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'POLITICAL' ENFORCEMENT OF STATE AID
RESTRICTIONS UNDER THE EC-TREATY

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AUTHORSHIP DECLARATION

I hereby declare and confirm that this thesis is entirely the result of my own work except where otherwise indicated. I have acknowledged on page 3 the supervision and guidance I have received from Prof. Peter D. Camesasca and from Prof. Alessio M. Pacces.

This thesis is not used as part of any other examination and has not yet been published.

(Technicalities: 17,999 Words (Including footnotes and appendixes; not including: cover, this declaration, acknowledgements, table of contents, list of abbreviations and bibliography (the content is spread over a relatively large number of pages due to separation of sections and paragraphs for convenience of reading, and due to the length of the bibliography)).

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**LIST OF ABBREVIATIONS**

**EUROPEAN COMMISSION**

**EUROPEAN COMMUNITY**

**EUROPEAN COURT OF JUSTICE**

**EUROPEAN COURT OF FIRST INSTANCE**

**EUROPEAN UNION**

**OFFICE OF FAIR TRADING IN THE UK**

**WORLD TRADE ORGANIZATION**

**COMMISSION**

**EC**

**ECJ**

**CFI**

**EU**

**OFT**

**WTO**
1. **Introduction**

The so-called 'State aid control', laid down in Articles 87-89 EC,\(^1\) is a very unique policy, according to which the Commission has supervisory power to control State measures, such as subsidies and other State measures that Member-States are entitled to grant to firms.

For many years, State aid control was considered to be a neglected field with respect to antitrust regulation – especially with regards to the role economic analysis plays in the field. Over the past two decades, however, it has gained considerable significance and constitutes a basic pillar of EC competition policy.\(^2\) State intervention might influence the way in which markets operate, by favoring certain firms on the expense of their competitors that operate in the common market, to the detriment of competition and trade within the market. State intervention might therefore go against the objectives of the EC Treaty and impede undistorted competition, free trade and internal market, market integration, and the maintenance of a level playing field in the common market.

Indeed, the amount of aid granted by Member-States is still high enough to raise competition concerns, even given the State aid control and the Commission's supervisory power. In the last three years for which data exist, the total State aid amount was approximately €65 billion per year.\(^3\)

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\(^1\) Treaty (2002).


\(^3\) The total amount does not include railways. In 2005, 2006, 2007 the total amounts were €63.8 billion, €66.7 billion, and €65 billion, respectively. See: Scoreboard 2006 (9), 2007 (9), and 2008 (4).
In order to enable the Commission to exercise its supervisory power, Member-
States have to notify the Commission before they grant a new aid or alter an existing
one and wait for its decision. Nevertheless, automatic and Commission-discretionary
exemptions do exist from this ex-ante notification requirement. This paper will focus on
the latter discretionary exemptions and, in particular, on the General Block Exemption
Regulation (hereinafter ‘GBER’).  

It is worth mentioning that despite the fact that the Commission approves the
vast majority of State measures that Member-States notify about after only preliminary
investigation, exemption from the ex-ante notification requirement is still very
appealing. It relieves the granting Member-State, and the potential recipient, from being
subject to the Commission's ex-ante preliminary investigation, the chance of being
subject to a long investigation, and the need to wait for a Commission decision before
the Member-State is allowed to implement the State measure.

In this paper, we take a dynamic approach. We use the economic insights from
the literature on political economy to analyze the legal framework, and with the help of
a simple model, we argue that the formation of the GBER results in inefficiencies. It
undermines one of the fundamental objectives of Articles 87-89 EC—that is, prevention
of competition distortions in the common market—and is prone to increasing social
waste. More specifically, we argue that when taking into account the costs of transfer of
resources between groups or individuals—that is, of rent-seeking at the Commission
level—the GBER creates barriers to entry for local firms while strengthening the

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4 Commission (2008a); According to the GBER, Member-States have to submit, ex-post, an informative
summary.

5 Scoreboard 2008; in 2007, 92% of the notifications were approved (18).
dominance of multinational ones and might lead to greater socially wasteful lobbying and rent-seeking activities, compared to the case in which the GBER does not exist.

We conclude the paper with policy implications and a suggestion for amendment of the GBER, such as to either require Member-States to show a significant and evident market failure that the aid is targeted at remedying when the recipient is a multinational (or a State-owned) firm, or otherwise allow a lower amount of aids and aid intensities ceilings to these types of firms. If it were to adopt our proposal, we believe that the Commission would pursue better its refined economic approach, which has been expressed in the Commission State Aid Action Plan (hereinafter 'SAAP').

Before we describe the way in which this paper is structured, we should also briefly note what this paper does not cover.

Firstly, some of the objectives of State aid control are not economic, but rather equity objectives, mainly social and regional cohesion. Being a paper in law and economics, its focus will be on efficiency considerations. Further, we do not thoroughly review the different views regarding the appropriate welfare standard in State aid control; we nevertheless implicitly advocate a more complete and accurate approach than the current effect-on-rivals, which includes also transfer costs, such as lobbying and rent-seeking activities.

Secondly, while we acknowledge the possibility of some administrative cost saving as a result of the GBER, since Commission officials do not have to investigate each case ex-ante, we do not conduct an in-depth analysis of this change in

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6 SAAP (2005).

7 On the appropriate welfare standard in State aid, see:

CRA (2006) (5-6, 82-91).

Buelens et al. (2007) (9-10).
administrative costs. We shall, however, state that our intuition is that the potential savings in administrative costs do not offset the competition distortions and socially wasteful rent-seeking activities the GBER ultimately leads to. Taking the distortion of competition and entry barriers alone, GBER results in perhaps a more complicated investigation by the Commission under Articles 81-82 EC. Moreover, Commission officials still have to review the *ex-post* summary Member-States submit according to the GBER.

Finally, while some studies have undertaken a comparative view, it is beyond the scope of this paper to comparatively analyze the State aid rules with respect to the WTO or other regimes.

This paper proceeds as follows. Section 2 analyzes the economic justifications to use State measures, the incentives of States to grant excessive amounts of aids, and their possible negative effects on competition and trade. After reviewing the relevant bodies of economic literature, we further show that within the context of economic analysis of State aid control, the GBER cannot be justified using political economy reasoning.

In section 3 we analyze the legal framework of Articles 87-89 EC—that is, the State aid control policy—and how it is constructed to prevent the negative effects of excessive aid that were pointed out in the previous section. We focus in particular on the legal characteristics of the GBER and explain why multinational firms have strong incentives to lobby and rent-seek at the Commission level to have the GBER altered to fit their business activities.

The conclusion from section 3 will be later used in section 4, as we then present a simple model, with which we show that where Articles 87-89 EC exist all

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multinational firms rent-seek at the Commission level to have the GBER modified to their needs while all local firms do not. The model further predicts that if the number of multinational firms is high enough, more total rent-seeking activities take place.

Section 5 interprets the results of the model. We explain why the GBER results in entry barriers and distortion of competition, contrary to the main objective of State aid control, and greater socially wasteful rent-seeking activities.

Section 6 concludes and offers policy implications which could assist the Commission in the refined economic approach to State aid cases it wishes to promote.
2. THE ECONOMICS OF STATE AID

2.1 General

The economic literature on State aid has been quite sparse until recently. In recent years, however, there have been some important contributions to the economic analysis of State aid control, and we will refer to five prominent State aid studies as well as to different fields in law and economics literature which State aid control can derive implications from.

To gain a full understanding of the economic rationale for this paper's argument, this section has four parts. The first part will analyze the economic justifications for the usage of State measures which might qualify as State aid. In the second part we discuss the incentives for States to grant inefficient and excessive aids. The third part will focus on the effects that excessive aid has on the objectives of State aid control, mainly trade and on distortion of competition. The economic rationale to have State aid control with a centralized decision-maker, such as the EC State aid control, will follow and will be analyzed in the fourth part.

2.2 Economic Justifications for Granting State Aid – Market Failures

Due to the fact that the real world does not usually correspond to the standard model of perfect competition and its strong assumptions, government intervention might sometimes be welfare enhancing. State measures which correct any type of market failure presumably have less distortive effect on competition in the common market and are more likely to lead to Pareto improvements than other State measures. Hence, the economic justifications for State aid are essentially based on the identifications of market failures.
More specifically, in a study carried out by the Commission, nine main types of market failures were found to justify State measures that might qualify as State aid: public goods; merit goods; increasing returns to scale; externalities; imperfect asymmetric information; institutional rigidities; imperfect factor mobility; frictional problems of adjustments to changes in markets; and subsidization of foreign competitors. We will refer to market failure in the general sense.

While market failures are considered to be the benchmark for justifying State measures, economists fail to agree on the way, and to what extent, it should be applied to State aid cases. In a recent study carried out for the Commission by CRA International, market failure has been identified as a key condition for determining whether the State measure in question is potentially welfare enhancing. The authors have argued that when no significant market failure can be identified, the aid should be declared as incompatible with the common market, and further analysis is not required.

Moreover, CRA suggests that an identified market failure is a necessary condition – but not sufficient – for State aid to be welfare enhancing. The targeted market failures must also be significant in order to justify the general costs of State aid, including the shadow costs of fund raising, lobbying activity, and transaction costs. The study further argues that when the State aid is 'targeted' and addresses significant market failures, it does not distort effective competition, regardless of the recipient's dominance.

11 See also Meiklejohn (1999b) (8-9).
12 The State aid should also be the appropriate means to remedy the identified market failure.
A different view was expressed in a study undertaken by the OFT.\textsuperscript{13} The latter advocates a more lenient approach, according to which if a market failure cannot be identified, the aid should not automatically be declared incompatible with the common market, but rather its potential distorting effects should be subject to a more in-depth analysis. The study's more lenient view is expressed also in relation to the case in which a significant market failure can be identified. In the latter case, as long as the aid is not too selective as far as the recipients are concerned, it can be approved up to certain intensity ceilings, and no further analysis is required.

Despite the debate regarding the extent to which market failure should be used in State aid cases, most of the economic literature acknowledges the fact that market failure is a key component in assessing the eligibility of State aid.\textsuperscript{14} In its SAAP, the Commission has also acknowledged the fact that a market failure could be one important justification for State measures.\textsuperscript{15}

Indeed, one important factor of the refined economic approach that the Commission presented in its SAAP is the analysis of market failures—which could be the reason, especially if they are of an economic nature, for markets not to achieve the desired objectives of the common market. In those cases, it is argued in the SAAP that identifying market failures will help to assess better whether State measure should be justified, and how it should be implemented to achieve the desired objectives of the common interest, without resulting in a distortion of competition and trade in the common market.\textsuperscript{16}

\textsuperscript{13} OFT (2005).

\textsuperscript{14} Buelens et al. (2007).

\textsuperscript{15} Supra note 6.

\textsuperscript{16} Ibid (paragraphs 10, 23).
Moreover, it seems that in the State aid Guidelines, Frameworks, and in particular, the GBER,\textsuperscript{17} the Commission has adopted the approach of the OFT study. In the GBER, the Commission specifies aid intensity ceilings and maximum aid amounts, below which Member-States are exempt from notifying the Commission on any plans to grant or alter aid according to Article 88(3) EC. We elaborate on the notification requirement and the GBER in the next section.

\textbf{2.3 Incentives for States to Grant Inefficient Aids, and Negative Externalities}

Even if we adopt the most lenient market-failure related approach to justify the grant of State measures qualifying as State aid, we find that States do not usually consider the correction of market failures as their only, or even main, objective when granting aid. Indeed, the aid sometimes creates a market failure, rather than corrects one. In this sub-section we analyze the reasons for States to grant inefficient aids and the source of negative externalities associated with those aids.

Four bodies of theory seem to be relevant in this context: strategic trade theory, the literature on public finance, the literature on economic geography, and of particular importance for this paper, the literature on Political and Regulation Economy, including Soft Budget Constraint and Rent-Seeking. We will now review each of these bodies of literature in turn.

\textsuperscript{17} Supra note 4.
2.3.1 Strategic Trade Literature

The literature on strategic trade studies the incentives of States to grant aid to firms that operate in the international market and the affect such aid has on the firm's foreign competitors and consumers. According to this literature, States compete in a negative-sum subsidy game between themselves in an imperfectly competitive market in order to get each other's profits, aiming to increase their citizens' welfare by reducing the recipient firm's marginal cost. The game is rational from each State's private point of view, but socially wasteful—all States are better off jointly refraining from taking part.

The attempt of a State to attract firms merely inflicts an externality on other States in the form of lost rents. Hence, the activity to which the aid is granted and the aid's amount are likely to be excessive and inefficient.

