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State Aid Consequences

Opel & European Union

Bachelor Thesis

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April 2011

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1. Introduction

The beginning of the 21st century has been challenging for the world. The economy, the business were put to a test by the financial crisis. Governments, confronted with their economic and social responsibilities, found themselves struggling to undertake actions to ensure that the current crisis will not prevail or recur (Lowe, 2009). Worldwide they engaged in massive bail-outs of the financial institutions (Brunel & Hufbauer, 2009; Wilks, 2009), arguing that it was necessary in order to keep the whole economy afloat. Nevertheless, slowly the crisis crept in the 'real economy' (Lowe, 2009) – the industry was affected. Governments were faced with the question: should they give state aid to industry as well? This issue caused tension particularly in the European Union (EU).

Legally the governments of the Member States of the EU are not allowed to intervene in many cases. Article 107 of TFEU reads that "save as otherwise provided in the Treaties, 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 internal market.". There are few exceptions to it concerning aid in cases of natural disasters or exceptional occurrences, culture and heritage conservation, and regional coherence development. The financial crisis which hit Europe in 2008 put this article to the test. First the banks were rescued. But apparently that was not enough. Different companies started falling like domino cards; industries were experiencing major difficulties. The temptation for governments to rescue them was great. But apparently it took the European automotive industry for governments to put aside their agreement completely.

The motor industry of the EU is huge. It is closely related with many other sectors. Some examples of key suppliers to car industry are electronics, information technology, steel, chemicals and rubber. Around seventy five percent of the value-added of a new car is generated by all these different suppliers. Thus the automotive sector can easily be regarded as one of the biggest employers in the EU. "Taking in the whole supply chain it accounts for an astonishing one third of all manufacturing jobs in the EU27" (Wilks, 2009, p. 277). However the importance of this industry is variable across the EU. More than one third of all people, who are directly employed by the motor industry, is employed in Germany (Wilks, 2009). It happened to be the misfortune that precisely during the financial crisis this giant of an employer was endangered by bankruptcy: there was a severe shortage on the demand side in the automotive market. The sales of cars dropped with thirty to sixty percent (Brunel & Hufbauer, 2009; Wilks, 2009). The expectation was that the sectors with close links to the automotive industry will experience the same decline in a very near future.

This could have been one of the reasons why the German government decided to intervene and provided for 1.5 billion euro (and was willing to give even more) of state aid to one of the biggest and the oldest car producers (since 1898) of Germany – Opel. One of the conditions under which this aid was granted was that the necessary restructuring of Opel would go at a minimum job loss for the employees in Germany. This decision did not go unnoticed by other member states. The newspapers were screaming about it. And soon enough many European countries got caught up in this fight over Opel. To mention a few which had a direct interest in saving (or not saving) Opel, were Germany, Belgium, United Kingdom, Spain, Poland and Italy. Many were furious about this deal as they argued that the conditions for rescue were unfair to the rest of the EU. After all, the *whole* European automotive industry was suffering under extreme drop of sales (Brunel & Hufbauer, 2009; Sturgeon & van Biesebroeck, 2009; Wilks, 2009). Opel had several other factories in other member states (for example in Belgium and Spain). Naturally other countries feared that their employees would pay for the minimum job loss in Germany. Was it then indeed fair to give state aid to one specific company and especially under such conditions? How will it affect others? Could this 'bail out' of industry be justified? Is it different from bailing out the financial institutions? Should we relax the state aid control that the EU has at the moment? What will it mean for the whole EU economy? Will today's solutions be tomorrow's problems?

Scholars disagree in their assessment of consequences of giving state aid. Some argue that this kind of aid is sometimes necessary for preserving social and political stability by avoiding mass unemployment (Brunel & Hufbauer, 2009; Wilks, 2009) or meeting other goals of social policy for example protecting the poor (Schwartz & Clementz, 1999). Others argue that state aid can correct market failures and therefore the governments should not be afraid to intervene in the market economies (Friederiszick, Röller & Verouden, 2006; Ganoulis & Martin, 2001; Glowicka, 2006; Le Grand, 1991; Meiklejohn, 1999; Wolf Jr, 1993). Whilst other scholars are not so sure about the supposition that governments are the right institutions to correct market failures and therefore are not convinced that governments should intervene in the first place at all (Becker, 2010; Collie, 2000; Dewatripont & Seabright, 2006; Fingleton, 2009; Nicolini, Scarpa & Valbonesi, 2010; Schwartz & Clementz, 1999; Shleifer, 2005; Stigler, 1971; Winston, 2006). Scholars also caution about favouring one company over another when giving state aid as it will create monopolistic advantages and thus have a distortionary effect on the competition (Garcia & Neven, 2005; Møllgaard, 2003; Munkhammar, 2007; Szyszczak, 2007) - while competition is regarded as a driving force behind economic growth (De Gaay Fortman, 1966; Fingleton, 2009; Munkhammar, 2007). And especially during recession no matter how tempting, the governments should not compromise competition rules as eventually healthy competition is believed to get the economy out of decline (Fingleton, 2009; Lowe, 2009). Also on international level, state aid will discriminate between countries and it will lead to retaliation, which will make everybody worse off (Besley & Seabright, 1999; Dewatripont & Seabright, 2006; Ganoulis & Martin, 2001; Nicolini, Scarpa & Valbonesi, 2010). Yet another stream of literature argues that state aid is even useless because market clearing is unavoidable (Becker, 2010; Besley & Seabright, 1999): inefficient firms sooner or later will (and should) exit the market and give place to more efficient ones (Fingleton, 2009; Nicolini, Scarpa & Valbonesi, 2010). On the other hand, seemingly useless subsidies can still do some good by creating a feeling of community (Schwartz & Clementz, 1999).

These contradicting views in the academic literature exhibit the very complex nature of state aid. However no matter how well the scholars succeed in picturing the complexity of it all, individually they fail in giving a holistic conceptualization of implications of state aid. Either they point only to the disadvantages or only to the advantages of granting state aid, or they give an incomplete picture of disadvantages of state aid for example by arguing that it distorts competition but mention nothing on the fact that whether state aid will indeed distort competition depends on a lot of factors. Nevertheless a complete understanding of state aid's advantages and disadvantages is very important for an assessment whether state aid could be justified and therefore granted. And this is especially relevant now, in the times of financial crisis, when the governments are rushing with helping industries to avoid bankruptcy, just assuming that they are doing the right thing. But are they? It seems as member states forgot the reasons for prohibiting state aid in the EU. Therefore there is a need in refreshing our memory. Hence this research sees its aim in examining state aid through the scientific loupe and exploring different approaches to state aid in order to present as complete picture as possible on the implications of state aid. And for the purpose of making this theoretical map of consequences of state aid more illustrative, Opel will serve as a study case. Hence I arrive at the question that I would like to investigate in this research:

What are the consequences of giving state aid to Opel for the European Union economy?

In order to answer the main question I will first present the cons and the pros of state intervention in economy in the form of state aid, aiming at a holistic conceptualization of implications of state aid, by the means of a literature review. Then I will move on to the description of Opel case on the basis of newspaper articles. After this I will arrive at the analysis of Opel case on the basis of literature review. And after evaluation of what these findings can imply for the EU, I will arrive at a conclusion. So the goal of this research is two-fold: holistic presentation of implications of state aid and application of these insights to the Opel case.

2. Literature review

2.1. Introduction

In order to answer the research question, one needs to understand the nature of the beast – the state aid. To my knowledge, a broad overview of implications of state aid is yet to be presented by the academics. This research should be treated as an attempt to structure the main ideas and arguments on state aid and to offer a holistic presentation of it. Therefore it seems logical to start my research with the literature review as it gives an advantage of mapping our insight of what state aid entails. Before going into the content of literature, there is a need to explain how the articles were selected. For the literature review I performed a systematic search of the available[1] databases which covered the topics in economics and/or social science. The following databases were examined: Business Source Elite, DEGREE, Directory of Open Access Journals, EconLit, Google Scholar, IDEAS, Oxford Journals, PiCarta, SAGE Journals Online, SpringerLink, ScienceDirect, Taylor and Francis (Informaworld), and Web of Science. A combination of the following key-words and their synonyms was used: 'state aid', 'state aid + economic', 'subsidy', 'economic + state intervention'. After getting acquainted with the literature some other keywords came up, such as 'market failure', 'government failure', 'competition', 'competition + economic crisis', 'efficiency'. On the basis of the abstracts the articles were considered in the following cases:

1. The articles were written in the English language.
2. If the articles dealt with specific fields where state aid could be given, only articles which dealt with industry were selected. This means that articles examining aid for regional development, agriculture and education were omitted. The regional development aid is allowed by the Treaty as it fosters economic development in the poorer regions and thus stimulates cohesion in the European Union, and thus was not of interest for this research. Agriculture is a special case where the rules of Common Agriculture Policy apply; therefore again such articles were not fitted for this research[2]. Education is a delicate matter as it is a merit good (Meiklejohn, 1999) and therefore cannot be compared with industrial goods.

In order to get the older literature, but also more diverse sources of information, the references from the retrieved articles were checked and selected on the same criteria as the retrieved articles. In this way there were also some[3] books selected. This amounted to a vast sum of literature resources, which gave the possibility to assess the implications of state aid. Having outlined how the literature was selected, I now come to analysis of its content.

First of all, there is a need to identify what is meant by the state aid. The definition given by the European Union suffices this research; state aid implies an action by a public authority of any level (national, regional or local), using public resources, to favour certain undertakings or the production of certain goods (Besley & Seabright, 1999). Another word for state aid is also a government subsidy or a government intervention. The main economic justification for granting state aid is the quest for efficiency when the market failures occur. This entails that governments can correct the market when it is not functioning well and in this case such intervention is justified as it will restore efficiency. Hence as a consequence economy would benefit in this scenario. On the other hand such intervention is likely to distort competition, as some undertakings will have unfair advantages over others. This would mean that by helping a market failure, *i.e.,* inefficiency, governments can cause distortions of competition, and thus create a new 'failure' while trying to improve another. The danger arises then that other governments, seeing their undertakings being disadvantaged, would want to help them as well. And thus the subsidy race among governments will be initiated, which will

[1] Available at the University of Twente.

[2] Interestingly enough, there is no academic proof that such policy is a good thing for the EU.

[3] Those which were available at the library of the University of Twente.

slurp a lot of money of common citizens as eventually they are financing the state aid by paying taxes. Such situation is then highly unlikely to benefit anybody. Consequently under such circumstances state aid will harm economy, and should therefore be condemned. So how does it work exactly? When is it justifiable for a government to intervene in the market? When should it rather restrain from doing so? What are the implications of giving state aid? This chapter will expose the answers to these (among other) questions. The literature findings are structured into two sections. The first one looks into the main argument for state aid justification, where state aid might benefit economy. The second part examines the main argument against the state aid, where state aid might harm economy. So the eventual discussion on the consequences of state aid is therefore revolving around the notion of being beneficial or harmful to economy.

2.2. Market failure

The scholars seem to agree that the only argument in favour of granting state aid is the presence of market failures in a market economy (e.g. Ganoulis & Martin, 2001; Szyszczak, 2007). Market economy is an economic system in which decisions about producing and consuming are made by individual producers and consumers, and there is little government intervention (Krugman & Well, 2006; Mankiw, 1997)[4]. Such economies are able to provide market participants with the things they want. As demand and supply side of economy are constantly in reaction to each other[5], the markets move towards an equilibrium, "a point when no individual would be better off doing something different" (Krugman & Well, 2006, p. 13). The equilibrium will be reached because if there is an opportunity for some people to get better-off, they will usually be able to exploit that opportunity bringing the market back to the equilibrium again (Krugman & Well, 2006; Mankiw, 1997). As an equilibrium is a point where demand and supply meet, in other words where the willingness of consumers of how much to pay for a certain amount of product equals the willingness of producers of for how much to sell a certain amount of product, it also determines the price and the quantity. Therefore such mechanism (commonly referred to as 'the invisible hand of Adam Smith') leads to efficient outcomes. Although market economy seems to be the choice for most of the governments, there is a debate when it comes to how much should the governments really abstain from intervention when it comes to market failures.

Markets fail when they cannot produce efficient results, when somehow the invisible hand of Adam Smith is not functioning well (Friederiszick, Röller & Verouden, 2006). But what do 'efficient results' imply? There are three types of efficiency: X-efficiency, allocative efficiency, and dynamic efficiency (Le Grand, 1991; Wolf, 1993). X-efficiency refers to "production of a commodity at the minimum possible cost in terms of the resources used" (Le Grand, 1991, p. 425). Allocative efficiency, also known as Pareto-efficiency, includes the notion of X-efficiency in the sense that if a production of good or service is allocatively efficient, then it will also be X-efficient. More precisely, the market outcomes are allocatively efficient if they generate a level of benefits which cannot be obtained at a lower cost, or at the same cost they cannot generate greater benefits; nonetheless in both cases, the costs must not exceed benefits. In other words such efficiency is achieved when it is impossible to rearrange resources without making somebody worse off (Barter, 1958; Winston, 2006). Hence if market fails, it means that arrangement of resources can be done in more efficient way and there is a need for intervention to correct it (Majone, 1996). The dynamic efficiency concerns the capacity of an undertaking to lower its costs of production, to improve the quality of its products, to innovate (Wolf, 1993). When referring to market inefficiency, market failure, scholars usually refer to allocative inefficiency (which includes the notion of X-efficiency). On the matter of dynamic efficiency the scholars remain undecided about the market's ability to accomplish this efficiency at all (Wolf, 1993). Therefore such efficiency is usually dealt with separately.

[4] It is contrary to the basis of command or centrally planned economy where government is making decisions about the production and consumption. This also means that the prices are not arrived at due to the market forces of demand and supply, but due to the governmental regulations.

[5] For the reason that producers and consumers are free to produce and consume whatever they want.

The scholars have defined a number of types of market imperfections which are of interest for state aid analysis. Below I will illustrate situations where government intervention can help to restore efficiency.

2.2.1. Externalities

Externalities occur where the actions of an individual have spill-over effects on the actions of another individual (Chang, 1996). Such spill-over effects can be negative, for example, when the side effect of production is an environmental pollution, which can also be denoted as *external costs*, and positive, for example, an investment by a company in research and development can lead to *external benefits* for other companies (Friederiszick, Röller & Verouden, 2006; Meiklejohn, 1999). Therefore companies, when making their private cost/benefit calculations, might over-provide activities with *external costs*, as according to their cost/benefit calculations it will be cheap to produce such activities, and under-provide activities with *external* benefits, as according to their cost/benefit calculations it will be expensive to produce such activities because they will not be able to capture those benefits themselves (Le Grand, 1991). In this way the companies, when deciding on the appropriate level of production, will only take into account their own benefits, "leading to a discrepancy between the private cost/benefit structure and the social cost/benefit structure" (Chang, 1996, p. 10). Hence the level of activity will be different from what is allocatively or even dynamically efficient (Wolf, 1993). Therefore in this case the government intervention is advisable (Chang, 1996; Friederiszick, Röller & Verouden, 2006; Meiklejohn, 1999). More precisely the government can choose to subsidize an undertaking which generates positive externalities, for example in terms of innovation or environment friendly technologies[6]. As it will be shown later in this chapter by helping such undertakings, the government also helps to sustain diversity in the market, the positive effect of which is the increased choice of consumers in products and services; and the accompanying effect of such diversity in the market is the decrease of prices. And as the prices are likely to go down, the consumers will be able to afford a better standard of living. On the other hand looking at the external costs, for example pollution, the government has an option of taxing it. In this way the costs will be 'internalized' and the company will be aware of all the costs.

