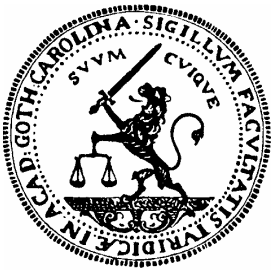

FACULTY OF LAW
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Researching Europe

- *An economic, competition law analysis of research and development joint ventures within the European Union*

Abstract: this thesis aims to clarify the economic incentives and EC competition law provisions regulating research and development joint ventures conducted through a common third party within the European Union.

Graduate thesis
30 points

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Contents

Summary

Research and development is a crucial part of any functioning economy, not the least within the European Union as one of the leading markets in the world today.

In addition to providing the market with new products, R&D also introduces better ways of production thereby creating new markets. However, R&D is often a costly and advanced process demanding huge economic and intellectual resources, which are crucial for economic development. Furthermore, one actor might lack intellectual capital or property rights needed for a new development. One solution to these problems might be to spread the economic risks and use the combined know-how of several parties in a joint venture.

R&D is a way for companies to find new markets and/or gain new market shares from their competitors. However, companies can also use R&D in different ways to cut out competitors from their relevant product markets and thereby establish themselves as market leaders, which in itself may damage market competition and hinder further product developments. There is therefore a potential conflict of interests.

Within the European Union, several objectives have been the guiding light in order to define the competition policy. Maximizing consumer welfare and achieving optimal allocation of resources are examples of economic objectives. A further objective has been to protect consumers and smaller firms from large economic entities. Third but not least, within the legacy of the coal and steel union, is the objective of creating a single European market, thus bonding the Union members economically in order to prevent future armed conflicts.

The objective of this thesis aims to research the EC competition rules and regulations regarding research and development joint ventures within the European Union in comparison with economic theorems regarding competition. Furthermore it will examine the transparency within the reasoning made by the Commission as well as in the judgements of the European Court of Justice and the Court of First Instance to clarify these decisions and rulings from an economic perspective. Due to the wide scope of the term joint venture, I have for the sake of this thesis chosen to restrict the term to the situation where two or more companies choose to jointly form a third party within the European Union for research and development purposes.

The turn towards a more effect driven approach provides the flexibility necessary to evolve within the modern economy, albeit do put a higher demand of the economic analysis on undertakings embarking on a R&D joint venture.

The general provisions for cases regarding competition are Article 81 (1) and (3) ECT. However, the broad range of joint ventures has called for more specialized provisions that are more suited to deal with the different forms of joint undertakings. In addition, the importance of R&D for the economic development of the Common market has allowed for a block exemption regarding these matters through Regulation 2659/2000.

Although the general rule is to asses the R&D joint undertaking under the block exemption regulation, one should not rule out the use of either the MR or Article 81 ECT. Thus, if the R&D joint venture does not fall under the exemption rules of Regulation 2659/2000 then Article 81 (1) is the applicable provision, and exemption can be granted through Article 81 (3). However, if the R&D joint venture could be considered full function and a concentration of community dimension, the MR would be the applicable provision.

In contrast to the previous normative legislation, the legal evolution of the provisions and case law regarding R&D joint ventures has been towards an effect driven estimate of the undertaking regardless of how it arose, rather than prohibiting certain forms of competition infringing behaviour.

Preface

Dedicated to my friends for all your support, and that you stood by me through the darkest times.

To Gabriella for your cherished friendship and support always close at hand.

To Louise and Madeleine, for all your perspective and support.

Special thanks to Emilia and Lloyd for taking the time and effort to proof.

Abbreviations

CFI	Court of First Instance
CDG	Directorate-General for Competition of the Commission
DM	Deutsche mark
ECJ	European Court of Justice
ECMR	(original) European Community Merger Regulation (4064/89)
ECT	EC Treaty (Treaty of Rome)
FF	French franc
GDP	Gross Domestic Product
MTF	Merger Task Force
MR	European Community Merger Regulation (139/2004)
R&D	Research and Development
TEU	Treaty of the European Union (Treaty of Maastricht)
TFEU	Treaty of the Functioning of the European Union (Treaty of Lissabon)
UHT	Ultra high temperature (sterilization process)
VAT	Value added tax
VI	77/160 AEI/Reyrolle Parsons re Vacuum Interrupters (1977)

1 Introduction

Research and development is a crucial part of any functioning economy, not the least within the European Union as one of the leading markets in the world today.

Not only does R&D provide the market with new products, but it also introduces better ways of production thereby creating new markets and cheaper and hopefully improved products for the consumer market. Furthermore, it may induce positive spill-over effects not initially thought of and a cross-fertilization of human resources. This process also aids in creating new knowledge and work opportunities, and is therefore a vital cog in the economic and social machinery.

Although crucial for economic development, R&D is often a costly and advanced process demanding huge economic and intellectual resources. In fact, in some industries it requires more economic resources than are available to any one actor in a single market. In addition, one actor might lack the intellectual capital or property rights needed for a new development. One solution to these problems might be to spread the economic risks and use the combined know-how of several parties through a joint venture.

This process can however come into conflict with the competition law of the European Union. Companies can draw on R&D as a way to find new markets and/or gain new market shares from their competitors. However, companies can also use R&D to cut out competitors from their relevant product markets and thereby establish themselves as market leaders, which in itself may damage the competition and hinder further product development. It is therefore a potential conflict of interests: on the one hand, the market gains of product development and on the other hand the damaging effects of monopoly or lessened competition. The regulation for this area must therefore weigh the different interests in order to create a system that both encourages R&D as well as promotes a healthy competitive economic market.

1.1 Objective

The objective of this thesis aims to research the EC competition rules and regulations regarding research and development joint ventures within the European Union in comparison with economic theorems regarding competition. Furthermore, it will examine the transparency in the reasoning made by the Commission as well as in any judgements of the European Court of Justice and the Court of First Instance to clarify these decisions and rulings from an economic perspective. This will also include a survey of how to treat R&D joint ventures in EC competition law.

Due to the wide scope of the term joint venture, I have for the sake of this thesis chosen to restrict the term R&D to the situation where two or more companies choose to jointly form a third party within the European Union for research and development purposes.

1.2 Questions

This essay aims to answer the following questions

1) What is the current competition law standing on R&D joint ventures within the European Union?

2) How has the view of R&D changed over the years since the Commissions decision in the Vacuum Interrupters case (1977)?

3) In what way can these changes be motivated from an economic perspective?

1.3 Method and material

For this thesis, I am using the classical legal dogmatic method, thereby using laws, legal doctrine and case law in order to asses the current legal standing.

I aim to assess the changes made from both economic and EC competition law perspectives in an attempt to clarify the economic incentives behind the current regulations and its interpretations. I will therefore be using a law and economics method to clarify the standings in the field of R&D joint ventures in order to explain the connection between economic theory and competition law regulations.

1.4 Outline

The thesis will start by explaining basic economic theories regarding competition and market behaviour, in order to give the reader a fair understanding of competition law economics.

The subsequent chapters will discuss the rules and interpretation of EC competition law. It is assumed in this thesis that the reader has acquired a basic knowledge of this field of law, and these chapters will therefore not go into depth regarding the basics of EC law.

The thesis will compare the legal developments in the field of R&D joint ventures with the decision of OJ L48/32 AEI/Reyrolle Parsons re Vacuum Interrupters (1977). In order to examine the changes that have been made from a competition legal point of view I will be working primarily with applicable regulations, convention articles and case law.

Economics

The main motivation behind competition law derives from a number of theories regarding the incentives of economic entities acting on a given economic and geographical product market. This is considered in conjunction with the theories of social and economic benefits of perfect competition, and the damaging effects of its opposite: monopoly.

Within the European Union, several objectives have been the guiding light in order to define the competition policy. Maximizing consumer welfare (utility) and achieving optimal allocation of resources (pareto efficiency) are examples of economic objectives. A further objective has been to protect consumers and smaller firms from large economic entities (monopolistic behaviour). Third but not least, within the legacy of the coal and steel union, is the objective of creating a single European market[1], thus bonding the Union members economically in order to prevent future armed conflicts.

Modern technology and the deregulation of the Common Market have led to an increasing number of joint ventures. In the modern market economy firms frequently search for new long or short term undertakings in order to stay ahead in the competition game. By pooling resources, this enables companies to achieve what each one of them could not do on their own[2].

A joint venture does not automatically constitute non-competitive behaviour, and can as stated above, be of great importance and benefit to the public and the relevant market at hand[3]. One reason for this is that the joint venture might be able to compete more efficiently in a given market than the parents would by themselves, enabling economies of scale and opening up the possibility of R&D that otherwise might not have been realized. The fact that the parents do not compete with the joint venture or each other does not necessarily constitute a regulatory breach of competition in a given market. Even in horizontal co-operation benefits can be harvested when the partners enters a joint venture by bringing complementary rather than parallel intellectual property to the co-operation[4].

Like many other economic tools, the joint venture can be used for cutting or hindering competition in order to maximize the joint profits and market shares of the parents in a way that might be harmful to third parties and the market[5]. Apart from the obvious fact that the joint undertaking can lead to actual or potential diminished competition between the parents, it may also lead the parents to co-operate outside the boundaries of the joint venture. In addition, a joint venture may also raise the entry barriers for new

[1] Craig, Paul, De Burca, Grainne, EU Law, 4th Ed. Oxford 2007, p. 950.
[2] Jones, Alison, Sufrin, Brenda, EC Competition Law, 3rd Ed. Oxford 2007 p. 1092
[3] Svernlöv, Carl, Internationella joint ventures, Stockholm 1997, p. 57
[4] Svernlöv, Carl, p. 56
[5] Jones, Sufrin, p. 859

undertakings on the relevant market. Since joint ventures can be beneficial to a market, it is therefore necessary to weigh these actual or potential gains against any foreclosing effects on the competition market[6].

In view of the above, it is not surprising to find that these economic theories are playing an increasingly important role in the Commissions view of Community competition law[7].

In the following economic introduction, I will briefly explain relevant theories without going into the mathematics of national economics, in order to give the reader an understanding of the economic background to the EC competition law.

1.5 Utility and Utility Maximization

All economy regard the use of scarce or limited resources, such as allowances, wages, budgets or a GDP. These limited resources are spent in accordance with the personal preferences of the consumer (regardless of whether the consumer is a person or a company).

The satisfaction gained from the consumption of goods and services is an abstract concept known as *utility*[8]. In view of the fact that the resources for the consumer are limited, the consumer will choose how to spend its resources in a way that will provide the most utility in accordance to the consumer's personal preferences, thus maximizing his or hers utility.

Utility maximization is an economic way of expressing that the consumers' wants exceed the available resources, and thereby force the consumer to make choices of how to spend its resources[9]. It is therefore thought that the rational consumer will consume its limited resources in the best way that the economic constraints allow in accordance to their personal preferences. This forces the consumer to make choices between different options in order to maximize their utility[10].

1.6 Economic equilibrium

Economic Equilibrium is a state created by the interaction of utility maximizing actors: one in which opposing forces balance each other in order to create a stable state that will not change unless outside forces intervene[11]. One could say that if the demand of one individual, trying to maximize his utility, is added to the demand of other individuals doing the

[6] Jones, Sufrin, p.1094
[7] Bishop, Simon, Walker, Mike, Economics of EC Competition Law: Concepts, Application and Measurement, London 1999, p. 2
[8] Parkin, Michael, Powell, Melanie, Mathews, Kent, Economics, 4th Ed. Essex 2000, p. 171
[9] Parkin, Powell, Mathews, p. 174
[10] Cooter, Robert, Ulen Thomas, Law and economics, 3rd Ed, Berkely 2000, p. 11
[11] Parkin, Powell, Mathews, p. 80

same, they will create a (aggregated) demand. This will then be measured against the combined willingness of the producers of that product to supply the given product at a given price and/or quantity. However, producers also seek to maximize their utility, which results in an equilibrium state showing what quantity and what price both the consumers and producers are willing to accept, thus presenting the market price.

This situation can only be shifted if outside forces push the equilibrium in any direction. Those forces can be numerous, such as the change in customer preferences, prices of raw materials, changes in exchange rates and changes in the competition structure of the market. This economic theory constitutes the foundation of the supply and demand theory showing that in a perfect competitive market the price will automatically revert to a "natural" equilibrium state. Very simply explained this means that if prices are below the equilibrium, customers will increase their consumption, thus creating a supply shortage and prices will again reach equilibrium. On the other hand, if the prices are too high, consumer interest will fall, thus creating a surplus, forcing prices to their "natural" state[12]. Most importantly, this means that in a perfect competitive market no single actor can influence the market price or quantity on its own, thus creating a dynamic market giving the highest total utility.

1.6.1 Pareto Efficiency

Pareto efficiency could be considered as the nirvana of national economics. If no resources are wasted while in the equilibrium state, this is referred to as pareto efficiency (or allocative efficiency). This is a situation in which no one person can gain more utility (personal estimation) without making someone else loose utility (again personal estimation)[13].

On a larger scale, this state constitutes the optimum performance rate for a given market and is considered the point that maximizes social welfare[14]. However, whether pareto efficiency is actually possible or whether it is just an academic term is a matter that is still being heavily debated.

1.7 Substitutes

An interchangeable good is referred to as a *substitute*, for example, an apple might substitute a pear as a snack. The degree of substitutability will affect the price and demand in a given product market. For example, a high price in pears will lead to an increased demand for the substitution apples[15], thus interlocking the two product markets. This means that any single producer

[12] Parkin, Powell, Mathews, p. 82
[13] Cooter, Ulen, p. 12
[14] Parkin, Powell, Mathews, p. 288
[15] Parkin, Powell, Mathews, p. 73

on one market must also take into account the given price and competition on the substitution market.