It should be noted, however, that the (classic) literature on strategic trade models the case in which producers are located in one of two countries with all of their consumers in a third country. Further, it fails to take into account the costs of the distortionary taxation used to raise the funds for the aid. Indeed, in this setting States

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18 The literature usually refers to subsidy, which is one form of the wider concept of State aid. See section 3.

19 Brander and Spencer (1985).

The recipient firm will then choose the quantity if the product market competition is a Cournot game or the price if it is a Bertrand game with differentiated goods.

20 Firms' migration does not change this conclusion. See: Black and Hoyt (1989); Bond and Samuelson (1986).

21 Besley and Seabright (1999).

22 Brander and Spencer (1985); Eaton and Grossman (1986).
that seek to increase the welfare of their citizens will have incentives to grant excessive aids in a Cournot setting, but not in a Bertrand one.  

More recently, in an important contribution to the State aid literature, Collie has modeled the case in which all producers and all consumers are located in a common market like the European Community. He first shows (Collie, 2000) that welfare effects from 'aid competition' depend on how the aid in question is funded.

Collie (2002) extends his first analysis and considers differentiated products in both Cournot and Bertrand oligopolies market structure, assuming that the granted aid is funded through distortionary taxation. He shows that both under Cournot and Bertrand oligopoly if products are sufficiently close substitutes, prohibition of State aid is likely to increase aggregate welfare. However, if products are sufficiently differentiated, welfare is reduced, since the negative effect of the aid on foreign producers is smaller than the positive effect on foreign consumers.

Also in the specific State aid control context, Besley and Seabright (1999) argued that the (classic) literature on strategic trade implies that an externality caused by an aid is a necessary condition, but perhaps not sufficient, in order to conclude that granting the aid in question will lead to an inefficient outcome and, in particular, a distortion of competition. They have also emphasized the fact that the literature restricts

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23 In a Cournot game, the State will grant an aid that reduces the recipient's marginal cost to the advantage of both the recipient and the local consumers – and to the detriment of the firm's foreign competitors, while in a Bertrand game, tax is likely to be introduced.

24 Collie (2000); Collie (2002).

On R&D see: Collie (2005).

25 *Supra* note 21.
the conclusion that an aid will affect the recipient's competitor to imperfectly competitive markets.\textsuperscript{26}

The authors further show that if countries are heterogeneous and benefits to attract firms vary over regions, 'subsidy-competition' between States can lead to an efficient allocation of aid to regions and overcome distortions in the common market.

They suggest that the source of the failure in this competition is the policy process—due to limited commitment, restrictions on bidding and government failure—and hence believe that the institutional particularities of 'aid-competition' should be the prime objective of State aid policy.

\textbf{2.3.2 Public Finance Literature}

Within the literature on public finance, Tiebout (1956)\textsuperscript{27} has shown that in a world with no externalities and many jurisdictions competition among them leads to an efficient allocation of local public goods and "reflects the preferences of the population more adequately than they can be reflected at the national level."\textsuperscript{28} However, when the assumptions of the model are relaxed this result is not likely to hold, and it has been argued that the model cannot be generalized.\textsuperscript{29}

When multiple jurisdictions are analyzed, and assuming mobile capital but immobile labor, Oates and Schwab (1988)\textsuperscript{30} have shown that if local jurisdictions are

\begin{footnotesize}
\textsuperscript{26} In a pure monopoly setting, there is no competitor to be harmed; in a perfectly competitive market the aid will affect only the recipient's profits, and not its competitors.

\textsuperscript{27} Tiebout (1956). See also Oates and Schwab (1991).

\textsuperscript{28} Tiebout (1956) (416).

\textsuperscript{29} Bewley (1981).

\textsuperscript{30} Oates and Schwab (1988).
\end{footnotesize}
homogenous in workers, competition among them to attract new industry and income is socially optimal, resulting in a zero tax rate and in an optimal environmental standard. However, if jurisdictions are not homogenous or where they set positive tax rate on capital, distortions are likely to arise. Similarly, Keen and Marchand (1997)\textsuperscript{31} argued that fiscal competition may lead to systematic distortions of the pattern of public spending.\textsuperscript{32}

More generally, the literature on public finance with multiple jurisdictions implies that if consumers or production factors are mobile, tax (or aid) competition among jurisdictions will lead to negative externalities.\textsuperscript{33}

\textbf{2.3.3 Economic Geography Literature}

The literature on economic geography aims to explain why and when manufacturing becomes concentrated in a few ('core') regions, leaving others ('peripheral') relatively undeveloped, and considers the location of production in space as a key issue both within and between nations.\textsuperscript{34} The literature builds on Marshall's notion of increasing returns that are external to any individual firm, which might lead to

\textsuperscript{31} Keen and Merchand (1997).

\textsuperscript{32} Competition can take the form of granting aids or by bidding down taxes ('race to the bottom'), if firms are taxpayers.

\textsuperscript{33} Inman and Rubinfeld (1996) conclude that taxation by lower level governments can lead to significant economic inefficiencies and inequities.

\textsuperscript{34} Krugman (1991a, 1991b).
agglomeration effects,\textsuperscript{35} and on his identification of the reasons for concentrated localization.\textsuperscript{36}

This literature further considers the linkage effects\textsuperscript{37} and shows why manufacturing in general are likely to end up concentrated in one or a few regions.\textsuperscript{38} It therefore provides a better understanding of the externalities that firms generate in the economies in which they operate according to their location.\textsuperscript{39}

In the State aid context, one might infer that granting aid—or, alternatively, introducing a tax—is sometimes required to induce firms to internalize the externalities they generate, and to achieve a more efficient outcome. Similarly, if a certain region suffers from imperfect competition, aid can be granted for the first group of firms to locate their business in this specific region, assuming that other firms will follow without the need for additional aid to be granted. However, relocation of firms will be welfare enhancing only if they move from a region with no aid to a region where aid is granted. If both regions are eligible to be granted aid, 'aid-shopping' will lead to a decrease in welfare.\textsuperscript{40}

\textsuperscript{35} Marshall (1890).
\textsuperscript{36} Krugman (1991a) (484-485).
Mainly three reasons: reduced probability of labor shortage; the ability to support the production of non-tradable specialized inputs; and informational spillovers.
\textsuperscript{37} When some firms are located in a certain area others have incentives to follow, since they enjoy good access both to large markets and to goods that the firms or their workers need.
\textsuperscript{38} Krugman (1991a).
\textsuperscript{39} The location of a firm inflicts an externality if, for example, it affects the market for skilled labor.
\textsuperscript{40} Sleuwaegen et al. (2000).
2.3.4 Political and Regulation Economy, SBC and Rent-Seeking

2.3.4.1 Political Failure and Regulation Economy

So far we have ignored the possibility of pressure groups and the ability of firms to 'capture' regulators. The literature on political economy considers the effect that political and institutional variables have on the allocation of resources. This literature—and, more specifically, lobby and rent-seeking literature—is of a particular importance for this paper, as we later confront the usage of State aid control as a tool to remedy these failures.

The economic analysis of regulation suggests that regulatory agencies are most easily captured by the regulated industries, since they are the only ones with the power to make a decision (Stigler, 1971); this naturally strengthens the incentives to invest in lobbying. Stigler further assumes regulatory agencies to serve only the interest of the regulated producers. Posner (1974), Peltzman (1976) and Becker (1983) considered regulators to serve a broader constituency than just the regulated producers; Stigler later accepted these generalizations.

It is easy to see why this theory predicts inefficient regulations and State measures. Indeed, the political choice might benefit the interest group at the expense of

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41 Stigler (1971); Stigler and Friedland (1962).


Posner also describes the differences between the Economic Regulation theory and the Capture Theory originated from Benteley (1908) and Truman (1951).

See also: Laffont and Tirole (1991).

43 Peltzman (1976).


society as a whole, creating a deadweight loss, as the social cost is higher than the social benefit.

In this context, Becker (1983)\textsuperscript{46} argued that in case of equal transaction costs in producing influence, deadweight loss from protective measures will be minimized, since granting an aid for one group will induce the damaged group to lobby in order to abolish it. However, hold-out and free-riding problems in the damaged group are likely to impede collective actions.\textsuperscript{47}

More generally, the literature on political economy shows that efficient decisions are taken either when there is no lobby or when all of the parties to be affected by the decision are represented.\textsuperscript{48} Further, the literature demonstrates an agency problem between politicians and voters, according to which the latter can control the formers' actions only imperfectly.\textsuperscript{49} Hence, politicians engage in activities that enable them to extract rents, such as granting aids in exchange to in-kind contributions, setting aside total welfare considerations.\textsuperscript{50}

\textsuperscript{46} Supra note 44.  
It does not prevent, however, the dissipation of resources on lobbying.  
\textsuperscript{47} Another classic study is the one by Olson (1965).  
For a general review of hold-out and free-ride problems, see:  
Parisi (2004); Williamson (1975).  
On greater influence of interest-groups, see:  
\textsuperscript{48} Persson and Tabellini (2000); Grossman and Helpman (1994).  
\textsuperscript{49} Neven and Röller (2005). Most lobbying models use the common agent model of Bernheim and Whinston (1986).  
\textsuperscript{50} Different views were expressed by Dewatripont and Seabright (2006).  
See also Gregor and Roháč (2009).
2.3.4.2 Soft Budget Constraint

A related political failure might result from the government's commitment problem and, in particular, from the Soft Budget Constraint (SBC) syndrome, a term formulated by Kornai. 51

The SBC problem is assumed to originate in the ex-post bargain between politicians and firms, enhanced by close relationships between the regulator and the regulated firm, 52 in the dynamic context of sunk costs and asymmetric information and in the paternalistic attitudes of States. 53 The fundamental reason for SBC is the inability of politicians to enforce firms' financial discipline and a fixed budget without bailout options ex-ante. 54

More specifically, a firm is said to have SBC when it (rightfully) expects to be ex-post bailed out in case of financial trouble. Under these circumstances, firms lack incentives to act efficiently and tend to over-invest.

The lack of incentives naturally results in economic inefficiency and reduced welfare. 55 State measures therefore highlight the problem of SBC, especially when it involves repeated bailouts of inefficient firms.

51 Kornai (1979); Kornai (1980); Kornai (1986); Kornai et al. (2003); Dewatripont and Maskin (1995); Dewatripont and Roland (1996).
52 This might lead to a 'regulatory capture'; see sub-section 2.3.4.1.
55 See Everaert (2004) for the specific inefficiencies of SBCs.
2.3.4.3 Rent-Seeking

While it has always been understood that public policies which produce deadweight losses are the outcome of efforts taken by interest groups that are affected by them, the (academic) literature on rent-seeking was the first to carry out an in-depth analysis of the welfare implications of these groups' activities and to identify transfer costs and their relation to competition over rents. Put differently, the rent-seeking literature was the first to adopt a dynamic approach and focus on the process undertaken by groups to achieve a welfare-reducing public policy rather than the final policy itself.

This literature, originated by Tullock (1967), contends that resources used to establish, maintain, or eliminate trade restrictions and monopolies are all part of the social cost of those policies. These resources, currently devoted to lobbying, could have been used for a more productive activity. Tullock further characterized the extent to which interest groups would devote resources to such rent-seeking activities and noted that rents might be fully dissipated through competitive efforts to obtain them.

Following Tullock, Krueger (1974) introduced the term rent-seeking and presented an empirical estimation of the losses from rent-dissipation associated with trade barriers in Turkey and India. In turn, Posner (1975) used the complete

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56 As opposed to profit-seeking, in which investments in production are profitable if someone other than the producer was better off buying the product.

57 Tullock (1967).

58 Similar reasoning can be detected in Shavell (2004) (329-330), where he refers to fraud, in the context of contract law.


60 Posner (1975).
dissipation idea to empirically estimate the losses from monopoly in the United States.\textsuperscript{61}

It was later recognized by Tullock (1980)\textsuperscript{62} that a complete rent-dissipation is only a special case and that the outcome of the rent-seeking contest depends on a number of variables.

