bulletin of the European Communities, Supplement 2/90.

Emerson, M. (et al.), "The Economics of 1992: An Assessment of the Potential Economic Effects of Completing the Internal Market of the EC" in: European Economy, Vol.35, March 1988

Fairburn, J.A. and J.A. Kay (eds.), Mergers and Merger Policy, (New York: Oxford University Press), 1989

Fine, F.L., Mergers and Joint Ventures in Europe: The Law and Policy of the EEC, (London; Boston: Graham & Trotman), 1989

Folsom, R.H., Corporate Competition Law in the European Communities, (Lexington, Massachusetts: Lexington Books), 1978

Forrester, I. and C. Norall, "Competition Law" in: Barav, A. and D.A. Wyatt (eds.), Yearbook of European Law, Volume 8, (Oxford: Clarendon Press: New York: Oxford University Press), 1988, pp.215-251

Geroski, P.A. and Jacquemin, A.P., "Industrial Change, Barriers to Mobility, and European Industrial Policy" in: Economic Policy, November 1985, pp.169-218

Gijlstra, D. and Murphy, D., Leading Cases and Materials on the Competition Law of the EEC, (Deventer, The Netherlands: Kluwer), 1984

Hannah, L., The Rise of the Corporate Economy, (London; New York: Methuen), 1983

Harrop, J., The Political Economy of Integration in the European Community, (Aldershot: England; Brookfield: Gower), 1989

Hopt, K. (ed.), European Merger Control: Legal and Economic Analyses on Multinational Enterprises, Volume I, (Berlin; New York: W. de Gruyter), 1982

Hufbauer, G.C. (ed.), Europe 1992: An American Perspective, (Washington D.C.: Brookings Institution), 1990

Jacquemin, A.P. and H.W. De Jong, Markets, Corporate Behavior and the State, (The Hague: Martinus Nijhoff Publishers), 1976

Jacquemin, A.P. and H.W. De Jong, European Industrial Organization, (New York: Wiley), 1977

Jacquemin, A.P. (ed.), European Industry: Public Policy and Corporate Strategy, (New York: Wiley), 1984

Jacquemin, A.P., P. Buigues and F. Ilzkovitz, "Horizontal Mergers and Competition Policy in the European Community" in: European Economy, Vol.40, May 1989

Jacquemin, A.P., "Horizontal Concentration and European Merger Policy" in: European Economic Review, Vol.34, 1990, pp.539-561

Jacquemin, A.P. and A. Sapir (eds.), The European Internal Market, (Oxford; New York: Oxford University Press), 1989

Locksley, G. and Ward, T., "Concentration in Manufacturing in the EEC" in: Cambridge Journal of Economics, 1979, No.3, pp.91-97

Martin, L. and Rider, J., "Opening up Europe" in: Euromoney, September 1988, pp.20-22

Morris, T.B., "Merger Control in the EC" in: Harvard International Review, Vol.XI, Summer 1989, No.4, pp.47-49

Morris, T.B., "Merger Control Comes to the European Community" in: Harvard International Review, Vol.XII, No.4, Summer 1990, pp.34-36

Mueller, D. (ed.), The Determinants and Effects of Merger, (Delgeschlagere Gunn Cambridge), 1980

OECD, Mergers and Competition Policy, Paris, 1974

OECD, Concentration and Competition Policy, Paris, 1979

OECD, Merger Policies and Recent Trends in Mergers, Paris, 1984

OECD, Competition Policy in OECD Countries (1983-1984), Paris, 1986

OECD, Competition Policy in OECD Countries (1987-1988), Paris, 1988

Porter, M.E., The Competitive Advantage of Nations, (The Free Press: New York), 1990a

Porter, M.E., "Europe's Companies After 1992" in: The Economist, June 9, 1990b, pp.17-19

Rosenthal, D., "Competition Policy" in: G.C. Hufbauer (ed.), Europe 1992: An American Perspective, (Washington, D.C.Brookings Institution), 1990, pp.293-344

Slot, P. and Woude, M. Van Der, Exploiting the Internal Market: Cooperation and Competition toward 1992, (Deventer, The Netherlands: Kluwer Law and Taxation Publishers), 1988

Sutherland, P. "Approaching a Showdown on European Merger Control" in: Mergers and Acquisitions, September-October 1988, pp.61-64

Sutherland, P., "The Future of Competition Policy in the EC" in: Multinational Business, 1989, No.2, pp.1-5

Venit, J., "The Merger Control Regulation: Europe Comes of Age....or Caliban's Dinner" in: Common Market Law Review, Vol.27, 1990, pp.7-50

Appendix A Export specialization index

The specialization index (si) used is an indicator of the revealed competitive advantage. It is calculated as the ratio between two relative market shares, in relation to the world: the share of EUR 12 exports of a given product compared with the Community's total visible exports, and the corresponding share of OECD countries:

$$si = \frac{X^{k}_{eur}\ \text{world}}{X_{eur}\ \text{world}} \bigg/ \frac{X^{k}_{oecd}\ \text{world}}{X_{oecd}\ \text{world}}$$

in which

X^{k}_{eur} world represents worldwide exports from EUR 12 of the product k at current prices;

X_{eur} world represents total worldwide exports of industrial products from EUR 12;

X^{k}_{oecd} world and X_{oecd} world have a corresponding meaning, referring to the OECD, including intrazonal trade.

Where the value of the index is 1, the results for worldwide exports from EUR 12 for product k (results gauged in terms of market share) are equal to those of all its competitors in the zone in question. Where the index is more than 1, the Community is above the average of its foreign competitors for product k, and the reverse is true if the index is less than 1. Of course the competitive advantage (or disadvantage) which appears in the comparison of these two market shares tells us nothing about the causes which actually determine this result. While good export performance normally occurs because the firms concerned are more efficient, it could also result from public support, which distorts competition. When the abovementioned specialization index is used, we therefore refer to the *revealed* competitive advantage.

Source: EC, 1989b

Appendix B Definitions of indicators

Demand growth: in each industry domestic demand is calculated for EUR 9 (D + DK + F + I + IRL + NL + B/L + UK). Domestic demand is defined as: production + imports − exports. The growth of demand is calculated in real terms over the period 1980-85. Demand growth helps to determine the stage in the life-cycle of the industry.

Import penetration ratio: the proportion of domestic demand supplied by imports indicates the degree of openness of a market to penetration by foreign products. On average the import penetration ratio in Community (EUR 9) industry is 35% for intra-EC and non-EC imports combined, 20,9% for intra-EC imports and 14,1% for non-EC imports. Prima facie the danger of a reduction of competition is less in industries open to the penetration of imports, whether these come from other Member States or non-EC countries, i.e. in those in which total intra-EC *or* non-EC import penetration is above average. Conversely, the danger of a reduction of competition is greater in industries relatively closed to imports, i.e. in those in which total intra-EC *and* non-EC import penetration is below average.

The potential economies of scale in an industry are the additional unit costs borne by firms operating at below 50% of the optimal scale. The data are drawn mainly from a survey of recent research into economies of scale (see Pratten (1988)). Industries in which potential economies of scale are substantial include transport equipment (motor vehicles, locomotives and aircraft), computers, electrical and telecommunications equipment and some sectors of the chemicals and food industries.

Technology content: several criteria can be used to identify high-technology sectors: the intensity of R&D, the proportion of scientists employed, the speed of obsolescence of products and processes, the amount of high-risk investment, etc. The main source here is the classification suggested by the OECD which uses the ratio of R&D expenditure to output for each industry in the OECD area

Source: Jacquemin, Buigues and Ilzkovitz, 1989