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Abstract

We investigate how the general principles of the Treaty have been applied to the car sector in the EU, given the specific soft law provisions which are typical of the sector. A detailed quantitative analysis from 1990 to 2008 highlights a reduction of aid over time. A shift from sectoral to "regional development" motives in granting aid to the sector is also observed in the last ten years. However, sector specific aid is now less explicit but it remains important. Large amounts of public money are spent without a consistent strategy, reducing capacity in some cases, expanding it in others. The scarcity of public funds calls for a more focussed European policy for this industry.

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1. Introduction

Since the meeting of the European Council in Lisbon 2000, the main principle in the European policy towards state aid is synthesized by the expression “less aid, better aid”. The first part (less aid) is quite obvious, while the idea of “better” aid refers to a re-orientation of aid towards horizontal objectives (regional, training, …) rather than purely sectoral ones; the reason is that horizontal aid is supposed to deal with market failures (too little spending in R&D or training activities) or with regional problems, while sector specific aid is feared to distort the allocation of resources.[1] However, the competence of the Commission on state aid is limited to a mere control of what member states do, banning aid which is deemed incompatible with the common market[2] (in the sense specified by the Treaty, article 107), but without pursuing an explicit pro-active policy (a “strategy”).

This raises several issues. First of all, one needs to evaluate the combined effect of decentralised decisions and of a central control. How effective is this control? Can it really abstract from a strategy? And is it sufficient to turn national policies into a consistent European picture? The second issue is whether the double objective set in Lisbon has been achieved or at least pursued consistently. As we will see, the most critical point is the attempt to limit sector specific aids and to break the special relationship between governments and certain large firms. Finally, the coexistence of a strict rule and numerous existing exceptions raises legitimate doubts about the effectiveness of the controls and their ability to safeguard the credibility of competition policy.

The analysis of state aid to the car sector appears particularly relevant at least given the industry’s prominence in the policy debate.[3] The attention of the member states (and hence of the Commission) to the car sector is such, that two specific framework agreements for

[1] Besley and Seabright (1999) and Martin and Valbonesi (2000) discuss the externalities generated by horizontal, regional and sectoral aids and inefficiencies arising from competition among governments. An updated analysis on these issues has been recently provided by Friederiszick, Röller and Verouden (2008).

[2] For a discussion about the legal instruments available to the EU Commission in regulating and controlling state aids, see Cini and McGowan (2008, ch.8).

[3] The sector is subject to an immense number and variety of regulations on safety, emissions standards, etc. According to the European Automobile Manufacurers’ Association (ACEA), the automotive industry has to comply to more than 80 EU Directives and 115 international framework agreements. These standards have become stricter and stricter over time. Even in competition policy, the car sector is given special attention in

state aid to the sector exist[4]. Although subsidies to this industry cannot be compared to those given to agriculture, financial services or transport, they are certainly large relative to other manufacturing sectors, and their distortive effect on competition and on the EU integration process is not negligible. Indeed, in many EU countries there is a national car producer: an aid given to a national champion might easily determine a subsidy race among EU member states, with negative relevant effects on the integration process.

In this paper we focus on the state aid policy towards the sector in the EU, starting from an analysis of the data, and trying to assess how the interplay of member states' policies and EC control have worked to shape what has happened. The control over state aid has been effective only at times: a considerable amount of money is given to the car sector, with evident contradictions, whereby capacity is decreased in certain member states and increased elsewhere, both things thanks to public money. The EU keeps refusing to admit that its state aid policy implicitly represents an industrial strategy. By so doing, the EU avoids to discuss its strategy openly and on a rational basis, with clearly inefficient outcomes.

Our analysis is performed on an original data-set we built collecting state aid cases to the car sector directly from the EU Official Journal (for the period 1990-1999) and from the EU State Aid Scoreboard (from 2000 on). Although many ways to support the industry are not included among official state aid figures, this is, to the best of our knowledge, the first attempt to measure the phenomenon. Over time, we observe a slowdown in the amount of aid granted. Additionally, from 2000 onwards, aid to the industry has been increasingly labelled as regional development aid. Large disparities emerge among states in the adoption of this instrument, with Germany, Italy and new member states acting as most generous donors.