The literature has been extended to show, for example, how the rules for allocating the rents, as well as the type and number of players and prizes, might affect the extent to which resources are invested in rent-seeking games. We elaborate on the difference between the \textit{all-pay-auction} and the \textit{lottery} contests in section 4, where we describe the mathematical model. Moreover, the literature has expanded from analyzing monopoly and trade to other areas of regulation, institutional and constitutional design – and to law itself.\textsuperscript{63}

Within the different branches of research in the literature on rent-seeking, State aid control seems to fit the one on the politics of regulation and international trade.\textsuperscript{64} More importantly, one might argue that since the social cost of inefficient aids also includes the costs of rent-seeking groups to be granted aids, it strengthens the need for a supranational body like the Commission to supervise the aid granted by Member-States. This paper confronts this argument and rebuts it.

\begin{enumerate}
\item Both Krueger and Posner found that the social costs were higher than what was previously thought. For a critique on Posner see Fisher (1985).
\item Tullock (1980).
\item Tullock (1975a); Parisi (2002); Buchanan (1983); Congleton (1980); Kunicova and Rose-Ackerman (2005).
\item For a general review of the new Institutional Economics and the Constitutional Economics, see: Williamson (2000); Weigel (2008).
\item For a comprehensive review see: Congleton et al. (2008a, 2008b); Lockard and Tullock (2001); Tollison (1982).
\end{enumerate}
2.4 The Effect of Excessive Aid on Trade and Distortion of Competition

2.4.1 Effect on Trade and Distortion of Competition

Most studies have analyzed the negative effects of subsidies on the recipient's rivals' profits. In this setting, Garcia and Neven (2004)\textsuperscript{65} argued that in order for these negative effects to exist the aid should be selective or asymmetric and change the recipient's (and its rivals') behavior, and that the recipient should enjoy a non-negligible market power. When these conditions are met, the aid may affect the recipient's behavior in scope depending mostly on market concentration and the degree of product differentiation.\textsuperscript{66}

Contrary to the Neven and Garcia (2004) and the Frontier Economics (2004) studies, the CRA (2006) study\textsuperscript{67} includes in its analysis not only the effect an aid might have on the recipient's rivals' profits but also the potential benefits from an aid, with respect to reducing market failure and increasing equity. More generally, the latter argues that State aid control should adopt a social welfare standard, of which the effect on rivals is only one element.

2.4.2 Market Definition – State Aid versus Antitrust and Mergers

If we wish to analyze the effect an aid has on trade and the distortion of competition, it seems necessary to consider market definition. A (very) brief note is therefore required on the measurement technique of the relevant market in the State aid context.

\textsuperscript{65} Garcia and Neven (2004); see also Frontier Economics (2004).

\textsuperscript{66} The negative effect on rivals is likely to be more significant when the market is concentrated and product differentiation is low.

\textsuperscript{67} Supra note 10.
While the analysis of market definition could be the same as is used for merger control and antitrust cases, the implications are different.\textsuperscript{68} In the latter cases, the relevant market is used to identify the distortion of competition arising from market power,\textsuperscript{69} while in the State aid context the aim is to identify the distortion of competition arising from changes in the recipient's behavior, triggered by the fact that aid is granted and to detect cross-border effects.\textsuperscript{70} By the same token, the relevant market in State aid cases is likely to be much broader than in antitrust cases.\textsuperscript{71} Yet another important difference is that in most State aid cases the recipient's competitors are harmed but consumers might benefit, at least in the short run.

Emphasizing these differences, Fingleton et al. (1998, 1999)\textsuperscript{72} provide a State aid-specific market definition analysis, taking into account not just the markets in which the potential recipient of the aid operates but also the markets to which it would be able to enter, if granted the aid. They further argue that complementary products and geographic markets are particularly important in State aid cases. On the other hand, Sleuwaegen (1999)\textsuperscript{73} suggests that although State aid has special characters, the analysis should mainly focus on the necessity of aid and its location.

\textsuperscript{68} For a comprehensive analysis in merger control and antitrust cases see Van den Bergh and Camesasca (2006) (105-150).

\textsuperscript{69} The crucial economic concept for market definition concept is the so-called SSNIP test (or: the hypothetical monopolist test); \textit{Ibid}, 108.

\textsuperscript{70} \textit{Supra} note 14.

\textsuperscript{71} This is especially true for markets in which aids for services are tendered and competition is in an international tendering regime.

\textsuperscript{72} Fingleton et al. (1998); Fingleton et al. (1999) (65-88).

\textsuperscript{73} Sleuwaegen (1999).
In practice, however, an in-depth market definition in the State aid cases is quite rare. We elaborate on this in section 3.

2.5 Rationales for State Aid Control: Implications from the Literature

To conclude this section, we attempt to derive the economic rationale for a supranational State aid control from the different fields of literature.

Recall that, according to the strategic trade literature, States compete in a socially wasteful 'aid-game' from which they are better off collectively refraining from taking part. The Commission, with its supervisory power over State measures that might qualify as State aid, can act to safeguard Member-States from engaging in this socially wasteful 'aid-race'.

The same argument holds to remedy the problem which the literature on public finance highlights. If Member-States have to receive an approval, or exemption, from the Commission before they grant aids, the Commission is able to prevent the negative externalities resulting from competition among jurisdictions to attract new industries and income. Moreover, in the economic geography context, a supranational body such as the Commission might be seen as capable of ensuring that aids to different regions do not result in inefficient 'aid-shopping' or cross-border negative externalities, which may drive a wedge between national and Community interests.

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74 Garman (2007) thus suggests that the US should adopt similar rules.

75 See the somewhat related literature on Federalism: Inman and Rubinfeld (1997).
The political economy and regulation economy literature, as well as the literature on the soft budget constraint (e.g. in rescue and restructuring cases),\(^76\) are particularly important for this paper. While State aid control may be helpful in dealing with the soft budget constraint and the government's commitment problem—by controlling the aid granted to the less efficient firms—whether the Commission plays a role also in mitigating regulatory capture and in decreasing the negative effects of lobbying activities is highly questionable, since one has to assume that lobbying activities take place more at the national level than in the Commission level. The Commission, however, is a very tempting source to lobby.

Although the Commission does not grant aids, it has the almost exclusive power to approve or exempt Member-States from the need for such approval. This 'prize' is very valuable for many firms, especially multinationals ones, as we explain in detail in the following sections. Indeed, it has already been argued that in the presence of centralized bodies, not only is more lobbying done in some cases but it also has more influence.\(^77\)

Further, while the literature shows that lobbying is efficient either when the decision-maker is immune to lobbying or when all of the affected parties are represented, we show that there is no full representation in lobbying at the Commission level. Lastly, while the (traditional) literature on rent-seeking focuses mainly on the rent-seeking private interest groups, and less on the incentives of decision-makers to supply such rents,\(^78\) the possibility of being hired after retirement can surely be one of

\(^76\) Harbord and Yarrow (1999) (89-131).


\(^78\) Krueger (1990); Tullock (1993); Buchanan (1980); McChesney (1987); Tollison (1982); Wintrobe (1998).
those incentives.\textsuperscript{79} This has special relevance when junior Commission officials in State aid departments, 'case handlers', are young employees in the prime of their pursuits after prestigious careers, facing lobbying by multinational firms. Carrying out an in-depth discussion on the incentives of decision-makers to supply rents is, however, beyond the scope of this paper.

The next section will analyze the legal framework of State aid control and how it is constructed to prevent the negative effects of excessive aids that we have pointed out. We focus in particular on the legal characteristics of the GBER and explain why multinational firms have strong incentives to lobby and rent-seek at the Commission level in order to have the GBER altered to fit their business activities.

\textsuperscript{79} Supra note 59.
3. THE LAW OF STATE AID

3.1 General

The State aid rules aim to provide a level playing field in the internal market, combating foreclosure of market entry as well as distortions of competition through governmental favoritism or through the act of 'picking winners'.

Therefore, State measures that constitute the so-called 'State aid' under EC competition law require Member-States to notify the Commission upfront. Article 87(1) EC states that any aid which distorts competition and affects trade between Member-States is incompatible with the common market, unless the Treaty states otherwise. This latter provision implies that some exceptions under the EC Treaty are possible. Indeed, Article 87(2) EC defines the conditions and categories in which aid shall be compatible with the common market. In turn, Article 87(3) EC defines the conditions in which aid may be considered to be compatible with the common market.

In this respect, it should be noted that it is in the Commission's discretion to declare aid that may be considered to be compatible with the common market under Article 87(3) EC—to indeed be, de jure (and de facto), compatible with it. To this end, Article 88(3) EC defines an ex-ante notification requirement: "The Commission shall be informed..." (hereinafter 'notification requirement'), while some very important exceptions exist to this requirement, as we describe below. Moreover, Member-States have to wait until the Commission's final decision before they implement new aids or modify existing ones (the 'standstill principle').

We proceed in this section by elaborating on Articles 87 and 88 EC. We also describe two Commission Regulations: the de minimis aid and the GBER—both are used to

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80 Sauter and Schepel (2007).
exemplify the importance of the exemption from the notification requirement. The GBER will later be used to develop our argument regarding the inefficiencies and distortion of competition by way of rent-seeking activity and entry barriers, which may arise due to the political procedure involved in shaping these regulations.

3.2 Aid Incompatible with the Common Market – Article 87(1) EC

Article 87(1) EC lays down the basic objective of the State aid policy, which states:

"1. Save as otherwise provided in this Treaty, any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the common market."

Article 87(1) EC applies a negative (and rebuttable) presumption to all forms of State aid, declaring them incompatible with the common market, but exemptions from this provision are possible, as we explain later. The Article does not provide us with a concrete definition of State aid, but rather refers to its effect, leaving the task of clarifying the concept of State aid to the European Courts and the Commission. It is clear that the concept of aid is wider than of a subsidy and can take a variety of forms.

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81 Friederiszick et al. (2006).
82 Biondi et al. (2004); Hancher et al. (2006).
83 Schina (1987) argued that the notion of 'State aid' was deliberately omitted.
84 Case C-30/59, De Gezamenlijke.
For public support to be classified as State aid, it has to satisfy all of the cumulative requirements listed in Article 87(1) EC. Some have mentioned four conditions for Article 87(1) to apply. The first condition is a transfer by State or State resources. Secondly, an (economic) advantage must be conferred. Thirdly, the aid has to be selective. And finally, the aid should have an effect on trade between Member-States and distort competition. Others choose to divide the fourth condition into two different conditions. We describe each of them in turn.

3.2.1 Aid by Member-State or through State Resources

State aid rules only cover measures which involve transfer by the State or through State resources. 'State' includes the central government and its ministries, departments as well as regional and local government entities. 'State resources' refer to private or public intermediate—appointed, controlled or operated—by the discretion of the State, and which uses resources that are either of the State or that are controlled by the State. In addition, the aid must have a budgetary consequence for the State, i.e. either the State gives directly from its resources or it does not collect a resource which the State is entitled to, thus decreasing the recipient's costs. Finally, the granted aid must be imputed to the State, for example by the fact that the body in question has been

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86 Biondi (2007); Nicolaides et al. (2008) (11-12).
87 Case C-482/99, French Republic.
88 Therefore, simply regulatory or administrative measure – will not be classified as State aid; see Case T-67/94, Ladbroke Racing; Joined Cases C-72 and 73/91, Sloman Neptun; Case C-189/91, Kirsammer-Hack; Joined Cases C-52-54/97 Viscido.
89 Case C-379/98, Preussen Elektra (paragraph 58).
designated or established by the State. It is clear from the case-law that these are two separate and cumulative conditions—that is:

"...for advantages to be capable of being categorised as aid within the meaning of Article 92(1) [today 87(1)] of the Treaty, they must, first, be granted directly or indirectly through State resources and, second, be imputable to the State..."  

### 3.2.2 An (Economic) Advantage to the Recipient

According to Article 87(1) EC, for a public support to be classified as State aid it should also constitute an economic advantage to the recipient and that the latter must be an 'undertaking'. As the Treaty does not contain a definition of undertaking, case-law has stated that:

"...the concept of an undertaking covers any entity engaged in an economic activity, regardless of its legal status and the way in which it is financed..."  

The economic activity is specified as being any activity consisting of offering goods and services to a given market. We will hereinafter refer to undertakings as firms.

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90 Case C-482/99, *French Republic* (paragraph 38).

Joinied Cases C-67/85, 68/85 and 70/85, *Van der Kooy* (paragraph 55).


91 Case T-351/02, *Deutsche Bahn AG* (paragraph 103), emphasis added.

Case C-345/02 *Pearle BV*.

Case C-482/99, *French Republic* (paragraph 56).

See also Biondi (2007).