However one could argue that the costs or benefits created by externality could be 'internalized' without the help of the government. In other words, there is no proof that the markets cannot handle externalities efficiently (Coase, 1960; Dahlman, 1979). For example, the victims of external costs could offer the producer payment in an exchange that he ceases the activity which leads to negative externalities. Therefore anti-interventionists argue that rational producer would choose to minimize the external costs as for that he will get money. However in reality such argumentation is weakened by the difficulty of its implementation. First of all, it is difficult to establish the number of all victims, and as long as the victims are dispersed, it will be also difficult to establish a fair payment. Moreover, nowadays usually it will be more beneficial for a producer to pay some of the victims and continue with 'externalizing' its costs than to cease the activity completely. In this way, the social costs will be passed on to the future generations, for example, in case of environmental pollution. Chang (1996) also points to the fact that "most goods create some negative externalities in their production processes in the form of pollution" (p. 11), thus making it for government impossible to intervene each time such situation takes place. Nonetheless, one should not focus on whether an externality exists or not, but investigate which solution would produce better results: market mechanism or government intervention (Chang, 1996).

2.2.2. Public goods

Government can be persuaded to intervene in the market because of the public goods. These goods are an extreme example of positive externalities (Friederiszick, Röller & Verouden, 2006; Le Grand, 1991). They are characterized by 'nonexcludability' and 'non-rivalty', where the former signifies that

[6] See for example the study of Kaur (2009) to see how state aid, within the EU, can positively contribute to the struggle against climate change.

a good cannot be exclusive in its use, so the ones who are not paying for a good cannot be excluded from benefiting from it, and the latter term implies that “enjoyment of the good by one person does not reduce its availability to other users” (Meiklejohn, 1999, p. 25). Therefore the suppliers of such good are not able to capture all the benefits themselves, and the consumers are likely to understate their preference for a public good as they know that they can get it for free if somebody else pays for it. In this case “individual rationality leads to collective irrationality” (Chang, 1996, p. 8). This in turn means that such strategic behaviour will lead to underprovision of public goods, leaving market at an inefficient level (Friederiszick, Röller & Verouden, 2006). For this reason, government intervention in the form of public financing of such goods is deemed to be an efficient response to correct this market failure.

However when looking at the particular case of automotive industry, it can hardly be conceptualized as a ‘public good’. Therefore this research will not go into more detail of this type of market failure. The only thing which needs attention here is the fact that even on this market failure type there is no consensus in the literature whether it is self-evident solution for the government to intervene when the market falls short on public goods.

2.2.3. Market power

Another explanation why the market mechanism may not be able to result in an efficient outcome is the presence of a concentrated market power – ‘failure of competition’ (Friederiszick, Röller & Verouden, 2006). This happens when the firms find themselves in the position where marginal costs are not increasing when the produced quantity increases (continuing economies of scale) (Le Grand, 1991; Mejklejohn, 1999). These ever increasing returns to scale make it possible for large firms to dominate the market as they will be advantaged in comparison to smaller firms which have high starting costs. Hence a limited number of firms will be in charge of production and eventually such situation will lead to the formation of dominance in the market (Le Grand, 1991; Wolf, 1993). Market power comes along with prices which are above the marginal costs, (in competitive markets the price would equal the marginal costs) and produced quantity lower than the quantity the society would want to have or would be warranted by the costs of production (Meijklejohn, 1999; Wolf, 1993). This results into some consumer surplus being transferred to the firms, but because the consumers lose more than the suppliers gain, the total surplus will be smaller. In such situation academics speak of deadweight loss to society (Chang, 1996). And this points to the heart of the market inefficiency in this stage: although such market can be X-efficient (Le Grand, 1991), it will still fail to produce allocatively and even dynamically efficient results. Dynamic efficiency will also be jeopardized as the dominant firms are not encouraged to innovate, to improve their ways of producing, to come up with updates of their products, etc. For the reason that they are secured of income and do not have to compete for that with others.

In these circumstances it will be justifiable for a state to intervene and correct the market mechanism, leading it to efficient results (Change, 1996). An example of such state intervention could be the reduction of market power through introduction of policies which foster entry into the troubled market (so for instance financial support to new firms). Thus state could promote competition (Meiklejohn, 1999). In this situation the consumers will benefit from the greater choice of goods and services (Collie, 2000). Additionally the side effect of increased competition is that producers are less able to manipulate the prices to their advantage. Thus competing for the consumers the suppliers will either look for the ways to decrease the prices or differentiate themselves in the quality to attract their clientele. As a result the consumers will be the winners as they will benefit either way (Collie, 2000).

However these state measures are not risk free. By helping one firm, state will be challenged not to create unequal circumstances for other participants of the market (Fingleton, 2009; Schleifer, 2005; Schwartz & Clements, 1999). Most likely some firms will be advantaged by state support when compared to others. For example, non-domestic firms, competing for the same market with domestic firms, will have to put more effort into their business if they want to stay in the market when the domestic firms are helped by the state aid, while the latter could be certain of its market presence (Friederiszick, Röller & Verouden, 2006). Therefore once again, when deciding to intervene in the market mechanism in order to restore efficiency, the state should weigh the consequences of its intervention and avoid a situation when by eliminating one market power it is helping to erect another.

2.2.4. Imperfect information

One of the assumptions of perfectly competitive markets is perfect information to which both consumers and suppliers have access. However this exists only on the pages of economic text books (Meiklejohn, 1999). In reality there is a discrepancy between the information available to supply side and demand side (Friederiszick, Röller & Verouden, 2006). Consequently, there will always be uncertainty without perfect information, and this may lead to inefficiency as consumers or suppliers are not able to make rational, efficient choices if they do not know everything about the product (or customer in case of suppliers) they want to buy. Hence, "market forces will not allocate efficiently and the economy will produce below its capacity" (Wolf, 1993, p. 27).

The government may then choose to step in and dissolve insecurity caused by imperfect information. An example is given by Meiklejohn (1999), where he points out to the consequences of imperfect information in financing new entries into the market, which usually have high sunk costs. He argues that it is extremely difficult for small and medium-sized enterprises (SMEs), to enter the market when the banks are not giving them the needed starting finance and investors are holding back because both do not trust that such loan or investment will be paid back. The outcome of such situation will be inefficient. As a result, the economy might not develop if new ideas are not introduced by the new entries. In such cases the state could correct such market failure by taking care that such entries do have a chance of getting finance (Friederiszick, Röller & Verouden, 2006). Taking the example of Opel, the investors might be scared off and hold back the needed finance, while the company might be doing a great job with innovative profitable technology. But as uncertainty prevails, the market will miss the opportunity to improve the efficiency level.

However again, if the state does decide to grant aid to a company, it must be good in picking 'winners', which would imply that it should have more and better information about potential 'winners' than investors or banks do, because it is betting with public finance (Meiklejohn, 1999). For example in the case of Opel, the government has less information about the car market than Opel has. In this way Opel is in a stronger position to convince the government that it is essential for the car market that Opel survives. If the government gives in, while the car market is saturated with car suppliers, it can lead to oversupply of cars, thus bringing the market further away from the equilibrium. There is a great deal of literature dealing with such inability of politicians to correct this market failure of imperfect information due to lack of knowledge, short-sightedness, the re-election motivations and high sensitivity to capture (Baldwin & Cave, 1999; Becker, 2010; Besley & Seabright, 1999; Collie, 2000; Dewatripont & Seabright, 2006; Fingleton, 2009; Le Grand, 1991; Schleifer, 2005; Schwartz & Clements, 1999; Stigler, 1971; Winston, 2006; Wolf, 1993). Academics refer to such inability as government failure. Thus correcting this market failure also involves a lot of risk from the state's perspective. Moreover it is obviously impossible for a state to correct all the failures associated with imperfect information.

2.2.5. Equity

So far I have given an impression that 'well functioning' is only to be determined by efficient outcomes. However, there is more to that. Especially in the world we are living in, where democratic rules request that preferences of society are ought to be heard by the government, one cannot ignore the outcomes which are desired by the people. And some of the people do not only want the 'cake to be bigger', but also the 'cake to be divided better' (Friederiszick, Röller & Verouden, 2006). In other words economic prosperity of a country is not enough, this prosperity should also be divided equally. Therefore when determining the 'well functioning' of the market one should consider distributional issues of equity.

On the whole economists are less comfortable in judging equity than efficiency (Friederiszick, Röller & Verouden, 2006; Le Grand, 1991; Wolf, 1993). It could be argued that including equity in the market failure discussion is too ambiguous and "goes beyond conventional boundaries of microeconomics" (Wolf, 1993, p. 19). The difficulty around the 'equity' is constituted in the definition of it. Wolf (1993) correctly points out that there are different shades of equity ranging from "equality of outcome or equality of opportunity" to "the Old Testament or the New Testament" sense of equity (p. 19). One can also interpret equity as a concept of social justice, but then again what is social and what is justice (Blauberger, 2009)? And so the judgment on 'equity' quickly becomes a normative one, if not even a political one (Friederiszick, Röller & Verouden, 2006). Some argue that equity *should* have priority over efficiency, and because the market is not able to accord such priority it is then regarded as a market failure (Lukes, 1996; Wolf, 1993). Despite the difficulty and the ambiguity surrounding equity concept, the consideration of distributional equity is very important for the formulating, assessing and executing government policies, including state aid policies. Therefore looking at the purpose of this research (holistic understanding of state aid), the omission of equity argument as a market failure is not allowable.

The economists concentrate on two dimensions of equity. The first one involves the distribution of a service/good, whether everybody has an equal access to it or at least a minimum standard of consumption. The second dimension focuses more on the equity of the financial ability of getting any service/good at all, and this comes down to the distribution of income and wealth (Le Grand, 1991). However there is no consensus on the 'optimal' redistribution of wealth and resources among the economists, because 'optimality' is rather ideologically (and politically) laden concept (Friederiszick, Röller & Verouden, 2006). On the other hand it is also obvious that people 'enter' the market with different resources which they use to generate income, and as that basis is not the same, the people will inevitably have unequal incomes with unequal opportunities to consume (Le Grand, 1991). And as market cannot correct such unequal situation itself this inevitably presupposes that government needs to intervene to correct such inequality if preferred by the people (Friederiszick, Röller & Verouden, 2006).

Thus, for example, in the case of Opel, the government might have been concerned with the fact that if Opel goes bankrupt the employees would hit the bottom of socio-economic ladder. They would not be able to afford the minimum standard of consumption. Moreover there would not be a balance in the distribution of wealth. Such radical changes in equity of a population can be a valid reason to intervene for the government. However, it is needless to say that such conclusion is a very politically and even ideologically laden statement. Nevertheless again, as Le Grand (1991) argues it is disputable "whether the inequities generated [by the market] will be greater than any created by government intervention" (p. 428). As an example, coming back to Opel, the government could have weighed the options between subsidizing on individual level, *i.e.,* via the existing standard social security payments, and subsidizing the company. In the first scenario, the market would have been let free to do its clearing, and unemployed would have been caught by the social security net – just to find another job later. But which one leads to better efficiency levels remains a disputable question.

This brings us to another point of discussion – the relationship between equity and efficiency. Academics are concerned with a trade-off which might appear between efficiency and equity in the process of policy formation. Some economists argue that it is not possible to have both at an optimal level (Friederiszick, Röller & Verouden, 2006). They argue that it is often the case that the 'increase' in one often leads to the 'decrease' in the other. This is partly because there is no cost-free redistribution: nor in taxation terms, nor in incentive problems terms. The equity could be achieved through a high taxation of a richer population of a country, but that may lead to the distortionary effects: the population that is to be highly taxed might be less motivated to earn or save money because they will have to give up the larger part, due to increased taxes, of their income. In other words a situation may arise when 'not-working' is more profitable than 'working', and this does not contribute to economic efficiency (Le Grand, 1990). On the other hand there are also economists who are less pessimistic about the distortionary effect the taxes can have on the people's incentive to work (Mankiw, 2007). Hence it becomes less straight forward whether the trade-off really occurs.

Another example does not offer clarity either. The government may wish to help the disadvantaged regions by subsidizing the local businesses. Such intervention is likely to increase the distributional equity within the country, but at the same time it is also likely to advantage particular firms over other firms. This might lead to reduced effort of regions "to balance their budget or to eliminate structural rigidities in their economies if the negative implications of budget deficits and slow growth performance are compensated by higher aid receivables" (Friederiszick, Röller & Verouden, 2006, p. 17). Therefore these moral hazard problems, induced by the improper implementation of financial support, may decrease economic efficiency. On the other hand, using the same example one can also show that there is no trade-off between efficiency and equity. By helping the less advantaged regions, the government might help to keep more players in the market and thus increase competition. And as argued previously more competition leads to more efficient results. At the same time such measure still helps to increase distributional equity within the country.

Lukes (1996) and Le Grand (1990) also disagree that there is a trade-off between efficiency and equity, but highlight it from another angle. They argue that such trade-off is impossible because that would imply that the objectives of efficiency and equity are of the same category of values, and they argue that efficiency is subordinate to equity. "Efficiency, on its most natural interpretation, is a secondary objective. It is, one might say, and adverbial quality: one pursues this or that goal more or less efficiently" (Lukes, 1996, p. 38). Efficiency, being a secondary objective, "acquires meaning [only] with reference to primary objectives such as equity" (Le Grand, 1990, p. 560). Therefore as efficiency cannot be an objective in the primary sense of the word; there cannot be a trade-off between the values of efficiency and equity.

However, such discussion can take this research out of its manageable scope and focus. Therefore it is wise only to give credit to the fact that such discussion exists, for the reason that when giving state aid the government should consider such possible trade-off between efficiency and equity. In sum, when government is aiming at correcting market failure of equity it should be cautious about the ambiguity of the concept of 'social justice' and consider what implications economic intervention will have on the relationship between efficiency and equity, and whether intervention will yield results which are worth of creating (Friederiszick, Röller & Verouden, 2006).

2.2.6. Macroeconomic crises

The economic crisis which set off in the beginning of the twentieth century reminded us of a natural phenomenon – downturns in the economy. Although such downturns are not directly considered as market failure, one cannot deny the fact that during such times the market does not function well, in other words the market *fails*. The troubled periods are a regular feature of economies (Krugman & Well, 2006). Fluctuations, series of ups (expansions) and downs (recessions), on the short run determine business cycle. Expansions are periods when the employment and output are rising. Recessions are periods when the opposite holds (Krugman & Well, 2006). To the consequences of a recession belong also reduced incomes and lower living standards. "Like market failure, recessions are a fact of life; but also like a market failure; they are a problem to which economic analysis offers some solutions" (Krugman & Well, 2006, p. 145).

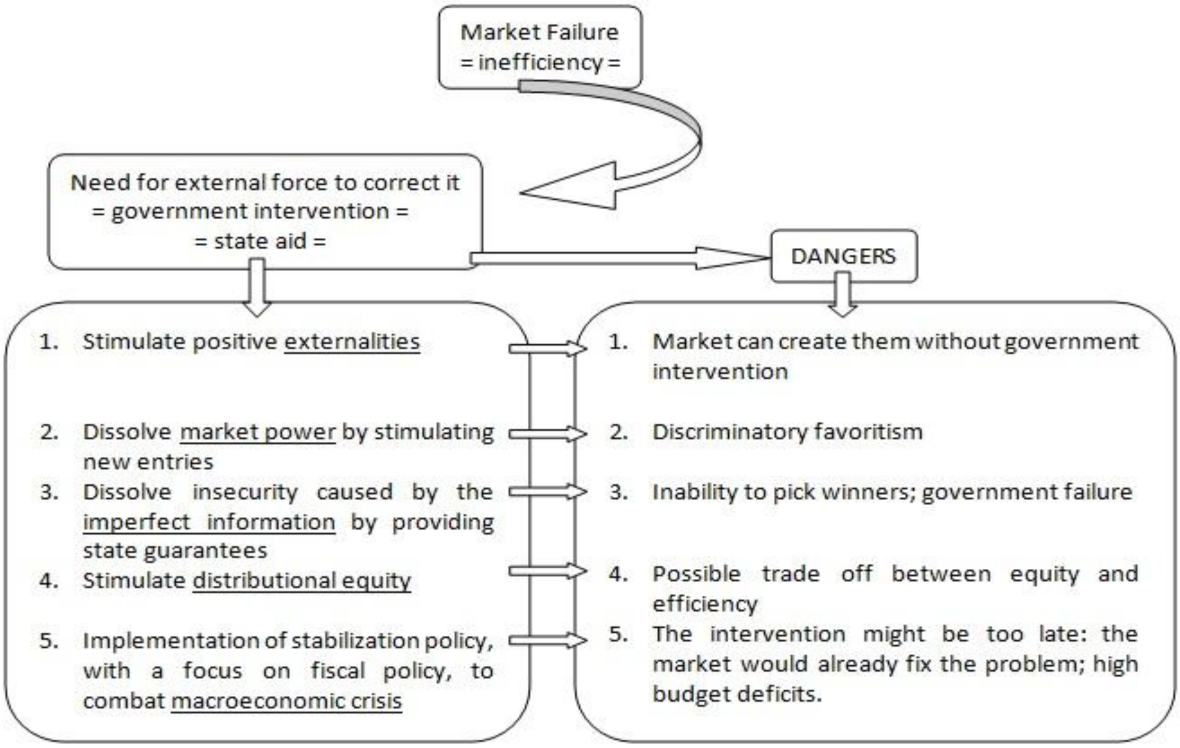
Governments can choose to try to reduce the severity of recessions through the so-called stabilization policy. The two main tools of this policy are monetary policy and fiscal policy. The first one concerns the changes in the quantity of money in circulation and/or in interest rates, and the latter concerns the changes in taxation and/or in government spending. However the 'means' are different, the 'end' is the same: both policies seek to ensure full employment. Economists are undecided which tool should be preferred over another. Some argue that the government should spend money in recession in order to create jobs, in other words expansionary fiscal policy should be the main focus (Keynesian school of thought), while others argue that the government should balance the budget and raise interest rate even though the recession might not be over, in other words monetary policy should be the main concern (orthodox school of thought) (Whyman, 2006).