The paper is organised as follows. In Section 2 we discuss some general features of the car sector, especially in the EU context. In Section 3 we first present the specific frameworks adopted for the car sector and we then illustrate how the EU system has

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the field of vertical restraints (see the block exemption regulation BER 1400/2002) because producers' concentration is such, that the concern for competition is particularly acute.

[4] For a detailed survey on the governments-industry relations in the automobile sector at national and EU level, since the post-war period and until the end of the last century, see Mc Laughlin and Maloney (1999).

worked, using the available data. In Section 4 we investigate member states' behaviour in the framework of international competition. Section 5 analyzes the relationship between state aid control and industrial policy, with a particular focus on the recent crisis. Section 6 concludes the paper.

2. The car sector in Europe

Considering direct motor vehicles production as well as most of the components,[5] the automotive industry employs more than two million workers in the European Union (EU25), which constitute around 7% of the manufacturing industries' workforce and about 1% of total employment. In the last thirty years, the total output of the car industry has constantly increased, while employment has remained almost stable, but uniquely because of the contribution of new member states. The relative weight of the sector over the EU economy in terms of employees has constantly declined since the Seventies, when it used to represent almost 2% of the total workforce. This decline is consistent with the shift towards services which has characterized Europe in the last thirty years. Nonetheless, the relative share of the car industry within manufacturing has slightly increased over time, thus suggesting that the decline has been more severe for other manufacturing industries.

When we move from direct employment (including components) to an estimate of the number of jobs which *indirectly* depend on this sector, statistics become a lot less reliable, as the definition of indirect links among sectors is less obvious. Some partisan estimates provided by the European Automobile Manufacturers Association (ACEA) suggest that indirect jobs related to the industry amount to 10 millions (ACEA, 2009). However, the figure considered includes quite an extraordinary conglomerate of activities such as recycling, sales, maintenance and repair of motor vehicles, road transport (passenger transport, taxi operations, freight transport), the construction of highways and roads etc. In the 1989 Community Framework for state aid to the car sector, the European Commission claimed that around 10% of EU employment depends on the car sector, a figure which in the 1997 Framework became 10% of the active population,[6] with the complementary statement that ten jobs depend on each job in the car sector. However, the hard facts behind this very impressive claim still remain to be clarified.

On the supply side, notice that the term "European car industry" may refer either to companies traditionally owned by EU shareholders and with headquarters in the EU (the typical "national champions"), or more generally to plants located in EU countries, which may well belong to Asian or US companies.[7] Obviously, if a government cares about employment, the latter concept is the most important one. All large member states host some of the about 250 production plants in the EU; Germany is by far the most important producer,[8] while the industrial presence in countries characterized by smaller markets is often negligible.[9]

Economic recessions typically lead to sharp decreases in new car registrations, as during economic crises expenses in durable goods are the first ones to be cut by consumers.. Looking at the number of new car registrations for EU 15 countries, we observe that the 1993-1995 period has been critical, showing a drop from 13 millions of new registrations to 11.5 millions. In the years which have followed there has been a rapid rise in the number of registrations, with around 14.5 million registrations in 2001. After that maximum, the number of new registrations has decreased slightly for a few years to reach a new peak in 2007, and decrease sharply since then. Moreover, being highly capital intensive, this industry is characterised by rigid production decisions, so that the sharp cuts in demand entail a massive underutilization of production plants.

The combination of cyclical demand for and productive ridigity makes employment very hard to protect and this provides car producers a strong argument to lobby for

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[5] This includes the Nace Rev. 2 sector 29, denominated "Manufacture of motor vehicles, trailers and semi-trailers", which include also bodies, parts and accessories, electrical and electronic equipment for motor vehicles and so on. The only major components which is not considered in this sector is tyres production.

[6] Whose definition includes both the employed and the unemployed.

[7] Many of these companies entered the EU market to circumvent quotas on car imports, which were in place in the 1993-2000 period for Japanese cars, and other restrictions (e.g., voluntary export restraints).

[8] About 34% of employees in the European car industry (EU 27) are employed in Germany. Data from Eurostat, latest available year is 2009.

[9] Bulgaria, Cyprus, Denmark, Greece, Ireland, Latvia, Lithuania, Luxembourg and Malta do not host production car plants (Official data sourced from ACEA website: www.acea.be).

subsidies. The need to ensure a reasonable management of productive capacity converges with the national governments' aim to protect employment.