The extent to which a consumer might substitute his or her consumption of a given good is, however connected to personal preferences. This is referred to as the *substitution effect*, and shows at what price or income change the consumer will change its consumption habits[16]. Furthermore, this leads to the theory of *cross elasticity*. Given two or more substitutable products, the degree of substitution can be measured through the willingness of consumers to change from one product to another, i.e. a high likelihood of change equals high cross elasticity and indicates the similarities of the products in question[17]. One must remember that the consumer is trying to maximize its utility from the economic constraints given. Thus, the (aggregated) substitution effect and cross elasticity can be of great interest when determining the relevant market, since this will show the willingness of the market to replace one good with another.

In light of the above, the degree of substitutability aids in determining a relevant product market. For example, an apple might substitute a pear due to the similarities in taste and texture as well as other proprieties of the two products. Conversely, none of the two products have the same attributes of a banana and are consequently poor substitutes for this fruit. By further determining that the banana is not price interlocked with other fruits, the banana might be considered a separate market. The combination of the substitution factors can therefore determine that the relevant market for bananas is a separate one, and thereby not a part of the general fruit market[18].

1.8 Market incentives

In economics, as stated above, it is generally regarded that the natural incentive for each economic actor in any given market is to maximise its utility[19]. For an economic actor such as a company, utility is usually measured in profit or market shares. In order to maximize profits a company can either raise its prices or lower its costs and thereby increase its profit margins. Raising prices is however not an option in a perfectly competitive market in which the number of substitutes are many and therefore profit margins are lower.

[16] Parkin, Powell, Mathews, p. 200
[17] Perloff, Jeffery M, Microeconomics, 3rd Ed. Berkeley 2004 p. 55
[18] See Case 27/76 United Brands Company and United Brands Continentaal BV v. Commission of the European Communities §§ 19-35
[19] Cooter, Ulen, p. 10

Another way to maximize utility can be to increase production efficiency. This can be done if one or both of the following two conditions are not met:

1. it's possible to produce the same amount of output using a lower cost combination of inputs or,

2. it's possible to produce more output using the same combination of inputs[20].

One could say that a company may be able to increase its profits if the producer does not reach a pareto efficient production, despite being in a perfectly competitive market. The struggle to keep production costs to a minimum is however, an ongoing struggle for the vast majority of producing companies. This brings us back to the importance of research and development in order to stay ahead of the competition. In other words, a competitive market forces companies to seek more efficient ways of production and/or new products in order to gain market share of the competition, given that increasing profits by raising prices is not an option.

If however, the market is dominated by one or a small number of companies, the incentive for them might be to use their dominant position on the market to subdue the competition. Examples of this can be the use of predatory or discriminating behaviour or under and over pricing[21]. This therefore creates the need for a legal competitive market regulation in order to control the behaviour of the dominant position and maximize the utility for both consumers and society.

1.9 Economies of scale

Economies of scale, occurs when the cost of producing an additional unit of a good is lower than that of the previous unit. This happens because fixed costs will account for a lower percentage of total costs, as well as allowing specialization, labour and other costs to be obtained more efficiently. In general, most firms will produce at their peak of efficiency when they can maximize economies of scale, thereby making the vast majority of manufacturing industries operate under this economic theory[22]. Depending on the production cost of a good, and the volume needed to achieve these benefits, it is not unusual for producers to use mergers or co-operation to achieve these benefits resulting in fewer and larger firms[23].

This introduces the fact that under certain circumstances one or a few manufacturers can produce a good more efficiently than a competitive industry, due to the lower costs of production and specialization. This is

[20] Cooter, Ulen, p. 12
[21] Bishop, Walker, p. 138
[22] Parkin, Powell, Mathews, p. 229
[23] Jones, R.J. Barry, Routledge Encyklopedia of International Political Economy, London 2001, p. 422

referred to as a natural monopoly and is an increasingly rare condition, which usually involves industries with high economic entry barriers[24]. This will however not remove the adverse effects of monopolistic behaviour and will add another entry barrier to the given market.

Economies of scale are generally considered to be internal or external. Whilst the internal regards a single company or factory; the latter is the more interesting from a competition law perspective since it refers to a cluster of firms within a geographical region. The geographical region of operation can be defined, for example, by studying the cost of transport and determining at what point this cost will exceed the marginal income[25]. Differences occur due to different properties of the good, for example certain goods are more expensive to transport due to volume, weight and shelf life[26].

There are several ways for a company to increase the benefits of economies of scale. Most of these include different methods of lowering both fixed and marginal costs, although innovation can also be a major contributor in many industries by developing new cost reducing production processes[27].

1.10 Competition and monopoly

In general, the main models of competition can be divided into three groups: perfect competition, oligopoly and monopoly[28]. Although few real markets of perfect competition or (non-political) monopoly actually exist, they are important to understand in order to comprehend the adverse effects of *monopolistic behaviour*.

A monopoly can be defined as a single production company market of a product for which no close substitutes exist; its opposite is monopsony which constitutes a single buyer market[29]. However, in most cases this is not the situation in the real world. In general, when competition behaviour is assessed, it is not regarding a single company market but rather against monopolistic behaviour and market failure.

Monopolistic competition is defined as a market structure in which several companies act in a market making similar but slightly different products[30]. These products may actually have substitutability with another monopolistic competitor's product, depending on the definition of the relevant product market.

[24] Parkin, Powell, Mathews, p. 312
[25] Jones, p. 422
[26] See C90/410/EEC Elopak/Metal box – Odin §§ 17-18
[27] Jones, p. 422
[28] Bishop, Walker, p. 11
[29] Cooter, Ulen, p. 277
[30] Parkin, Powell, Mathews, p. 322

Although generally considered as harmful, it is the opinion in some countries that certain economic actors should be kept under government monopoly for political, economic and social purposes in order to ensure public interests and population health[31].

Duopoly or oligopoly, on the other hand is defined as a market with two or a small number of producers, producing products with a low differentiation and a high degree of substitutability. Since these companies understand that their pricing is interdependent, the incentive might be to use cartels (referred to as "gentlemen's agreements") in order to control the price and quantity on the market. The benefit of a cartel is that it is easier and less costly for the companies to review any breach of the cartel rules than it is to constantly review and defend its position on a competitive market. Another main benefit for the cartel is the ability to price a good at a point where it produces the most utility for the cartel members. This leads to the fact that cartels present the same market failure and adverse economic effects as do monopolistic behaviours[32].

A common feature to the monopolistic behaviours is the ability for a company or cartel to restrict production quantity and raise prices in order to maximize its own utility[33]. This creates inefficiency through the deadweight loss incurred by the monopolist dictating the economic equilibrium to the point of maximizing its own utility, and not at the point of general (pareto) efficiency. From a social point of view, this deadweight loss imposes social costs by not utilizing resources in an efficient manner[34]. Nevertheless, a monopoly can be efficient if it manages to achieve an economy of scale[35].

1.10.1 Market failure

If a market does not utilize its resources efficiently, the result is referred to as "market failure". A market failure does however not include normal changes in price and wage structure, i.e. a low farm yield resulting in higher prices of flour and bread does not constitute a market failure[36]. There are five main types of market failure[37]:

1. Limited information
2. Poor definition of property rights
3. External costs and benefits
4. Monopoly power
5. Public goods

[31] Parkin, Powell, Mathews, p. 469, see exception rule Art. 30 ECT
[32] Cooter, Ulen, p. 33
[33] Parkin, Powell, Mathews, p. 128
[34] Cooter, Ulen, p. 128
[35] Parkin, Powell, Mathews, p. 313
[36] Parkin, Powell, Mathews, p. 11
[37] Parkin, Powell, Mathews, p. 286

The key point of these types of market failure from a legal competitive point of view is that of monopoly power (monopolistic behaviour). Following from the incentive of companies to maximize their utility, the result will most likely be market failure, or imperfect competition if one producer is left controlling the market. By definition, market failure is inefficiency due to lost consumer surplus[38]. This is created by the fact that the monopolist will produce at a quantity and price that gives the most utility for the producer regardless of the market demands, i.e. to a price higher than the marginal cost of production. This in turn means higher sales prices and lower production quantities than that of market demands[39]. Therefore the producer alone dictates the economic equilibrium and the lost surplus will be the difference between the actual result and a general equilibrium outcome. A secondary effect of lack of competition is an additional loss of utility through the lessened incentive for the producer to keep production costs at a minimum.

Nevertheless, the adverse effects of monopolistic behaviour do not only cause the above stated effects, they also deplete the drive and dynamics of the market (dynamic inefficiency)[40]. The effect is a very low incentive for product and market development as this is no longer a necessity for the monopolist in order to remain or expand on the given market. The general view is that this creates a stagnant market with lessened utility, a lost consumer and social surplus, and is therefore condemned by economists as inefficient.

1.11 Research & development

The necessity of innovations in the fields of new products and production processes is regarded as a central element not only to the companies involved, but also to social gains and in the trade between nations[41]. A successful *Research and Development* program creates new products or a more effective way of producing an existing product[42].

Modern R&D is often a costly process: in some industries it is so costly that not even a market leader can bear the costs of new product developments alone. Therefore, it is becoming increasingly common for these projects to be organized in regional or transnational networks within multinational corporations and different forms of joint ventures in order to effectively utilize human rescores and spread risks[43].

Although expensive, in many cases R&D is a good way of investing in order to maximize company utility. A successful invention will allow a company to become market leader. Because a new invention has no close

[38] Parkin, Powell, Mathews, p. 287
[39] Cooter, Ulen, p. 40
[40] Cooter, Ulen, p. 277
[41] Jones, p. 1340
[42] Cooter, Ulen, p. 128
[43] Jones, p. 1339

substitutes, the inventor can therefore reap the corporate benefits of the temporary monopoly power that arises from the intellectual property rights. This effect will prevail as long as the intellectual property rights grants exclusivity. Patent rights therefore become a balance between the incentive to invent and adverse effects of monopoly against the social gains of R&D and a competitive market[44]. However, on a dynamically efficient market the competition counteract this by developing substitute products, and thereby keeping up the pressure for further innovations[45]. This is, as seen above, not the case for monopolistic behaviour[46].

Nevertheless, R&D is not solely used for the purpose of product development; it can also be used in many different ways to gain market share and to cut out competition. For example, in many fiercely competitive industries, R&D is a necessity to maintain a position on a given market and can impose large costs on the firms involved. These costs can also aid the companies already in the market by serving as a barrier of entry for new companies seeking to enter. This is done simply by deterring new companies through the sheer scale of capital investment required for setting up a competitive operation[47].

From a social point of view, the percentage return of R&D is often considerably higher than that of other forms of economic returns[48]. In addition, R&D sometimes produces gains beyond that of the initially intended use on other markets, which can start a chain reaction that reverberates between markets and increases the gains of the invention. This is referred to as "spill over effects", and further enhances the social and economic benefits of an invention[49].

Considering that long-run economic growth is the single most important factor in determining the wellbeing of a geographic region and its citizens, the importance of a clear regulation that promotes R&D is emphasized[50].

1.12 Market intervention

Market intervention is a collective term regarding situations where government intervention is considered justified in order to prevent the adverse effect of monopolistic behaviour[51]. There are two main types of interventions:

[44] Cooter, Ulen, p. 128
[45] Parker, Powell, Mathews, p. 312
[46] see chapter 2.6.1
[47] Jones, p. 422
[48] Returns on R&D can be in excess of 40 %, compared with the return of physical capital being about 8 %. Mankiw, Gregory N., Macro Economics, 4th Ed. Harvard 1999, p. 120
[49] Perloff, Jeffery M, p. 313
[50] Mankiw, p. 122
[51] Jones, p. 975

1. Regulation, and
2. Monopoly control

The economic term "regulation" is a collective term, which includes directives and laws, as well as other rules and regulations by governments and agencies. These are the tools used in order to control the market incentives, by regulating prices, product standards, entry barriers etc. However, its opposite, "deregulation", is sometimes used in order to promote a healthier competitive environment in a single market.

Monopoly control is the laws especially directed towards monopolistic behaviours. This can, for example, be regulations regarding restrictive practices, merger activity etc[52].

There are several theories regarding the reasons for market intervention. The one that stands out in regard to competition law is that of *public interest theory*. This theory states that regulations are there to satisfy the demand of both consumers and producers in order to maximize the total utility surplus[53]. Whilst Community competition law has traditionally been directed more towards a healthy competitive market between firms, the interest of consumer utility can be seen more clearly in the North American anti trust laws than those of Europe. However, both systems strive for the goal of maximizing the total utility surplus. Albeit measuring the utility surplus at different levels.

[52] Parker, Powell, Mathews, p. 454
[53] Parker, Powell, Mathews, p. 455

2 EC Competition law

The Community competition policy has several key objectives. One of these objectives is to enhance efficiency through the optimal allocation of resources, thus maximizing social and consumer utility. A second objective is to protect consumers and smaller firms from the market failure effects of monopolistic behaviour. Thirdly, the policy has the objective of creating a single European market by prohibiting certain elements of economic friction such as tariffs and quotas in order to ensure free movement between member states[54].

2.1 The competition law provisions

The main regulations for competition are found within Articles 85 and 86 of the Treaty of Rome and entered into force in 1958. These regulations have since been unchanged, although renumbered to Articles 81 and 82 by the introduction of the Amsterdam Treaty that entered into effect in May 1999[55] and thereafter to Articles 101 and 102 in the TFEU. Both articles have a direct effect and therefore national courts must apply these provisions *ex officio* in relevant cases. For the sake of clarification, in the following, reference will be made in accordance to the ECT article numbering (even in older cases retaining the old article numbers).