92 This condition holds also when the beneficiary is the indirect recipient.


93 Case C-244/94, *Fédération Française* (paragraph 14).

94 Case C-35/96, *Commission v Italy* (paragraph 36).
For the purpose of this condition, the economic advantage should be any economic benefits that the recipient firm would not have obtained under normal market conditions.95

State aid itself is widely interpreted and does not include only subsidies, grants, loans or guarantees, but also interventions which:

"...in various forms, mitigate the charges which are normally included in the budget of an undertaking and which, without thereof being subsidies in the strict meaning of the word, are similar in character and have the same effect."96

It should also be noted that when considering whether a measure constitutes State aid, the actual or potential effect of an aid on the market is taken into account, rather than the aim of the granting State.97

As a practical matter, and in order to assess whether aid constitutes prohibited State aid under Article 87(1) EC, the Commission has developed the private investor principle98 and the private creditor principle.99 Analyzing these principles is beyond the

95 Case T-157/01, Danske Busvognmænd (paragraph 57); Case C-173/73, Italy v Commission (paragraph 26); Case C-39/94, SFEI (paragraph 60).
96 Case 30/59, De Gezamenlijke; Supra note 87; Case C-200/97, Ecotrade Srl (paragraph 34); Case C-143/99, Adria-Wien (paragraph 38).
97 Case C-173/73, Italy v Commission.
See also: Griffin (2006).
99 Case C-342/96, Spain v Commission (paragraph 34).
scope of this paper, but we should just mention that both are aimed at assessing whether the conferred economic advantage would not have been obtained under normal market economy conditions.\(^\text{100}\)

### 3.2.3 Selectivity

An equally necessary condition for State aid is that it must be selective,\(^\text{101}\) and thus affect the economic relationship between the recipient and its competitors. Hence, 'general measures', which apply uniformly to all firms that have similar legal or factual situation in all economic sectors in a Member-State without distinction, are not considered to be State aid.\(^\text{102}\) The question whether the measure is more economically beneficial to some firms is irrelevant.

A policy measure is also considered to be 'selective' if the authorities that set it enjoy some discretionary power. It has been stated in the case-law that when the authority:

"...enjoys a degree of latitude which enables it to adjust its financial assistance having regard to a number of considerations such as, in particular, the choice of beneficiaries, the amount of the financial assistance and the conditions under which it is provided…meet the conditions for classification as aid within the meaning of Article 92(1)\(^\text{[today 87(1)]}\) of the Treaty..."\(^\text{103}\)

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\(^{100}\) See: Khan and Borchardt (2008).

\(^{101}\) Article 87(1) defines selectivity: "…favouring certain undertakings or the production of certain goods…"

\(^{102}\) Case T-55/99, CETM (paragraph 39-40).

\(^{103}\) Case C-241/94, French Republic (paragraphs 23-24), emphasis added.
A 'general measure' should therefore be automatically or readily available to all firms – without discrimination. Moreover, the policy measure will not be considered to be general if it applies only to some of the Member-State's territory, for example regional and sectoral aid.\(^{104}\) Finally, objectivity alone will not be enough for a measure not to fall under the selectivity condition.\(^{105}\) However, the Courts would not consider it as an advantage, if the difference in treatment is justified by reasons relating to the nature and the general scheme of the system.\(^{106}\)

### 3.2.4 Effect on Trade between Member-States

The fourth and fifth criteria (i.e. effect on trade and distortion of competition) might be considered as one, since when a State aid confers an economic advantage to its recipient, compared to its competitors in the common market, the trade must be regarded as affected by the aid.\(^{107}\) Due to their high importance and relevance for this paper, we refer to each of them separately.

For an aid to be classified as prohibited States aid, it must also affect trade between Member-States.\(^{108}\) According to the Court's case-law:

Furthermore, even a policy measure which appears to be general might nevertheless be considered as selective, if it favors certain firms.

See Case C-6 and 11/69, *Commission v French Republic*.

\(^{104}\) Case C-88/03, *Portugal v Commission* (paragraph 56).


Case C-308/01 *GIL Insurance* (paragraphs 72-74); Case C-169/84 *Chimie Azote* (paragraphs 21-24).

\(^{107}\) Case C-173/73, *Italy v Commission* (paragraph 13)

"...there is no threshold or percentage below which it may be considered that trade between Member States is not affected. The relatively small amount of aid or the relatively small size of the undertaking which receives it does not as such exclude the possibility..."\textsuperscript{109}

This is true for all aid, except for the \textit{de minimis} aid,\textsuperscript{110} which is considered not to have an effect on trade (or competition) between Member-States.

In addition, it is sufficient to show that the beneficiary is involved in an economic activity and operates in a market in which there is a trade between Member-States, or that the aid might limit the potential development of a competing product for which trade exists. The Commission is not required to engage in a detailed analysis of the relevant market or the competitive relationships between the recipient firm and its competitors.\textsuperscript{111}

More importantly for this paper, the fact that a firm is local, and conducts its business in one Member-State alone, does not mean that the aid it receives does not affect trade between Member-States. In the words of the ECJ:

"...aid may be such as to affect trade between the Member States and distort competition where the recipient undertaking competes with producers in other Member States, even if it does not itself export its products. Where a Member State grants aid to an undertaking, domestic production may thereby be

\textsuperscript{109} Case C-280/00, \textit{Altmark} (paragraph 81);

See also: T-288/97, \textit{Regione Friuli} (paragraph 44-46); Case C-75/97, Belgium v Commission, (paragraphs 46-50); Commission (1988).

\textsuperscript{110} Commission (2006a).

\textsuperscript{111} The Commission only has to motivate its decisions with proper reasoning.
maintained or increased with the result that undertakings established in other Member States have significantly less chance of exporting their products to the market in that Member State...¹¹²

In the model, which we present in section 4, we differentiate between firms that conduct business only in one Member-State, which we define as local, as opposed to firms that conduct business in all Member-States, which we define as multinationals. This differentiation does not pose any difficulty, since both types of firms can affect trade between Member-States and be subject to the provisions specified in Article 87(1) EC.

3.2.5 Distortion of Competition

Like the intrinsically linked condition regarding the affect on trade, there is no threshold to indicate whether the granting of certain aid distorts competition or weather it threatens to do so.¹¹³ Operating aid, for example, is considered, in principle, to be distortive to competition:

"...operating aid...is intended to relieve an undertaking of the expenses...in its day-to-day management or its usual activities, in principle distorts competition..."¹¹⁴

Furthermore, unlike Article 81-82 EC cases, the definition of the relevant market offered by the Commission for State aid cases—and, in particular, the 'distortion of

¹¹² Case C-303/88, Italian Republic (paragraph 27).
¹¹³ See, for example, Gröteke and Kerber (2005).
¹¹⁴ Case T-214/95, Het Vlaamse (paragraph 43).
competition' test—does not include any in-depth analysis of the relevant market in question; while the relevant product market has been defined according to the 'Prodocom list', the relevant geographic market has been (almost) automatically identified within the European Economic Area, and thus the effect of aid on the recipient's competitive position has hardly ever been assessed.\(^{116}\)

In *Philip Morris*,\(^ {117}\) the ECJ held that there is no need for a detailed analysis to determine the relevant market in which competition is supposed to be distorted. Indeed, the Commission is not required to show the real effect of aid on competition (and trade).

More recently, however, the CFI has stressed the significance of market definition also in State aid cases and has annulled a decision of the Commission, since the latter committed manifest errors of assessment as regards to the definition of the relevant market.\(^ {118}\)

Nevertheless, the relevant question remains whether the competitive position of the recipient, compared to its competitors in the intra-Community trade, as well as his purchasers or suppliers,\(^ {119}\) would be better with the granted aid.\(^ {120}\) Moreover, when aid actually affects trade, it has been ruled by the CFI that the Commission is not required to prove that the aid in question has distorted or threatened to distort competition.\(^ {121}\)

\(^{115}\) Council (1991).


\(^{118}\) Case T-155/98, *SIDE*.

\(^{119}\) Evans (1997).

\(^{120}\) Jenny (1995).

\(^{121}\) Joined Cases T-298/97, 312-313/97, 315/97 and T-600-607/97, T-1-6/98 and T-23/98 *Alzetta (Mauro)*.
Lastly, like other conditions of Article 87(1) EC, the focus is on the distortion itself, rather than the purpose or the form of the aid.\textsuperscript{122}

3.3 Aid Compatible with the Common Market – Article 87(2) EC

Article 87(2) EC lays down that certain aid, specified in the Article, is automatically considered to be compatible with the common market ('automatic exemptions'). It states:

"2. The following shall be compatible with the common market:

(a) aid having a social character, granted to individual consumers...;
(b) ...natural disasters or exceptional occurrences;
(c) ...Federal Republic of Germany affected by the division of Germany..."

The notification requirement applies to these categories without exceptions. The Commission will then merely assess whether the proposed measure meets the formal and technical requirements of the Article. If it has been established that the aid falls within one of the exceptions, the Commission cannot exercise any discretion in the matter, and must regard it as compatible with the common market.

The common principle of all three provisions of Article 87(2)(a) EC is that aid must have a social character. Such aid does not address any specific firm or production of good, but rather the individual and ultimate consumer, who is unable, by definition, to distort competition. We might think of aid to elderly or disabled individuals as

\textsuperscript{122} Case C-173/73, Italy v Commission.
instances in which this exemption from incompatibility might apply,\textsuperscript{123} as well as the aviation sector.\textsuperscript{124}

To make the picture complete, we should briefly mention that Article 87(2)(b) EC is concerned with natural disasters or exceptional occurrences. The natural disaster category includes earthquakes, floods, avalanches, landslides, droughts and tornadoes. Under the exceptional occurrences category we might think of war, internal disturbances or strikes, and – under some conditions – major nuclear or industrial accidents and fires.\textsuperscript{125}

Article 87(2)(c) EC has not been applied for the last twenty years and seems to have lost its relevance after the re-unification of Germany.\textsuperscript{126}

\textbf{3.4 Aid that may be Compatible with the Common Market – Article 87(3) EC}

Article 87(3) EC is of particular interest. It lays down five categories, specified in the Article in which State measures qualifying as State aid may be considered to be compatible with the common market ('discretionary exemptions'). It states:

"3. The following may be considered to be compatible with the common market:

(a) aid to...standard of living is abnormally low or where there is serious underemployment;

(b) aid to...project of common European interest...;"

\textsuperscript{123} Joined Cases T-116/01 and T-118/01, \textit{P&O} (paragraphs 162-170).

\textsuperscript{124} Commission (2005).

\textsuperscript{125} Guidelines (2000).

\textsuperscript{126} Although some disagree. See: Landi (2007).
(c) aid to facilitate the development of certain economic activities or...economic areas...;

(d) aid to promote culture and heritage conservation...;

(e) such other categories...by decision of the Council...on a proposal from the Commission."

This provision is very important for this paper, since it provides the Commission with very wide discretion to declare the compatibility of certain aid and thus fall under the exemption\textsuperscript{127} – the Commission must first assess the existence of the technical criteria listed in the Article and then take a discretionary decision as to whether aid should be authorized. The existence of these exemptions, therefore, justifies the notification requirement specified in Article 88 EC and in the Procedural Regulation.\textsuperscript{128}

We elaborate on Article 88 EC below.

The common principle of Article 87(3) EC could be seen as incentive effects.\textsuperscript{129} In order for the aid to qualify for one of the exemptions, it must be shown that the aid is required to incentivize the firm to engage in one of the objectives, as specified in the Article, in which the firm would not have been engaged in without such aid; or alternatively – it would have engaged in it in a restricted or a different matter.

For a great part of the State aid cases, the most relevant exemptions are those specified in Articles 87(3)(a) and 87(3)(c) EC, from which some have distinguished three main aid categories as we describe below.\textsuperscript{130}

\textsuperscript{127} Case C-225/91, \textit{Matra SA}; Case T-152/99, \textit{Hijos de Andrés}.

\textsuperscript{128} Council (1999); see also Commission (2004), Commission (2008b).

\textsuperscript{129} Nicolaides et al. (2008) (47).

\textsuperscript{130} Vademecum (2008) (7-10); Hancher et al. (2006).
3.4.1 Regional Aid

Both Articles 87(3)(a) and 87(3)(c) EC refer to regional aid. Article 87(3)(a) concerns regions which are disadvantaged in comparison to the average standard of living in the Community as a whole and is defined in the Commission's Guidelines. Article 87(3)(c), on the other hand, enables Member-States to assist particular regions, if they are disadvantaged compared to the national average. The Commission plays an important role here as well, as it decides, on proposal by a Member-State, which regions qualify for this exemption.

3.4.2 Aid to certain Sectors

The Commission has also adopted rules to define its view of State aid to particular sectors or industries. These rules include aid to general sectors in order to address some specific problems or conditions these sectors confront, such as the financial sector (in the context of the current global financial crisis), broadcasting, coal, cinematographic and other audiovisual works, electricity (stranded costs), postal services, shipbuilding, steel and synthetic fibers-motor vehicles industry.