Overall, this industry has been considered as a "special one" since the birth of the European Union. Claims regarding the relevance in terms of direct and indirect jobs, the role in terms of patents[10] and the symbolic role of car brands in economic development after World War II have all been used to justify the large amount of state aid devoted to this specific industry. But is this industry actually different from other manufacturing industries?

The industry's value added and employment are relevant in absolute terms, but they represent only about 1.7% of value added and 1% of total employment in 2009. What really seems to distinguish this industry is the dominance of a small group of large firms: according to Eurostat (2008) it displays one of the lowest shares of small and medium-sized enterprises among manufacturing sectors, together with utilities and with oil and gas. Moreover, these firms are generally quite old: most of the existing brands have been around since the end of the 19th century (Opel in 1862, Peugeot in 1882, Renault in 1898, Fiat in 1899) or the beginning of the 20th century (Rover in 1904, BMW in 1917, Citroën in 1919, Mercedes-Benz in 1926, Volvo in 1927, Volkswagen in 1937). Thus, these companies have been recognized a leading role in industrial development by governments, and their products have sometimes become symbols of the economic progress of entire nations.[11] Can this justifiy the special attention of governments? In Section 3 we describe how government care about the sector, highlighting trends in subsidies to car production plants in the different EU member states.

3. State aid to the car sector in the EU, 1990-2008

Although art. 107 of the Treaty states that government subsidies to business are incompatible with the Treaty, the same article lists a number of reasons to allow such

[10] According to ACEA, about 5,900 new patents per year can be ascribed to the sector. Unfortunately no official statistics exist to substantiate such claim (which appears quite extraordinary).
[11] The US attitude towards its three "giants" is not very different. See Luger (2000) for a full account of the relationship between car producers and governments in the US.

subsidies. Discretional exemptions should lead to aid which – having a limited effect on trade and competition among member states – is aimed among other things at promoting relevant projects of European interest, regional economic development in low income or high unemployment areas, "certain economic activities".[12] These discretional exemptions leave room to a case by case valuation, a costly process – especially after the enlargement – which the Commission has tried to redress over time, in particular reacting to member states' waves of subsidies in periods of economic crisis. This was apparent for the car sector at the beginning of the Eighties, when the oil shock and the subsequent recession gave rise to a real subsidy race (Dancet and Rosenstock, 1995); a similar race happened between 1993 and 1996.

The Commission's reactions led to documents labelled "Frameworks", the first of which dates back to 1989, while the second was issued in 1997. The 1989 "Community Framework for state aid to the motor vehicle industry" (OJ C 123, 18.5.1989) represents the first systematic attempt to organize state aid analysis in a way to make it compatible with a harmonic development of competition in the sector. Coming after a real subsidy race, its first aim was to increase the transparency of state aid to the sector, and to specify some conditions, which the EC may ask to allow specific subsidies. As for transparency, the Framework envisages an obligation for member states to notify *i)* all proposed aid schemes outside already approved schemes, and *ii)* those schemes within approved schemes if the total cost of the project is above the threshold of 12 Million ECU; moreover, the Framework includes an invitation to inform the Commission about all aid decisions, to be collected in a final annual report.

Some conditions for allowing state aid were also introduced. First of all, the Framework introduced the idea that the EC should make sure that the aid does not help increase the market share, and it states that in some cases capacity cuts may be required. As for aid schemes referring to specific objectives, the framework already introduces a positive attitude towards regional aid, limits the possibility to use R&D as an excuse to subsidize

[12] These exemptions are usually considered the ground for many soft low provisions which has been developed since the early 1990 in the EU state aid legal framework – i.e.: Community guidelines on state aid for rescuing and restructuring firms in difficulty, Community framework for research and development, risk capital, *de minimis*, etc. For a discussion on soft law provisions in EU state aid regime, see Cini (2000).

any technological improvement (with a clear distinction between R&D spending and the mere introduction of new technologies), and specifying that training aid could be allowed *per se* if not linked to new investments. However, after 1993 a sharp demand drop brought about a new subsidy race, and new controls were considered necessary. At the same time, the evolution of general state aid policy made it necessary to update the framework.