However again it is not definite whether the government should intervene at all. Mankiw (1997) argues that “before certain measures kick in, the measure will become unnecessary as market will already fix the problem itself” (p. 363). Moreover, what is relevant to the discussion on state aid, the increased public debt, which can be the result of government spending, “may crowd out private investment spending and reduce the economy’s long-run rate of growth” (Krugman & Well, 2006, p. 309). This can happen because the government will end up ‘competing’ with the firms, which plan to borrow money for investment purposes, in the financial market (Krugman & Well, 2006). Rising debt may also lead to government default, which can offset economic and financial turmoil on national but also international level. Moreover there is a reason to believe that budget deficits put a burden on future generations (Mankiw, 1997), as they would be paying higher taxes. But again there are also economists who are less pessimistic about the impact of excessive budget deficit (Mankiw, 1997). In fact, Mankiw (1997) even argues that the question ‘how big a problem are government budget deficits?’ is one of the most important unresolved questions of macroeconomics.

What should be noted here is the fact that economic crises, economic downturns, can be the reason for the government to intervene in the economy. And just as in other cases, the government should be cautious and aware of the consequences of such intervention. However it is also clear, that economic reasons are also ideologically driven in this case. So it comes down to what men believe – which school of thought one pursues.

2.2.7. Summary and conclusive remarks

This section has outlined the justifications for state aid, government intervention, in the case when markets fail to come to efficient results or to results which can be regarded as not satisfying the equity concern. It has been shown that there are different types of market failures that are related to the state aid discussion. The diagram below exposes the justifications for giving state aid on the ground of different market failures and the dangers that accompany such state aids.


Market Failure
= inefficiency =
Need for external force to correct it
= government intervention =
= state aid =
DANGERS
1. Stimulate positive externalities
2. Dissolve market power by stimulating new entries
3. Dissolve insecurity caused by the imperfect information by providing state guarantees
4. Stimulate distributional equity
5. Implementation of stabilization policy, with a focus on fiscal policy, to combat macroeconomic crisis
1. Market can create them without government intervention
2. Discriminatory favoritism
3. Inability to pick winners; government failure
4. Possible trade off between equity and efficiency
5. The intervention might be too late: the market would already fix the problem; high budget deficits.

One obvious conclusion can be drawn that academics agree on one thing – the market can fault. However serious the flaws of the market can be, there is no consensus whether it is the government that should intervene. All above mentioned cases of the market failures do not lead to self-evident conclusion that government can do a better job than a market can. Even more so, the government can be the wrong player to interfere in the first place (Becker, 2010; Besley & Seabright, 1999; Collie, 2000; Dewatripont & Seabright, 2006; Fingleton, 2009; Harbord & Yarrow, 1999; Nicolini, Scarpa & Valbonesi, 2010; Schleifer, 2005; Schwartz & Clements, 1999; Stigler, 1971). There is always a chance that the market can resolve the issue itself. Often there is even a danger that the government can do more damage by for example misbalancing the competitive market by giving advantage to certain producers, while wanting to reduce market power of others. Moreover the assumption that the government has better information than the market does and can therefore 'pick winners' is disputable. The government can also cause inefficiency by overemphasizing the distributional equity objective, and thus again misbalance the market.

A dilemma arises with acknowledgement that a key condition for a particular state aid to succeed (enhance the welfare) at all is the presence of market failure (Ganoulis & Martin, 2001). And once such proposition is established, the following problem comes up: measurability (Beulens *et al.*, 2007; Friederiszick, Röller & Verouden, 2006; Ganoulis & Martin, 2001). Although there are insights of what *is* market failure, the general empirical indicators are difficult to distil (Beulens *et al.*, 2007; Friederiszick, Röller & Verouden, 2006). It is a challenge to identify the magnitude of a market failure, and it is not easy to overcome (Le Grand, 1991). The actual costs of market inefficiency to social welfare are often unknown (Ganoulis & Martin, 2001). Therefore it is an extremely delicate task for the government to prove that the damages are worth intervening for.

On the other hand it is equally difficult to prove that the damages are *not* worth intervening for. For example, Zerbe & McCurdy (1999) argue that market failures are characterized by ubiquity – the state of being everywhere (p.561). Anywhere one would look one would inevitably find some market imperfections. This makes justification of state aid on the basis of correction of market failure look unstable. The rightly placed criticism is: when to intervene at all? Which market failure (*i.e.* inefficiency) is significant enough to call for intervention? However the "supporters of the market failure concept avoid this problem by focusing on failures that are 'big'" (Zerbe & McCurdy, 1999, p. 564). But then again: what is big? To socialists the equity argument may be the valid reason to intervene, while for liberals it might not be the case. It follows then that, just like equity, efficiency revolves around value-laden preferences people make about efficient levels of being (Arrow, 1984; Le Grand, 1990). So market failure is typified by its inevitable continuous existence and the inability to analyze it objectively.

Consequently against this background, the defence of state aids on the grounds of market failures argument becomes a weak one as there are a lot of ambiguities around it (Ganoulis & Martin, 2001). Like doctors wanting to cure the patient, the government should consider "a diagnosis of the underlying disease and consider the dangers of treatment, including side effects" (Zerbe & McCurdy, 1999, p. 559). An observation of the existence of market failure is necessary for a successful state aid intervention, but it does not suffice (Buelens *et al.*, 2007; Zerbe & McCurdy, 1999). The science does not offer black and white scenarios, when it comes to justifying state aid on the ground of market failure. On this point we turn to the following section which will deal with other factors which should be taken consideration of in order for the intervention to succeed.

2.3. Competition

One of the main critics of academics on the use of state aid is the possible negative effect it may have on the competition. The part on market power has already touched upon this concept; by interfering in the market, there is a possibility that the government can disturb the mechanism of a competitive market. For the understanding of state aid consequences it is essential to explore this concept into some more detail. This section will pay attention to why it is so important to sustain the competitive status of economy and how exactly and whether can government endanger it through state aid.

First of all there is a need to establish what the word 'competition' implies. De Gaay Fortman (1966) points to the two interrelated dimensions connected to the word 'competition' – *state* of rivalry and the *act* of competing. "The existence of rivalry implies that rivalry must influence the behaviour" (De Gaay Fortman, 1966, p. 1), on the other hand when the focus lies on the *act* of competing, the presence of rivalry dictates how such competing takes place. These two different dimensions also point out that there are different ‘shades’ of competition: for one competition is connected to words like ‘initiative’, ‘progress’, ‘development’ and ‘performance’, the so called “*competition in performance*” denotation; for other competition signifies deliberate attempt to eliminate other competitors, the so called “*cut-throat competition*” understanding (De Gaay Fortman, 1966).

2.3.1. Mechanism

Having outlined the implications of competition, it becomes easier to understand what the benefits of sustaining competitive status of economy are. There is a need to be aware of why the competition is worthy of preservation in the first place before explaining how the state aid can endanger it.

Suppliers face other competitors in the market. They have to compete for their existence and attract consumers. In order to do so the suppliers have to adjust to the demands of consumers, otherwise they risk exit from the market. The consumers’ demands concern prices, quality, service and quantity of the product. Consumers and suppliers are always reacting to each other in order to reach the most optimum stage of economic activity price-wise and quantity-wise. For the suppliers the only way how to survive in such environment is to differentiate themselves from the rivals through quality, better price, service, and good investments (for example eco-friendly technology). Such continuous state of rivalry ensures dynamic accumulation of knowledge and innovations, as suppliers are forced to compete for existence. Thus competition becomes about providing better quality, more efficient production, efficient specialization and job allocation, efficient rate of output, and lower prices, plurality of goods and services, and freedom of choice (De Gaay Fortman, 1966; Lowe, 2009). “Competition is a key driver of productivity growth and wealth creation.” (Fingleton, 2009, p. 3). Said differently, the competition stands for improvement, and not because the old things are bad, but because the new ones are even better (Munkhammar, 2007). Hence competition will ensure all three types of efficiency: X-efficiency, allocative efficiency, and dynamic efficiency.

But there is another side to this state of rivalry. For example in bad times when everybody is watching their pennies, customers will reduce their spending and undertakings will have to adjust their supply to the reduced demand (otherwise the companies will make costs without any gain). Therefore flexibility is essential for the companies’ health. This consequently means that the losses are made by the companies which are unable to adopt their products to the demands of the customer. And such firms eventually leave the market. The least efficient firms exit first, followed by the companies which are too small to achieve economies of scale. If these adjustments are not enough to bring demand and supply to the equilibrium, and demand remains lower than supply, there will be a time when some of the firms will be making losses until one of them cannot stay afloat any longer and will exist the market, bringing the market back to the equilibrium again (Lyons, 2004). This market clearing is inevitable and weak producers will be eliminated (Becker, 2010; Fingleton, 2009). This is just as fundamental for economic growth as the entry to the market; as inefficient firms exit the market leaving room for more efficient companies to expand and new ones to enter (Dewatripont & Seabright, 2006; Lyons, 2004). It is also referred to as the creative destruction – an industrial mutation that “revolutionizes the economic structure from within” (Schumpeter, 1994, p. 83); the destruction of the old is a necessary condition for the creation of the new (De Gaay Fortman, 1966; Munkhammar, 2007; Schumpeter, 1994).

Nevertheless the companies may initiate agreements or cartels to fix the price or fix the supply amount in order to secure their share of the market and avoid the mechanism of creative destruction, which makes it impossible for the inefficient companies to survive and allows newcomers into the market. For example, by forming cartels the companies can agree upon the supplied quantity in order to make the product artificially scarce and consequently raise the prices. Or other way around, the companies may engage in predatory pricing forcing some of the suppliers out of the market. This is the point where government comes into picture, because it can implement competition policy to secure unbiased competition. It can set up rules to punish and monitor cartels or any other anti-competitive behaviour.

2.3.2. State aid & competition

However the government intervention is risky. The government can also be the one who can stand in the way of competition by providing discriminatory state subsidies or protection to some firms (Friederiszick, Röller & Verouden, 2006; Harbord & Yarrow, 1999; Lyons, 2004). This is an ever returning line of argumentation against state aid in most of the literature on state aid. Academics argue that giving state aid will inevitably disturb competition in most of the cases by stimulating market power. Moreover it will also introduce moral hazards, as companies will not have the incentive to perform better as they will be certain of government rescue in case of losses (Garcia & Neven, 2005; Lyons, 2009; Møllgaard, 2003). State aid will also stand in the way of creative destruction upon which the competition mechanism rests (Becker, 2010; Dewatripont & Seabright, 2006). Hence X-efficiency, allocative efficiency, and dynamic efficiency will be jeopardized when subsidy or state aid will be given. However not everything is that straight forward and this section will illustrate exactly that. There are always exceptions, nuances and faults in assumptions which determine whether the state aid indeed will stimulate market power formation. In attempt to present this complex matter as orderly as possible, I divided this section into two parts, based on the main criticism on the state aid. Each part will start with argumentation which criticizes state aid and proceed to more nuanced look upon state aid.

2.3.2.1. Stimulation of market power

The government can stand in the way of the previously mentioned essential mechanism of creative destruction by helping the, often, old or less efficient firms to stay in the market regardless the fact that other new companies could do the same job more efficiently (*i.e.,* cheaper, faster, environmentally friendlier). It is not unimaginable then, that state aid can facilitate market power formation, because while non-receivers suffer, the recipients will enjoy the preferential position. Following, such intervention is likely to affect the receivers, the non-receivers, and the new-comers.

First of all, “it has the effect of lowering the recipient’s cost of capital.” (Møllgaard, 2003, p. 8). The receivers which would normally (*i.e.,* without the help of the government) have increased costs, as they would have found themselves in a situation where their production is not valued by the customers, will be safe as government will be compensating the costs. “State aid then will allow the recipient to gain [or keep] market share and become [or stay] dominant while charging higher prices or selling larger quantities compared with the level playing field.” (Møllgaard, 2003, p. 8). In the case when the recipient is already the main supplier, it will continue keeping the prices artificially high (because there is no reason to pass on their cost reduction, acquired through the subsidy, completely as they do not have to compete with others for the consumers (Garcia & Neven, 2005)) and in this way scare off the entries and at the same time secure its market share and income.

On the other hand, if the supplier is not dominant but on the same footage as other competitors, it might decrease the prices to the customers (by passing on their cost reduction to them) and in this way ‘steal’ them from the competitors[7] (Garcia & Neven, 2005). At the same time the latter will not be able to compete on such low prices and might eventually be forced to exit the market, leaving the recipients at a stronger position than before. Even if they stay afloat, they will be “forced to reduce price, quantity, and investment, effectively accepting the dominant firm’s leadership or dominance” (Møllgaard, 2003, p. 8). The non-receivers will be hurt, as the rent will be shifted away from them to the receivers (Chindooroy, Muller & Notaro, 2007; Garcia & Neven, 2005; Møllgaard, 2003). Another thing that should not be forgotten is that eventually, due to the lack of proper competition, the recipients are likely to raise the prices and in this way disadvantage the consumers’ purchasing power. Thus indirectly, the state aid will also harm consumers.

Nevertheless a conclusion that state aid will always stimulate market power formation would be too naive. The argument supported by the most of the academics is that the state aid will endanger

[7] However it will be shown later that such strategic decision depends on the level of concentration of the market but also on the level of rivalry.

competition by allowing dominance into the market. The rightly placed criticism is then – how do you define the market, because its conceptualization determines whether a supplier can be called dominant or not (Fingleton, Ruane & Ryan, 1999). "The evaluation of market power, its extent and consequences, and the definition of the relevant market are inextricably linked." (Fingleton, Ruane & Ryan, 1999, p. 66). The more narrowly the market is defined the bigger the possibility is for the firm to be seen as dominant. For example in the case of Opel, there is difference between a general automobile market and a very specific hybrid or electric cars market. Moreover identification of the geographic area of the market is also influential in the conviction of dominance. Before deterministically claiming that state aid is likely to benefit or create any dominant players, in other words disadvantage competition, it should be considered what market is of importance here, who are the main competitors, and who shares the same characteristics.

When competition and market definition are discussed at the same time, it eventually comes to the question whether the products are compatible. In other words, how easy it will be to substitute the good or service with another. The lower the substitutability, the more specific is the market definition, and the bigger is the chance that the supplier would be found dominant (Fingleton, Ruane & Ryan, 1999). In other words low substitutability also indicates that the market concentration is high – there are few suppliers (Garcia & Neven, 2005). The concept of concentration is important for the state aid discussion because "with a small number of firms, the recipients account for a relatively large share of output and hence [the subsidy] has more of an effect on competitors" (Garcia & Neven, 2005, p. 13). Therefore in a market characterized by low concentration the damage caused by the state aid would be smaller.