When assessing the competition provisions, it has been the constant practice of the ECJ to assess the situation at hand in both economic and legal contexts[56]. It is, for example, possible for co-operation between national undertakings from the same member state to affect the trade on the Common market, thus falling within the scope of Community Law[57]. Hence, apart from the applicable provisions, several economic factors need to be reviewed in order to assess any damaging effects of each individual competitive situation.

Historically, the Courts and Commission have retained a formal economic interpretation of the competition provisions. This object-orientated view resulted in the Commission utilizing the competition provisions in order to promote rivalry between firms and to prevent interferences to the single market. In later years, there has been a shift to a more effect-orientated economically realistic view, placing more emphasis on adverse effects and the social and consumer utility gains of the competitive market[58].

[54] Craig, De Burca, p. 951
[55] Ritter, Braun & Rawlinson, European Competition Law, 2nd Ed., Hague 2000, p. 3
[56] Ritter, Braun & Rawlinson, p. 15, See C-234/89 Delimitis §§ 23-27, T-7/93 Langnese-Iglo § 99
[57] Allgårdh, Ola, Norberg, Sven, EU och EG-rätten, 4th Ed. Stockholm 2004, p. 436
[58] Jones, Sufrin, p. 208

2.1.1 Article 81 Trade affecting practisies

This provision regards the prohibition of any, and all, agreements between undertakings, restricting the free trade within the European Union[59].

The far-reaching effect of this provision was determined in the ECO Swiss case[60]. In this case, the ECJ decided that Article 81 was of such *fundamental character* that even an arbitrary court, as well as any national court shall, *ex officio* try whether a presented agreement is in breach of Article 81(1) Prohibition) and therefore is considered null and void in conjunction of Article 81(2) (voidance). This being the rule unless exemption can be granted through Article 81 (3)[61].

The terms undertaking and trade have both been given broad interpretations reflecting the dynamic character of the provision, strongly indicating the importance of the desired effect of free movement within the Union. This is referred to as the *principle of effect*, and thus includes all measures that have a competition inhibiting effect within the member states; regardless of whether the measure in itself was actually undertaken within the Union or not[62]. This effect-oriented view has been defined further by the ECJ in cases like Windsurfing[63], concluding that it is the effect of an agreement, not the matter of single specifics that define compliance with Article 81 (1).

The ECJ has however insisted that object and effect shall be separated; in certain cases, a *full economic analysis* might be necessary to define any breach of Article 81 (1), while other actions such as horizontal price fixing and boycotts are prohibited *per se*[64].

Since the introduction of Council Regulation 1/2003[65], national courts and competition authorities now have the right to apply the entire Article 81, thereby breaking the Commissions previous exclusive right to grant exemptions through Article 81 (3)[66]. The introduction of Regulation 2790/99[67] introduced what is referred to as "new-style" block exemptions, differing mainly in being less formalistic and more oriented towards the overall economic effect[68].

[59] http://eur-lex.europa.eu/en/treaties/index.htm, O J. C 321E of 29 Dec. 2006
[60] C-126/97 Eco Swiss China Time Ltd v. Benetton International NV
[61] Ahlgårdh, Norberg, p. 432, §§ 50-51
[62] Ahlgårdh, Norberg, p. 438
[63] Case 193/83 Windsurfing International Inc. v. Commission of the European Communities
[64] Craig, De Burca, p. 1003
[65] Council Regulation 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty
[66] Craig, De Burca, p. 977
[67] Commission Regulation 2790/1999 on the application of Article 81(3) of the Treaty to categories of vertical agreements and concerted practices
[68] Craig, De Burca, p. 995

If an agreement is found to be in breach of Article 81 (1) exemption may be granted under Article 81 (3), providing that *all* of the following four conditions are met:

a) it must improve the production or distribution of goods or promote technical or economic progress
b) consumers must receive a fair share of the resulting benefit
c) it must contain only restrictions which are indispensable to the attainment of the agreement's objectives
d) it cannot lead to the elimination of competition in respect of a substantial part of the products in question[69].

2.1.2 Article 82 Abuse of dominant position

Article 82 constitutes the other side of the competition coin, regulating the unilateral behaviour of one or several companies on a given market, thereby constituting a complement to Article 81. This does not however prevent any measure or undertaking from breaching both articles[70].

For the application of Article 82, the following two criteria must be fulfilled:

a) the abuse of dominant position by one or more undertakings on the common market or substantial part thereof,
b) the undertaking may affect trade between member states[71].

The primary concepts of Article 82, are those of "dominant position" and "abuse", these are however not defined in the ECT. Therefore, these concepts have been defined by the ECJ in several cases in the 70s, such as in the Continental Can case of 72[72], and more clearly in the later Hoffman-La Roche case. In the Hoffman-La Roche case, the Court adopted a broad interpretation on the concept of abuse, not restricting itself to certain measures. Abuse of a dominant position can take many different forms: from unreasonable purchase and sales prices or other unreasonable terms of agreement[73] and terms of agreement not connected to either the purpose of the agreement or general branch customs[74]. Other examples of abuse include under-pricing by retailing at prices under the variable cost or average total costs[75], or making the acquisition of an own product solution

[69] Craig, De Burca, p. 976, OJ C101/97 The New Commission Guidelines on the Application of Art 81 (3) (2004)
[70] Ahlgårdh, Norberg, p. 448
[71] Ahlgårdh, Norberg, p. 449
[72] Case 6-72 Europemballage Corporation and Continental Can Company Inc. v. Commission of the European Communities
[73] Case 78-70 Deutsche Grammophon Gesellschaft mbH v. Metro-SB-Großmärkte GmbH & Co. KG
[74] Case 85/76 Hoffmann-La Roche
[75] C-62/86 AKZO Chemie BV v. Commission of the European Communities

conditional to the purchase of that of another product in order to cut competition[76]. These are some examples that the ECJ and CFI has found incompatible with the objective of undistorted competition within the Common Market. It should be noted that exclusive retailer agreements are not defined as a dominant position that falls within the scope of Article 82[77]. However, it should not be forgotten that abuse of dominant position could also be an effect of monopsony behaviour[78].

The interpretation of Article 82 has historically been applied with the objective of preserving a particular market rather than protecting consumer wellfare and the competitive process. This has resulted in a formalistic approach more focused on the form of a certain action rather than the effect which has translated into different means of conduct resulting in the same effect being treated differently. The Courts and Commission have therefore recently aimed at conducting a more effects-driven approach (or "rule of reason") of Article 82, supported by the incentives of *consumer wellfare* and an *efficient allocation of resources*[79]. This change has not been entirely without friction and has been referred to as the "last of the steam powered trains" and seems to be a winding road, given that the formalistic approach is at times still in use by the Courts[80].

2.1.3 Relevant market

In order to ascertain whether an undertaking is actually dominant one must define the relevant market. The relevant market consists of two parts: the geographical and product market, which must be reviewed in conjunction with the temporal factor[81].

The temporal factor defines the estimated time for which a certain undertaking may dominate the market. This temporal dimension can be influenced by: competition structures that may change due to seasonal productions, shifts in consumption patterns to substitute goods or the validity time of intellectual property rights, to name a few[82]. Many markets however, do not have a specified temporal factor and this factor has therefore often been overlooked in the assessment of Article 82 violations[83].

2.1.3.1 Product market

The definition of the product and the product market has been a common ground of argumentation in many of the Article 82 cases. In addition, the Commission has been repeatedly criticized for its tendency to adopt a

[76] T-201/04 Microsoft v. Commission
[77] Case 78-70 Deutsche Grammophon
[78] T-219/99 British Airways plc v. Commission of the European Communities
[79] Jones, Sufrin, p. 294
[80] Jones, Sufrin, p. 297
[81] Craig, De Burca, p. 1006
[82] Craig, De Burca, p. 1011
[83] Jones, Sufrin, p. 388

narrow interpretation of the market, and in some cases so narrow that findings of dominance would be inevitable[84]. It is therefore of the utmost importance that the conduct of this assessment is thorough and made in a well-balanced manner[85].

The Courts, as well as the Commission, have strongly adopted the view of product interchangeability[86] as the main argument when defining the relevant product. This review requires the Courts and Commission to investigate both supply and demand of the given market[87].

In the investigation of the demand side, the Courts and Commission have relied on the cross elasticity[88] of the goods in question in order to determine the boundaries of the relevant market[89]. This approach has been particularly clear in cases like United Brands where the ECJ took into account special qualities, like fruit texture, availability and several other properties that make bananas less likely to be substituted for other fruits, and thus constituting a market of their own[90]. This has more recently been confirmed by the CFI in the case of France Télécom (Wanadoo), where the CFI concluded that high and low speed internet connections do not compete on the same market due to difference in consumer preferences and thus a low cross elasticity[91]. It is generally the demand side of cross elasticity, i.e. the consumer substitution ratio, that has provided the major emphasis in determining the relevant product market. One issue with this approach is that search refinement can be made almost infinitely, thus giving raise to an extremely narrow market definition[92].

On the supply side, measurement of cross elasticity not only includes producers competing with the same goods but also includes an estimate of producers that may easily adapt production to produce an interchangeable good[93]. Therefore, even these producers may be deemed part of the same relevant market[94]. In contrast, this assessment can also be used to divide what consumers may deem a homogenous or interchangeable market due to major differences in handling and processing of the good[95].

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[84] Case 322/81 NV Nederlandsche Banden Industrie Michelin v. Commission of the European Communities, New replacement tyres for heavy vehicles was determined as a separate market from that of all other tyres. Case 22/78 Hugin Kassaregister AB and Hugin Cash Registers Limitied v. Commission, The relevant market was deemed to be spare parts for Hugin machines only.
[85] Jones, Sufrin, p. 352
[86] See 1.7 substitutability
[87] Craig, De Burca, p. 1006
[88] See 2.3 cross elasticity
[89] Craig, De Burca, p. 1006
[90] Case 27/76 United Brands Company
[91] T-340/03 France Télécom
[92] Case 322/81 Michelin
[93] T-51/89 Tetra Pak Rausing SA v. Commission
[94] Case 6-72 Europemballage Corporation and Continental Can Company
[95] T-65/98 Van den Bergh Foods Ltd. v. Commission, soft ice cream and single wrapped ice cream was considered separate markets.

2.1.3.2 Geographical market

When assessing the area of the relevant geographical market, pertinent factors to be considered include transportability and cost of distribution, i.e. the cost of transportation may induce costs outside a certain geographical area that makes the relevant product non-competitive with local substitutes[96].

This assessment is performed for each separate case, although special requirements are needed in order to redefine the market as smaller than a separate member state, even so this has been done before[97]. If for any reason it is not possible to establish a specified geographical market, the entire Union shall be considered the relevant geographical market[98]. The key for this assessment for the Courts has been that the relevant geographical market shall encompass all areas where the conditions of competition are sufficiently homogenous[99].

In certain situations, a firm may not enjoy a dominant position solely on its own; this will instead follow from agreements or similar actions, thereby creating a collective dominant position. This type of collusive behaviour does not exclude the undertakings from scrutiny, simply because the single actor on its own is not in breach of the boundaries of dominant position. Furthermore, an exemption granted through Article 81 (3) does not prevent the application of Article 82 if abuse of a dominant position is found to be in effect[100].

[96] 90/410/EEC Elopak/Metal box – Odin, Joined cases T-202/98, T-204/98 and T-207/98 Tate & Lyle plc, British Sugar plc and Napier Brown & Co. Ltd v Commission of the European Communities
[97] Ahlgårdh, Norberg, p. 451
[98] C-53/92 P Hilti AG v. Commission of the European Communities
[99] Jones, Sufrin, p. 383
[100] Ahlgårdh, Norberg, p. 451

3 Mergers and Joint ventures

Although this thesis focuses primarily on joint ventures, a basic understanding of the field of mergers is also necessary because the adverse effects of these types of co-operation can be similar and are at times covered by the same provisions.

Some of the rationales supporting the need for a merger regulation deals with the plundering of assets of an acquired firm due to short-time interests of certain shareholders. In addition, it deals with rationalizations of existing production facilities that may affect regional policy negatively through unemployment and successive changes in economy. However, the economic benefits of mergers and different types of co-operation can be numerous. For example, being able to utilise the combined economic resources of several firms may well render it easier to maximize economies of scale[101]. In addition, lowered costs of distribution as well as cuts in production spill costs can be achieved through vertical mergers, i.e. making production and distribution more united without the need to acquire the necessary human resources of a new business through trial and error[102].

3.1 Merger regulation history

Since Articles 81 and 82 do not specifically mention mergers, the consensus among Member States acknowledged the need for a separate provision regarding this matter. As early as 1973, the Commission[103] attempted to fill this regulatory gap, but differences of opinion and political squabbling between Member States prevented any conclusive legislation[104]. 1990 saw the genesis of the first specified Community measure to address adverse effects arising from mergers through the European Community Merger Regulation 4064/89[105]. Although primarily intended as a tool against the structural changes and the common control of mergers, some joint ventures were dealt with in accordance to ECMR and in particular, regarding the matter of coordination of competitive behaviour of the parents, which was previously dealt with under Regulation 17/62[106]. Prior to 1990, all of the above-mentioned undertakings were dealt with in accordance to Articles 81 and 82[107].