This led to the Second Framework, issued in 1997 (OJ C 279/1 15.09.1997). This scheme broadly reflects a general evolution in evaluating training aid, regional aid or the aid for rescuing and restructuring firms in difficulty. For instance, regional development aid requires - among other things – an evaluation reasonably close to a cost-benefit analysis, including the proof that a viable alternative exists, so that – absent the subsidy – the firm would develop the same project elsewhere.[13]

Besides this, a major evolution is provided by the Lisbon declaration, which can be synthesized – as already mentioned - in the formula "less aid, better aid". Although we will see in the following pages to what extent these principles have found an actual application in the policy towards the car sector, it is important to acknowledge that especially the second part of the Lisbon's formula – i.e.: "better aid" – was quite in line with the EC tradition. Although the Treaty accepts aid directed towards "certain economic activities" (e.g., certain sectors), the preference for horizontal interventions, aimed at more general objectives such as regional development or training of the workforce, was already present in the first framework on the car sector. However, as we will see, the explicit objective contained in the final Lisbon declaration has gone hand in hand with an apparent shift in policy, so that aid labelled as "sectoral" has almost disappeared.

The real economic issue is to what extent all these attempts to frame state intervention have really proved useful, and whether we can actually form a broadly consistent picture of the interventions of the Commission and, even more problematic, of member states. In this perspective, the next paragraphs will first provide a closer look at the trend in total amounts of state aid to the sector, and then analyze the cases approved in the 2000-2008 period.

[13] An analogous evolution is marked by the "Multisectoral framework on regional aid for large investment projects" which was adopted shortly afterwards (December 1997) and later reviewed in 2002. The coexistence of this framework with the sectoral one raises some question marks, especially given that the size of firms in the sector usually implies that investment projects fall within the scope of "large investment" frameworks.

3.1 The data

To answer this question we have collected a considerable amount of data, using the state aid register of the DG Competition[14] for cases after 2000, and carefully checking the Official Journal, annual issues of the Report on competition policy and various EU documents for previous years. Publicly available information varies in quality over time. Early documents are less systematic and less generous of information than recent ones, which have a much greater transparency and precision. Before 1988 the information appears to become really occasional and not reliable, so that our "backwards" search has stopped at that year. The systematic comparison stops at 2008, as aid in the crisis period is hardly comparable to the one of the previous years. We tackle the issue in qa specific section later in the paper.

We have focussed on the amount granted, on the basis of the final decision published in the Official Journal of the European Communities. We report data on the total nominal amount granted. Whenever possible, we also kept the information on the discounted values.[15] When considering soft loans, we take the data on the gross grant equivalent.[16] All values reported in the tables are expressed in Euro/ECU. If the amount is reported in the official documentation in the national currency only, the exchange rate adopted is the annual average (data from Eurostat).

Since a decision on a state aid may take several years, it is difficult to choose a year of reference. We choose to attribute an aid to the year of the final decision, and not to the year in which the case was opened. This general principle has an exception for cases in which the aid was granted before the decision, as in these cases we attribute the aid (if approved) to the year in which it was paid. The rationale is that we are interested in the time period in

[14] See http://ec.europa.eu/competition/state_aid/register/.

[15] Many times subsidies are given over a set time horizon, and in recent years the discounted value is sometimes provided in the decision. For the cases up to the end of the '90s only the nominal amount is generally available, and the information on the time period during which the grant elapses is often not reported, thus preventing us from computing the discounted value.

[16] If this value is not officially provided, we have computed it on the basis of the spread between the required interest rate (which could be nil) and the interest rate of the ECB for its main financing operations, as reported monthly in the Official Journal.

which the aid has been granted, either with or without a formal approval. Finally, we also consider the information on the instrument adopted (grant, soft loan, etc.) and (especially for recent cases) the type of "primary objective" stated in the decision.

Thus, the data we present here refer to *approved* aid - i.e., aid the EC has declared compatible with the Treaty - and which is explicitly devoted to the car sector. Notice that even when state aid is "primarily" targeted to horizontal objectives, it may be explicitly earmarked to a specific sector or firm, and we include in our database only those amounts which have been reserved to one or more firms in the sector (whichever the horizontal objective which justifies the scheme).[17]

Notice that our data underestimate the total *support* effectively granted to the sector. At least three sources of state aid to firms in the car sectors are missing. First of all, only aid measures explicitly earmarked to car producers are included, while some car producers may have received aid under horizontal programmes which were approved as general measures, and which had been targeted to many sectors (and not specifically to one). In the same way, although demand subsidies (e.g., scrapping incentives) do not formally represent state aid as the money is given to consumers, they are nonetheless granted specifically to support the sector. Finally, the European Investment Bank (EIB) is sometimes asked to target its funds to specific sectors, but these specific programmes have not been accounted for in the present analysis.