For example, if the market is defined as a car market: it is easy to substitute a car by any other car as there are plenty of car manufacturers (*i.e.,* concentration is low); but when the market is more specified, it becomes less easy because there are not so many, for example, hybrid cars (*i.e.,* concentration is high). Consequently if the government chooses to help, for instance car manufacturer X which is one of the few hybrid car manufacturers, it might argue that the damage to competition will be small because they are supporting just one of the many car manufacturers, but in fact if examined closely company X has only few competitors, and therefore the damage to competitors would be greater than expected. Eventually it evolves that the higher the level of concentration of the market the bigger the chance is that state aid would 'increase distortion incurred by the competitors' (Garcia & Neven, 2005, p. 14).

When considering one specific supplier one should look at the cross-price elasticity of demand. It is not unimaginable that a change in the price of one product leads to a change in the demand for another. The economists call this the cross-price effect. In case when products are substitutes (*e.g.* new cars and second-hand cars), the cross-price elasticity is positive. For example, as the *price* of new cars (X) *rises*, the *demand* for second-hand cars (Y) (close substitute of new cars) will *rise* as well; which in term means that consumers will substitute the X by Y as Y turns out to be cheaper in the end. And as both price of X and demand for Y move in the same direction, the relationship between them is accordingly positive. The greater the value of the cross-price elasticity the more readily the consumers will substitute the X by Y. And if calculation of cross-price elasticity indeed shows a strong positive relationship, the producer of X can hardly be called dominant as there is a strong substitute in the market (Forgang & Einolf, 2007).

Another concept that is closely associated with the previous ones in the literature, and which is also relevant for the discussion of what kind of effect the state aid can have on competition is the intensity of rivalry (*i.e.,* ferocity of competition) (Garcia & Neven, 2005). "Rivalry matters because competitors are induced to respond more sharply to the price reduction of the recipient" (Garcia & Neven, 2005, p. 13). Intense degree of rivalry indicates the low degree of product differentiation and low margins. It is also closely related to the market concentration. Garcia and Neven (2005) argue that when a state aid is directed at reducing the costs of a producer, while there is high level of intensity of rivalry, it will cause distortion in the market - even in the case of low concentration[8], *i.e.,* many suppliers. This means that in the case when there are a lot of companies in the market and the competition among them is fierce, and one company is helped by the government to overcome its high costs, the rest of suppliers will deal with disadvantageous consequences as a result of preferential treatment of the recipient. Facing strong competition the recipient is likely to pass through his reduction costs. Some of the competitors would be forced to leave the market because they will not be able to compete on such low prices as they already face low margins of profit. Hence the competition might be hurt and indeed there will be an opportunity for market power to arise.

The analysis of the situation where the degree of rivalry is low also suggests that state aid is indeed bad for competition. It is important to bear in mind that low degree of rivalry indicates that the suppliers produce differentiated products and have high margins. Hence as the products are so differentiated the recipient's pass-through of his reduction costs will not make a difference for other competitors. Price decrease of one product will not force others to decrease their prices as well in order to stay in the market, because of the low substitutability of the product. So the others will not be forced out of the market when unable to compete on low prices. Hence it follows that low rivalry suggests a low substitutability and as argued previously a market characterized by a low substitutability is very 'fertile' to the market power formation. Hence it can be concluded again that state aid given to participant who already operates in a low degree of rivalry environment is harmful to competition. In other words, the competition will not be advantaged by strengthening an already potential market power.

On the other hand, the situation changes when the state aid is given to the recipient who operates in a market characterized by intermediate[9] degree of rivalry. The recipient is unlikely to pass through his reduction costs when the degree of rivalry is intermediate, because such action will be a strategic mistake[10]. It will only initiate fiercer competition and in the long run the recipient will see his margins shrink (as companies will engage in down-pricing war leading the price to the level of marginal costs). This implies that if the state aid is given to a firm which does not face fierce competition, it is unlikely that the firm will lower its prices to the consumers because it does not want the competition to get tough. Consequently this means that other competitors will not be forced out of the market as situation when they would be unable to compete on the low prices will not occur. This also means that the status quo will persist: prices do not fluctuate and nobody leaves the market. However the maintenance of status quo does not necessarily have to be a good thing, the idea is that state aid will not stimulate any new market power.

The same relationship between state aid and competition is applicable when the state aid is directed at affecting the quality (*e.g.* in case of financial assistance for the research and development (R&D) investments) (Garcia & Neven, 2005). The state aid will disadvantage competition when the recipient finds himself in a market characterized by high or low degree of rivalry. However the state aid can sustain competition when the degree of rivalry is intermediate. However Garcia and Neven (2005) neglect one thing in this case: positive externalities which such financial assistance may initiate. The rivals might profit from such state aid to one of them if, for example, the rest of competitors can free-ride on the accumulated knowledge from the other firm's R&D investments. Consequently one may argue that with accumulation and 'dispersion' (when others can free-ride) of better knowledge the competition will be advantaged. The government can ensure such 'dispersion' through, for example, making it one of the conditions of the state aid.

When the state aid is directed to keep the company from exiting the market (or other way around, when the state aid is directed at inducing entry), it is an *intermediate* and even *low* degree of rivalry combined with *high level of concentration* which will benefit the competition the most (Garcia

[8] Previously it has been argued that especially high concentration of the market will result into the state aid causing more damage to the market.

[9] This means that there is some product differentiation and there are some margins of profit, but it is not enough to make the supplier entirely independent or dependent on others.

[10] This holds for low and high concentration as well.

& Neven, 2005). The *intermediate* and *low* degree of rivalry is of importance here because it means that the degree of product differentiation and the margins of profit are higher, than in the case of *intense* rivalry. A new entry will bring possible substitutes to the market (decreasing the concentration). The presence of subsidized firm (which otherwise would be absent) will affect the (potential[11]) prices and the profits of existing competitors. The existing competitors will see their profit margins shrink as they would be forced to lower their prices with regard to more substitution. Hence state aid will strengthen competition and accordingly provoke the prices to go down.

If there was already a high degree of intensity of rivalry in the concentrated market before the entrance of the new competitor, then additional substitute provider would be less able to provoke a decrease in the existing prices (Garcia & Neven, 2005). Apart from the fact that there will be more competitors and the market will be less concentrated, the state aid will not initiate fiercer competition. At the same time it will also not disadvantage the competition either. So the argument that state aid will stimulate market power will still not hold here.

This part of the section has attempted to demonstrate that the argument that the state aid stimulates market power formation does not always hold. At least it is not black and white. Of course there are threats to competition but they should be analyzed in more detail before drawing the negative conclusion. For instance, the attention should be paid to the definition of the market, the level of concentration, the cross-price elasticity of demand and the degree of rivalry in the market.

2.3.2.2. Moral hazards and creative destruction

Another criticism of state aid comes from the moral hazards literature. The problem of moral hazard arises when the government subsidizes companies (Garcia & Neven, 2005; Lyons, 2009; Møllgaard, 2003). Subsidies can undermine the competition mechanism because the prospect of receiving financial help can lead to reckless behaviour on the side of the recipients. They will be secured that if the problems will arise they will be rescued by the government. So there is no incentive to improve their functioning: there is no incentive to innovate and become better. For example, if the recipients bet high and produce a lot of goods, the scenario is then either get the high profit if everything is sold or get financial help if demand falls short (Lyons, 2009). The motivation to improve the status quo will not play a role in the business strategy anymore as the companies would not have to compete with their rivals because of the capital security provided by the government. In an empirical study of Bergström (1998) it has been shown that in the short run the subsidized firms do increase their productivity more than the non-subsidized, but already within three years the productivity of these firms decreases below the level of productivity of the non-subsidized firms. He finds evidence for the explanation of such reduction in the following: granting state aid gives rise to slack or rent-seeking activities, as companies relax their efficiency maximizing goals over time.

Moreover, this incentive to improve (on which rests the idea of creative destruction) is also reduced by the fact that not the companies which innovate but the companies which can best work the political system and lobby the government get the price in the end (Garcia & Neven, 2005; Lyons, 2009). Hence moral hazards can also be of importance to the entry of new companies into the market. They can be scared off to enter the market, because of the observation that the companies only survive if they can lobby the government. Therefore the investment and aggressive marketing will be given a lower priority as the companies will know that inefficient rivals will hang on to the shares of the market (despite of the incompatible product offers and overcapacity) without any concern for the consequences of such inadequacy (Lyons, 2009). Flowingly, the creative destruction will be impeded as non-efficient and non-innovation driven firms will stay in the market, making it impossible for new-comers to enter.

However, as argued previously in section on mechanism, the strength of creative destruction is in its inevitability. Therefore state aid becomes a waste of money because an economic restructure

[11] In case when a company would have left the market without the state aid, the stronger competitors would have been left with a possibility to raise the prices and therefore increase their profits.

and industrial mutation are necessary to move on. The inefficient firms will sooner or later perish independently of government intervention. So why would the government interfere and just postpone the execution at all (Becker, 2010) and waste public money (Dewatripont & Seabright, 2006)? The best thing in the prospect of competition the government could do is only to neutralize or cushion the exit of a company but not to prevent it at all (Becker, 2010; Lyons, 2009). Thus the argument against state aid follows that state aid will reduce the recipient's incentive to compete and thus innovate and moreover state aid will be pointless because creative destruction is inevitable.

Moral hazards are indeed difficult to prevent or regulate, but still there is some room for nuances. The rise of moral hazards indicates that a firm does not function well. However there is literature which points out to different conditions which are needed to be fulfilled in order for the firm to still have a chance and survive the difficult times, in other words improve their functioning, after receiving state aid. Thus it suggests that in some cases there is a possibility that the company will still have the incentive to innovate and become better after having received state aid. This in turn means that the mechanism of creative destruction does not always hold, as without state aid it could have destroyed something useful.

First of all already in the previous part of this section, it has been shown that state aid under certain circumstances can stimulate competitive behaviour by allowing more competitors into the market and sometimes even preventing the disappearance of firms as it may lead to a monopoly or tight oligopoly situation (Chindooroy, Muller & Notaro, 2007; Garcia & Neven, 2005). This implies that the recipient of the state aid will also be forced to compete (and thus innovate). Another related argument that state aid may be justified when it helps to sustain competition by keeping important knowledge asset for the economy from vanishing (for example, a company which produces high-tech nanotechnological devices which no one else knows how to produce) is supported in other literature (Chindooroy, Muller & Notaro, 2007; Collie, 2000; Collie, 2002). Hence the state aid can force the competitors to be more competitive.

Therefore, under these circumstances, the government can choose to help the firm in difficulty. It can give rescue or restructuring aid. A firm in difficulty is characterized by the inability to overcome losses on its own and without outside intervention by the public authority it will be driven out of the business in the short or medium term (Gual & Jódar, 2006). Rescue aid is limited in time, amount and form; and the idea is to buy the company time with this help to come up with a self-financed plan how to restructure (Glowicka, 2006; Gual & Jódar, 2006). While restructuring aid is long-term, can be taken any form and is large enough to support the restructuring of the firm in order to restore its long-term viability (Glowicka, 2006; Gual & Jódar, 2006). "Therefore, a firm receiving restructuring aid gets substantially more support from the state than a firm receiving only rescue aid" (Glowicka, 2006, p. 34).

Coming back to the previous statement that why would the government even bother to give state aid when the 'creative destruction' is unavoidable and weak competitors will be eliminated eventually, empirical studies on the effects of these two types of aid – rescue and restructuring – have shown that such statement is very conditional. Therefore the deterministic conclusion on the uselessness of state aid would be naïve. The findings illustrate that companies receiving restructuring aid have a higher chance of surviving than companies receiving rescue aid (Chindooroy, Muller & Notaro, 2007; Gual & Jódar, 2006). "We estimate that almost 50% of the companies having received rescue state aid did not survive while only 20% of the companies having received restructuring aid folded." (Chindooroy, Muller & Notaro, 2007, p. 176). It should be noted that both studies do not confer the blame of folding to the type of the aid, but simply show that rescue aid receivers are less likely to survive. "This result can be explained by recalling the key characteristics of rescue aid: it is given to temporarily support a firm in difficulty and does not enable the firm to undergo fundamental changes, but only to commit to a restructuring plan in the near future. In the absence of a subsequent award of restructuring State aid, the company is thus required to fund its own restructuring costs, which might deepen its problems" (Chindooroy, Muller & Notaro, 2007, p. 182). Hence one could argue that government should refrain from giving rescue aid as the recipients of it are likely to default anyway. On the contrary the empirics on restructuring aid show that aid can indeed help the firm to stay in the competition and thus also help it to contribute to the competition mechanism.

The studies have also shown that if company's difficulties were induced by the market decline and/or poor management, the chance of survival after receiving rescue or restructuring aid is higher by 30 percent (Chindooroy, Muller & Notaro, 2007; Gual & Jódar, 2006). Next to it, the demand growth in a sector, to which the firm belongs, has also been found likely to improve the probability of survival. The characteristics of the company such as "size, age, legal status, its condition at the time of aid (measured in profits per employee), or even the relative size of aid have no significant effect on the probability of survival" (Gual & Jódar, 2006, p.87).

Another interesting empirical finding was done by Oxera (2009). They have shown that companies which were growing faster prior to the period of difficulty are more likely to survive financial difficulty, while those companies which performed badly in financial terms over the past years prior to the period of difficulty are less likely to survive the difficult times. However this relationship is weaker over the longer term which suggests that contemporaneous business performance is a better indicator of company survival than the historical performance (Oxera, 2009).

Keeping these different aspects in mind, two things evolve: the state aid cannot be called pointless at all and in certain circumstances the recipient has a real chance to improve. It has been argued in the literature that sometimes the state aid is warranted to exactly *maintain* the competition. Empirical findings show that ailing producers are not always doomed to default, as the theory would suggest. It has been shown that firms with a structural aid are more likely to survive when compared to the rescue aid receivers. Companies which are in difficulties because of the poor management and/or market decline are also likely to restore themselves with a state aid. And the companies which have performed well prior to the difficulty period were also observed to use the aid wisely and recover from the downturn. The demand growth in a sector after the difficult period has been also found positively related to the chances of companies' survival. Hence the assisted firm *can contribute* to more and maybe even better competition.

Concluding it can be said, that this section attempted to illustrate that the state aid will not always disadvantage competition. The main arguments for criticizing state aid, which are that state aid will lead to the stimulation of market power, moral hazards and is in general a waste of money, are not as solid as some would think. There is no doubt that the state aid *can* cause distortion but if the market and the recipient have been analyzed properly and the state aid has been given in the consideration of these characteristics, there is a chance that the government intervention will have less disastrous consequences for the competition than has been commonly argued for.

2.3.3. International competition

Analyzing state aid in the European context it is interesting to pay attention to the international aspects in the debate on state aid. As it has been mentioned earlier, the European Union member states have agreed on the need for supranational state aid control in order to sustain integrity of the EU single market characterized by healthy competition (Blauberger, 2009; Lowe, 2009). However the practice shows that member states are pretty flexible on obeying this agreement (Blauberger, 2009; Fingleton, 2009). Previous section has outlined the possible traps of relaxing these competition rules by allowing state aid. This section will illustrate the possible consequences of providing state aid in the light of the international competition.

Before arguing *how* and *whether* state aid will disadvantage foreign competitors, one should be reminded of the basic rationale of open economy. An open economy is an economy that trades products and services with other countries. "Economies have become open over time because international trade is mutually beneficial: countries are able to specialize in activities they do comparatively well, are able to use their resources more efficiently, and so on" (Krugman & Well, 2006, p. 13). Therefore the competition could be said, is taken to another level, where firms are not only competing with domestic rivals, but are also exposed to foreign competitors. Open economy is also characterised by market orientation[12]. This all suggests that an open economy due to its interdependence on other countries' economies is able to react and adjust to the changes taking place in the world economy. An open economy is therefore advantageous enough to be respected by the governments.