131 75% of the Community average; Guidelines (2006a).
132 Case C-284/84, Germany v Commission (paragraphs 18-20).
133 Commission (2009a).
137 Commission (2001c).
Furthermore, aid for agriculture, forestry, fisheries and aquaculture is mainly regulated under particular Guidelines and the general State aid control only partially applies for these sectors.\(^{142}\)

### 3.4.3 Other Horizontal Aid

The Commission further publishes in Guidelines, Frameworks, and the GBER the criteria to be applied for particular categories of aid which are aimed at tackling issues and problems that might arise in any industry, region or sector. We later elaborate on the GBER, as we believe its amendment is the objective of lobbying by multinational firms.

Currently, the categories of aid covered by these Guidelines include: aid for climate change and for other environmental protection; aid for R&D and innovation; aid for the rescue and restructuring of firms in difficulty; aid for small-medium sized enterprises; aid to employment; training aid; aid for risk capital; and aid for service of general economic interest.

### 3.4.4 Methodology for State Aid Assessment and the Balancing Test

Even aid which cannot be exempt under the Guidelines, Regulations and Frameworks is not always incompatible with the common market, and the Commission has the power to assess whether it can be considered as compatible under Article 87(3) EC. This assessment is based on the *balancing test* which is a part of the refined

\(^{140}\) Commission (2002b); Commission (2002c).

\(^{141}\) Commission (2001d); Commission (2002d); Commission (2003c).

\(^{142}\) Guidelines (2006b); Guidelines (2008a).
economic approach that the Commission has presented in the 2005 SAAP – a plan aimed at reforming State aid control.\textsuperscript{143}

3.4.4.1 The New State Aid Action Plan of 2005

In the SAAP, the Commission represented its intent to use economic and legal analysis in order to determine when a State measure is considered to be State aid and when State aid may be declared compatible with the common market. The SAAP sets up the conditions for appreciating the compatibility of State aid:

"...state aid should only be used when it is an appropriate instrument for meeting a well defined objective, when it creates the right incentives, when it is proportionate, and when it distorts competition to the least possible extent...fundamentally about balancing the negative effects of aid on competition with its positive effects in terms of common interest."\textsuperscript{144}

Further, indications for positive and negative effects are specified:

"In general, the positive impact of an aid depends on: i) how accurately the accepted objective of common interest...has been identified, ii) whether state aid is an appropriate instrument and iii) whether the aid creates the needed incentives and is proportionate. On the other hand, the level of distortion...generally depends on: i) the procedure for selecting beneficiaries and the conditions attached to the aid, ii) characteristics of the market and of the beneficiary and iii) the amount and type of aid."\textsuperscript{145}

\textsuperscript{143} Supra note 6.

\textsuperscript{144} Ibid (paragraph 11).

\textsuperscript{145} Ibid (paragraphs 20-22); an appropriate instrument is, for example, an aid to correct a market failure.
In most cases, such balancing will not take place explicitly. The GBER and other so-called 'soft law' provisions, such as Guidelines and Communications, define 'eligible cost' according to which firms may receive State aid.\textsuperscript{146} The amount of aid is reflected in terms of aid intensity – the aid amount expressed as a percentage of the eligible costs. To date, this implicit balancing test has been elaborated on the R&D and Innovation Framework,\textsuperscript{147} the Guidelines on risk capital for Small-Medium sized Enterprises,\textsuperscript{148} and the Guidelines on Environmental Protection.\textsuperscript{149} Decisions of the Commission on the applications of these Guidelines fill the balancing test with practical content.\textsuperscript{150}

3.4.4.2 Four Degrees of Assessment

From the above analysis of Article 87(3) EC four different degrees of State aid assessment arise, each of them subject to a different level of examination by the Commission.

The first category constitutes aid which is defined as the least distortive one. Presumably, it does not affect trade between Member-States, neither does it distort or threaten to distort competition, and therefore does not fall under Article 87(1) EC. In other words, it is not considered to be State aid. Therefore, the policy measure is not subject to the notification requirement of Article 88(3) EC.

\textsuperscript{146} On the evolution 'soft law', see: Cini (2001).

\textsuperscript{147} Framework (2006).

\textsuperscript{148} Guidelines (2006c).

\textsuperscript{149} Guidelines (2008b).

\textsuperscript{150} See, for example, Commission (2006d).
The *de minimis* aid Regulation\(^\text{151}\) defines the conditions for an aid to fall in this category, with a general ceiling of €200,000 (cash or grant equivalent) over any three fiscal years period.\(^\text{152}\) The recipient retains the possibility to be granted State aid under schemes approved by the Commission, whereas the *de minimis* ceiling applies to all public aid which is classified as *de minimis* aid. Moreover, the Regulation applies only to 'transparent' *de minimis* aid. Transparent aid is one for which it is possible to calculate precisely the gross grant equivalent *ex-ante* without a need to undertake a risk assessment.\(^\text{153}\)

The second category is the GBER.\(^\text{154}\) The GBER applies to all sectors of the economy with the exceptions of fisheries and aquaculture,\(^\text{155}\) agriculture\(^\text{156}\) and coal\(^\text{157}\) and regional aid in the steel, shipbuilding and synthetic fiber sectors.\(^\text{158}\) The GBER also does not apply to regional aid schemes which are targeted at specific sectors of economic activity – except tourism – within manufacturing or services.\(^\text{159}\)

The GBER applies for the following categories of aid: regional aid; SME investment and employment aid; aid for the creation of enterprises by female

\(^{151}\) *Supra* note 110.

\(^{152}\) For the road transport sector, this ceiling is €100,000.

\(^{153}\) *Supra* note 110 (paragraph 13).

\(^{154}\) *Supra* note 4.

\(^{155}\) Except for training aid, aid in the form of risk capital, aid for R&D and innovation and aid for disadvantaged and disabled workers; *Ibid* (Article 1, paragraph 3(a)).

\(^{156}\) *Ibid* (paragraph 3(b)).

\(^{157}\) With the exception of training aid, R&D and innovation aid and environmental aid; *Ibid* (paragraph 3(d)).

\(^{158}\) *Ibid* (paragraphs 3(c)-(g)).

\(^{159}\) *Ibid* (paragraphs 4).
entrepreneurs; aid for environmental protection; aid for consultancy in favor of SMEs and SME participation in fairs; aid in the form of risk capital; aid for R&D and innovation; training aid; aid for disadvantaged or disabled workers. For the GBER to be applied, the aid should also be transparent – as defined above for the de minimis aid – and have an incentive effect.160

A very important implication of the GBER is that aid schemes fulfilling all the conditions of the GBER are considered to be compatible with the common market, within the meaning of Article 87(3) EC, and are exempt from the notification requirement of Article 88(3).161 Member-States are therefore free to implement the aid scheme without being subject to the Commission's assessment and are only required to submit to the Commission a summary of the scheme within twenty working days following the implementation; they are not required to be granted an ex-ante authorization. The GBER also determines aid intensity162 and individual aid ceilings for each category of aid, below which the GBER will be applicable.

A third category of assessment degree is the standard assessment, which empowers the Commission to assess most State aid cases through ex-ante defined conditions – mainly specified in the Guidelines and Frameworks which are relevant for the different type of aids. Under this category the Commission will examine the plan, and make sure it meets the proportionality and necessity of the aid on the side of the positive effects, with limited level of distortion of competition on the side of the negative effects. In this case the refined economic approach and the balancing test

160 Different incentive effects are required for different types of measures; Ibid (Article 8).
161 Ibid (Article 3).
162 'Aid Intensity' means the aid amount expressed as a percentage of the eligible costs.
expressed in the SAAP are reflected in the legal presumptions of the Guidelines and Frameworks.\textsuperscript{163}

The fourth and most demanding category is the detailed assessment. This category applies to cases in which the potential distortion of competition is allegedly the greatest, namely cases which exceed the threshold for the standard assessment. For cases in this category the Commission will conduct the full balancing test.

It should be pointed out that despite the refinement of the 'soft law' provisions, State aid control is still rather form based and an explicit economic analysis of State aid is very limited and has not been considered to be of high importance in assessing compatibility.\textsuperscript{164} This minor use of economic analysis is most outstanding when assessing whether the aid has an impact on competition and trade\textsuperscript{165} in comparison with other fields of competition law, which have gained ample economic analysis.

When taken together with the considerations to determine whether an aid should be considered as State aid (see section 3.2), it seems that the State aid control might be too broad and might be prone to both type I and type II errors.\textsuperscript{166}

\textsuperscript{163} For the 'compensatory justification', see Mortelmans (1984).

\textsuperscript{164} Ahlborn and Berg (2004).

\textsuperscript{165} Economic analysis is mainly limited to the 'economic advantage' the State measure confers on the recipient; see sub-section 3.2.2-5.

\textsuperscript{166} See OFT (2004).
3.5 State Aid Procedures – Article 88 EC

Article 88 EC provides the provisions regarding State aid procedures. The Article states:

"1. The Commission shall, in cooperation with Member States, keep under constant review all systems of aid existing in those States...
2. If...aid granted by a State or through State resources is not compatible with the common market...the State concerned shall abolish or alter such aid within a period of time to be determined by the Commission...
On application by a Member State, the Council may, acting unanimously, decide that aid which that State is granting or intends to grant shall be considered to be compatible with the common market, in derogation...
3. The Commission shall be informed, in sufficient time...of any plans to grant or alter aid. If it considers that any such plan is not compatible with the common market having regard to Article 87, it shall without delay initiate the procedure provided for in paragraph 2. The Member State concerned shall not put its proposed measures into effect until this procedure has resulted in a final decision."

According to the Article and its complementary Procedural Regulation,\textsuperscript{167} State aid control is entrusted to the Commission and to the Commission alone.\textsuperscript{168} For this reason, Article 88 EC is based on an \textit{ex-ante} authorization, under which Member-States

\textsuperscript{167}\textit{Supra} note 128.

The Procedural Regulation defines 4 types of aid: New Aid, Existing Aid, Unlawful Aid and Misuse of Aid. We mainly focus on the first.

\textsuperscript{168}Ehlermann (1995) (1216).
have to notify the Commission before they grant a new aid, or alter an existing one, and to get its approval. Moreover, according to the *standstill principle*, specified in paragraph 3, Member-States cannot grant the aid until they receive such authorization from the Commission. Thus, unless exempt from the *notification requirement*, aid granted without meeting these conditions would be considered unlawful.

### 3.6 The Council's Role in Determining Conditions for Article 88(3) – Article 89 EC

Article 89 EC states that:

*"The Council...on a proposal from the Commission...may in particular determine the conditions in which Article 88(3) shall apply and the categories of aid exempted from this procedure."*

The Article therefore empowers the Council to determine the conditions in which Article 88(3) EC shall apply and the categories of exemptions. Even within the determination of conditions and categories for exemptions, the Commission plays a crucial role, as the Council acts on its proposal. Indeed, Council Regulation 994/98, the so called 'Enabling Regulation', specifies only general categories that may be exempt from the notification requirement and leaves the Commission with the power to set the actual thresholds and conditions and, subsequently, to declare them as de facto exemptions.

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169 In principle Member-States can also petition to the Council, but this happens only in exceptional and rare circumstances.

170 Council (1998); see also Cremona (2003).
3.7 Implications for Further Analysis

From the above analysis in sections 3.4-3.6, it is clear that firms are better off having the aid they receive classified as close as possible to the first category of assessment. In particular, rational firms will want granted aid to be either categorized under the first or second degree. The reason is clear. Aid under the first category — *de minimis* aid — is not even considered to be State aid, and is therefore not subject to any review by the Commission let alone the notification requirement. Aid under the second category — GBER — is also very appealing, especially for multinational firms that, due to large projects and large amount of aid, cannot fall under the *de minimis* aid. Under the GBER, Member-States do not have to notify the Commission and can implement the policy measure upfront without the need to acquire an authorization from the Commission, whereas the beneficiaries are, of course, the recipient firms. Moreover, the mere threat to open the procedure will frequently induce a Member-State to modify its proposal to make authorization easier. This holds, of course, for the firms as well, as they would like to avoid the bad reputation involved with the procedure and lobby *ex-ante* to alter the GBER.

Not able to fall under the *de minimis* aid, multinational firms are likely to lobby at the Commission level to alter the GBER and to try to have the individual ceiling and aid intensities high enough to cover their average aid per project. Assuming that Member-States have budget constraints and a fixed amount of aid to be granted per

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171 Even if large firms manage to have the *de minimis* aid ceiling higher, it is not likely to be high enough considering their large projects.


173 A well-known example is that of the UK and France joining Germany (rather than the firms) to lobby for the extension of the *de minimis* criteria; *Financial Times* (2007).
year, the high GBER ceiling adversely affects small firms, which will then be likely to be granted less aid; a higher amount of aid will be granted to the largest firms, whereas less aid remains for the smaller ones.