3.2 Total aid amounts: less aid?

Since 2000, the general approach of the Commission (and even more of the European Council) has been to aim at reducing state subsidies and at inducing better targeting of resources. Let us start from an analysis of whether it is legitimate to say that – according to some criterion – aid to the car sector has actually decreased in the last few years.

[17] In some cases, aid is earmarked to specific sectors, among which the car industry, but the list of interested sectors is in fact very large; these cases are not considered by our analysis.

Table 1: Total state aid to the car sector, 1990-2008 (Million €, 2000)

	Average 1990-94	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU12	1,105.4	377.4	769.5	57.2	263.1	310.3	90.9	342.9	563.2	123.8	43.3	123.4	13.4	23.5	80.7
EU15		393.7	779.4	57.2	264.8	310.3	90.9	342.9	563.2	154.4	52.9	132.4	20.0	23.5	80.7
EU25											52.9	132.4	63.7	171.2	152.1
EU27														172.0	248.3

Source: Own elaboration from DG Competition and OJ EU information

Our data show that state aid in EU 12 (or 15) has indeed decreased over time in absolute terms. While in the Nineties it was not uncommon to see hundreds of Millions paid out every year, in the following decade total values have rarely reached the previous peaks. Notice that as recent data are likely to be more accurate than older ones, the actual decrease in state aid to the industry is probably even greater than what reported here. Moreover, as we will later see in greater detail, this happens even despite the effort to integrate new accession countries and former East Germany *Länder*, which are the largest beneficiaries of aid in recent years, both because of a greater presence of areas eligible for regional aid, and for an explicit effort to favour their integration in the EU.

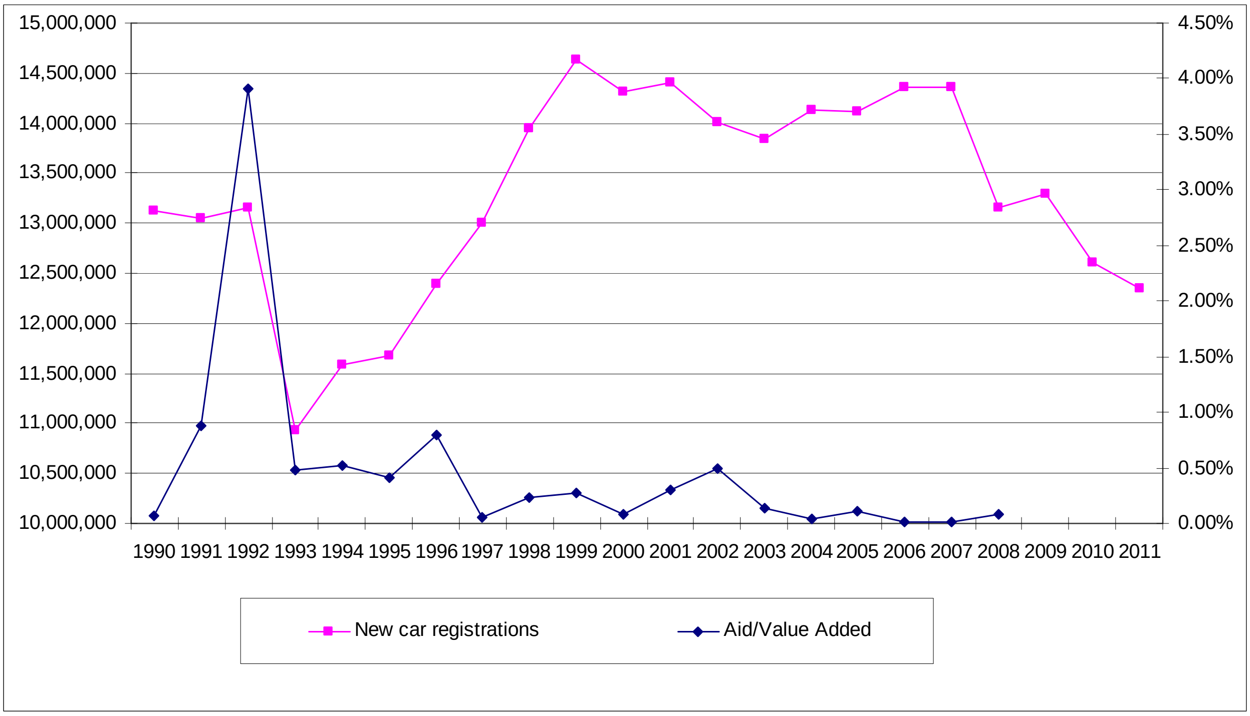
To better understand the data in Table 1, one should first of all consider that subsidies are likely to depend on the actual levels of economic activity, and that they could be related to the level of demand. To make the analysis more precise, in Fig. 1 we have considered, on the one hand, the ratio between the amounts of state aid and the value added of the sector (as a proxy for its size)[18], and on the other hand, the number of new car registrations as an indicator of demand.