[101] See 1.9 Economies of scale
[102] Craig, de Burca, p. 1044
[103] Commission Proposal for a Reg. of the Council of Ministers on the Control of Concentrations between undertakings, OJ C92/1
[104] Craig, de Burca, p. 1042
[105] Council Regulation 4064/89 on the control of concentrations between undertakings
[106] Cook, C.J, Kerse, C.S, E.C. Merger Control, 3rd Ed. London 2000, p. 23, Council Regulation 17/62 First Regulation implementing Articles 85 and 86 of the Treaty
[107] Jones, Sufrin, p. 941

The ECMR gave the Commission exclusive competence in matters regarding the authorisation of concentrations. The process was predominantly regarding the *effect* of the concentrations following the competition criteria, stating that: "a concentration is incompatible with the Common Market only if it creates or strengthens a dominant position as a result of which effective competition is significantly impeded". This trial was to be made objectively, not empowering the Commission to weigh the benefits and adverse effects of the concentration against each other in order to deny or authorise a concentration[108].

There were several subsequent amendments of the ECMR, and in May 1 of 2004 the new EC Merger Regulation 139/2004 was introduced[109]. It was seen as a necessity to modernize the current provisions in order to further accommodate open market economy and an integrated free market, as well as preparing the expansion of the Union. Although most forms of concentrative undertakings will now fall within the ambit of this regulation, Articles 81 and 82 may still be in use in certain cases[110].

3.2 European Community Merger Regulation (139/2004)

The use of the collective term "merger" in accordance to the MR is not a strict one. On the one hand, it includes undertakings such as regular mergers and acquisitions and on the other hand certain types of joint ventures, thus accepting a wide interpretation in some aspects as well as a restrictive view regarding certain formulations[111].

The need for a special provision regarding mergers and concentrations follows from the fact that the ECJ has found Articles 81 and 82 insufficient in order to control all operations in breach of the goal of undistorted competition[112].

Prohibition and exemption of undertakings which could impede effective competition on the Common market as a result of a strengthening of dominant position are given in Articles 2 (3) and 2 (2) respectively, and interpretation as far as this concern does not differ in particular from that of Article 81 ECT.

The MR also follows the fundamental principles of subsidarity and proportionality set out in Article 5 of ECT, thus preventing the use of measures in excess of what is necessary to achieve the objective of a non-distorted competition[113].

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[108] Cook, C.J, Kerse, C.S, p. 6
[109] http://ec.europa.eu/comm/competition/mergers/cases/#by_nace
[110] Craig, de Burca, p. 1042
[111] Mathijsen, P, A Guide to European Union Law, 9th Ed. London 2007, p. 317
[112] Council Regulation 139/2004 on the control of concentrations between undertakings § 7
[113] Regulation 139/2004 § 6

3.2.1 Concentration

A merger occurs when two or more independent economic entities join or when one or more undertakings take over another. The subject of the MR is to ensure that the Commission assesses structural changes that may affect the trade between member states. There are several transactions and agreements from which a merger can arise; the vast majority of these undertakings do not however come within the scope of Community dimension. Furthermore, the MR regards the adverse effects arising from *concentrations*, thus making this a crucial concept in the assessment of an undertaking within the MR[114].

Application of the MR is only possible concerning *lasting* concentrations undertaken with a *change in control*. This is defined in Article 3 (1) in conjunction with Article 3 (2).

The use of the term *lasting* in Article 3.1, points out that this provision, just like assessment of Article 82, shall be done in conjunction with the temporal factor. However, one major difference exists in the assessment of this factor: while Article 82 refers to an existing position and an already conducted behaviour, the MR also includes the prohibition of market structure modification and a hypothetic element regarding future dominant position[115].

In determining the existence of a concentration, the Commission has declared that assessment will be based on qualitative rather than quantitative criteria, thus focusing on the issue of *control*[116]. Furthermore, it is the *impact of the concentration* as such that is determined by the MR.

3.2.2 Community dimension

In order to address the quantitative thresholds, the concentrations are assessed through the combined aggregated world-wide or Community-wide turnover of the undertakings involved. A concentration of Community dimension is deemed to be in existence if the aggregated turnover from the preceding fiscal year, after deduction of rebates and VAT, exceeds a given amount[117]. Even if a concentration does not reach the limit of having Community dimension, a member state may still refer the case to the Commission if the concentration affects the trade between member states and significantly threatens competition within that territory[118]. In addition, the Commission published a notice in 2005 on considerations to be taken

[114] Jones, Sufrin, p. 942
[115] Mathijsen, P, p. 318
[116] Craig, de Burca, p. 1045
[117] Regulation 139/2004 Articles 1, 2 & 5, at the time of writing worldwide turnover threshold 5 billion €, Community-wide turnover threshold 250 million €.
[118] Regulation 139/2004 § 15

into account when deciding on exceptions to the one-stop shop principle of the MR[119].

3.2.2.1 EC Merger Regulation: Joint ventures

Article 3 (4) of the MR states that a joint venture shall encompass a concentration in accordance of Article 3.1 (b) if the venture performs *all the functions of an autononomous economic entity on a lasting basis*. If however a joint venture *otherwise regarded as a concentration has the object or effect to coordinate the competitive* behaviour of independent *undertakings* the assessment shall be made within Article 81 (1) and (3) ECT[120].

In order to determine whether or not a joint venture is to be considered an autonomous economic entity, one must take the independence from the parents into account. This assessment is made by looking into the joint venture's ability to make their own independent decisions as well as the amount of available independent resources, such as financial resources, independent staff etc[121]. This provision does not however cover the whole spectrum of such undertakings, but only what is referred to as "*full-function*" joint ventures[122]. Moreover, the only full function joint ventures to fall within the ambit of MR are those that fulfill the requirements for concentration of Community dimension[123].

In addition, if the objective or effect of the joint venture results in a co-ordination of competitive behaviour that *may appreciably limit* competition, this will be evaluated through the Articles 2 (4) and (5) under the MR. Such coordination can be an effect, if the parents retain activities in the same relevant product and geographical market, operate up- or downstream or in a market closely connected to that of the joint venture. Thus, the interpretation of whether a joint venture falls within the scope of Article 3 (4) of the MR is not a clearly distinguished one[124].

3.2.2.2 Full function Joint ventures

There has been a shift to a more economically orientated view of full function joint ventures, i.e. whether the joint venture was a sustainable autonomous economic entity with a sufficient amount of its own assets. The reasoning behind this is that economically, a fully-fledged joint venture would have a similar structural impact on a given market to that of a merger[125].

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[119] Craig, de Burca, p. 1050, Commission Notice on Case-referral in Respect of Concentrations
[120] Regulation 139/2004, Article 2 (4)
[121] Mathijsen, P, p. 318
[122] Jones, Sufrin, p. 1094
[123] Craig, de Burca, p. 1047
[124] Craig, de Burca, p. 1048
[125] Cook, C.J, Kerse, C.S, p. 5

These conditions will however, not be met if the joint venture only regards a specific function of the parents without any market access, such as joint ventures *only* regarding R&D. The key in this assessment is whether the joint ventures activities can be considered auxiliary to that of the parents. If so, the joint undertaking does not fall within the ambit of full function[126].

In deciding whether the joint venture is operating as an autonomous entity, the assessment shall be made in the context of the relevant market at hand, i.e. by comparing the functions normally carried out by other undertakings on that market[127].

3.3 The EC Merger Regulation and Articles 81 and 82

Articles 81 and 82 were the primary tool when determining concentrations prior to the enactment of the ECMR and MR. In accordance to Article 21 of the MR this provision now states that the Commission alone shall deal with concentrations of Community dimension, while cases lacking this dimension fall within the Member State jurisdiction. The purpose of this is to exclude the application of Articles 81 and 82 with regard to concentrative behaviour[128].

The MR *only* covers full-function joint ventures that are concentrations and although an increasing number of undertakings are considered to fall within the scope of this provision, a large number of non full-function endeavours still fall within the ambit of Article 81. Thus, the ECT Articles are subsidiary to the MR in the assessment of joint ventures[129].

However, the ECT Articles carry a direct effect to the Member State courts that cannot be disapplied by the Regulation. This presents a possible conflict with the general one-stop shop principle of the MR, by allowing an undertaking to apply for a preliminary ruling under Article 234 ECT and challenges the compatibility of a concentration through a national court under the Articles 81 and 82 through direct effect. Although, such a challenge is most likely where the concentration does not carry a Community dimension, it is possible unless the Courts find that the MR somehow diminishes the direct effect of Articles 81 and 82 concerning concentrations of Community dimension[130].

[126] Commission Notice on the distinction between concentrative and co-operative Joint ventures §14
[127] Craig, de Burca, p. 1047
[128] Jones, Sufrin, p. 992
[129] Jones, Sufrin, p. 1095
[130] Jones, Sufrin, p. 993

4 Research & Development Joint ventures

The Commission has stated that R&D collaboration is beneficial to the Community in many ways: not only does it help to keep R&D costs to a minimum through economies of scale, but also aids in creating more cost efficient developments by spreading both economic risk and benefits. Such collaboration can therefore open up new markets as well as enlarge existing ones if given enough expenditure[131]. Furthermore, one objective of the ECT is to create an efficient market economy in order to stimulate such co-operative use of human resources[132].

On the other hand, the Commission has concluded that there are also negative incentives regarding this sort of co-operation. For one, powerful firms may enter into such ventures alongside other market leaders in order to control the technical development in any one field of economics. In other cases, such collaboration may induce entry barriers to a given market that would greatly hamper efficient competition. Furthermore, the co-operation in the area of R&D may also facilitate the joint coordination of production quantities as well as product pricing[133].

It has however, not primarily been the R&D collaboration as such that provides a questionable degree of co-operation between undertakings entering into such ventures, but rather the different closely connected agreements of commercial exploitation and distribution[134].

The policy adopted by the Commission in the field of R&D joint ventures as given in the Report on Competition Policy is:

"…to seek the best possible balance between on the one hand a reinforcement of the competivity of the European industry and on the other hand the maintenance of workable competition[135]."

"…to maintain workable competition and to ensure that the technical progress resulting from the research does not merely serve to produce monopoly profits[136]."

[131] Commission of the European Communities, XV:th Report on Competition Policy, 1985, point 282
[132] Allgårdh, Norberg, p. 431
[133] XV:th Report on Competition Policy, point 282
[134] Jones, Sufrin, p. 1104
[135] Commission of the European Communities, XIII:th Report on Competition Policy, 1984, point 42
[136] XV:th Report on Competition Policy, point 284

The Commission's objective seems to be to ensure a "workable" competition, thus highlighting the fact that R&D collaboration must not prove to be free of any adverse effects in order to pass as beneficial[137].

4.1 Research and development Joint venture regulation history

The broad interpretation of the term joint venture gives rise to the question of how to treat these types of co-operations from a legal perspective. This has been a discussion fraught with controversy and differences in political views among the member states. On one hand, there has been an argument that joint ventures should be regarded as a behavioural issue and should therefore fall within the jurisdiction of Article 81. On the other hand, there are arguments regarding joint ventures as a structural issue to be dealt with under a merger regulation. The solution in the ECMR was that concentrative (structural) aspects of joint ventures fell under the ECMR, whilst the co-operative (behavioural) aspects fell under Article 81: a partial solution that caused a great deal of confusion. In accordance with the MR, any joint venture that amounts to a concentration[138] and is hindering competition is dealt with under this provision[139], and although changes have been made to account for concentrative as well as co-operative aspects within the confines of the regulation, the MR still supports a certain degree of segregation in this matter[140].

From a competition law point of view, the main concern over joint ventures is the relations between the parents[141]. Until the early 80s, the Commission perceived joint ventures in general as a social and economic benefit. The view at the time was to review joint ventures under Article 81 (1) and if considered beneficial exempt them under Article 81 (3)[142].

However, the concern of loss of potential competition did introduce a rather stringent interpretation of Article 81(1) with regard to joint ventures[143]. This becomes clear when looking at the decision made in 1977 in the *Vacuum Interrupters* case, where the commission took a very narrow interpretation of the relevant product market as well as the competition structure on that market[144]. The Commission deemed that the joint venture was in breach of Article 81(1) in a way that probably would not have been the case today. This was largely due to the Courts rather stringent hypothetical interpretation of the development abilities of the parents.

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[137] Bellamy & Child, Common Market Law of Competition, 4th Ed, Luxembourg 1993, p. 267
[138] See 4.2.1
[139] Jones, Sufrin, p. 1091
[140] Craig, de Burca, p. 1046
[141] Jones, Sufrin, p. 1094
[142] Jones, Sufrin, p. 1095
[143] Jones, Sufrin, p. 1096
[144] OJ L48/32, AEI/Reyrolle Parsons re Vacuum Interrupters (1977) § § 15, 16

Suffering hard criticism for the decision of *Vacuum Interrupters* being based on the wrong assumptions, the commission re-evaluated its standing in the question of potential competition through *Commissions XIII:th report on Competition Policy*[145] and the decisions that followed, like *Optical fibres*[146].

In 1985 the Commission introduced a block exemption for certain horizontal agreements through regulation 417/85 regarding specialisation agreements and 418/85 regarding R&D agreements. As a result of their weak provisions, the regulations were however of limited use, and were replaced in 2000 by 2658/2000 for specializations and 2659/2000 for R&D[147].

There is a limited amount of case law regarding these types of co-operation, mainly because of a lenient view of the Commission; although permit for the conduct was sometimes granted first after changes in the initial planning had been made[148]. Nonetheless, any competition restricting effects arising from a joint venture must be *appreciable*[149] under the normal assessment criteria for Article 81.