In section 4 we show that large firms indeed lobby at the Commission level. This comes as no surprise and firms have lobbied ever since benefit could be derived from doing so. However, taking into account lobbying to alter the GBER, we show that it is likely that multinational firms would lobby to influence the GBER provisions, as opposed to local ones, and to the detriment of the latter. We elaborate on the implications of this outcome in section 5. Moreover, in the context of Article 87(3) EC, it is worth mentioning two important factors that largely contribute to the nature of lobbying and rent-seeking by firms at the Commission level, as they try to have the Regulations adapted to their needs.

First, as has been shown, Article 87(3) EC provides the Commission with very wide discretion and the exclusive responsibility to design the exemptions and decide on State aid cases. As some have noted, the Commission's discretion under the State aid control is so wide that it could simply decide to abandon almost all microanalysis of State aid.

This very wide discretion of the Commission leads to the fact that if a multinational firm seeks to have the criteria of the GBER altered to benefit it, the Commission is the only political institution it should address. It may therefore allow

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174 The Commission is, of course, subject to judicial review, but Courts interpret the GBER which the Commission sets by itself.

175 Sierra and Smulders (2008).

176 For the role that politics plays in the Commission's State aid decisions see: Cini and McGowan (1998); Woerdman (2001) (17); Smith (1998).
political factors to enter State aid decision-making and focus mainly on the Commission for lobbying State aid issues. Indeed, empirical data shows that large firms prefer to lobby directly at the Commission level and consider lobbying at the Commission to be the most effective and to offer the 'best value' among all political channels.

Second, mainly the *de minimis* aid Regulation, but also the GBER, set a quantitative threshold. This means that it does not require the firm to engage in sophisticated phrasings of the Regulations in order to have them altered to their own benefit; they simply need to convince the Commission that the exemption threshold is too low. On the other hand, the qualitative thresholds of the GBER, such as the incentive effects might require firms to invest more efforts.

Moreover, the quantitative thresholds are not derived from any empirical knowledge of the Commission regarding the levels of aid required to overcome, for example, specific market failures. Rather, they reflect subjective rankings of the gravity and importance of the problems granted aid wishes to address. As a Consequence, and due to their arbitrary nature, the thresholds cannot reflect the distortion of competition caused by the aid. This means that the Commission is not able to reject a request from a rent-seeking firm to alter the Regulations on solid economic grounds. The Commission's decision is thus seen as more of a 'political' than an 'economic' decision and hence more lobbying and rent-seeking is predicted.

The next section models this rent-seeking activity to alter the GBER.

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177 Cini and McGowan (2009).

178 Coen (1997a); Coen and Richardson (2009).

179 *Supra* note 14 (15-16).

4. A Rent–Seeking Model

The previous section has shown that multinational firms have strong incentives to lobby at the Commission level in order to alter GBER.

We will now show, in a simple rent-seeking model, that in this GBER context, State aid control might lead to an outcome opposite to its objectives; in other words, it might lead to a distortion of competition, rather than to its prevention, by way of creating barriers to entry and, under certain conditions, also by resulting in a greater total rent-seeking activity than in the case with no such provisions.

The model we describe is derived from the seminal rent-seeking model of Tullock (1975, 1980).\textsuperscript{181}

4.1 Tullock’s Model

In Tullock’s model, the probability of a lobbyist who bids $X$ to win the prize $\pi$ (given that all other lobbyists together bid $Y$, and $R > 0$)\textsuperscript{182} has been made by the specification:

\[
\pi(x, y) = \begin{cases} 
\frac{1}{2} & \text{if } x = y = 0 \\
\frac{x^R}{x^R + y^R} & \text{otherwise } (x \geq 0, y \geq 0)
\end{cases}
\]

This specification has become the standard in the literature on rent-seeking.\textsuperscript{183}

From this general model of Tullock, 2 prominent sub-models have emerged:\textsuperscript{184} the lottery and the all-pay-auction models.\textsuperscript{185} Both are special cases of Tullock’s general

\textsuperscript{181} Tullock (1975a); Tullock (1980).

\textsuperscript{182} Given $Y$, the probability of winning is an increasing function of $X$.

\textsuperscript{183} Baye et al. (1994); Hanming (2002); Vogt et al. (2002).
model. The difference between the two models is in the relationship each model assumes between the lobby expenditure and the probability of winning the prize.

According to the lottery model, the probability of a lobbyist winning the prize is proportional to the player's lobbying expenditure relative to the total expenditure (of all players). In Tullock's model, this will be the case where \( R = 1 \).

In contrast, according to the all-pay-auction model, the player who has the highest lobbying expenditure wins the prize (with probability 1). In Tullock's model, this will be the case where \( R = \infty \).

### 4.2 The Model

In the model we describe below we choose the lottery model, in which \( R = 1 \). The reason is two-fold. Firstly, the lottery model has been studied most frequently.\(^\text{186}\) Secondly, and more importantly, it seems to reflect a more realistic picture of rent-seeking activities in the State aid context, where lobbyists operate, almost always, in a state of uncertainty. Lobbists know that if they invest more in lobbying, the probability of them winning the prize will be higher, although there is no guarantee that the one who invests more in lobbying wins.

In the lottery model we consider two types of firms operating in the European market that are subject to State aid control. Firms are either local – denoted \( l \), that is they conduct business in only one Member-State; or multinational – denoted \( m \), that is

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\(^\text{184}\) Hanning (2002).

\(^\text{185}\) Rowley (1991); Rowley (1993).

they conduct business in all Member-States. As mentioned in sub-section 3.2.4, both types of firms can affect trade between Member-States and can be subject to Article 87(1) EC. Further, we assume there are \( J \) firms in total, and \( I \) Member-States.\(^\text{187}\)

Since Member-States have to notify the Commission before granting new aid\(^\text{188}\) for its approval, we denote \( A_j \in \{0,1\} \) as an indicator to whether the Commission has approved new aids or whether it has exempted them from the notification requirement altogether.\(^\text{189}\) \( \Pi \) is the firm's operating profit, \( S \) is the total subsidies, or other form of aid,\(^\text{190}\) a firm receives, and \( R \) is the firm's lobby expenditure. Therefore, firms have profit functions:

\[
\Pi(s, r) = \Pi + S - R
\]

We assume a firm can only receive a subsidy from a Member-State where it conducts business and with the approval or exemption provided by the Commission. \( s_{i,j} \) is the subsidy from state \( i \) to firm \( j \). As \( f_i \in \{0,1\} \) indicates whether firm \( j \) conducts business in Member-State \( i \), it follows that:

\[
S = A_j \times \sum_i (f_i \times s_{i,j})
\]

\( r_{i,j} \) is rent-seeking done by firm \( j \) in Member-State \( i \) and \( r_{c,j} \) is rent-seeking done by firm \( j \) at the Commission level. Therefore:

\[
\Pi(s, r) = \Pi + A_j \times \sum_i (f_i \times s_{i,j}) - ( \sum_i r_{i,j} + r_{c,j})
\]

\(\text{187}\) \( I \) is also the number of local firms in each country. \( m \) is the number of multinational firms; note that \( J = I + m \).

\(\text{188}\) \text{Supra} note 128.

\(\text{189}\) According to Commission (2006a) or Commission (2008a).

\(\text{190}\) As explained, the concept of State aid covered under Article 87(1) is much wider than a mere subsidy. We use the term 'subsidy' only for simplification.
We assume that each Member-State has 1 unit of subsidy to distribute. Following Tullock's lottery model, we further assume that the probability (i.e. expected subsidy) of firm $j$ to win a subsidy from Member-State $i$ is given by the firm's lobbying expenditure in the Member-State – $r_{i,j}$, related to the total lobbying expenditure in the Member-State:$^{191}$

$$E(s_{i,j}) = \begin{cases} r_{i,j} \frac{r_{i,j}}{\sum_j r_{i,j}} & \text{if } \sum_j r_{i,j} > 0 \\ \frac{1}{j} & \text{otherwise} \end{cases}$$

Moreover, since there is no supply constraint of approvals or exemptions from the Commission,$^{192}$ we assume it 'sells' an approval or an exemption for price $p$.

Firms make simultaneous lobbying decisions regarding how much to lobby in each Member-State and whether or not to 'buy' an approval or exemption from the Commission.$^{193}$ We restrict our analysis to symmetric pure strategy equilibrium.

4.2.1 Benchmark: The Commission is not required to Approve or Exempt ($p = 0$)

We first consider the case in which no approval or exemption is required from the Commission before a Member-State can grant a new aid. In this hypothetical case, Articles 87-88 EC do not exist. Put differently, this is the case where $p = 0$.

Local firms optimize with respect to the rent-seeking done only in the Member-State where they conduct business. We use $- j$ to denote all firms but $j$:

$^{191}$ Subsidies are specific to each Member-State and firm – denoted $s_{i,j}$.

$^{192}$ It can be argued that the Commission is bounded by the Regulations and Courts' ruling, but the Commission sets these Regulations almost exclusively.

$^{193}$ 'Selling' and 'buying' of legislation is a rooted process in the literature on rent-seeking. See: Landes and Posner (1975) (877-879).
This yields to the following first order condition:

\[
(7) \quad \frac{\Sigma_{-j} r_{i,j}}{(r_{i,j} + \Sigma_{-j} r_{i,j})^2} = 1
\]

Multinational firms optimize:

\[
(8) \quad \max_{r_{i,j}} \left( \Pi + \sum_i E(s_{i,j}) - \Sigma_i r_{i,j} \right) = \max_{r_{i,j}} \left( \Pi + \sum_i \frac{r_{i,j}}{r_{i,j} + \Sigma_{-j} r_{i,j}} - \Sigma_i r_{i,j} \right)
\]

This yields the same first order condition for each \(i\):

\[
(9) \quad \frac{\Sigma_{-j} r_{i,j}}{(r_{i,j} + \Sigma_{-j} r_{i,j})^2} = 1
\]

Therefore, in the symmetric, pure strategy, equilibrium:

\[
(10) \quad \frac{(l+m-1)r_{i,j}}{(l+m)r_{i,j}}^2 = 1
\]

That is, each firm invests in rent-seeking in each Member-State:

\[
(11) \quad r_{i,j} = \frac{l+m-1}{(l+m)^2}
\]

It follows that the expected subsidy from each Member-State to each firm is:

\[
(12) \quad E(s_{i,j}) = \frac{r_{i,j}}{\Sigma_j r_{i,j}} = \frac{1}{l+m}
\]

Local firms have an expected profit of:

\[
(13) \quad \Pi + \frac{1}{l+m} \frac{l+m-1}{(l+m)^2} = \Pi + \frac{1}{(l+m)^2}
\]

Multinational firms have an expected profit of:

\[
(14) \quad \Pi + \sum_i \left( \frac{1}{l+m} - \frac{l+m-1}{(l+m)^2} \right) = \Pi + \frac{l}{(l+m)^2}
\]

And the total rent-seeking is:

\[
(15) \quad TR = \frac{l(l+m-1)}{l+m}
\]
Finally, the price per 1 unit of subsidy from a Member-State is:

\[ MSP = \frac{(l+m-1)}{l+m} \]

### 4.2.2 The Full Model (\( p > 0 \))

We now consider the full model with Articles 87-88 EC and the State aid provisions, in which an approval from the Commission is required before granting or altering aid, unless the aid is exempt from the notification requirement. Put differently, this is the case where \( p > 0 \), where \( p \) represents the required investment in rent-seeking at the Commission level in order to receive its approval or exemption.

**Proposition 1:** *If the required investment in rent-seeking at the Commission level for an approval or an exemption is low enough, both local and multinational firms rent-seek*

Suppose that the 'price' firms have to pay in order to get the approval or exemption from the Commission for a granted aid is low, that is \( p \leq \frac{1}{(l+m)^2} \). At this low price, local firms also buy it by way of lobbying and investment in rent-seeking.

Local firms have an expected profit of:

\[ (17) \quad \Pi + \frac{1}{(l+m)^2} - p \]

Multinational firms have an expected profit of:

\[ (18) \quad \Pi + \frac{l}{(l+m)^2} - p \]

Therefore, both local and multinational firms rent-seek at the Commission level and keep their profit positive (note also that \( E(s_{i,j}) = \frac{1}{l+m} \)).
The total rent-seeking is:

\[ TR = \frac{l(l+m-1)}{l+m} + (l + m)p \]  

Accordingly, the average price per 1 unit of subsidy is:

\[ ASP = \frac{l(m-1)}{l+m} + lp + \frac{mp}{l} \]

And the marginal price per 1 unit of subsidy—that is, the price paid to Member-State—is:

\[ MSP = \frac{l(m-1)}{l+m} \]

**Corollary 1.1:** Compared to the case where no approval or exemption from the Commission is required, rent-seeking activity remains the same at the Member-State level, but additional rent-seeking activity takes place at the Commission level.