Let us return to what kind of effect the state aid will have in the environment of international competition. The basic common argument remains the same; by the fact that a preferential status will be given to one company, the state aid can lead to the dominance formation in the market. Government intervention of this kind can create international distortion to the competition. "Inefficient firms receiving subsidies take market share from more efficient foreign suppliers" (Lyons, 2009, p. 13). Resulting rent shifting will create externalities in the economic geography: protection of rents and employment at home will be achieved at expense of economic activity abroad (Dewatripont & Seabright, 2006; Ganoulis & Martin, 2001; Nicolini, Scarpa & Valbonesi, 2010; Schwartz & Clements, 1999). As a result an efficient specialization of production among countries (*i.e.,* allocative efficiency of the European economy) will be destroyed and the economic welfare will be jeopardized (Nicolini, Scarpa & Valbonesi, 2010; Szyszczak, 2007).

Collie (2000; 2002) suggests an interesting point of view. He argues that the subsidizing of the domestic products might not be that bad, because the foreign consumers will be offered cheaper products as a result of over-subsidizing. Therefore as long as the foreign consumer surplus exceeds the loss to the foreign suppliers, the subsidies might not be that welfare decreasing after all. However one can strongly disagree with this argument. The situation where the foreign government will just observe how his suppliers are hurt and do nothing about it is unlikely (even though in such status quo his consumers might be better off).

Different from domestic environment, where there is only one big subsidizer, the international environment is characterized by many big subsidizers. In other words other governments will also start subsidizing their champions if they notice that they suffer due to the unfair competition. As a result the governments will engage in retaliation – "a mutually destructive subsidy war" (Lyons, 2009, p. 13). The public authorities would only be making their spending decisions on the basis of mere national or even regional interests forgetting that their economies are so intertwined, especially in the European Union (Dewatripont & Seabright, 2006), and that their protective actions will lead the others to do the same. Consequently this will result into reduction of the whole economic but also social European welfare (Nicolini, Scarpa & Valbonesi, 2010; Schwartz & Clements, 1999). And as probably such subsidy war will get a lot of attention (through media) the image will be created not in favour of further market integration (which boosts competition) (Ganoulis & Martin, 2001).

Moreover one should not forget that the subsidy war is eventually[13] financed by the taxpayers' money. And as at the certain moment the government would need more money to finance its state aid programmes, it will raise taxes (Ganoulis & Martin, 2001). And then there is a danger that it will bring more damage to the market in the form of distortionary taxation (Collie, 2000; Ganoulis & Martin, 2001). Taking the example of the main tax the government can use – income tax (Mankiw, 2007), such market distortion can occur because market participants (people and firms) can change their behaviour regarding the fact that they would have to pay more taxes on their income, and therefore have less money over for themselves. They will revaluate whether and how much worth it is for them to work the same hours or maybe not to work at all. So there will be revaluation of the trade off between work and leisure, but also market production and home

[12] The benefits of market economy have been outlined earlier, see section on market failure.

[13] Government could also borrow money from other global institutions (like IMF), but eventually it has to pay the money back from the tax proceeds.

production[14] (Mankiw, 2007). However one can disagree whether such taxations will indeed distort the market mechanism. It depends on the elasticity of labour supply. Some economists believe that this elasticity is small (inelastic), meaning that such taxes cannot be very distortionary as people and firms would still provide their services even if their income tax gets higher (Mankiw, 2007). Others think that the labour supply is elastic, meaning that the market participants will indeed pass on the (extra) work if the income taxes are raised (Mankiw, 2007). Nevertheless what one believes, when giving state aid the government should be aware of the effects it will have on its taxation policies and in turn how these taxation policies might affect the market mechanism.

Another side of the coin is that the subsidy race will negatively affect the country's balance sheet. To afford the race the government would have to borrow money or economize on other expenses, like education and medical care. Due to high expenditure the budget deficit will rise. "A serious consequence of rising debt is to create reasonable doubts about the government's solvency and about monetary stability." (Bohn, 2010, p. 14). Such doubts are of importance because the foreign investment depends on it. This is especially relevant in the euro zone. What the European member states of euro zone tend to forget is that the investors see EU as one playing field and not as 17 playing fields. So if there is some trouble with one of the member states, the investors are likely to be scared off the euro zone completely, because they are aware of the interdependency (brought by common currency) among them. Therefore budget deficit of one member state will have consequences for other member states as well. Despite the fact that, the economists do not agree on the negative consequences of the budget deficits[15] (Mankiw, 1997), one can agree upon the idea that excessive budget deficit does send a message to other international market players. But whether such message will be taken negatively one cannot predict with certainty. Therefore caution on the side of the subsidy granters is in place.

Apart from the ambiguous nature of consequences of tax raises and budget deficits (as a result of high expenditure on subsidy wars), it can be said that the decision to grant state aid will have international consequences, especially in the European Union, where the economies of member states are so interdependent. When one country decides to disobey the competition rules of internal market, it is likely that the others will follow as well. As they would not want to see how the profits are booked at the expense of their own suppliers. The whole situation will result into a prisoners' dilemma, which is unlikely to benefit European welfare. In economic terms, the efficient specialization is likely to suffer from such subsidy war. In social terms, groups of population – for example the school children, the elderly and the sick, are likely to suffer from the diverted public spending. Following, the international problem of subsidy war will quickly become a national problem.

2.3.4. Competition & economic crisis

The circumstances of the world economy are not to be ignored when state aid is discussed. As the European Union finds itself still recovering from the economic and financial crisis, one can rightly question whether the governments which have been bailing out banks on a regular basis in the past three years should do the same for the industry and give the competition rules a lower priority than the rules would suggest? This section will look into the characteristics of the banks which made their rescue justifiable and examine whether the same holds for the industry. As argued previously disobeying the competition rules (allowing state aid) should be done very cautiously, but how does it look like when the 'disobeying' happens in times of crisis?

Recession is tough on politicians. They are expected to perform miracles and 'undo' or fix the damages caused by the market. "Recession increases public pressure on politicians to intervene to

[14] Meaning, whether poeple will hire professionals to do the job from the money that they earn, or they will choose to do the job themselves (without the help of professionals) because the extra money that they will earn does not pay off in the end.

[15] See section on macroeconomic crises.

deal with failing firms, unemployment and consumer vulnerability" (Fingleton, 2009, p. 3). It also undermines public confidence in the market mechanism and competition advantages, resulting into greater demand for public intervention (Fingleton, 2009; Le Grand, 1991; Wolf, 1993). Consequently, the short-term goals are prioritized as "the immediate costs of competition to existing business, employees and consumers may be up-front and visible, with the benefits delayed and less visible" (Fingleton, 2009, p. 4). Hence, tolerance of these short-term costs will be lower in a recession.

Despite of the concerns about unemployment, "there is absolutely no evidence to suggest that more competition leads to net employment losses." (Lowe, 2009, p. 5). The mechanism of competition is still the same, only now it is more visible and fast. Unlike an economic boom, when the inefficient players may survive, a recession will tend to eliminate the less efficient ones, leaving a stronger supply base. It will take higher levels of innovation for firms to survive. The more flexible the market participants (including labour force) are the bigger the chances that they will overcome the recession. It is still wise of governments to not over-rush with stuffing the ailing firms with public money; they might turn out to be the waste of money in the end (Fingleton, 2009).

But the banks were treated differently than the concept of creative destruction would suggest. And there is a good reason to justify this intervention. Banks have two important characteristics which no other economic sector shares. Firstly, the banks are so interconnected that the collapse of one of them is very contagious and it will poison the whole banking system (Fingleton, 2009; Lyons, 2009). "A large bank with substantial trading activities has a negative externality on its rivals – if it collapses, the stability of its rivals is undermined" (Lyons, 2009, p. 5). The removal of one rival in any other economic sector would on the contrary be beneficial for the rest (Fingleton, 2009; Lyons, 2009).

The second characteristic lies in the fact that bank finance provides the most important ingredient in the economic system, without it the economy collapses (Fingleton, 2009; Lyons, 2009). No other sector (thus including industry) can claim that its product is so essential to *every* other sector in the system. Banks are simply too important – too big, to collapse. "Banks are particularly important for smaller firms which do not have the scale to issue corporate bonds and do not have access to the internal capital markets of large business groups." (Lyons, 2009, p. 5). In case of banking crisis, the collapse of confidence made the banks stop making these loans and focus on the rebuilding their reserves. This caused the liquidity to disappear and resulted into severe financial constraints for the businesses. The companies were forced to cut down in investments and economize on labour force, which in turn made the consumers spend less (as fewer of them were employed) (Fingleton, 2009; Lyons, 2009). And so the banking crisis was threatening to dry up the whole economy. Therefore government needed to step in and help the banks to get on their feet again in order to start 'oiling' the machine (Fingleton, 2009). Hence the state aid to financial world is justified[16] - they are just 'too big' to fail.

But cannot this notion 'too big to fail' hold for the industry as well? 'Too big' can have different categories: a monopoly provider, a large direct employer or a company supporting a large supply chain (Lyons, 2009). The first category of monopoly provider, for example a rail network, is characterized by the fact that the asset will not disappear if the provider will be caught by bad financial times, *i.e.*, the rail network will still be there. Most likely this asset will also have a lot of value, and therefore it could be taken over from a 'mal-administrative' company and be sustained by the new ownership. Therefore the state aid in this case is unnecessary. Other categories of 'too big to fail' will result into distortion of the market if given preferential treatment. If the company is a large direct employer, the efficiency would be hurt because there are more efficient ways to exploit the labour (Lyons, 2009). In the case of a long supply chain, an efficient (A) and an inefficient (B) company may share the same supplier. For example, two car manufacturers (A and B), have the same supplier of electronics. Initially the loss of one of the big customers (B) might endanger the producer of electronics. On the other hand this producer of electronics needs to be efficient as well and thus has to react on time to the changes in the market and scale down. However one can doubt whether

[16] Even if the banks were themselves to blame for the mismanagement of their assets.

this line of argumentation is realistic, as there is a great chance that such situation will not occur in a short term. Nevertheless it does show that there *is* a way the industry sector can go about its own 'too big to fail'-representatives and for the banking sector this does not hold – they have to be given assistance.

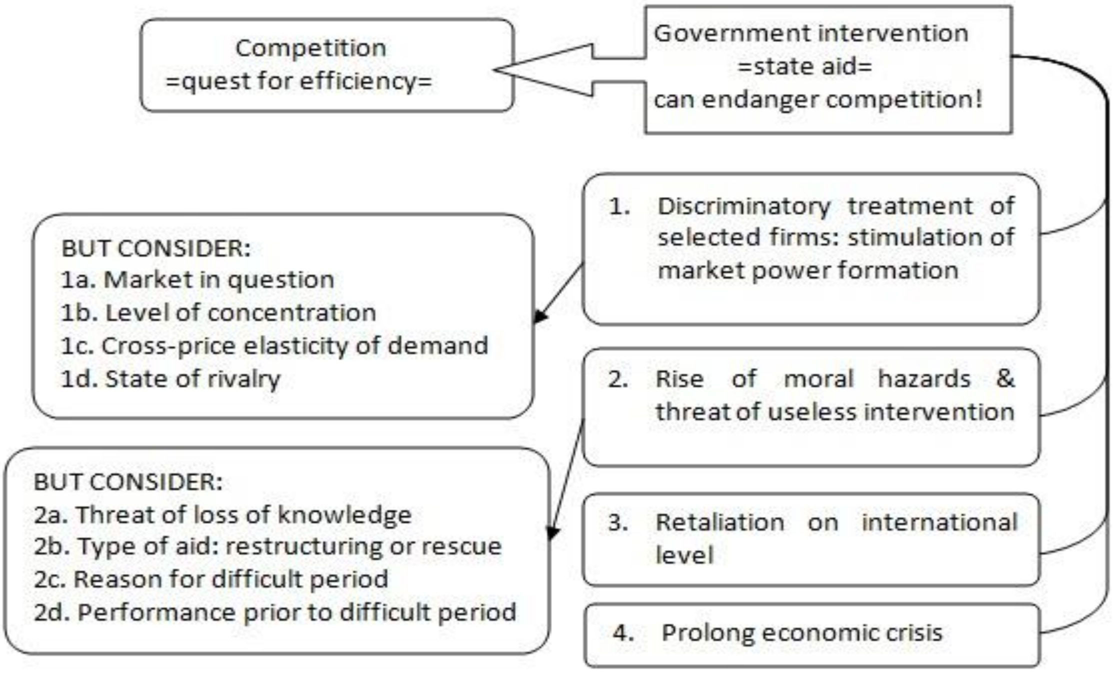
However one can look at it from another perspective. Democracy of nowadays offers a way how to make the consequences of the industry collapse just as unbearable as consequences of banking collapse (Brunel & Hufbauer, 2009; Willks, 2009). Strikes and demonstration are costly. "Just as financial stability was a valid rationale for bank nationalisations, so can be the social and political stability a rationale for industrial intervention." (Wilks, 2009, p. 281). But history shows that this kind of argumentation does not get the economy out of recession and in the end this is what everybody wants (Cole & Ohanian, 2004; Fingleton, 2009; Lowe, 2009). Relaxing the competition rules in order to sustain social rest does not pay off in the end. The academics now believe that relaxation of competition rules in the 1930s probably helped prolong the economic crisis by seven years (Cole & Ohanian, 2004; Fingleton, 2009; Lowe, 2009). The same goes for the economic situation in Japan in 1990s (Fingleton, 2009). "Some economists suspect that President Franklin Roosevelt's "New Deal" cartelization policies, which limited competition in product markets and increased labour bargaining power, kept the economy depressed after 1933." (Cole & Ohanian, 2004, p. 781). At the end of the day what such policies do is delay the necessary restructuring and deepen the recession further. Route to recovery lies through healthy companies (Lowe, 2009). When the recession is over, even stronger competition will be observed as only strong and efficient suppliers will survive. Therefore if the member states of European Union are serious on holding the position of economic giant, they should be careful when assigning state aid to their companies (Fingleton, 2009). Munkhammer (2007) even goes further and suggests that "just as we let go of the agriculture, we must let go of the manufacturing. Subsidizing old industries or protecting old jobs may in the worst case succeed – and in that case, the new and better will not emerge." (Munkhammer, 2007, p. 34).

Economic downturn is tough on politicians. Pressure to help the ailing firms clouds the minds of the politicians (Blauberger, 2009). Nevertheless the dangers of harming competition are still the same in the times of recession. However people might draw plausible, though inappropriate, analogy between the industries and the banking sector, and demand that industries should be rescued as well. However industry and banking sector do not share essential characteristics which could make industrial intervention justifiable. Rivals in banking system will suffer if another rival will exit the market, this condition does not hold in industry, on the contrary the exit of a rival will benefit the rest. Moreover no other industry provides a product which is needed for the rest of economy like banking sector does. History also provides examples of the situations when politicians have stepped in to help the industry in the recession by relaxing the competition rules, but there are studies which point out that such actions have likely caused the recession to deepen and delay the recovery. Therefore there is no reason to believe that economic crisis creates special conditions where the competition rules can be ignored.

2.3.5. Summary and conclusive remarks

So does state aid threaten competition and thus is dangerous for the prosperity of our nations, and therefore should be avoided? This section has attempted to show that the answer to this question is not that obvious as the first analysis would suggest. Although there are chances that state aid will cause distortion to the market via stimulating market power formation, creating moral hazards and standing in the way of inevitable creative destruction, there are also reasons to believe that the state aid does not necessarily have to be that harmful.