These data indicate that over time state aid has indeed decreased, but that probably the increase in demand explains a good deal of the dynamics. During the Nineties, on average the ratio of aid over value added in the car sector was 0.72%, a figure which falls to 0.14% in the 2000-08 period. At the same time, after 1997 demand in EU 15 jumps, and remains, to levels above those of previous years. Whether the decrease in aid is an effect of the Lisbon declaration or simply is due to better demand conditions remains an open issue. In

[18] Notice that due to lack of comparable data on aid, Figure 1 cannot go beyond 2008.

any case, this decrease in aid may also depend on a shift in policy instruments from direct subsidies to firms to subsidies to consumers (scrapping incentives), which are not considered state aid. These schemes are now quite common, and they are allowed without problems as long as they are not discriminatory; notice that through these schemes member states often commit amounts, which are far larger than those previously given as state aid.

Figure 1: State aid as a % of the sector's value added and new car registrations in EU 15, 1990-2008.



Source: DG Competition and Eurostat

Although data after 2008 are not strictly comparable to the previous ones, again they would show a clear increase in state aid as a way to compensate the sharp fall in car registrations. Controlling state aid seems to be easy only when demand remains high.

3.3 Better aid or better packaging ?

Let us now turn to issue of whether the shift in policy marked by the Lisbon declaration has actually proved effective as for the "quality" of aid (where in the EU rhetoric "good" means horizontal while "bad" means vertical, or else sectoral). To find an answer, it is first of all useful to consider in greater detail the EC decisions and the applications. Looking at the cases, it appears quite obvious that while sectoral aid was the declared goal of most state aid in the Nineties, this is no longer true since 2000, when labels such as “sectoral development” or “aid to investments” magically disappear, and regional aid suddenly becomes by far the most important declared objective of the state aid targeted to the car sector.

This is the combination of two facts. The first one is that even before that date, aid was very often granted to plants, which in fact were located in assisted regions. However, given that the indication of the primary objective of the aid was not crucial, sometimes member states simply used “sectoral development” as a generic term, trusting that anyway the analyses would have been based on the actual location of the plant, on the specification of the assisted R&D project, etc.

The second one is that the EC has anyway accepted the idea that regional development policies could go through aid schemes which, instead of being anonymous or at least open to many firms, were explicitly meant for specific plants. This interpretation of regional policy, although totally standard for many years, is far from obvious. Can we really talk about “horizontal” state aid, when the aid is not generically meant for an area, but when it is targeted to a specific plant, which happens to be located in that area?

Therefore, the shift to aid measures which had a declared “primary” objective of horizontal nature has not changed the possibility of member states to target these measures in a very precise and specific way.

Coming to more recent cases, it is interesting to see that the main declared objectives which motivate aid to car plants are regional development, training and R&D (see Table 2). The regional development objective is associated to the largest number of cases (31), and to 75% of the total amount of aid (around 2 bn €). The training objective records 28 cases, but the total amount granted under this heading is quite limited (about 223 M€) as compared to the 5 cases of aid for R&D which alone have mobilized 177 M€.

Table 2 – State aid to the car sector by primary objective , 2000/2008, Million €

Primary objective	N° of cases	Cumulated amount of nominal aid (Million €, 2000)
Employment	1	0.24
Environmental protection	1	10.18
R&D	5	176.94
Regional development	31	1,552.33
Rescue & Restructuring	2	82.00
Sectoral development	1	9.14
SME	1	3.62
Training	28	222.65
Total	70	2,057.10

Source: Data from OJ and DG Competition, deflated values, base year is 2000.