Although the assessment under Articles 81 and 82 has largely been replaced by other provisions in terms of competition infringing behaviour of joint ventures, both articles still apply in order to catch and prevent joint undertakings that otherwise might not fall within the ambit of more specialized provisions.

In 1993, the Commission adopted the "Notice on the Assessment of Co-operative Joint Ventures"[150] in which the Commission set out a policy of realistic economic analysis of a joint venture before determining whether it was in breach of Article 81(1) ECT[151]. However, in the *European Night Services*[152] case the Commission did not properly conduct this analysis and as a result, the CFI annulled the Commission decision and concluded that the Commission could not replace the economic analysis of Article 81 (1) by granting exemptions through 81 (3). One problem at the time was that the Commission sometimes engaged in an economic analysis under article 81 (3) rather than under Article 81(1)[153]. Moreover, the Court found that the Commission had failed to identify the relevant market at hand properly, as well as applying an inappropriately short time for the exemption granted.

[145] Commission of the European Communities XIII:th Report on Competition Policy, 1984
[146] Jones, Sufrin, p. 1097, 86/405/EEC Optical Fibres (1986)
[147] Jones, Sufrin, p. 1103
[148] Jones, Sufrin, p. 1092
[149] T-374 – 5, 384 and 388/94, European Night Services v. Commission (1998)
[150] Commission Notice on the distinction between concentrative and co-operative Joint ventures, OJ C385
[151] Jones, Sufrin, p. 1099
[152] T-374 – 5, 384 and 388/94, European Night Services
[153] Jones, Sufrin, p. 1099

The scope of the economic analysis by the Commission becomes especially clear in *P&O/Stena Line*[154], which despite not regarding R&D is interesting in the clear economic and systematic reasoning of the Commission. Beginning by establishing the joint venture in breach of Article 81(1) in § 39, the Commission goes on to review the infrastructure and economic benefits of the new entity (§§ 61, 62). Furthermore, the Commission examines the benefits on the consumer market (§ 63) and whether these benefits could be reached by lesser forms of co-operation between the parties (§§ 64-66). To finalize the assessment of whether the proposed joint venture would be allowed under Article 81(3), the Commission reviews the competition and entry barriers on the given market (§§ 67, 68) before coming to the conclusion of a time-limited exemption.

Prior to the introduction of regulation 1/2003 there was a possibility for undertakings to achieve negative clearance, individual exemptions or letters of comfort from the Commission regarding Articles 81 and 82[155] with regard to horizontal agreements. Since this possibility has been removed, the undertakings must therefore make this assessment themselves and second-guess the Commissions view.

At present, the bottom line is that any joint venture that falls under the scope of "performing on a lasting basis all the functions of an autonomous economic entity" is regarded as a full function joint venture and shall therefore fall within the ambit of the MR[156]. Those not regarded as full function shall therefore be regarded as competition law cases and therefore be treated within Article 81.

4.2 R&D Joint Venture Group exemptions

The mere existence of a group exemption in the field of R&D indicates the importance of these types of collaborative agreements for the economic development of the Common market. The foundation for these exemptions is found in Article 163 of the ECT, which stipulates the goal of promoting a healthy environment for R&D within the European Union.

Numerous R&D agreements fall outside Article 81 (1): this is especially true if the parents are *not* considered competitors on the relevant market and only regards a pure R&D co-operation, or if the R&D is mainly undertaken through outsourcing. On the other hand there is an ever increasing risk of a joint R&D undertaking being assessed under Article 81 (1) if the joint research regards a new product, the parents are in horizontal co-operation or if the agreement contains specifics granting one partner exclusivity of the outcome of the joint efforts[157].

[154] 199/421/EC P&O/Stena Line (1999)
[155] Jones, Sufrin, p. 1022
[156] Article 2 (4) Council Regulation 139/2004
[157] Goyder, D.G, EC Competition law, 4th Ed, Oxford 2003, p. 431

Group exemptions in these fields of operations are granted through Commission regulations 2658/2000 and 2659/2000 regarding specialization agreements and R&D, which replaced the previous regulations 417/85 and 418/85.

4.2.1 Block exemption 2659/2000

The block exemption rules in the field of R&D agreements are stipulated, along with the demand for a separate framework for the joint R&D, in Regulation 2659/2000 which replaces the former Regulation 418/85. The old regulation simply provided exemptions in very basic types of R&D agreements, and only regarded those that fell outside the ambit of Article 81 (1). Thus, the very narrow scope of the provision rendered it almost useless which was the prime reason for its replacement at the end of 2000[158].

Regulation 2659/2000 is one of two block exemptions that received special treatment from the Commission, the other concerns specialization agreements[159]. Both regulations came into force together with the new Guidelines on horizontal co-operation that to a certain extent also regard these matters and is therefore dealt with later in this thesis[160].

The block exemption of 2000 follows the economics based approach that provides the present day agenda of the Commission[161]. The provision is thereby stressing the importance of properly identifying the *likely effect* of the R&D joint venture. This includes the whole spectra of market power and assessement of the R&D collaboration, from minor modifications and substitutes of existing products to the completion of an entirely new product range. Thereby, not only introducing a more effect orientated view, but also a temporal factor in assesment of the relevant market[162].

The block exemption applies to the following types of joint R&D agreements[163]:

> (a) joint research and development of products or processes and joint exploitation of the results of that research and development,
>
> (b) joint exploitation of the results of research and development of products or processes jointly carried out pursuant to a prior agreement between the same parties, or
>
> (c) joint research and development of products or processes excluding joint exploitation of the results.

[158] Goyder, D.G, p. 429
[159] Commission Regulation 2658/2000 on the application of Article 81(3) of the Treaty to categories of specialisation agreements
[160] Goyder, D.G, p. 419
[161] Regulation 2658/2000, § 7
[162] Goyder, D.G, p. 431
[163] Regulation 2659/200, Article 1

Although usually considered to have a foreclosing effect on the market; the use of contractual clauses that restrict partners from independently, or in co-operation with a third party, from carrying out R&D in the same field of operation during the term of the agreement is exempted though Article 1 (2).

Article 3 of the Regualtion stipulates the conditions for exemption stating that, "the parents must each have access to, as well as being free to exploit the resluts of the work in order to prevent an unbalanced exploitation from a stronger partner". Furthermore Article 3 (3) states that: "the joint exploitation must relate to results which are protected by intellectual property rights or constitute know-how, which substantially contribute to technical or economic progress".

The new regulation also includes far reaching possibilities in Article 7 in conjunction with Regulation 1/2003[164] for the Commission to withdraw an individual granted exemption that is found incompatible with the conditions laid down in Article 81 (3) of the ECT[165]. In particular regarding:

(a) the existence of the research and development agreement substantially restricts the scope for third parties to carry out research and development in the relevant field because of the limited research capacity available elsewhere,

(b) because of the particular structure of supply, the existence of the research and development agreement substantially restricts the access of third parties to the market for the contract products,

(c) without any objectively valid reason, the parties do not exploit the results of the joint research and development,

(d) the contract products are not subject in the whole or a substantial part of the common market to effective competition from identical products or products considered by users as equivalent in view of their characteristics, price and intended use,

(e) the existence of the research and development agreement would eliminate effective competition in research and development on a particular market.

The new regulation retains the "black list" of its predecessor in Article 5; although changed to a certain degree it defines the agreements and clauses that are prohibited *per se*. Additions to this list in the field of R&D regard agreements limiting the parties' ability to perform R&D in non-related matters of the joint co-operation. The "black list" furthermore, prohibits limitations to markets, sales, prices, customer activities or the possibility to

[164] Council Regulation 1/2003 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty
[165] Jones, Sufrin, p. 1116

challenge intellectual property rights within seven years from the time of the introduction of the product within the Union. The sales prohibition also includes any restrictions of passive sales in a market reserved for another parent[166].

4.2.1.1 Competition structure of Regulation 2659/2000

The application of the block exemption is limited to certain market power thresholds and the Regulation utilizes a calculated market share as a proxy for market power. Definition of relevant market generally follows the same rules that apply for Article 81 (1), read in conjunction with the guidelines on horizontal co-operation[167]. In order to establish the applicable threshold rules, it is important to first define the competition structure between the parents.

If the parents are *not* considered competitors, the undertaking will according to Article 4 (1), be exempt for seven years from the date when the contract products where first introduced to the Common Market. After this seven-year period, the non-competitive parent R&D joint venture may still enjoy exemption if the aggregated market shares of the parents do not exceed the 25 percent threshold as given in Article 4 (3).

Where the joint R&D regards two or more competing parents the general rule in Article 4 (2) is that the aggregated market share of the undertakings involved must not exceed 25 percent of the relevant market at the time of entering the agreement in order to enjoy exemption through this regulation.

The rules for calculation of market shares according to Article 4 are given in Article 6 (1), which stipulates that the market share is to be calculated based on market sales or other reliable market information relating to the preceding *calendar* year. Thus, if in the calculation of the market power of an undertaking the market share exceeds the 25 percent threshold the general rule is to apply Article 81 (1) of the ECT, followed by a possible exemption through Article 81 (3) of the ECT.

The Regulation does however provide for a limitied transitional relief through Articles 6 (2) and (3). If the threshold of 25 percent is not initially breached and the undertaking is granted exemption and subsequently market power rises above this limit, but not in excess of 30 percent of the relevant market, Article 6 (2) of the Regulation allows for a two year relief following the year in which the threshold was first exceeded.

Moreover, if the market share was initially under the 25 percent threshold, but subequently rises above 30 percent market power in the relevant market, the exemption *shall* continue to run for one additional year after the year the undertaking breached the limit.

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[166] Ahlgårdh, Norberg, p. 443
[167] See chapter 4.3.2.1

4.2.1.2 Differences from Block exemption 418/85

Regulation 418/85 did not have any significant impact in its intended field of use, mainly because the strict definition of R&D only made it applicable to a very limited number of agreements[168]. These restrictions prevailed through several different definitions within the provision. Furthermore, these only applied under certain given preconditions giving the provision too narrow a scope for practical use[169].

In contrast to the new block exemption, Regulation 418/85 contained a "white list" of affirmative actions. The removal of the "white list" is in line with the effect driven approach of the Commission, since even an affirmative action under certain circumstances can give rise to adverse effects. The opposite is however not true regarding "black listed" actions since these are the ones that will always induce some form of market failure[170].

Another relief for the parents undertaking a joint R&D is that the new block exemption does not demand a framework agreement between the parents to be presented in order to define the scope of the R&D and the field in which it was to be carried out.

In addition, major changes have been introduced in areas of production, distribution and sales. While Regulation 418/85 did prohibit the parents of setting prices, production and sales targets, this has since been granted; thereby allowing the R&D joint ventures to stipulate specifics regarding the future outcome of the joint undertaking.

The market share regulation has been raised from 20 to 25 percent i.e. aggregated market shares in the relevant product market of the parents in excess of 25 percent will put an ever-higher demand on proof of the joint ventures non-foreclosing effects[171]. For R&D that included joint distribution the previous threshold was merely 10 percent. This is now included in the 25 percent rule; not only raising the market share threshold, but also together with the changes regarding prices, production and sales, also presenting a more practical view of R&D joint ventures[172].
Furthermore, the exemption time limits in Regulation 418/85 Article 3 regarding joint ventures not breaching the aggregated threshold, as well as that of the transitional relief have been prolonged. Nor does the new block exemption retain the rather confusing distinction between co-operative and concentrative joint ventures. Thus, providing a more practical and streamlined provision.

[168] Commission Regulation 418/85, Article 1
[169] Jones, Sufrin, p. 1104
[170] Regulation 418/85, Articles 4 and 5
[171] Ahlgårdh, Norberg, p. 443, Regulation 2659/200, Article 4, Regulation 418/85, Article 3
[172] Goyder, D.G, p. 429

4.2.2 Commission Guidelines on horizontal co-operation

In addition to the exemption regulations, the Commission's guidelines on horizontal co-operation agreements[173] have sections that to a certain extent regard these matters as well. The purpose of the guidelines is to "provide an analytical framework for the most common types of horizontal co-operation" and to serve as a complement to the block exemptions[174].

The guidelines evolved from the Commission's proposal to modernize the implementation of the competition rules. Any assessment under the guidelines must however be reviewed in light of the general outline in the Commission's guidelines on the application of Article 81 (3) which takes precedence over the more specialized guidelines[175].

The modernization process implemented by these guidelines foremost includes the new policy of an economic based methodology, with the clearly effect driven approach of reviewing the *impact* of an undertaking on a given market, although determining that certain actions are more likely to create adverse effects than others[176]. Thereby implementing the economic goals set out in the Commission's Reports on competition policy and the decisions of the Courts.

4.2.2.1 Definition of relevant market and market shares.

Just like the block exemption regulation, the economic based methodology primarily concerns market power, although the guidelines follow the same basic rules set out in Regulation 2659/2000, they do offer a more detailed view of interpretation of the provision. Recognizing both the benefits and adverse effects of horizontal agreements, the Commission states that market power is the major factor in determining whether a horizontal agreement falls under Article 81(1) or not [177].

In determining the market power one must first define the relevant market. In the case of R&D collaboration the key concern is that of the relevant product market. These markets are divided into existing markets and new markets[178], which are subsequently divided into product or technology markets[179].