It depends on the characteristics of the market (such as concentration, cross-price elasticity and intensity of rivalry) whether the state aid will indeed induce distortion, but it does not have to. On the other hand the state aid can foster competition and really help ailing firms which became victims of poor management or market decline. Therefore companies which represent a valuable asset for the economy will not perish. Thus these arguments weaken the arguments of moral hazard and creative destruction. On the other hand international competition will suffer because national state aid is likely to set off retaliation, which will negatively affect efficient specialization between the countries, especially in the European market. The politicians are definitely not helped by the recession to stay committed to the competition policy. In such economically difficult times the politicians will tend to put aside their competition morals under public pressure to help the ailing firms. Although state aid could still be given in order to sustain competition, the likelihood that politicians will base their decisions on the right reasons is low (Dewatripont & Seabright, 2006). Therefore the state aid, given in the name of the wrong reasons, will indeed endanger competition and can even delay the restructuring of economy which is needed in order to get out of the recession. These different aspects are summarized in the diagram below:


Competition
=quest for efficiency=
Government intervention
=state aid=
can endanger competition!
1. Discriminatory treatment of selected firms: stimulation of market power formation
BUT CONSIDER:
1a. Market in question
1b. Level of concentration
1c. Cross-price elasticity of demand
1d. State of rivalry
2. Rise of moral hazards & threat of useless intervention
BUT CONSIDER:
2a. Threat of loss of knowledge
2b. Type of aid: restructuring or rescue
2c. Reason for difficult period
2d. Performance prior to difficult period
3. Retaliation on international level
4. Prolong economic crisis

Another point that deserves a bit of attention is that creative destruction which is an important part of healthy competition is in reality not that 'creative' in the beginning. One of the assumptions behind this theory is that employees can easily switch from one job to another. In reality this does not hold. Especially during recession it becomes difficult for unemployed to find a replacement for their jobs. Not to be misunderstood "jobs alone can and must not be the reason for delaying an inevitable market clearing with taxpayers' money" (Becker, 2010, p. 56). There is a great danger that the social costs of artificial extension of a company's existence would be greater than social benefit of reallocating the workforce[17]. The government should weigh the options that if company indeed exists the market, a lot of people will be on the street. It should consider whether such unemployment can be supported by social security net, while 'creative' part of 'creative destruction' will start to kick in.

Consequently against this background, the criticism of state aids on the grounds of competition endangerment argument becomes not that solid as a first analysis would suggest. There are a lot of conditions which can make the danger of state aid to competition overrated. It takes a thorough assessment of the national and international market, industry, and product to claim that state aid is dangerous and pointless. There is no clear wrong or right in this situation, it always depends on other factors.

[17] The only way when it will not be waste of money is when the company's vanishing will cause a great deal of knowledge to perish and when the company's troubles are caused by poor management and/or market decline. Thus it would mean that it would be better for competition if the company was helped. Hence 'destruction' can actually destroy something useful.

2.4. Conclusion

This literature review has mapped the consequences of the state aid. The challenge was to present them in a cohesive light, making our understanding of state aid as complete as possible. The arguments have been considered in favour and against the state aid.

The *justification for state aid* is based on the argument that government can restore the market inefficiency, and bring the market to equilibrium again. Hence state aid can result into welfare enhancement. Put differently, as a consequence of state aid people will be enjoying a better standard of living. The literature review indentified several market failures where the government interference will lead to more efficient results. The positive externalities cause discrepancies in cost/benefit equation of the firms leading them to 'underproduce' certain goods. Consequently the inefficiency will arise. The presence of a market power will also disadvantage efficiency, as high prices and lower quantity of supply will lead to a deadweight loss to society. Imperfect information will also lead to inefficiency as consumers and/or suppliers will not be able to make rational, efficient choices without proper information. Accordingly such uncertainty will result into the levels of production that will not do justice to the economy's capacity. Distributional inequity can also be seen as a market failure, as market often fails to meet the social demand for distributional equity. Economic recession can also be the reason for a government to support the industry. In the abovementioned situations the intervention of a government can boost economy, as efficiency will be restored.

But not everything is that simple. However serious the flaws of the market can be, there is no consensus on the idea that it is the government that should intervene. Sometimes the market mechanism can improve its functioning without external help. Neither there is a consensus on whether the government is more eligible and able to do a better job than a market can. Even more so, due to its lack of technical knowledge, a short-sightedness due to the re-election motivations and high sensitivity to capture the government can be the wrong player to interfere in the first place. Government is always in a tricky position not to cause another distortion to the market while restoring efficiency. The trade-off between efficiency and equity is one of the examples where the government can restore one market failure at the expense of another. Hence the idea that government intervention will contribute to a better welfare is many case questionable.

This chapter also argued that government intervention is only useful if it addresses market inefficiency. Such condition does not make the job easier as market failure is characterized by the measurability problems. Although there are insights of what is market failure, the general empirical indicators are difficult to distil. So it becomes difficult to argue how distortive is market failure, and thus whether there is need for external help. At the same time, the market failures are characterized by ubiquity. And this makes the argument for justification of the state aid on the grounds of market failure corrections look unstable. Therefore it brings in doubt the whole idea that the consequences of state aid in case of market failure are welfare enhancing.

On the other hand the main *argument against state aid* is not that rigid either. The common argument is that state aid will disadvantage competition, induce market distortions and stimulate market power formation, even though state aid might be directed at precisely reducing the market power. Due to preferential treatment of some firms, the non-receivers and possible entries would be scared off, harmed or driven off. Such state aid will create moral hazards and delay the needed restructuring of the firm but also of the economy as a whole. It will endanger creative destruction and innovation initiatives, and thus economic prosperity. It will harm efficiency as well, as the room for improvement will not be exhausted. In sum, the economic development would be jeopardized as state aid would hinder competition. But one should be very cautious when deterministically arguing that state aid will have negative implications for the competition, and thus for the economy.

As it is again not that simple. This chapter has shown that the market characteristics play a major role in the assessment of whether and how much the state aid will disadvantage competition. The substitutability of the products and the concentration of the market are two important interdependent concepts here. In a market characterized by high concentration and low substitutability the damage caused by the state aid would be bigger than in low concentration and high substitutability situation. Related to this is the cross-price elasticity of demand. This concept can indicate whether a recipient can be called dominant. The intensity of rivalry has also an effect on whether the state will provoke market power formation. Although there is no doubt that the state aid *can* cause distortion, it depends on many other factors whether and to what extent it *will* indeed cause distortion. Moreover state aid can also foster competition and really help ailing firms which became victims of poor management or market decline. Therefore companies which represent a valuable asset for economy will not perish. Thus the main argument against state aid shows cracks in its manifestation.

On the other hand international competition will suffer because national state aid is likely to set off retaliation, which will negatively affect efficient specialization between the countries, especially in the European market. On the other hand, when looking at the national consequences of financing retaliation – tax raise and budget deficit, the economists do not agree on the negative effects it will have on national (and European) economy. Some argue that excessive budget deficit will scare off foreign investment and high taxation will become distortionary. Others are not so sure about these negative implications. Nevertheless one can be certain that if retaliation occurs, there will be no winners in the end.

The politicians are definitely not helped by the recession to stay committed to the competition policy, as under public pressure they will tend to give in and provide the help. And then, although the politicians could present the state aid as a way to boost competition, the likelihood that they indeed analyzed the market properly before assigning support will be low, and thus the chances for failure and distortion will be high. If this indeed is to take place, the situation will reduce the chances for a quick recovery from the recession. If politicians want to give state aid and cause as less distortion to the market as possible, they would have to pay attention to the characteristics of the national and international market and to the characteristics of ailing industry and the product it provides.

Concluding, there are several things that emerge from the literature review. First of all, the science does not offer black and white scenarios, when it comes to *justifying* state aid on the ground of market failure, nor when it comes to *condemning* state aid on the ground of competition endangerment. Everything *can* have a negative effect but *does not necessarily have to*. Second of all, the literature review exposed the interdependence of different arguments. It emerges that efficiency and competition are two very dependent concepts. Presence of competition in the market ensures efficiency. On the other side efficient use of production factors will boost competition (and thus boost economic growth). If state aid gets in between and affects one, the other will experience the same effect. For example, if state aid boosts competition, the efficiency will be higher. Other way around holds as well, if there was a market failure, and the government has successfully restored it, the market will become more competitive. So when one wants to estimate the consequences of state aid, one should look at the whole picture taking into account different conditions and factors. The case of Opel will help me to illustrate this.

3. Opel case

3.1. Introduction

The literature review has mapped the concept of state aid into detail. In this chapter I will see how theoretical concepts are reflected in the real world. In order for me to do so, I chose Opel – German car manufacturer as an example. It suits the illustration purpose as in 2009 Opel was involved in the European discussion, when German government was considering state aid to Opel. Despite the fact that there were more cases of bail-outs, the automotive industry presents an interesting case, as it is one of the biggest industries of the European Union (Brunel & Hufbauer, 2009; Wilks, 2009). As already mentioned earlier, it is closely related to many other sectors of economy. And therefore it is easily the biggest employer in the European Union. The choice fell on the German manufacturer, because Germany is the largest car producer. Therefore it became attractive to examine what would be the consequences of the state aid in this crucial case. I will proceed with explaining what happened and then move on to the analysis.

But before doing so, there is a need to outline how I have gathered information on Opel case. In order to keep the research within the manageable scope I decided to use newspapers to see how the discussion around Opel evolved. On the other hand it should be noted that the validity of this research would be higher if the primary documents of Opel were examined, or even working papers of German government on the issue of Opel[18]. But because these sources could not be acquired for this research, there was a need for another alternative, which became the newspaper coverage. Although journalists cannot be expected to know everything about the car market, Opel and the decisions of German government, they can present a rough idea what was going on in this sector. And this will suffice the scope of this research.

The newspapers will help me to draw the line of events behind the discussion. The biggest threat to validity of the research when using the newspaper articles is the biased representation of the events. It is therefore preferable to analyze the newspapers of different countries, in order to present as least biased picture as possible. However the scope of this research and (more importantly) my limited knowledge of other European languages constrained my options for collecting the information on Opel. On the other hand, it is not the goal of this research to compare the newspapers in order to see whether and how they present the news on Opel. Thus there is also no urge to collect as many different newspapers as possible. The opinions in the newspapers will only suit as an illustration of what kind of discussion took place around Opel. I will assume that one newspaper is able to expose the debate around Opel, which is needed for my research. Therefore I will be able to distillate the story line. Hence, although without any claim to be exhaustive and presenting *all* the valuable information, the selection of one newspaper will suffice the goal of my research as it will allow at least to see whether and how the theoretical concepts presented in the literature review are exhibited in the reality.

This research will make use of the Dutch newspaper. The reason for this is the relatively detached position the Netherlands took in the discussion around Opel. Although there are a lot of suppliers to the automotive industry in the Netherlands, their existence does not depend entirely on Opel. They are interested in the general sustainment of the automotive industry without any preferences. Moreover, apart from Spyker Cars, the Netherlands can hardly be regarded as a car producing country and therefore it cannot be claimed that the Netherlands is competing with Germany for the position of the biggest car producer of Europe. Hence I assume that a Dutch newspaper is a reliable source of information.

The newspaper was selected from the database LexisNexis Academic NL[19] with the help of the keyword "Opel". I used the time frame of almost one year: since 1st of October 2008 till 30th of October 2009. This was the time when the events around Opel were discussed in the newspapers on the regular basis. Such search combination revealed five newspapers: NRC Handelsblad AD/Algemeen Dagblad, De Volkskrant, Trouw, Het Parool. The choice fell on NRC Handelsblad as it had the most - 177 - articles[20].

Gathering the information on Opel two concepts, which emerged in the literature review, were kept in mind: market failure and competition. Specific attention was paid whether there was any indication on the following sub-concepts:

[18] I will come back to it in the next chapter on 'Reflection and further research'.
[19] Available at the University of Twente.
[20] The rest had 156 (AD/Algemeen Dagblad), 152 (De Volkskrant), 101 (Trouw), and 93 (Het Parool) articles.

Market Failure Presence ***(main argument in favour of state aid)***	**Competition** ***(main argument against state aid)***
• Stimulation of positive externalities • Dissolve market power • Dissolve insecurity caused by imperfect information • Stimulation of distributional equity • Measure to combat macroeconomic crisis	• Stimulation of market power formation 1. Market in question 2. Level of concentration 3. Cross-price elasticity of demand 4. State of rivalry • Rise of moral hazards and threat of useless intervention 1. Presence of threat of loss of knowledge 2. Type of aid: restructuring or rescue 3. Reason for difficult period 4. Performance prior to the difficulty period • Retaliation on international level • Prolong the economic crisis

Such analysis of the newspaper articles revealed the following story.

3.2. The story of Opel

The car industry suffered a great deal of market decline worldwide in 2008. The biggest European car producing countries Germany, Italy and Great Britain dealt with extremely low sales. In Spain the sales dropped by 41 percent. In the USA, the biggest car market of the world, the drop of sales was 30 percent (NRC, 9.10.2008). Especially the top segment of the car market, like BMW and Mercedes-Benz, saw its profits shrink and were forced to close its factories for several weeks. Daimler, owner of Merceds-Benz, cut the jobs of 150,000 employers in its German factories (NRC, 28.10.2008). It is remarkable that BMW was in trouble, because it was believed to have the most flexible labour-system in European car industry: it was organized in such a way that any time needed the production and labour could be transported from one production-location to another (NRC, 9.10.2008). Volkswagen, Ford, Skoda and Seat were forced to close some of its European factories for several weeks in the end of 2008. General Motors (GM), owner of Opel, Saab and Vauxhall, closed factories for several weeks in Germany, Spain, Poland and Great Britain as well (NRC, 15.10.2008). Slovakia, which with its many foreign car-manufacturers' factories was very dependent on car-industry, saw the factories closing too (NRC, 15.10.2008). Hence almost all European countries saw its automobile producers wrestle with drop of sales and the consequences of it.

One of the leading figures of GM, Carl-Peter Forster, argued that drop of sales of cars in Europe was due to economic instability, financial crisis and increased oil price. (NRC, 9.10.2008) The financial problems of the car market were partly due to liquidity shortages. The capital market, where up to one year ago car companies could easily find their funding, was still very fragile and cautious for any other shocks. This stagnation in car market was therefore believed to arise from the credit crisis. Temporary support of governments in this area seemed therefore to be justified: it would have been intolerable if healthy companies would have gotten into trouble because of the dysfunction of the financial sector (NRC, 20.11.2008). But there was more to this. Professor Wolfgang Gerke, the German financial-economic expert, argued that European car industry had been producing too many cars for already too long time (NRC, 24.03.2009). The car market was over-saturated: the supply of cars simply outweighed the demand for it (NRC, 17.11.2008). Such overcapacity could not be ignored when talking about the troubled car industry, even though financial market could still be one of sources of the problem.

GM, one of the biggest industries of the US (NRC, 18.02.2009), were threatened with bankruptcy unless there was a government support offered. The consequence of GM bankruptcy would be the bankruptcy of its European daughters; one of them was Opel (NRC, 18.02.2009). Hence on 14th of November Opel had turned to the German Government for financial assistance (NRC, 15.11.2008). Opel had asked for 3.3 billion euro in order to prevent defaulting and secure employment. The idea was to separate from GM, for which Opel needed a lot of money (NRC, 2.03.2009). There was a growing public conviction that the 'Americans' have 'destroyed' the German Opel and that they were the source of all the troubles (NRC, 18.11.2008). Indeed there were liquidity problems at the American headquarters, but, as mentioned previously, there was also a lagging behind demand for cars in Europe (NRC, 17.11.2008). "It is not Opel's fault – it just makes intervention pointless", argued Professor Wolfgang Gerke (NRC, 24.03.2009). In addition if German government were to provide aid, how could Opel ensure that the German tax money would not go to the headquarters of GM in Detroit to fill in the gaps but be spent for the Opel factories in Germany (NRC, 18.11.2008)?

Next to it there were doubts about the Opel's own capacity to survive. Opel itself had been dealing with a malaise already for several years. The so popular Opel during the interbellum had lost its popularity in 1980s. And in 2007 Opel's market share had decreased from 17 percent to below 10 percent and the number of employees had decreased by 57 percent compared to 1960s figures (NRC, 17.11.2008). Late response to market developments, bad coordination with American headquarters and mismanagement were believed to be the reasons for such decline (NRC, 17.11.2008). Professor Wolfgang Gerke, argued that Opel as an independent company was also just too small to survive, had too less money to invest in the needed technology, had already problems with some of its current models and just as a company was not profitable (NRC, 24.03.2009). Opel was believed to be the weakest producer of German cars (NRC, 17.11.2008). Ferdinand Dudenhöffer, professor in Management at Gelsenkirchen and expert in car industry, was of an opinion that Opel had been artificially kept afloat by GM and it had not succeeded to become lucrative again (NRC, 17.11.2008). The German minister of Finance, Peer Steinbrück, had not uttered any confidence of successful state aid intervention either as the government should not be responsible for the mistakes of industry (NRC, 17.11.2008).