**Corollary 1.2:** Likewise, the total rent-seeking is higher.

Since \( p \) is low, and both local firms and multinational ones choose to rent-seek at the commission level, additional rent-seeking activity that was not previously carried out takes place (firms still have to rent-seek at the Member-State level, since the Member-State is the one to grant the aid). Consequently, and as can be seen from comparing (15) and (19):

\[ \frac{l(l+m-1)}{l+m} < \frac{l(l+m-1)}{l+m} + (l + m)p. \]

**Proposition 2:** There is a range between the low required investment and the moderate required investment in rent-seeking at the Commission level, in which there is no symmetric pure strategy equilibrium.
Suppose that the 'price' firms have to pay in order to receive the approval or exemption from the Commission for a granted aid—i.e. the required investment in rent-seeking—is in the range between low and moderate, that is, \( \frac{1}{(1+m)^2} > p > \frac{1}{(1+m)^2} \).

At this low-moderate price, there is no symmetric pure strategy equilibrium. However, there are mixed strategy equilibriums where local firms rent-seek probabilistically and randomize among pure strategies.\(^{194}\) Since we restrict our analysis to symmetric pure strategy equilibriums, and due to the fact the mix strategy equilibrium does not provide us with new insights, we do not explore this range here.

**Proposition 3:** If the required investment in rent-seeking at the Commission level for an approval or an exemption is moderate, all local firms do not rent-seek at the Commission level and all multinational firms do.

Suppose that the 'price' which firms have to pay in order to get the approval or exemption from the Commission for a granted aid is moderate, that is, \( \frac{l}{m^2} > p > \frac{1}{(1+m)^2} \).

At this moderate price, all local firms do not buy it, and all multinational firms do. Following the same logic of the case where \( p = 0 \):

\[
(22) \quad r_{i,j} = \frac{m-1}{m^2}
\]

And the expected subsidy:

\[
(23) \quad E(s_{i,j}) = \frac{1}{m}
\]

Local firms have an expected profit:

\[
(24) \quad \Pi
\]

Multinational firms have an expected profit:

\[ (25) \quad \Pi + \frac{t}{m^2} - p \]

The reason why local firms do not choose to rent-seek in this range of \( p \) is straightforward from (25). If they did, their profit would have been negative.

The total rent-seeking is:

\[ (26) \quad TR = \frac{t(m-1)}{m} + mp \]

Accordingly, the average price per 1 unit of subsidy is:

\[ (27) \quad ASP = \frac{(m-1)}{m} + \frac{mp}{l} \]

And the marginal price per 1 unit of subsidy, that is, the price paid to the Member-State, is:

\[ (28) \quad MSP = \frac{(m-1)}{m} \]

**Corollary 3.1:** The marginal price per 1 unit of subsidy—that is, the price paid to Member-States—will decrease.

Since in the case where \( p \) is moderate local firms refrain from rent-seeking, the prices at the Member-State level decreases, as can be seen by comparing (28) and (16):

\[ \frac{(m-1)}{m} < \frac{(t+m-1)}{t+m} \]

The logic is simple: when local firms do not rent-seeking, the multinational firms face less competition for aids. Therefore, assuming that the total quantity of aids each Member-State is able to grant is fixed, due to budget or other constraints,\(^{195}\) the multinational firms have to 'pay' less in order to receive the same quantity of aid.

\(^{195}\) One might think of limited State infrastructure or simply not enough aid to satisfy all firms.
**Corollary 3.2:** If \( p > \frac{II}{m^2(l+m)} \), the total rent-seeking is greater, compared to the case where no approval or exemption from the Commission is required.

**Proof:** See Appendix 1

**Corollary 3.3:** Likewise, for some ratios of local firms to multinational ones—that is, where \((l + m)m^2 > II(1 + m)^2\)—the total rent-seeking is greater compared to the case where no approval or exemption from the Commission is required, for all 'moderate' \( p \).

**Proof:** See Appendix 2

If we combine proposition 3 with corollaries 3.2 and 3.3, the outcome is quite remarkable. Not only that for a moderate \( p \) only multinational firms rent-seek, a fact that by itself might distort competition as we explain in section 5, but also the total rent-seeking activity, with its attributed social cost, is greater – in the case where \( p > \frac{II}{m^2(l+m)} \) and \((l + m)m^2 > II(1 + m)^2\). That is, the total rent-seeking is greater when a high enough number of multinational firms operate in Europe than in the case where no approval or exemption from the Commission is required. We elaborate on the social cost of rent-seeking in section 5 as well.

**Proposition 4:** There is a range between the moderate required investment and the high required investment in rent-seeking at the Commission level, in which there is no symmetric pure strategy equilibrium

Following the same logic of proposition 2, if the 'price' is in the range between moderate and high—that is, \( I > p > \frac{l}{m^2} \), —there is no symmetric pure strategy
equilibrium, but there are mixed strategy equilibriums which this paper does not explore.

**Proposition 5:** *If the required investment in rent-seeking at the Commission level for an approval or an exemption is high enough, neither local nor multinational firms rent-seek*

Suppose that the 'price' which firms have to pay in order to get the approval or exemption from the Commission for a granted aid is high—that is, \( p > I \).

At this high price, neither local nor multinational firms buy it; therefore, there is no rent-seeking. The reason why multinational firms do not choose to rent-seek in this range of \( p \) follows the same logic used to explain why the local ones refrain from rent-seeking in proposition 3. If they did, their profit would be negative.

### 4.2.3 Finding the Level of \( p \)

One result of the model (proposition 3) is that when \( p \) is moderate, all local firms do not rent-seek at the Commission level and all multinationals firms do. Another result is that in such a moderate range of \( p \), and if the number of multinational firms is high enough, the total rent-seeking will be greater under State aid control than in the case where such control does not exist (corollaries 3.2 and 3.3).

We will now argue that \( p \) is indeed moderate and therefore the results of propositions 3 and its corollaries are the results that should draw one's attention and from which we should continue our analysis. More specifically, \( p \) is represented by the cost firms have to incur in order to achieve access to the Commission and influence its policy.
One part of this cost can be identified in a study undertaken by Coen (1997a), in which he shows that during 1984-1994 the main focus of large firms' political activity has shifted away from the national level and towards European institutional channels. Moreover, the most favored political channel among all EU institutions was the Commission.

In order to achieve good access to the Commission, firms were required to have a broader political profile across a number of issues. This was considered as the cost of 'identity building' – a part of our p.

A different, yet related, part of the cost can be detected in a more recent study of Coen (2009), in which he shows that the Commission continues to be the prime focus of lobbying among all EU institutions. Of equal importance, since the Commission has the discretion to invite or exclude lobbyists, the result is a more competitive 'elite pluralism' environment, where access to decision-makers is restrictive and more competitive.

Being a part of this elite group and participating in the more exclusive policy forums and committees therefore incurs a cost. Firms have to develop long-running relationships with the Commission, and to be able to gather and exchange valuable information. To be effective, firms also need to open offices in Brussels in order to be able to monitor policy agenda and develop personal relationships with Commission

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196 Coen (1997a)
197 More shifts were recognized according to country origin. See: Coen (1998); Coen (1999).
198 Coen and Richardson (2009).
officials in all key points of the decision-making process.\textsuperscript{200} It should also be born in mind that sensitive issues such as State aid are not included in group discussions, and firms therefore need their own representation,\textsuperscript{201} which implies a higher level of $p$ than in a case where a firm has to pay only a share of the cost in a collective group.\textsuperscript{202}

\textbf{4.2.4 ('Anecdotal') Evidence Supports our Model}

In this sub-section we will try to identify which firms could handle the most prominent type of costs, i.e. 'identity building' and 'elite pluralism' costs. We will show that this 'anecdotal' evidence supports the results of our model.

As for the 'identity building' cost, multinational firms with pan-European operations were able to manage this cost most effectively and benefited most from the gradual restrictions of access to the Commission in the 2000s.\textsuperscript{203} These firms have the experience of operating in a number of EC countries and may possess cross-national information which can be utilized by Commission officials. Hence, large firms and, more so, multinationals were established as 'insiders' through regular and broad-base political activity.

As for the cost a firm has to incur in order to be part of the 'elite pluralism', it has been shown that the largest individual firms have the highest degree of access to the

\begin{itemize}
\item \textsuperscript{200} In State aid decision-making process, firms have to lobby at the 'Case-Handler', Director and Commission levels.
\item \textsuperscript{201} McLaughlin et al. (1993).
\item \textsuperscript{202} In addition, on non-State aid issues, more weight is given to major multinational firms within the group; \textit{Ibid} (208).
\item \textsuperscript{203} Coen (2007).
\end{itemize}
Commission,\textsuperscript{204} since they provide the highest quantity and quality of the information, or in the most efficient way.\textsuperscript{205} Multinationals are likely to be in the forefront.

4.2.5 Implications for Further Analysis

As will be now explained, we believe that a moderate $p$ is the only reasonable assumption from the above review. It is obvious that the cost of achieving access to the Commission decision-making process, mainly through 'identity building' and '{\textit{elite pluralism}}', is not low enough, and hence not all firms are able to 'pay' this $p$ (thus proposition 1 is irrelevant). Similarly, this cost is not prohibitively high, since we know that large multinational firms are able to 'pay' this $p$ (thus proposition 5 is also irrelevant).

It follows that $p$ is moderate\textsuperscript{206} and therefore the range of proposition 3 should draw our attention for further analysis. Indeed, empirical data supports this assumption by showing that when firms have to pay this cost in order to have access to lobbying at the Commission level, large multinational firms are likely to engage in such lobbying, while local small firms are not.

The next section interprets these results.

\textsuperscript{204} Bouwen (2002); Eising (2007).

\textsuperscript{205} Pfeffer (1982).

\textsuperscript{206} Recall that we do not explore the range of propositions 2 and 4.
5. INTERPRETATION OF THE RESULTS

5.1 General

In the previous section, we have shown that the only reasonable assumption to make regarding the level of \( p \)—i.e. the price firms have to 'pay' the Commission in order to get the GBER adapted to their needs—is that it is moderate. This range of \( p \), explored in proposition 3 in the model, yields, in turn, two important results that we have already described above; but they are worth a more in-depth analysis.

The first result is that in this range all multinationals firms engage in rent-seeking activities at the Commission level, and all local firms do not. Not only does this result lead by itself to inefficient decisions, since no full representation takes place,\(^{207}\) but it also creates entry barriers in the specific GBER case we discussed. The second result is that if there is a high enough number of multinational firms operating in the common market, the total rent-seeking activities will be greater than in the benchmark case (corollaries 3.2 and 3.3).

We proceed now to interpret these results and explain why the phrasing of the GBER is inefficient and might lead to a distortion of competition by creating entry barriers and distortions of competition, contrary to one of the pillars of State aid control and, in some cases, also higher rent-seeking transfer costs.

5.2 Barriers to Entry

We will now elaborate on the entry barriers for local-small firms that the GBER creates, to the detriment of competition in the common market. Recall that we have focused on the lobbying by multinational firms to alter the GBER so as to allow higher

\(^{207}\) See sub-section 2.3.4.1.
maximum allowable aid levels and higher aid intensity levels, which under the GBER will be exempt from the notification requirement. Multinationals firms have strong incentives to do so, since they could be granted more aid without the need for the granting authority to go through the procedure of acquiring an approval from the Commission.

Surely, if multinationals succeeded and the GBER was set to exempt higher maximum allowable aid and aid intensity levels, small local firms would also be allegedly better off, since they might also benefit from more non-notified aid. However, there are three crucial reasons for this rent-seeking activity to benefit only multinational firms and worsen the position of local ones.

First, we assumed that Member-States have a fixed quantity of aid to grant. Therefore, if multinationals are likely to receive more aid, locals are likely to receive less. Second, and more importantly, we have shown that local firms do not rent-seek at all, even not at the Member-States level. This enables multinational firms to extract more aid from Member-States, as they now face less competition for the same quantity of aid. Third, if their rent-seeking were successful, Member-States would now be allowed to grant the multinational firms a higher amount of aids and aid intensities without the need to notify the Commission and to get its approval.

It follows that the current GBER tends to favor multinational firms over local ones. Indeed, while in some provisions of the GBER there is less aid intensity allowed for large firms, the GBER does not include a category for multinational firms, i.e. firms that operate in all Member-States.\footnote{Commission (2008a).} Since a large firm is defined under the GBER as any firm which is not a small-medium size one,\footnote{Ibid, Article 2(8). The Article refers to 'enterprise'.} it can also be a local firm operating...
in only one Member-State. An average multinational firm is thus far more dominant than the average large firm.