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[173] Guidelines on the applicability of Article 81 of the EC Treaty to horizontal co-operation agreements, 2000

[174] Guidelines on horizontal co-operation agreements § 7

[175] Commission Guidelines on the Application of Art 81 (3), OJ C101/9, § 5

[176] Guidelines on horizontal co-operation agreements §§ 7, 25, Guidelines on the Application of Art 81§ 5

[177] Guidelines on horizontal co-operation agreements § 24

[178] Guidelines on horizontal co-operation agreements § 43

[179] Guidelines on horizontal co-operation agreements §§ 44-49

The importance of calculating market shares is pointed out in the Guidelines chapter two regarding agreements on research and development. As stipulated in the block exemption rules regarding R&D, the calculation of market shares in the field of R&D must not exceed 25 % of a market that regards products capable of being improved or replaced by the products under development[180]. The reasoning of the Guidelines on this point relies heavily on the principle of substitutability concerning the classification of whether or not a product regards the same market.

If the R&D regards an entirely *new* product for which no substitute exists, the R&D block regulation exempts these agreements irrespective of market shares for a seven year period measured from the time the product is first introduced to the market. After the seven year period the market shares of the parents are calculated and the normal 25 % regulations apply[181].

An R&D joint venture falling outside the 25 % limit of the 2659/2000 block exemption due to the parents market position, does not constitute an automatic infringement of competition. It does however call for a more detailed analysis relative to the combined market power of the parents. The same applies in relation to assessment under Article 81 (1), where the likelihood of falling under Article 81 (1) is relative to the market power in excess of 25 % of the relevant market[182].

If such an undertaking is found in breach of Article 81 (1) the Guidelines distinguish between R&D joint ventures regarding new markets and those regarding improvement of products on existing markets for the possibility of exemption through Article 81 (3)[183].

For R&D in *already existing markets* the existing products/technology, effects on prices, output and/or innovation in existing markets are to be assessed relative to the parents joint market shares. In addition, without regard to the parents market power factors like entry levels, the number of other innovation activities and other foreclosing activities must also be considered[184].

Regarding R&D projects in *new markets* the lack of an existing market to compare to brings in a hypothetical element. Thus, the restrictions of innovation concerning, the quality and variety of possible future products/technology or the speed of innovation are examples of factors mentioned to take into consideration. Furthermore, the Guidelines point out the importance of condsidering the possibility for each of the parents to

[180] Guidelines on horizontal co-operation agreements § 53
[181] Guidelines on horizontal co-operation agreements § 54
[182] Guidelines on horizontal co-operation agreements § 63
[183] See also chapter 2.1.1.3 for the assessment
[184] Guidelines on horizontal co-operation agreements § 64

conduct the relevant development independently within a reasonable time limit, which if so, would be considered to be hidering competition[185].

4.2.2.2 Competition assement

Most R&D agreements do not fall within the ambit of Article 81 (1); there are however, certain agreements of this kind that usually do and those that might[186].

R&D undertakings involving non-competitors seldom give rise to any competition infringement, although this must be reviewed in the context of the existing markets and/or innovation. In this context, the parties must not be assumed competitors in a given market on the grounds that they conduct R&D together. If the parties of the joint collaboration are not able to conduct the R&D separately, and therefore are reliant on the know-how, technologies and other resources of the partner, it is not considered to restrict competition. The definitive question regarding the competition structure is whether each party carries the combined resources for conducting the R&D in question on its own within a reasonable time limit[187].

Furthermore, co-operation only involving "pure" R&D agreements, not including any specifics regarding the joint exploitation of the results through licensing, production and/or marketing rarely fall under Article 81(1). These agreements will only be regarded as inhibiting competition if effective competition in the field of innovation is significantly reduced[188].

Paragraph 59 of the Guidelines concerns the types of R&D agreements that are always regarded as competition inhibiting and therefore fall under Article 81 (1). These are the cases where the creation of the joint R&D is subsidiary to means like the creation of a disguised cartel, price fixing, output limitation or market allocation. It is however, stated in the paragraph that the existance of specifics regarding the exploitation of future results does not necessarily constitute competition infringement.

[185] Guidelines on horizontal co-operation agreements § 65
[186] Guidelines on horizontal co-operation agreements § 55
[187] Guidelines on horizontal co-operation agreements § 56
[188] Guidelines on horizontal co-operation agreements § 58

5 Case law

There are relatively few cases regarding the matter of R&D joint ventures within the Union. One of the main reasons being the affirmative view of the Courts and Commission on co-operative and even horizontal R&D programmes derived from the goals of Article 163 ECT.

In the case of third party joint R&D undertakings the two main issues regard:

- the possibility for the parents to conduct the joint development programme separately
- the internal power structure of the parental control.

The following aims to provide an insight in the reasoning of the Commission in major decisions and rulings in the area of joint R&D undertakings since the late 70s and is presented in accordance to the division above.

5.1 Separate product development

5.1.1 77/160/EEC AEI/Reyrolle Parsons re Vacuum Interrupters (1977)

The Vacuum interrupters LTD (hereinafter VI) case introduced a very strict interpretation of Article 81; both in terms of geographical and product market. Since at the time neither the MR nor any form of block exemption existed, the decision only involved the use of Articles 81 (1) and (3).

The case regarded the VI horizontal joint venture between UK based Associated Electrical Industries LTD (hereinafter AEI) and Reyrolle Parsons LTD (hereinafter RP), in the R&D of vacuum controlled electrical switchgear acting as automatic circuit breakers in high voltage machinery. The advantage of using vacuum over other models existing at the time is that in this process any electrical arc that might erupt from switching high voltage machinery cannot be sustained. VI designed, manufactured as well as sold these interrupters for incorporation into other switchgear, any actions beyond this demanded the combined written consent of both parents.

Both parents independently manufactured and sold other switchgear for the whole spectrum of uses and had commenced this technically sophisticated research separately at substantial cost to each party prior to the joint venture. Apart from cost, one of the reasons why the parents decided to discontinue their respective R&D was the perception of not being able to reach a viable production on their own. The decision to form a joint venture in order to utilize the combined resources more efficiently was signed in 1970 presenting 60% holdings to AEI and 40% to RP. Furthermore, the parents

agreed to refrain from performing the tasks and assignments associated with the joint venture for the duration of the 10-year agreement. By 1974, the costs of the joint venture in terms of R&D, production, manufacture and sale exceeded 1.5 million pounds, with total turnover for that period being less than 155 000 pounds.

5.1.1.1 Product and relevant market

At the time, the Union market for the product in question was limited to prototype developments. However, there had been expansive development for similar products in both USA and Japan that lead the Commission to the conclusion of similar market development within the Union.

The relevant product market was limited to firms and undertakings manufacturing, constructing and adapting switchgear for incorporation of vacuum type interrupters. At the time being, the only manufacturer of this product within the Union was VI.

In regard to restriction of competition, the Commission stated that although the parents *probably* would *not* develop a similar product on their own within a foreseeable future. The Commission deemed that they *might* have done so, thereby making the parents potential competitors, thus making the agreement of horizontal character. By depriving the parents of this hypothetical development possibility the Commission deemed the object and effect of the agreement to be restrictive of competition within the Union. In addition, the fact that AEI and RP each held an important market position within the relevant geographical market (UK) was considered to raise entry barriers for other Community manufacturers trying to enter that market, as the relevant market would then consist of the stronger joint undertaking and not the two competitive firms.

The reasoning of the Commission was that the joint venture *might* affect the market, and since no current market substitutes existed this would affect the market in a negative way.

5.1.1.2 Commission decision analysis

In its decision the Commission adopted stringent interpretations of several important competition law assessments, without properly taking into account the beneficial effects of the joint venture.

In terms of interpreting the relevant geographical market, the Commission constrained it to Great Britain, mainly due to the origin of the parents. Although there were facts indicating the entire Union as a probable product market, this was not taken into consideration.

Regarding the competition structure of the parents, the major factors contributing to the assessment of falling under Article 81 (1) was the horizontal structure and the aggregated market shares on the defined

geographical market. This was the result of the assessment that the parents were considered potential competitors that *might* have a negative effect on a newly created market. The highly hypothetical reasoning of the Commission in this case inevitably led to the conclusion of competition infringement under Article 81 (1).

However, the possibility of exempting the joint venture in order to promote technical or economic progress was deemed possible under Article 81 (3). In this assessment several factors contributed to the decision, including future market, product and consumer benefits of the joint R&D. In addition, the fact that the agreement did not contain any indispensable restrictions was perceived as beneficial. Furthermore, the fact that VI was allowed to act freely within the market and sell to any producer of switchgear, thereby not presenting any unnecessary foreclosing effects on the market was considered favourable. Because of the above VI was exempted through Article 81 (3) until March 1980.

It seems like the hypothetic decision was based on the concept that if no substitutes exist this would be considered monopolistic behaviour, not taking into account the advantages of product development, added utility and the spill over effects of innovations in the assessment under Article 81 (1). In addition, one of the more heavily criticized parts of this decision was the fact that any competition infringing effects are considered under Article 81 (1), while the beneficial considerations are not taken into account until the exemption through Article 81 (3).

The decision reflects the view of the Commission at the time, not to grant the undertaking negative clearance under Article 81 (1), but rather consider the undertaking incompatible with community law and then exempt any beneficial economic effects under Article 81 (3).

5.1.2 90/410/EEC Elopak/Metal box – Odin (1990)

The Elopak/Metal box – Odin case concerned the Norwegian firm Elopak A/S and its UK-based sister, which together with UK conglomerate Metal Box had embarked on a R&D joint venture for the creation of a new combined paper and metal container for UHT treated food products. At the time of the Commission's decision Odin had already developed a prototype filling machine ready to be submitted for productions trials.

Elopak was primarily engaged on the European market, but also in Africa, the Middle East and USA. The vast majority of the product market for Elopak was carton containers for fresh milk, and to a lesser extent for juice, wine and water. After the acquisition of American Purepak the consolidated turnover for the Elopak group was around €300 million.

The Metal Box Group was an international conglomerate of packaging industries based in the United Kingdom, with a wide range of packaging

products. The primary product market was that of metal, plastic and PET containers, as well as closures and seals. After a merger with French company Carnaud, granted by the Commission, the aggregated turnover for the Metal Box Group was in excess of €3.1 billion.

Since none of the parents had the necessary know-how to perform the R&D separately, the decision was made for the creation of a 50/50 jointly owned company, Odin. Odin would not only research the hybrid container itself, but also the necessary machinery for filling and if successful undertake production and distribution of these containers and machines. The parents were however still free to carry out R&D on their own or in conjunction with a third party provided that they did not use any know-how obtained from the other parent or Odin.

Odin was to be under control of a board of equal numbers from the parents. Furthermore, Odin were granted the exclusive right to exploit the intellectual property rights licensed from the parents, and the right to any improvements it may make within the field of the agreement.

5.1.2.1 Product and relevant market

The new product was based on Elopaks gable-top carton container with a laminated metal lid including a separate closure capable of being aseptically filled. The user market for the product in question was for UHT processed foods, a process that preserves the quality of food better than canning; hence, possible substitutes for the product, if successful could be metal cans, but also glass jars and certain “brick” type carton containers.

The substitutes in the relevant product market for the new container were controlled by a small number of large companies. Although an oligopolistic market structure, consideration was given to the transportability of the new product, i.e. transportation costs of blank metal and glass containers tend to run high and thereby limit the geographical market of the substitute products. The new product would most likely be able to be transported as flattened blanks, the same as other carton containers and would therefore not create any significant foreclosure on the current geographical markets. Nor would it compete with current gable-top containers as the new product was considered to be used for UHT-processed foods.

5.1.2.2 Commission decision analysis

Similar to the Optical fibres case[189] neither of the parents had the necessary know-how to be able to develop the product by themselves without significant investment of time. This would therefore effectively preclude either of the parents from attempting the development of the new container on their own.

[189] 86/405/EEC Optical Fibres, See 5.2.1

Odin applied for exemption under Regulation 418/85. However, since Odin was free to manufacture and distribute to any potential buyer, not only the parents, it did not fulfil the obligations for the simplified procedure set out in Article 2 of the Regulation. Although not exempt through Regulation 418/85 the Commission explained that the joint venture did not fall within the scope of Article 81 either. This was due to the fact that the parties were not considered competitors or potential competitors due to low substitutability between their respective products. Since the parents were not considered competitors, there was therefore no risk of a foreclosing effect on competition on the relevant market, thereby excluding Article 81 (1).

However, the specifics of the agreement must also be examined to make certain that these do not restrict competition within the meaning of Article 81 (1). Especially since Odin's new product might compete with the current products produced by Metal Box. No such specifics were found in the case of Odin, nor did the agreement contain ancillary restrictions[190] beyond what was necessary. Moreover, the ease of break-up or sale of the agreement ensured that the economically stronger partner, Metal Box, could not exploit the joint venture at the cost of the other partner. Thus, the independence and freedom of action of the jointly created undertaking and the parents was considered of major importance for not restricting the freedom of the parties involved, and thereby fall within the ambit of Article 81 (1).

The Commission therefore concluded that the agreement and creation of Odin did not have any appreciable prevention, restriction or distortion of competition on the common market, and therefore granted a formal negative clearance for the joint venture.

In comparison to VI the Commission provided a lenient interpretation of the relevant market, as well as granting a negative clearance under Article 81 (1) instead of exemption through Article 81 (3). In the light of the current effect driven approach to R&D joint ventures, it is noticeable that the Commission does not estimate the positive economic effects of the new product. Furthermore, the narrow scope of Regulation 418/85 prevented the use of the specialized provision in a way that would not be the case regarding the current Regulation 2659/2000.