Meanwhile the talks about Opel were taking place, Volkswagen was the first car manufacturer to receive financial aid from the government. In spite of high sales and taken measures to overcome the crisis, the banks seemed to be reluctant to lend any money to Volkswagen. Higher interest rates were being charged and Volkswagen had no other choice but to pass the costs through to its clients (NRC, 10.12.2008). However the differences between the performances of Volkswagen and Opel seemed huge, and not in favour of Opel, it seemed impossible that Merkel government would bluntly refuse to help Opel. Chancellor Angela Merkel had already promised to 'help' Opel, however it was unclear yet how that aid would look like (NRC, 17.11.2008).

German government was in a difficult situation. It was cornered by the 'super-elections' year with regional and national elections. Economic satisfaction among the voters was crucial for re-election of the government. Before autumn 2008 Merkel government was pretty sure of its success as German economy was doing well, exports and employment seemed to be fine (NRC, 9.01.2009). However this had changed. The threat of recession became very real. That was why the electoral uncertainty increased. The German politicians had to show that they could deal with economic recession, take care of employment. Almost the whole city of Rüsselheim was dependent on the Opel factory. Opel concerned a lot of direct (29,000) and indirect employment (NRC, 18.11.2008). The sustainment of auto-industry and Opel in particular, had therefore become crucial: no politician in the race for elections could afford letting Opel go without decreasing its chances at elections (NRC, 18.11.2008; NRC, 9.01.2009).

Alongside the electoral considerations, Opel was also an emotion-laden concept. The car industry was very dear to Germans: it was the heart of German industry. Adam Opel was one of the industrial inventors of the nineteenth century whose name has a status within and outside of Germany. Opel, Daimler, Benz, Siemens and Bosch were the core of German industrial pride (NRC, 4.03.2009). Despite of the critic on Opel's functioning; Opel seemed to be finally improving its performance: Opel Insignia had been awarded Car of the year 2008 price (NRC, 20.11.2008) and especially the smaller models like Corsa were doing very well at the market (NRC, 26.02.2009).

The uncertainty around Opel's position was unfavourable for company's existence struggle. It was unclear whether the company is worth fighting for or not. There were electoral, emotional and optimistic considerations on one side and low demand for cars and bad performance on the other side. It did not help the situation that German government was reluctant to provide assistance because it was not convinced by the restructuring plan the Opel presented and kept on emphasizing that Opel should also try to get private investors (NRC, 2.03.2009). Therefore when Chancellor Angela Merkel had declared that German government stood surety for Opel, it was taken as an encouraging sign for the private investors (NRC, 1.04.2009). The German government promised to provide for 3 billion euro of guarantees and 1.5 billion of a bridging loan for the time when Opel would be in the transition to become independent from GM (NRC, 29.05.2009). And maybe such a strong backing up was exactly what was needed at that time, as soon enough the first buyer, Fiat, had expressed its interest in Opel (NRC, 24.04.2009).

However different from what one could have expected, the Germans did not seem to be happy about Fiat as a potential buyer. Fiat declared that it needs 5 to 7 billion euro on guarantees from the German government to make Opel lucrative again (NRC, 5.05.2009). Although Fiat had promised to keep all four German factories open, it did not promise that all jobs would be safe (NRC, 5.05.2009). The models of Fiat and Opel are similar - they practically have the same market. So if Fiat would take over, it would therefore economize on the duplication costs and mass resignations would follow (NRC, 24.04.2009). Germans were not too keen on the quality of Italian cars either and feared that Italians would do no good to German Opel (NRC, 29.04.2009). Next to Opel Fiat was also negotiating over buying Chrysler (NRC, 5.05.2009). Fiat CEO Sergio Marchionne had declared that he wanted to merge Fiat, Opel and Chrysler to create a new global automotive company (NRC, 22.05.2009). However there was a legitimate doubt whether such combination of ailing firms was able to result into one healthy company.

Nevertheless Italians believed that if Germans were able to step over their prejudices against Italians, then Fiat could offer a great opportunity (NRC, 6.05.2009). Mario Deaglio, professor of international economics in Turin, and Fabiano Schivardi, professor of political economics in Cagliari, pointed to the fact that the current owner of Fiat was a great entrepreneur because he managed to transform an ailing Fiat to a profitable company (NRC, 6.05.2009). Italians also pointed out that Fiat was specialized in environment-friendly motors. Therefore Fiat had some knowledge that Germans could benefit from as well. Moreover from business point of view, as already pointed out earlier, the companies could economize on the duplication costs (NRC, 6.05.2009).

Magna International, Canadian automobile parts manufacturer, had also expressed its interest in buying Opel (NRC, 29.04.2009). In cooperation with the Russian state bank Sberbank, Magna had made a bid of 700 million euro (NRC, 29.05.2009). Its plan was based on the new eastward orientation of Opel. The Russian market represented an opportunity to grow, as there was still a high demand for cars, while Europe was dealing with over-saturation of car market (NRC, 29.05.2009; NRC, 3.06.2009). By cooperating with the Russian car manufacturer OAO GAZ, Magna hoped to penetrate the Russian market (NRC, 22.05.2009). Moreover Magna would be firing 10,000 people at Opel, from which only 2,500 in Germany, the rest would be on UK and Belgium account (NRC, 29.05.2009). Naturally no German could be against such a deal.

But there was also a downside to such a deal. According to the plan, if Magna took over, Sberbank would own 35 percent of Opel, Magna 20 percent, GM 35 percent and Opel employees 10 percent (NRC, 29.05.2009). It was a rather complicated construction considering that 60 percent of GM was owned by US government and 60 percent of Sberbank was owned by the Russian government (NRC, 29.05.2009; NRC, 2.06.2009). Moreover Magna did not have any experience in selling cars, as it was specialized in the manufacturing of automobile parts (NRC, 11.09.2009). Nor was the Russian GAZ a hero in manufacturing cars: its development had been on halt for a very long time (NRC, 11.09.2009). Nevertheless Magna aspired to become a great Canadian car manufacturer (NRC, 3.06.2009). However the realization of such an ambition would for sure cause conflict of interests to arise: Magna would be competing with its clients (NRC, 3.06.2009). Magna's biggest clients were GM (19 percent) and Chrysler (11 percent) and as they were both in trouble Magna's turnover had decreased by 45 percent (NRC, 29.05.2009). So it was not in Magna's interest to see both companies making losses, but with an entrance of another competitor this could not be avoided. So at the same time Magna would have to cooperate and compete with its rivals. In order to solve the problem, GM and Magna had agreed that Magna would not sell cars in the USA, but for Europe there was no such agreement (NRC, 3.06.2009).

Another bidder was Beijing Automotive Industry Cooperation (BAIC), one of the largest Chinese car manufacturers (NRC, 22.05.2009). BAIC, ambitious to become a global player, represented an interesting option because it could take over Opel without the help of German government – it was backed up by Chinese commercial banks (NRC, 6.08.2009). That was different from both Fiat and Magna as they would need German money to take over Opel. However BAIC was a state owned company and many feared that Chinese influence would be bad for the company (NRC, 4.07.2009). Moreover Germans were reluctant to give up their Opel know-how to Chinese (NRC, 4.07.2009).

RHJ International, Belgian listed and American originated investment company, was another buyer in the race (NRC, 22.05.2009). It was believed that GM preferred to sell Opel to RHJ International (NRC, 6.08.2009). Such a deal seemed better as it was less complicated than for example Magna's one, and there was no danger that intellectual capital would be lost to Russians or Chinese (NRC, 6.08.2009). But the Germans did not seem happy about this investment company either: they feared that this company would fire too many people (NRC, 6.08.2009).

Remarkable was that the German government seemed to be very much involved in the decision about selling Opel. However strange it might be, as one cannot sell something it does not own, there was an explanation for that. GM and the US government were ultimately to determine who would be the buyer of Opel (NRC, 26.05.2009). Nevertheless, none of the candidates (except of BAIC) could do without the support of the German government (NRC, 26.05.2009). Moreover it was the German government who provided Opel with a much needed bridge loan to wait out for the suitable buyer. And Berlin had made it clear that it would only give 3 billion euro to Opel if Magna took over, as the rest, Berlin feared, would fire too many people than it would have been acceptable in the election year (NRC, 22.05.2009; NRC, 6.08.2009). Therefore GM was in no position to ignore Berlin's wishes (NRC, 6.08.2009).

Where German politicians were making demands and putting conditions to their assistance, the German academics were still less sure about any assistance at all. Harsh criticism came from economist Hans-Werner Sinn, president of a research institute at the university in Munich. According to him the gigantic help that was offered to Opel could secure much more jobs elsewhere, for example in small and medium enterprises (NRC, 28.05.2009). He had calculated that the plans of Fiat and Magna would cost the government from 198,000 to 296,000 euro per secured job, and this was more than one totally new job in the car market, which cost 174,000 euro (NRC, 28.05.2009). Therefore such state aid to Opel would be complete capital destruction and be bad for the taxpayers (NRC, 28.05.2009). Moreover academics argued that if the government helped one firm, there was no good reason not to give state aid to another following one. And soon enough those 'others' followed: Arcandor (owner of Karstadt one of the biggest German malls), Infineon (electronics company), and Schaeffler (one of the biggest supplier to the automotive industry) filed for state support (NRC, 10.06.2009)[21]. So where did government think to draw the line and could it be legitimate?

Europe wide there was also a lot of resistance to German plans. Countries like Britain, Poland, Spain and Belgium, with major GM branches[22], pressured Berlin to create a transnational approach to Opel's case and demanded Brussels to take actions against German 'Alleingang' (NRC, 28.05.2009). European leaders suspected that when German GM factories (with the generous help of Berlin) would remain open, the chance was high that somewhere else in Europe other GM factories

[21] German government was not willing to give state aid to these companies as they could not prove that it was the financial crisis that got them into trouble (NRC, 10.06.2009).

[22] Thus also Opel factories.

would have to close (NRC, 28.05.2009). Their suspicion was not for nothing. When Magna's offer was finally[23] accepted by GM, it became clear that four German factories would still be running after the takeover, but the future of Opel factory in Belgian Antwerp (2,600 employees) and Opel factory in Spanish Zargoza (7,000 employees) was less promising (NRC, 21.09.2009).

However, the countries, which were protesting against state aid, became silent all of a sudden (NRC, 16.10.2009). Probably they figured that they too better pay GM in order to keep the jobs in their countries (NRC, 16.10.2009). UK had also thrown itself into the subsidy race in order to save as many jobs as possible for its own factories (NRC, 23.10.2009). Belgian government announced already previously that it was helping Volvo factories in its country (NRC, 25.07.2009). And so Neelie Kroes, the Competition Commissioner at that time, found herself in a very difficult position to be strict on state aid matters as the resistance to state aid control grew every day (NRC, 16.10.2009). Moreover especially Opel issue was a difficult one because of its complexity: an investigation on Opel would take too much time and by the time it would be finished Opel would not exist anymore (NRC, 23.10.2009). Opel employed 50,000 people (direct and indirect employment) and Brussels was not interested in having such a mass resignation on its conscience (NRC, 23.10.2009). Therefore Kroes sufficed with a letter to the German government with a warning that GM should not be pressured to sell Opel to the preferred buyer of German government, but be free to select the buyer on their own (NRC, 17.10.2009).

On 3rd of November GM declared to not be selling Opel any longer (NRC, 4.11.2009). The most important reason was the improved business environment in Europe and improved financial capacity and stability of the GM (NRC, 4.11.2009). After receiving some aid from German and American governments the GM arose with a new team, leader and a new strategy. And probably selling Opel was no longer deemed as necessary due to changed circumstances (NRC, 4.11.2009). Germany was far from pleased with such a decision. German Opel factories went on demonstrations as now the previous reorganization of GM would probably take place which presupposed mass resignations in Germany, the thing that Magna promised to avoid (NRC, 4.11.2009). The question was whether Merkel was to provide that promised guarantees now, when the elections already took place and Magna no longer was a buyer.

The newspapers show that Opel was a European battle. Everything seemed to come together: industrial policy, national interest, electoral strategies, and culture differences of potential buyers. There were different opinions on the performance of Opel, and whether this company constituted any value for German but even European economy. And this consequently leads to the question whether saving Opel was a good idea at all. The following section will try to answer this question with the help of identified concepts in the literature review.

3.3. The analysis

The following section will expose how theoretical concepts relate to reality. I have arranged it into two parts in accordance to the structure that was adopted for the literature review. Therefore firstly I will examine the justification for state aid which presupposes enhancement of economy and then I will move on to the argument condemning state aid as it will endanger competition which is of great importance for economy. I will examine whether the nuances identified in the literature review can be found here.

3.3.1. Market failure and Opel

Literature review established that for the state aid to enhance the welfare, the state should address a market failure. In other words, state aid should correct market inefficiency to be justified. The literature review identified several cases of market failure, where government intervention can be beneficial. So what can be observed in Opel case? There is certainly inefficiency, but whether such

[23] GM still preferred RHJ International, but Berlin had pressured to sell Opel to Magna (NRC, 11.09.2009).

inefficiency is worth intervening for and whether the government intervened in the right way is ambiguous.

Newspaper articles revealed that there were too many cars and too less demand for it. So the car market was misbalanced. Put differently, this market was in search for equilibrium. However this is certainly a form of inefficiency, the intervention of the government in this case is unnecessary as the market will do its clearing the end and get rid of oversupply. Therefore, the state aid to Opel is likely to only worsen the situation as it enables *even more* car supply. Therefore it can be argued that the state aid in this case only aggravates the inefficiency.

Newspaper articles showed no evidence that Opel was under-providing external benefits which would have been essential for the market. Therefore in this sense of the market failure, there was no need to intervene. Next to it the state aid to Opel cannot be considered as a measure to dissolve market power – all car suppliers were in the same position, troubled by drop of sales and financial instability, unable to dominate the others. Even on the contrary, it can be argued that such state aid only threatens to misbalance the ‘powers’ as one company is advantaged by the support compared to others. Although there was also help provided to another German car producer, Volkswagen, which would point to the fact that other German receivers also got a beneficial treatment, this was not (immediately) the case for other European cars. This even resulted in tension in Europe as other countries felt threatened by such preferential treatment.

On the other hand, it could be argued that state aid to Opel was directed at the market failure of imperfect information. Newspaper articles pointed out that there was uncertainty around the future of Opel, while it showed potential by winning the Car of the Year price. Therefore it might have been indeed wise that government decided to stand surety for Opel and in this way encourage the private investors. But all the same, there is still a danger that government might have ‘picked the winner’ incorrectly. It was known to the investors that there is saturation at the car market. So there is a legitimate doubt that the government had indeed other optimistic information on car market in general. Hence although imperfect information could have been indeed impeding market mechanism and scare off the investors (which could have been there if there was no uncertainty), there is no indication that German government armed itself against the government failure. Even more so there are reasons to believe that Opel and the investors abused the upcoming elections as a manipulation to receive state aid. In other words, there were indications of capture, and strong re-election motivations for the politicians to give state aid. Again this indicates that government was unlikely to have ‘perfect information’ either.

Newspaper articles reveal that there were concerns about the distributional equity as many people would become unemployed were Opel to go bankrupt. Therefore by intervening the government could contribute to welfare enhancement and thus improve economy. But there is no evidence found that securing equity, the efficiency was not harmed. It was argued that government paid too much money per secured job than a completely new job in the car market would cost. Hence the costs could be outweighing the benefits in this situation. Consequently intervention to restore equity might have been wrongly argued for, as the equity could have been restored also without the market intervention but through the existing social security payments. However it is not shown in the newspaper articles whether the social security net was strong enough to hold so many unemployed. The government could have supported the goal of equity also differently. As newspaper articles also suggested the gigantic help that was offered to Opel could have secured much more jobs elsewhere, for example in small and medium enterprise. Therefore although equity inefficiencies were there, one cannot say whether the government enhanced welfare by providing state aid to Opel.