This imbalance between the most dominant firms, multinationals (or 'national-champions' and State-owned firms),\textsuperscript{210} and local firms in receiving non-notified aid naturally calls for competition concerns and, in particular, creates entry barriers. While multinational firms strengthen their position in the market with an easily granted—and hardly supervised—aid, local firms are blocked from entering the market or are forced to leave it. Further, these entry barriers cannot be remedied by the \textit{ex-post} summary Member-States submit to the Commission, since if a local firm has exited the market, it might not enter again for some time (or at all)—if the Commission decides \textit{ex-post} that the aid has been unlawfully granted—and this to the detriment of competition.

The importance of entry barriers for competition policy has been a subject for academic debate between the Harvard School and the Chicago School. As Van den Bergh and Camesasca (2006)\textsuperscript{211} explain, while the Harvard School approach, following Bain (1956),\textsuperscript{212} qualified many types of entry barriers, the Chicago School approach, represented by Stigler (e.g. 1968),\textsuperscript{213} Bork (e.g. 1993)\textsuperscript{214} and Posner (e.g. 1979)\textsuperscript{215}

\begin{footnotesize}
\textsuperscript{210} Consider national-champions such as banks, airlines etc. that usually conduct business all over Europe.
\end{footnotesize}

See also:


\textsuperscript{211} Van den Bergh and Camesasca (2006) (83).

\textsuperscript{212} Bain (1956).

\textsuperscript{213} Stigler (1968); Stigler (1983).

\textsuperscript{214} Bork (1993).

\textsuperscript{215} Posner (1979).

On Posner's general approach to Antitrust law, see:

advocated that antitrust law should concentrate only on artificial barriers, mainly those created by the government, as opposed to forms of efficiency.

While it is beyond the scope of this paper to develop an in-depth discussion on entry barriers, it is important, and of extreme relevance, to note that in the context of the Harvard-Chicago debate on entry barriers, State measures will naturally be classified as an artificial barrier to entry, and hence the Chicago School will also support the argument that granting excessive aids to multinational firms, which in most cases enjoy a considerable market power, creates entry barriers and should raise concerns regarding competition.

More generally, while economists disagree with respect to non-regulatory entry barriers, there is a consensus among most economists that government regulation or, more generally, absolute advantage granted such as State measures qualifying as State aid, creates entry barriers and should raise competition concerns.

5.3 Rent-Seeking and Transfer Costs

As we have explained in sub-section 2.3.4.3, the literature on rent-seeking contends that the costs of transferring income—i.e. resources devoted to lobbying and rent-seeking activities—are all part of the social cost of these (welfare-reducing) policies. These activities generate welfare losses, even if no administrative costs arise for making it, since they consume resources for a non productive activity.

216 Non regulatory entry barriers include: strategic advantage, scale-economies and sunk-costs, product-differentiation, vertical foreclosure, predatory pricing and advertising.


218 Tullock (1971).

219 The textbook example considers theft.
In the context of State aid control, Tullock (1975b)\(^{220}\) argued that investing in becoming potential recipients of aid and subsidies is very evident. In this setting, resources that are used to allow, or prevent, such granting of subsidies are not productive or otherwise beneficial and thus reduce welfare.

In the GBER context, recall that the model predicts that where State aid provisions exist, all multinational firms rent-seek in order to be exempt from the notification requirement and all local firms do not.\(^{221}\) Therefore, since now fewer firms compete, one might expect rent-seeking activities to be decreasing compared to a world without State aid control. However, as we have shown in the model, when there is high enough number of multinational firms, more rent-seeking activities take place when Articles 87-89 EC exist than in the case where they do not.

The reason is straightforward. If the effect of local firms exiting the rent-seeking competition at the Member-State level to receive aids is weaker than the effect of the multinationals firms now having to engage in more rent-seeking—i.e. both at the Member-State level and at the Commission level—the outcome is more rent-seeking activities in total.

Further, once the formation of a law or regulation—here, the GBER—is decided upon and implemented by the Commission, it assigns long-term income sources to those who were able to influence it to their advantage, since Courts would enforce these 'deals' between lobbyists and decision-makers;\(^{222}\) this, in turn, results in higher rents.

\(^{220}\) Tullock (1975b).

\(^{221}\) Rent-seeking will take place both at the Member-States level and at the Commission level, since within Articles 87-89 the Member-State is the one to grant the aid, but the Commission has to approve or exempt.

\(^{222}\) Supra note 193.
associated with the GBER, and the rent-seeking related to it.\textsuperscript{223} Thus, that multinational firms have strong incentives to intensely invest in rent-seeking at the Commission level to alter the GBER to their business activities seems to be a reasonable assumption to make; we have elaborated on this in section 3. However, whether or not the number of multinational firms satisfies the conditions of corollaries 3.2 and 3.3 of proposition 3 in the model is a question for empirical research.

By the same token, it is worth mentioning that while most of the traditional literature on rent-seeking considers a reduction in the number of groups competing for rents to be welfare enhancing, because it decreases the expenses of rent-seeking—and, subsequently, waste—\textsuperscript{224} it does not pose the results of our model with any difficulties. The reason is that this literature does not take into account the possibility that the remaining fewer groups would have to rent-seek in more institutions (Member-States and Commission), than in the benchmark case where all groups compete (only at Member-States).

\textsuperscript{223} Tullock (1993); Lambsdorff (2002).

\textsuperscript{224} Krueger (1974); Tullock (1980); Buchanan (1980). Bhagwati and Srinivasan (1980) criticize this approach.
6. CONCLUSIONS AND POLICY IMPLICATIONS

6.1 Conclusions

In this paper, we have tried to show that the GBER results in an inefficient outcome and might undermine the main economic objective of State aid control – that is, to prevent distortions of competition between Member-States.

While the first section introduced the State aid control framework and its importance, the second section has laid down the economics of State aid and concluded by arguing that State aid control cannot be justified by the political and regulation economy, since when taking lobbying and rent-seeking activities into account, the GBER reduces welfare rather than enhances it.

To understand whether or not State aid control achieves its objectives, and to support our last assertion from the previous section, Section 3 analyzed the legal framework of State aid, showing why the Commission is the prime focus for lobbying, and why multinational firms have strong incentives to rent-seek in order to alter the GBER so that they would be subject to the latter's degree of assessment.

Section 4 modeled this rent-seeking activity, which in turn predicted that due to the cost of receiving an approval or an exemption from the Commission, all multinational firms will rent-seek at the Commission level, while all local firms will not. Further, if the number of multinational firms operating in the common market is high enough, the total rent-seeking investments would be higher in the case where Articles 87-89 EC exist than in the case they do not.

In section 5 we interpreted the results of the model and explained that rent-seeking by only multinational firms leads the GBER to be inefficient by creating barriers to entry to local firms and, if the number of multinational firms is large enough
(an empirical question), also by generating more socially wasteful rent-seeking activities. Moreover, it artificially strengthens the position of multinational firms, perhaps the most dominant firms in the common market, and distorts competition, contrary to the main economic objective of Articles 87-89 EC.

We therefore conclude that the GBER is inefficient, since it creates barriers to entry which distort competition and, under plausible conditions, i.e. high enough number of multinational firms, results in more socially wasteful rent-seeking activities.

6.2 Policy Implications

The inefficiency of the State aid control with regards to the GBER might be resolved in several ways.

One solution could be to require Member-States to show, in the ex-post summary they have to submit to the Commission, an evident and significant market failure if they have granted a State measure to multinational firms. They should also be required to show that the measure is appropriate and necessary in order to remedy the specific market failure. Member-States would still be exempt from the ex-ante notification requirement under the GBER, but due to competition concerns that State measures raise when granted to multinational firms, they would have to show in each of these cases that those concerns are limited, and that efficiency suggests that granting the State measure is the appropriate policy instrument.

It should be noted that the GBER already states that it aims to balance between minimizing distortions of competition and tackling market failures. Nevertheless, it does not require Member-States to describe in the summary they submit to the Commission ex-post the market failure that the measure was aimed to remedy. In this
setting, monitoring and ensuring a strong correlation between the State measure and the market failure is extremely difficult, if ever possible.

Our suggested requirement in the context of State measures for multinational firms would thus be very helpful. On the one hand, the exemption still applies, and the Commission does not have to conduct an in-depth analysis if the case fell under the GBER, ensuring the savings of the associated administrative costs; on the other, the concerns from distortion of competition are mitigated.

A second best solution to resolve the inefficiencies resulting from the current formation of the GBER could be to add a fourth category to the GBER. As we have explained, the GBER differentiates, in most cases, and regarding allowable aid intensities, between large firms and small-medium ones; lower aid intensities are allowed to the former. It does not, however, consider the difference between multinational firms and 'normal' large firms.

While a large firm can be a local firm conducting business in a single Member-State, multinational firms are naturally on average far more dominant with a wider affect on trade in the common market. It therefore seems a good solution to allow multinationals lower aid intensities than those allowed to large firms—and, of course, than those allowed to small-medium ones—by this reducing the possibility of strengthening the market power of the perhaps already most dominant firms and the sequent danger of distortion of competition. The criticism we expressed earlier regarding the arbitrary nature of these quantitative thresholds applies to our proposal too, though. However, our proposal at least takes into account the inherent advantage of multinational firms over local ones and might not require a great effort to be executed.

One might argue that a third solution might also be appropriate—that is, to require Member-States to include in their ex-post summary to the Commission an
assessment of the market power of the recipient firm. This solution, however, has at least one major shortcoming. It does not relieve the Member-State and the Commission from the burden of undertaking an in-depth analysis and thus might undermine the entire concept of the GBER.

We therefore conclude that our first proposal—that is, to require of Member-States, in case the recipient firm is a multinational (or a State-owned) firm, that they include in the *ex-post* summary they submit to the Commission also clear evidence of a significant market failure that the State measure is targeted at remedying, and that they explain why this is an appropriate and a necessary measure—will lead to the most efficient outcome.

This, we believe, would pursue better the refined economic approach the Commission advocates in the SAAP. It would strike the right balance between the social costs a State measure generates when it is granted to multinational firms—that is, a possible distortion of competition and possibly greater social losses from rent-seeking activities; and the benefits of the State measure—that is, an increased total welfare, if it is targeted at remedying a significant and well-defined market failure.

While this paper has not directly addressed the question of the appropriate welfare standard in State aid, it suggests that a more complete and accurate standard than the current 'effect-on-rivals' should be developed.
Appendix 1

Proof of Corollary 3.2:

We consider the case in which total rent-seeking is greater where $p$ is 'moderate'

\( \frac{I}{m^2} > p > \frac{1}{(1+m)^2} \) than in the case where no approval or exemption from the Commission is required ($p = 0$), by comparing (15) and (26) in section 4.

For the Corollary to hold we need the condition:

\[
\begin{align*}
(1) \quad & \frac{I(m-1)}{m} + mp > \frac{I(l+m-1)}{l+m} \\
(2) \quad & mp > \frac{I(l+m-1)}{l+m} - \frac{I(m-1)}{m} \\
(3) \quad & mp > \frac{mI(l+m-1) - l(l+m)(m-1)}{(l+m)m} \\
(4) \quad & p > \frac{mI(l+m-1) - l(l+m)(m-1)}{(l+m)m^2} \\
(5) \quad & p > \frac{mI + m^2 I - ml + ml + lml - lml + m^2}{(l+m)m^2} \\
(6) \quad & p > \frac{Il}{(l+m)m^2} 
\end{align*}
\]

Q.E.D
Appendix 2

Proof of Corollary 3.3:

As a result of Corollary 3.2, we know what is the condition on \( p \), for total rent-seeking to be greater. But this only holds if \( p \) is 'moderate' \(- p > \frac{1}{(1+m)^2} \) and hence if:

\[
(7) \quad \frac{1}{(1+m)^2} > \frac{II}{(l+m)m^2}
\]

Then also:

\[
(8) \quad P > \frac{II}{(l+m)m^2}
\]

And the condition is satisfied. Followed from (7) is:

\[
(9) \quad (l + m)m^2 > II(1 + m)^2
\]

The left hand-side of the inequality is a cubic in \( m \), while the right hand side is quadratic in \( m \). Therefore, for any number of Member-States and local firms per Member-State, we can find a number of multinational firms (perhaps a big number, say \( X \)) that makes this inequality true; any number of multinationals higher than \( X \) would also satisfy the inequality.

Q.E.D

\[225\] In its 'moderate' range, \( p \) also has to be smaller than \( \frac{l}{m^2} \). This, however, does not pose any difficulty, since \( \frac{l}{m^2} > \frac{II}{(l+m)m^2} \).
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