[190] Ancillary restrictions: Clauses that would normally be considered to be infringing competition, but is vital to the existence of the joint venture and therefore exempt, see Jones, Sufrin p. 1075

5.1.3 90/446/EEC Konsortium ECR 900 (1990)

In 1988 AEG Aktiengesellschaft (AEG), Alkatel NV and Oy Nokia agreed co-operation in the form of the consortium ECR 900. The purpose was the joint development and manufacture of a pan-European digital cellular mobile telephone system and parts thereof, not including the end products (mobile phones) through which the consumers connected to the system.

In the "CEPT-Memorandum of Understanding" signed in 1987 the parties agreed to introduce the new telecommunications service to the public in their countries in 1991. The system was a completely new communications system known as the GSM (Groupe Spécial mobile). Although the system did not require a uniform technology, it did provide a uniform standard and room for development for different system components.

5.1.3.1 Product and relevant market

The new digital system provided several advantages over the existing analogue system, such as substantial improvement in the quality of speech and sound as well as an increase in the total number of users. Furthermore, the system provided faster dataflow and new encryption to prevent unauthorized communication interceptions. Another major advantage of the joint undertaking was the development of a single mobile communications standard agreed by virtually all European network operators. Thereby breaking down the existing geographical frontiers and allowing consumers to be connected anywhere in Europe by what is referred to as roaming.

Regarding the agreement between the parties, it is important to notice that it provided free access to each partner's improvements.

The potential market for the GSM network at the time was the national network operators and the undertakings acting on their behalf, limiting the number of potential customers for the relevant product to only 15.

5.1.3.2 Commission decision analysis

The Commission stated that the agreement did not fall within the ambit of Article 81 (1) on the grounds that, none of the three parents could have successfully preceded on their own within the relevant deadline the co-operation. Thereby including a temporal factor to the estimate of the parents production capabilities.

With an estimated cost of DM 300 to 500 million, there was no realistic possibility for any one parent to provide the financial expenditure for the development programme of the system alone. Furthermore, the available number of specialist engineers offered a very limited workforce that could not be increased within a short time frame.

The Commission also stated that it would be an unreasonable economic burden for any one of the parents to bear the risk involved in the development of the GSM system.

Although the number of potential customers on the market was limited to only 15, the agreement and the bidding structure on the market prevented any one member of the consortium to use its production improved by individual development to achieve a competitive advantage over the other parents.

In regard to the circumstances above the Commission therefore saw no reason to take any action against the joint undertaking.

5.2 Parental control

5.2.1 86/405/EEC Optical Fibres (1986)

Following the criticism against the VI case and the new policy introduced by the XIII:th competition report[191] the Commission in the Optical fibres case took on a more lenient view, and is generally considered to have been the first steps towards a new policy on R&D.

The joint undertaking regarded manufacture and sales of optical cables between New York based company Corning Glass Works (in the following Corning) and several of its associated firms in Europe. The Corning groups primary market was in development, manufacture and sales of glass and ceramic products and had an aggregated turnover for 1984 in excess of US$1.7 billion, and product patents in all major countries. Between 1973-74 Corning signed joint development agreements with BICC and the Plessey Company plc in the UK, Compagnie d'Electricité (CGE) in France and Industrie Pirelli SpS in Italy. In addition Corning formed the joint venture "Siecor GmbH" with Siemens AG in Germany. Several similar joint ventures were formed between Corning and partners around the world, in particular in the USA and Japan.

The development agreements regarded the cabling technology necessary for the cabling of optical fibres, while Corning continued on the development of the fibres themselves without co-operation. Corning also included an exclusive manufacturing and sales license in all of the agreements, in effect terminating the joint venture if the partner opted to use the license option. CGE and Pirelli exercised this option while BICC and Siemens chose to continue the joint venture agreements.

1975-78 concluded further developments of co-operation with partners around Europe concerning sales of optical fibres and the granting of exclusive distribution rights in the respective countries, and in the years after further non-exclusive licenses to several other countries were signed.

[191] Commission of the European Communities XIII:th Report on Competition Policy

Furthermore, in 1981 Corning formed a 50/50 UK joint venture with BICC named Optical Fibres (hereinafter OF), and a 40/60 joint venture with Compagnie Finacière pour les Fibres Optiques (hereinafter COFO) in France.

The object of the formed joint ventures was the development, production and sales of optical fibres. The agreements were limited to a 15-year term, and the agreement specifics granted Corning's partners the majority of the board with simple majority resolutions. Furthermore, the agreement expressly stated that each joint venture had the right to actively pursue sales in the territories of all Member States, with the exception of the territories where Corning had granted exclusive licences.

5.2.1.1 Product and relevant market

In the 70s Corning managed to develop optical fibres for use in telecommunications, cable TV and broadband communications. The optical fibres had the advantage of higher communication speeds over the existing substitutes, such as copper and coaxial wires as well as microwave and satellite communications. This meant that Corning held a special position in the market since they were the proprietor of several basic patents for the manufacturing of optical fibres in a large part of the world.

The largest markets for the product at the time were the USA, Canada, Japan and the European Union. In North America, Corning represented 80% of the production capacities and in Japan the biggest actors in the market were Corning licensees. In the Common Market an estimated 48% of the production capacity was represented by Corning's joint ventures.

With an increasing demand for broader communication bandwidth, optical fibres were forecast rapid development in the entire Common Market, thereby concluding this to be the relevant geographical market.

The product is generally sold to cable manufacturers that supply the cabled fibres to users of optical cables. Regarding the pricing, the Commission concluded in its analysis that the three major factors that set the prices for the product were the suppliers of optical fibres, the cable makers and the customers demanding the product. In addition, the price factor also depended on the pricing of traditional conductors, thereby indicating the substitutability of the products and placing optical fibres in the market for communications cables.

5.2.1.2 Commission decision analysis

Optical Fibres provided a more complex structure of joint ventures than that of VI, the case displays a more lenient view both in terms of relevant product and in terms of relevant product market in comparison.

Except COFO, that had applied for exemption under Article 81 (3), the Commission did not consider the individual joint ventures with Corning to have any competition distorting effects. Nor were the parties considered actual or potential competitors in the market of optical fibres. In addition, the agreement was not considered to have any foreclosing effects for third parties or any other foreseeable competition infringements. The agreement also provided the parents freedom to engage in individual R&D, and did not contain any obligations beyond what was considered necessary.

However, the Commission did find that restrictions to competition were a result of interlocking ownership of joint ventures in the same market. The Commission's main concern was the introduction of a network of three joint ventures. Although not individually considered to hinder competition, the inter-related ownership provided an oligopolistic market structure. Apart from ownership, the oligopolistic structure was compounded by the fact that all of the joint ventures were acting in the same market, depending on the same access to Corning's intellectual property rights and R&D, as well as only being permitted passive sales in territories where Corning had an exclusive licensee. The restriction was considered even more noticeable due to the already limited number of suppliers of optical fibres in the market, thereby raising the demand for independency of the joint ventures. The inter-related joint ventures were therefore considered to have a foreseeable restrictive effect and distortion of competition and therefore to fell within the scope of Article 81 (1), and thus had to be exempted through Article 81 (3).

The initial agreement provided Corning the influence to effectively control the production and marketing policies of the joint ventures, thereby presenting a considerable risk of collusive behaviour. Amendments were therefore made to the agreement ensuring competition between the joint ventures and limiting Corning's control. Although the Commission stated that Corning retained a high level of control after the amendments because of its predominant role, the distortion of competition was deemed to be *outweighed* by the benefits of the joint co-operation. The benefits of the joint ventures were thoroughly investigated by the Commission, stating that not only did the co-operation promote technological progress, but also added consumer benefits that would likely lead to lower consumer prices. Thus, even after the modifications to the agreements the Commission stated that, although the joint ventures were not free of any adverse effects this was outweighed by the benefits, thereby ensuring a *workable* competition.

The Commission therefore granted a time limited exemption for OF and Siecor for fifteen years under Article 81 (3).

In the modern globalized economy, it may sometimes be necessary to look beyond the borders of the internal market in order to properly conduct an investigation of the relevant market and its structure. Contrary to the VI case, the Commission conducted a thorough economic analysis of the

market, company and agreement structure, as well as appreciating the future effects on the market both in terms of product and consumer benefits.

5.2.2 87/100/EEC Mitchell Cotts/Solfitra (1988)

Although not pure R&D the Solfitra case regarded the fusion of companies M. C. Engineering (MC) and Solfiltras products into a new product. The new product was to be assembled and marketed by the joint venture Michel Cotts Air Filtration Ltd for the UK market.

MC was a subsidiary of Mitchell Cotts group plc based in the UK, whose primary markets were in the fields of international engineering, transportation and trading with an aggregated turnover of £377 million. The other parent Solfitra was a part of the French Groupe Saint-Gobain with a turnover in excess of FF57 billion, manufacturing a wide array of products for water supply systems, papers, fibre reinforcements *et al*.

5.2.2.1 Product and relevant market

The new product was a high-efficiency air filter utilising microfine glass fibre for the nuclear, biological and computer markets. Although simple in its manufacture, the product required a pleated glass fibre paper. MC did not possess either the know-how nor the necessary R&D facilities to independently manufacture the product. The solution was to form a joint venture with Solfitra who in turn provided a 10-year, year-to-year renewable license for the joint venture for the production of the pleated paper.
The market for the product was that of high efficiency air and gas filtration equipment, a market in which only 7 companies provided 80 to 85 % of the output to the Common Market.

Solftiras market share three years prior to the joint venture was approximately 15 % of the Community market for high efficiency filters, and although MCs market share on the Common Market as whole was negligible, it held approximately 10% of the market in UK and Ireland.

The relevant product market was considered the *manufacturing* of the product. It was considered that the parents were not competitors or potential competitors on that market, because MC was marketing a finished product incorporating pleated paper, whereas Solfitra and other manufacturers produced a finished product without outside assistance. In all the Commission concluded that the relevant market was that of high efficiency filters in the UK and Irish markets.

5.2.2.2 Commission decision analysis

The Commission concluded that although Sofitra was only a minority shareholder of the joint venture it was the key provider of important technology and thereby in effect sharing control with MC. The Commission therefore stated that Solfitra must be considered a full partner of the joint

undertaking. Due to the risk of unwanted effects because of an unequal distribution of power between parents, the Commission clearly stated that secondary factors that provide *actual influence* over the joint venture must be considered, not merely the number of shares owned by each parent.

Since both parents held a fairly small market share of the relevant product and geographical markets and the agreement did not involve the forming of a network of joint undertakings, the agreement of the joint manufacturing did not fall under article 81 (1).

However, concerning the sales and distribution of the product, Solfitra and the joint venture were competitors. Thus, it was necessary that territorial restrictions in the agreement between them were examined under Article 81 (1) in order to determine any other competition infringements. These territorial agreements, in effect dividing the geographical market between the joint venture and Solfitra, were therefore considered to raise entry barriers not only in the UK but also in Ireland. This emphasises the importance of not only regarding the agreement between parents as such, but also surrounding factors that might have an appreciable impact on the competition on the relevant market.

Pursuant of Article 81 (3) the Commission did grant a time limited exemption for the duration of he initial 10 year agreement on the grounds that competition would not be eliminated for a substantial part of the market and that it would provide technological improvements benefiting the consumer market.

6 Conclusions

6.1 Current legal standings of R&D Joint Ventures

The primary rule regarding R&D joint ventures is only briefly pointed out in the above. It is the basic rule derived from the benefits of economic development, in which "pure" R&D joint ventures are beneficial and necessary to economic development and in the vast majority of cases does not pose a threat to the competitive market. Although few R&D joint ventures are what is referred to as "pure", it is typical that the agreement contains specifics regarding the exploitation of future intellectual properties such as, sales, licensing and other commercial and legal implications following a discovery.

When examining an R&D joint venture it is of prime concern to properly classify the undertaking, i.e. to make a thorough economic assessment of the third party joint venture in order to see what competition law provision is applicable. This is of prime concern for the parents since the possibilities and extent of the exemption varies between the provisions.

Although the general rule is to assess the R&D joint undertaking under the block exemption regulation, one should not rule out the use of either the MR or Article 81 ECT. Thus, if the R&D joint venture does not fall within the exemption rules of Regulation 2659/2000 Article 81 (1) is the applicable provision, and exemption can still be granted through Article 81 (3). Seen in regard of the parents, it is important for them to avoid falling within the scope of Article 81 (1) having to go through the application of negative clearance, or the exemption process of Article 81 (3), when the special provisions regarding R&D provide easier and further reaching possibilities for exemption.

However, if the R&D joint venture could be considered *full function* and *a concentration of community dimension* the MR would be considered the applicable provision. In this case the only automatic exemption available is if the joint venture is regarded as "pure".

In the classification it is also important to consider the market structure of the parents, i.e. whether the agreement is of horizontal or vertical character. This is due to the fact that horizontal agreements are more likely to have a foreclosing effect on competition, whilst vertical co-operation are more likely to actually present more efficient production and/or distribution, with an increased market and consumer utility.

6.1.1 Individual product development

One of the definitive questions regarding the competition structure of the parents is however whether each parent has the necessary resources to conduct the R&D on their own. If so, the R&D joint venture is generally considered to inhibit competition and can therefore not be exempted.

In the assessment of this ability, it is distinguishable from the practice of the Commission that two main arguments have concluded the parent's inability to conduct R&D without the joint co-operation of others. These arguments therefore provide a foundation for argumentation for parents embarking on such a venture.

The primary reason for acceptable inability of conduct has been the proven *lack of intellectual property* of the parents, i.e. neither party possess the necessary know-how to conduct the R&D on their own. Even if one parent does have the possibility to acquire such knowledge, this must be deemed a viable economic possibility in order to present hindrance to exemption.