The story of Opel also demonstrates that there was a recession. So the government might have been intervening for fighting this phenomenon. Nevertheless this observation does not bring much clearance to the discussion, as it is always to be argued both ways: in favour and against an intervention in such situation. One would argue that this is the right way to get the economy out of recession by enhancing government expenditure and thus ensuring more employment in this way. At the same time one could also argue that this will only prolong recession as it hinders the needed economic restructuring and increases budget deficit. Yet there are more facts that point in the direction that this intervention is unlikely to get the economy out of recession. First of all, indeed car market needs restructuring as it is argued to produce too many cars for already too long time. The state aid under such circumstances will only postpone the restructuring and prolong the recession. And then, it has been also argued that this intervention is too costly for the government. Therefore, although budget deficit has an ambiguous effect on economy, it can still be argued that no economy could benefit from an inefficient spending.

3.3.2. Competition and Opel

Literature review revealed that the main argument against state aid is the danger it poses to competition mechanism. And by damaging competition the state aid is likely to damage the economy as well. However the literature review also identified nuances to such 'damage'. What is then applicable to Opel case? As argued previously newspapers showed that there was a preferential treatment of Opel and therefore, one would think, it is bound to endanger competition. The question remains whether there are conditions which could nuance the posed danger.

There are doubts whether state aid stimulated market power formation in Opel case, the formation of which is believed to be one of the main consequences of state aid and therefore also the ground for condemning it. First of all, state aid made it possible for Opel to stay afloat, which without the bridging finance would definitely not be possible. The rest of car manufacturers did not have this guarantee that they would remain afloat. However, it is not clear that Opel managed to sell more cars or gain more than the rest of the car manufacturers due to this state aid, and hence approach any nearer the position of a market power. There is a reason to doubt it because Opel to begin with was argued to be a weak producer having a small market share. The market it operated is huge (also geographically) – there were plenty of car suppliers, and Opel is not that specialized to differentiate itself completely from the rest (therefore creating its own niche in the market)[24]. Therefore the concentration of the market, to which we count Opel to, was low, and Opel had a lot of substitutes. Thus it is unlikely that this state aid would result into immediate raise of benefits or even turnover. Hence the first glance shows that this state is unlikely to stimulate market power because of Opel's market share at that moment and market for cars in general.

However it should be noted that the findings cannot offer accuracy whether there was a market power formation *taking place*. As the newspaper articles did not reveal information on the prices of cars and the turnover figures of different car manufacturers it becomes difficult to draw conclusions on 'the cross-price effect nuance', which enables to see how state aid (if passed through to the customer prices) effects the demand for the cars of other manufacturers. And next to it, the newspaper articles did not provide evidence where it would be possible to trace the *effect* of state aid on the prices. The lack of this knowledge also impedes one to draw conclusions on the cross-price effect.

Literature review identified the degree of rivalry as another indicator of how distortionary the state aid could be. In Opel case, the situation where the state aid is directed at keeping the company from exiting the market is applicable. According to the literature review in such circumstance intermediate (or low) degree of rivalry accompanied by high concentration, would affect economy in a positive way as it will strengthen competition. An additional entry would provide for more substitutes and therefore cause the price level to drop, benefitting the consumers. The degree of rivalry in European car industry could be said to be intermediate but as already mentioned

[24] One could argue that Opel belonged to the group of German cars, which have a certain prestige in the car market. So it is arguable that Opel belongs to well-famous German cars, which have their own niche in the market. This market is naturally very small and very concentrated. It is therefore supposable that Opel has a different position there than on the general market for cars. However Opel was also believed to be the weakest one among German cars. So even if this market is of importance here, there is no reason to believe that Opel could become dominant with state-aid. It would need much more time and much more money to claim any dominance there as well.

earlier the concentration is rather low. Therefore keeping another substitute in the low concentrated market with such degree of rivalry, is unlikely to damage competition by introducing a market power. Opel might tune up the rivalry, as it might decrease the prices, causing others to follow, resulting into more competition among the car manufacturers. On the other hand it seems realistic that Opel would not be able to decrease the prices immediately due to already high losses.

Hence it can be argued that state aid to Opel was not endangering competition by allowing market power formation. However, if one looks at the plans of possible buyers, it becomes evident that there were plans to make Opel a huge company. For instance Fiat proposed to merge with Opel and Chrysler and create a bigger company. This is peculiar. Such design would, without a doubt, create at least something close to a market power. Therefore it is strange that this plan was even considered in the first place, as competition is better off with more players in the market. However such approach might still be good for economy as it might be more efficient – ailing companies would be replaced by one bigger company which could operate more efficiently.

State aid can also undermine competition by giving rise to moral hazards, by making it unattractive to innovate, and by impeding creative destruction mechanism. Second chapter[25] pointed out moral hazards are difficult to prevent or regulate. In the case of Opel, the newspaper articles revealed that the public and employees thought that all the trouble at Opel was caused by the 'American liquidity problems at headquarters'. Except of experts nobody seemed to be paying attention that Opel itself was just not functioning properly. It seemed as it was agreed upon the idea that Opel itself was a good company, without the need to restructure much. However this was not the case. Hence one could argue that Opel's secured presence at the market provided by the government made the company believe that change (innovation) was not necessary. This is not good for the competition (and thus economy) as company does not have the incentive to innovate/compete. Following, the creative destruction is impeded as non-efficient and non-innovation driven company will stay in the market. Moreover the realization that non-efficient companies can still survive if they ask the government to help made other companies (Arcandor, Infineon, and Schaeffler) to demand help from the government as well.

It is also unclear whether state aid to Opel is useful at all, in other words whether creative destruction will not prevail in the future and eliminate this company. The newspaper articles revealed that there were concerns about Opel's own incapacity to function properly already for several years. So the state aid to Opel might be just a waste of money as it will eventually collapse anyway. However this was also not certain. The award of the Car of the Year 2008 could make one doubt the Opel's incapacity to produce good cars. Therefore Opel might have represented an important asset for economy the disappearance of which should be avoided. Hence the 'destruction' might have been righteously avoided. GM's reluctance to sell the knowledge to Russians or Chinese showed that this company had some very exclusive knowledge/technology. This became also evident from the decision not to sell Opel at all; this suggests that Opel was indeed worth fighting over. Thus in this way by keeping an important player to stay in the market, the government could have stimulated a better competition. Hence there is a chance the state aid to Opel has actually helped to sustain competition by preserving a good company.

When it comes to the characterization of state aid to Opel, it is difficult to conclude from the newspaper articles which one, rescue or restructuring aid, is applicable here. It could be said that both are applicable: the bridging finance was widely regarded as a rescue help which Opel (GM) needed to buy time before deciding how to restructure. However there were more guarantees promised, once the company would be bought. Hence it is difficult to say whether Opel as a rescue-aid receiver is less likely to survive because it also got some sort of restructuring aid. Therefore although the newspaper articles could not give enough evidence for suggesting that state aid to Opel is a waste of money (if Opel was eventually to default anyway), there is also not enough information to suggest the opposite. At the same time the chance for Opel's successful intervention increases with the knowledge that the market decline and poor management have been the trouble makers for

[25] Section 2.3.2.2 Moral hazards and creative destruction.

the company. Moreover the newspaper articles also demonstrated that there was a good performance prior to the recession – as Opel got the award of the Car Price of the Year 2008. And as literature review argued the companies which were growing faster prior to the period of difficulty are more likely to survive the troubled times and restore their power. Hence there are reasons to believe that this state aid was not a waste of money, because the company has a chance of recovery.

Nonetheless, it remains that the car market is over-saturated. So it is questionable whether saving just another producer is indeed the right thing to do for the economy and competition. After all, if company would have gone bankrupt, the curator could have sold the ‘good parts’ of Opel without the need for taxpayer money. In such scenario, valuable asset to economy would still survive, just probably under another name.

These doubts are strengthened by the idea that this state aid angered a lot of European leaders. Everybody was involved as they feared that German national benefits would result into European costs. Newspaper articles also revealed that at a certain moment, national governments stopped protesting against the German measures and decided to help their own manufacturers instead. One could argue that other national governments responded to German state aid by assisting their own car-industry as well. However, based on the newspaper articles, one cannot conclude whether it was indeed the effect of German state aid. However state aid did threaten efficient specialization as the more efficient factory in Zargoza was to close, if Opel was sold to Magna, and less efficient ones in Germany would remain open. So Opel case reveals to a certain extent how dangerous state aid is for international competition, especially in the European Union.

Newspaper articles also showed that recession and upcoming elections put a lot of pressure to act upon the politicians. Public was convinced that state should intervene as a company should not suffer from the consequences of financial crisis. And German government had no other choice by to please the public if they aspired to be re-elected. Therefore it becomes questionable whether this state aid was an economic measure or a political one. And this in turn sets doubts the righteousness of this state aid, as the competition principles might not have been guarded for in the first place.

3.4. Conclusion

It seems unlikely that state aid to Opel will correctly address the market failure and in some cases the state aid might even create or worsen the inefficiency. Consequently in this regard, this state aid is likely to do more damage than good to European economy. The table below demonstrates this conclusion in more detail.

Market failure	State aid effect on this market failure
Externalities	Not applicable as newspapers did not reveal this market failure or how the state aid could effect it.
Market power	Although there was no market power to remedy in the first place, state aid gave preferential treatment to some firms, therefore danger of discriminatory favouritism is applicable.
Imperfect information	Could be argued that state aid tried to remedy it, but unclear whether the government ‘picked the right winner’ and there is a danger of government failure.
Equity	Could be argued that state aid tried to remedy it, but the fact remains that it is not clear whether state aid to Opel was the right measure to remedy it in regard with efficiency concerns.
Macroeconomic crisis	Could be argued that state aid tried to remedy it, although there is a valid threat that this state aid was spent inefficiently and only postponed the necessary restructuring of car industry.

With regard to state aid effect on competition, it can be argued that state aid did endanger competition to a certain extent. There are legitimate doubts whether state aid stimulated market power formation in Opel case. On the other hand the state aid provoked moral hazards which endanger competitive status of economy. There are different opinions on the usefulness of this state aid to competition – it might have saved an important asset, and Opel might actually recover. On the other hand it is ambiguous whether state aid was needed to preserve this competition: curator could have sold the 'good parts' of Opel which would have kept the asset in the economy, but for this measure there would have been no need to use tax payer money. And moreover the market is saturated with cars – maybe there is simply no need for another competitor as it does not bring any added value. One thing emerged from this analysis as well is that state aid endangered efficient specialization in the EU. On this matter there is no doubt that state aid to Opel endangered competition and disadvantaged economy. The analysis of how recession and political environment influenced this state aid, suggests that government might have not even considered the consequences of state aid to competition and economy at all.

4. Conclusion

This research aimed to offer a holistic conceptualization of the consequences of state aid. One of the most obvious conclusions to be drawn from this research is that literature rarely provides deterministic scenarios with regard to the state aid consequences.

The literature review has shown that state aid, in the presence of market failures (such as positive externalities, market power, imperfect information, inequity, and macroeconomic crises), can restore efficiency and contribute to economic prosperity. However such justification of state aid also knows its exceptions and nuances. There is no consensus whether it is the government that should intervene and whether government is at all capable of correcting market failures without erecting other inefficiencies. The literature review has also revealed that the main argument against providing state aid, knows its own nuances as well. One cannot claim deterministically that state aid will endanger economy by disadvantaging competition (stimulating market power formation and impeding creative destruction). The literature has shown that the market characteristics (such as concentration, cross-price elasticity and intensity of rivalry) play a major role in the assessment to what extent the state aid will disadvantage competition. Moreover the arguments of moral hazards and the inevitability of creative destruction also do not always hold, as state aid can also foster competition and really help firms, which represent valuable assets for economy, but are now ailing because of poor management or market decline. However it also emerged that even though state aid might fall under the abovementioned nuances, it is still likely to initiate retaliation on international level, which will negatively affect efficient specialization between the countries, especially in the European market. Moreover the history also reveals that when the politicians are taking decisions to disobey competition rules in times of recession, they are likely to disregard important factors which can make such disobedience lead to disadvantageous consequences for economy. Hence it shows that the coin has two sides.

When applying these insights to the case of Opel, it emerges that state aid, based on the newspaper information, is likely to have an ambiguous, however more verging on negative, effect on European economy.

Although there was no market power to remedy in the first place, state aid gave preferential treatment to Opel, therefore danger of discriminatory favouritism arose. However when examining this discriminatory favouritism more closely in the light of endangered competition, it emerged that although Opel did receive special treatment, it is unlikely that it will stimulate Opel to become a market power. Therefore, in this sense, this state aid does not seem to have harmful consequences for the economy.

When looking at the fact that the German government tried to create some feeling of certainty by providing assistance, it can be argued that it was righteous of this government to do so in order to encourage investors and eliminate imperfect information. After all the company did show potential to be a good investment when the chances of successful recovery are considered (e.g. the indicators like market decline, bad management and good performance prior to crisis were observed). However it is questionable whether the government has read the signs properly.

First of all, the market was saturated with car manufacturers. Hence although the company might have had potential, it might have been more efficient to let Opel go and let the curators do their job as having an additional car manufacturer might not have been what the market was asking for. And secondly, there are reasons to doubt whether the government was *able* to make the right decisions at all: there are grounds to believe that Opel and the investors abused the upcoming elections and macroeconomic crisis as a manipulation to receive state aid. In other words, there were indications of capture, and strong re-election motivations for the politicians to give state aid. So although the company could have presented an important asset for competition and economy, thus justifying state aid, it remains questionable whether state aid was the right measure to preserve this competition.

Hence as there is a chance that this state aid could have been unnecessary, I am inclined to conclude that it would harm economy as there is a danger that the (tax payer) money was spent inefficiently. This is also supported by the idea that although the government might have aimed at preserving distributional equity, it could still be argued that such equity could have been sought in other more efficient ways. Not to forget, due to saturation of the car market such state aid is likely to only postpone the necessary restructuring of the car industry, and thus hurt economy eventually.

The newspapers also reveal that state aid provoked moral hazards which endangered competition fundamentals. Another thing that emerged from this analysis is that this government intervention endangered efficient specialization in the European car industry. On this matter state aid to Opel endangered competition and disadvantaged European economy.

Coming back to the main question – *what are the consequences of giving state aid to Opel for the European Union economy?* – the following can be stated. Based on the newspaper articles, I am inclined to suggest that state aid to Opel is likely to be more harmful than beneficial for the European economy.

5. Reflection and further research

One of the main weaknesses of my research on what are the consequences of state aid to Opel (undermining my conclusion) is the fact that I conducted this research using secondary documents: the documents which are infamous for its biased representation of reality – the newspaper articles. Although it was sufficient to see how the concepts, identified in the literature review, could be reflected in reality, it is still very desirable to consult other documents as well in order to get as valid conclusion as possible on the consequences of state aid to Opel. For example, one could use these documents to increase validity of the research:

- Official government statements or policies (national and international);
- company’s own documents on its performance;
- statistics on the (international and national) car market;
- documents on the social security system;
- statistics on the unemployment (e.g. information on how soon jobless people find a job again).

Consequently, the weakness of my research constitutes the ground for further research which could examine these documents and see what conclusion would be reached then. Moreover, it is also desirable to conduct a longitudinal study on Opel to see whether state aid was (or was not) a waste of money. Such research would contribute to our understanding of effectiveness of state aid to industry. There is in general a need for broadening and deepening of our knowledge and understanding of determinants of success and failure of government intervention. The newspaper articles suggested that social security net can catch the misfortunate unemployed. But can it really? It is therefore also interesting to stress test such net for its durability in the times of macroeconomic crises. Such knowledge will contribute to better understanding of the alternatives to state aid. Then based on the findings of the above-suggested studies, it becomes important to see whether the European law and regulations on state aid need an update. Therefore the findings of these studies will eventually call for the revaluation of state aid control in the European Union.

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