The second reason regards the financial expenditure and the available capital of the parents. This presents an economic assessment on the parent's *ability to finance* the R&D project individually, i.e. if the expenditure will prove too great for one parent this will provide a reason for exemption.

Both of these factors shall be regarded in the light of a temporal factor, assessing whether intellectual or economic capital can be acquired within a reasonable time limit in comparison to the actual or hypothetical market at hand. As in all competition law, the granting of a competition infringement is measured against the aggregated utility benefits that might result from such an act.

6.1.2 R&D joint venture Agreement

In R&D joint ventures, consideration must not only be given to the general competition law considerations, but also to the fact of how the agreement between parties is structured and the general benefits to the market. It is clear that an increasing economic consideration has been entering the assessment of R&D in the Commission as well as the ECJ and CFI. However, this form of economic assessment is not always clear or precise, and therefore puts high demands on a certain degree of stringency. This becomes especially true when it comes to the assessment of such broad terms as joint ventures, because this term encompasses so many different forms of co-operation.

In order to prevent an unbalanced use of R&D joint ventures it has been pointed out that the agreement must not provide the possibility for any one parent to control the terms of the R&D joint venture or the following commercial practices. It is important to notice that the rules regarding the

equal control of the joint undertaking follows the *principle of effect*. It is therefore not enough to show that the parents hold an equal amount of shares or members of the board if one parent has exclusive veto or can use financial strength or any other means to control the joint daughter company. This principle of effect therefore requires the parents to regard the entire power structure between them. This in order to prevent the use of R&D joint ventures as a cloak for competition infringements and prevent the actions in the "black list" of the block exemptions that induce adverse effects.

The bottom line regarding the agreement is that it must not include any restrictions between parents beyond that which is necessary for the functioning of the R&D collaboration, thereby fulfilling the goal of the Commission to ensure a workable competition. It is therefore important for the parents to ensure the *freedom of action and/or termination of the agreement* as well as maintaining a balanced power structure of the joint undertaking.

6.1.3 R&D relevant market

As in all competition law it is crucial to the assessment to establish the relevant market at hand, an assessment that relies heavily on the principle of substitutability.

The basic assessment of relevant market follows that of Article 81 (1) which divides the relevant market into relevant product and geographical market. In the field of R&D, this adds a hypothetical element as well. In so far, that in order to establish the relevant product market it must also be defined whether the product in the development programme is a new market on its own, or part of an already existing one.

This is of great importance for potential partners, since a classification of the R&D as a new market under block exemption 2659/2000 is *automatically* exempt for seven years after which the same rules applies as for R&D regarding development of existing products. Thereby, this does not impose the 25% aggregated market share limit applying for products deemed replacements or in other forms part of an existing market for that seven-year term. Although it must be noted, that a combined market share in excess of 25% does not automatically constitute competition inhibiting behaviour, this assessment becomes increasingly stringent linked to a rising amount of market share in excess of this value. In addition, even in the assessment of the foreclosing effects of a joint R&D undertaking under Article 81 it is important to notice that there is a difference between new products and existing markets, providing a higher possibility of exemption if the product is deemed an entirely new market.

Regulation 2659/2000 also introduces a temporal factor with a hypothetical element in the definition of the relevant market. Thus, in order to determine the relevant market, this shall also include an appreciation of the future competition structure and the hypothetical spill over effects of such

ventures. This appreciation can, for example, be based upon the number of other R&D programmes regarding the same area or the likelihood of the development of such programmes, since the market will in time respond to the introduction of a new product by producing substitutes. This assessment probably provides the least transparency for the parents undertaking a joint R&D programme. Thus presenting difficulties in making a pre-emptive assessment before entering the joint venture, and in addition, there is no real policy from the Commission on how to properly conduct this analysis.

At present, it is the task of the R&D joint venture to make an assessment of what provision applies in their special case. This presents a certain amount of legal uncertainty, due to the fact that the joint undertaking cannot be assured that a national court, competition authority or even the Commission it self will come to the same conclusion as they do.

6.2 Development of R&D Joint Ventures

The Commission's view on horizontal collaboration between undertakings has changed over time. It is likely that this is a work in progress, and that further changes will be made.

6.2.1 The provisions

The division that evolved with the ECMR between concentrative and co-operative joint ventures was a political solution that only served to further enhance the confusion of practical classification of joint ventures. Although this view is still sustained to a certain degree, with the current MR, it seems like the effect driven approach of the Courts and Commission have the ability to eventually overcome the obstacles that concern this matter by providing a legislation that can evolve with the future needs of the Common Market.

It seems to me that the main point, in regard to joint undertakings, should primarily be the effect on competition on a relevant part of the common market, and the joint benefits to the market and consumers within a relevant geographic region. Thus, the question of whether an undertaking is of concentrative or co-operative nature is in all regards secondary to this assessment, and should therefore not be of primary interest, but rather be examined if there is considered a proper need for it.

Regarding Community Competition Law, a broad interpretation of Articles 81, 82 and applicable provisions may give way for a certain amount of judicial leeway, and although this will provide for a judicially dynamic interpretation that is quickly adaptable to the fast changing modern economic market. This will also provide for a certain degree of transparency to be lost, and the sum of all economic gains might then be less due to market uncertainty, followed by a diminishing total social utility. This approach does however, have the added advantage of dismantling any classification errors during the creation of a joint venture, i.e. what

provision is applicable to the undertaking at hand thereby excluding divisions like the one on co-operative and concentrative joint ventures founding Regulation 418/85.

Although a stricter interpretation of competition law provisions for R&D might present a higher degree of predictability. This might fail to keep up with the dynamics of the market, and considering the large inside lag of the Community legislative process this presents the risk of the provisions becoming obsolete before its time.

Furthermore, in the formalistic provisions the white papers were an example of an effect that in cases of competition could present a possibility of attaining an unwanted effect by using legal means. The black list does however not present this problem in the same way, since the content relates to practices that is harmful to market economy *per se*.

In conclusion, the evolution of the provisions have been towards an effect driven estimate of the undertaking regardless of how it arose, rather than prohibiting certain forms of competition infringing behaviour. This change is clearly seen in the modifications in exemption rules between Regulations 418/85 and 2659/2000, where the latter carries a more effect driven approach. This is in contrast to the more normative approach containing affirmative and non-affirmative actions of Regulation 418/85.

These effect goals provide the necessary economic and legal leeway required for a dynamic impact on the common market. This does however, put a higher emphasis on a correct economic estimate of the relevant product and geographical market, as well as the hypothetical elements. It is however the opinion of the author that this is the logical turn of events. When determining an ever larger and faster evolving economic common market with previously unknown commercial practices, it is a necessity for the Courts as well as the Commission to be able to battle adverse effects regardless of how they arise. Furthermore, the overall loss of legal transparency in the case of R&D joint ventures is most likely less inhibiting than the use of a less dynamic legislation.

6.2.2 Case law

A Common ground for all cases since the VI case is to emphasize the inability of the parents to conduct the R&D programme on their own within a reasonable time limit.

The relative small number of cases indicates a lenient attitude towards R&D collaboration as such. Furthermore, the lack of significant cases in later years is likely due to a higher degree of market understanding, in effect providing the necessary information for future R&D joint ventures in order to avoid review from the Courts and Commission.

It is of importance that the interpretation of the provisions controlling the behaviour of R&D joint ventures does not appear too cloudy or wanton, which as the CFI points out in the European night services puts high demands of a properly conducted economic analysis. This analysis was not properly conducted in VI, which resulted in heavy criticism over the Commissions unbalanced reasoning of only regarding the foreclosing effects under Article 81 (1). Thus, any competition inhibiting effects as well as the benefits shall be assessed together, not as in the VI under separate Articles.

In regard of geographical market, the VI based the appreciation of that market largely due to the nationality and the active market of the parents at the time being. In the years that followed the Commission adopted the view that this review should be based on a more balanced economic analysis of parameters relevant to the product in question. This reasoning is especially clear in the case of Metal Box Odin taking into account matters such as substitutes, production, present market structure and transportability and several other related costs in the assessment of the relevant market. In addition, if no relevant geographical market can be determined the entire Common Market shall be considered the relevant geographical market.

It has also been the practice of the Commission to utilise a very narrow interpretation of relevant market, as can be seen in cases like Michelin, Hugin and VI. In the field of R&D that may require substantial resources, this could actually be counterproductive due to lessened incentive for firms to invest because the new product market will be considered to hinder competition by automatically presenting a monopolistic market. This presents the difficulties of balancing in between a dynamic and effective common market and choking it.

The development since the introduction of Optical Fibres seems to rely on a much broader interpretation of the principle of substitutability concerning product, seriously taking into account the economic benefits of the joint R&D. In the assessment of the benefits, Konsortium 900 presented an economic analysis with a higher emphasis on the consumer utility of the joint undertaking, something that seems to be very much part of the current agenda in terms of R&D joint ventures.

Since the Lissabon conference the Commission has emphasised the lack of actual citizen benefits as an underdeveloped area within the competition structure of the Union. It is therefore in the author’s opinion possible that this will have an increased impact on the assessment of future competition law as well as inducing a higher emphasis on the effects of joint R&D programmes on consumer utility.

6.3 The economic standpoint

In the present fast evolving economic society, it is interesting to notice the effect driven approach of the Courts and Commission in several fields of Community legislation. This interpretation is a step away from the normative legal tradition, but it provides the dynamics necessary to confront tomorrow's commercial practices. However, this also induces higher demand for a basic economic understanding from those in touch with the legislation, since the judicial transparency in the field of competition law might not follow from a norm, but rather form a correctly conducted economic analysis derived from the principles laid down by the Commission. Hence, the increased importance of understanding the connection between law and economics since the Courts as well as the Commission seems to put an increasing amount of emphasis on the economic argument.

Before entering a joint venture that might consume considerable economic as well as intellectual resources a certain amount of transparency is needed, especially for joint ventures regarding R&D since there is no guarantee for any results. This transparency, like intellectual property rights, provide an incentive for the investing undertakings by ensuring that any yields derived from the R&D joint venture will be assured to the parents. Especially so, since inventions protected intellectual property legislation actually provide the creator with a *time-limited legal monopoly* for the duration of the copyright, thereby creating the very adverse effects the competition law aims to battle.

In order to evaluate the given situation at hand, one must assess market shares, the market structure, concentrations of buyers and sellers, market dynamics and entry barriers. All of these economic considerations evolving from different market theories must be considered and clearly defined prior to the assessment of legal considerations in order to make proper use of the competition law provisions regarding join venture R&D. Furthermore, the assessment must also include *a reasonable estimate of the economic, actual and hypothetical market impact* on the given market after an exemption, prohibition or changes in competition structure as well as foreclosure, spill over and cumulative effects. The effect on the present given market is of course much less speculative than the assessment of the possible effects on a future market, especially in the field of R&D since this might totally change an existing market or induce a brand new one. This thereby makes any transparencies of the provisions of R&D joint ventures highly dependent on a proper economic assessment as well as interpretation.

From a basic point of view, the competition law analysis of R&D joint ventures measures the utility maximisation in a certain market by weighing the disadvantages of loss of competition against the future gains of utility. Thus, if the cost of the alternative appreciated loss of competition is less than the estimated future gains in utility this would actually add to the aggregated social utility and therefore may not be considered to have

foreclosing effect. From the case law, it can be seen that there seems to be a shift in how this assessment is conducted.

The reasoning in the VI case highly regarded that of product elasticity, not taking into account any utility gains, but rather stating that the new product would be beneficial due to lack of current substitutes. The increased economic influence of the reasoning has shifted the balance towards arguments of both foreclosing and utility gains of actual and hypothetical markets under Article 81 (1), thereby identifying the *likely effect*, something that is also stressed in block exemption 2659/2000. This indicates a move in the assessment of R&D joint ventures towards a public interest theory that utilises a higher degree of cross elasticity measurement.

There has also been a detectable shift in the measurement of utility. Whilst in most cases the distortions or gains in utility is often discussed around market gains, i.e. measuring the effect on the competition. Konsortium 900 introduces an argumentation taking into account the consumer utility.

In regard of terminology, there is a certain difference in the wording and interpretation between the Community law and that of modern economic theory, i.e. where the Courts and Commission chooses the term interchangeability an economist would search for product substitutability through the measure of product elasticity. This difference seems less apparent in United Brands than in later cases. This could be a cause for confusion, but it seems like ECJ and CFI as well as the Commission have, and continue to rely heavily on their interpretation in the analysis of competition law provisions. Thereby, the tendency to rely more on an effect-based interpretation of these provisions could give rise to the need for a more clear and either economically separate, or a more homogeneous jurisprudence for the sake of transparency.

The effect driven troubleshooting solution seems to be part of a broader view on the trade of common market with a move towards a legislation based more on principles rather than fixed norms. These principles might prove harder to incorporate in legal systems belonging to a more normative legislative tradition, than those of common law.

The globalised economy of modern Europe presents a market that constantly evolves with new products and commercial practices. It is clear that in order to meet these and future markets, there is an ever increasing demand for an effective provision that will not become prematurely obsolete. It has therefore been regarded that the effect of a given act is the cause of an adverse or foreclosing effect, not the act as such. This has lead to the current more flexible effect orientated view of the Commission, thereby taking a step away from the previously more normative approach. Due to the indecisiveness in the field of competition law regarding R&D it has been referred to as the “last of the steam powered trains”, but it is quickly picking up speed and moving in the right direction.

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