The two cases of Rescue and Restructuring are quite considerable in amount (about 82 M€) mainly because of the support to the Polish firm FSO (previously Daewoo) organized as a state guarantee of a gross grant equivalent of 59 M€ and other state support measures for about 14 M€. In the formal investigation of this aid, the EC has distinguished between subsidies granted before Poland's accession and those referring to the post-accession period. These latter subsidies have been investigated in the light of the 1999 guidelines on rescue and restructuring aid, to assess whether they would be "capable of restoring long term viability of the firm within a reasonable timescale and that the aid is limited to the minimum necessary and does not unduly distort competition".[19] It is interesting to note that this aid was authorised under the condition of a "production-sales-cap": FSO should limit its annual production to 150 000 units until February 2011.[20]

[19] See about Commission Press Releases IP/05/64, on 19/01/2005.

[20] Conditions of this kind are often introduced. The idea is that firms should not take advantage of these subsidies at the expense of their rivals. Notice that the most immediate effect of this cap is to limit positive effects on consumers; however, the rationale for this safeguard for rivals can probably be considered an attempt to avoid subsidy races.

4. Member states and competition

Let us now discuss some of the determinants of state aid to the car sector, considering first the international aspect of state aid and competition, and then coming to issues of internal EU relationships.

4.1 The US factor: federal v. state subsidies

One of the main arguments in favour of state interventions is that “other countries do the same”; this is the likely starting point of subsidy races, and it is important to analyse to what extent the general EC leniency towards the car sector could be justified as a retaliation *vis à vis* non EU countries’ policies. The international dimension of competition among car producers is quite obvious. The automotive industry is traditionally concentrated in the richer areas of the world, namely EU 15, USA and Japan, with 20.7%, 11.9% and 15.8% respectively of world production of motor vehicles in 2008,[21] The main actors in the industry also come from the leading economies: in 2008 the largest company was Toyota, with a production over 9 million motor vehicles, followed by GM with 8.3 millions, Volkswagen with 6.5 million and Ford with 5.4 millions.

There is little doubt that competition takes place in a global market, but it is not easy to assess, whether other countries help the car sector in the same way as EU member states do. One of the reasons is that - in particular - in the US there is no clear definition of “state aid”: Interventions at federal level are extremely rare, and confined to situations very close to what the EC defines as “rescue and restructuring aid”,[22] while states subsidize firms as part of their local development policies. This confirms that the EU attention to state aid within a competition policy framework is quite unique (Cini and Mc Gowan, 2008).[23]

Only two episodes of relevant federal interventions are recorded in the US, and they were both bailouts. The first one refers to Chrysler in 1979, when public guarantees were

[21] Data from the International Organization of Motor Vehicle Manufacturers (www.oica.net). As in other segments of industry, however, former “emerging” economies are gaining relevance in recent years: China nowadays produces around 13% of the global supply of motor vehicles, Brazil and India 4% and 3% respectively. Interestingly, if we focus on the production of cars only, the US share of world production drops to 7.2%, overtaken by China, with 13%.

[22] Notice that the US industry basically consists of three giants, Chrysler, Ford and GM.

[23] For a discussion about the US antitrust state action doctrine, see Martin and Valbonesi (2006, Section 5).

provided for a 1.5 bn$ loan, but the operation entailed a 350 M$ return to the Government, which probably means that this intervention should not really count as "aid" in the European sense, given that at least ex post market criteria were most likely met.[24] The second one is the Automobile Industry Financing Program of 2008, when the federal commitment in equity and loans was about 50 bn$ for GM and 20 bn$ for Chrysler.

It is very hard to compare these figures to EU equivalents. In the first place, notice that the relevant concept in the EU is the "gross grant equivalent", which is obvious when aid takes up the form of a direct grant, less so in case of loan guarantees, and even less in case of equity participations: given the absence of a comparable monitoring system in the US, no official calculation of the EU notion of gross grant equivalent is available. In the second place, in these cases the federal authority acquired such a stake in the companies that, at least for a period, the control of these companies *de facto* fell in public hands one thing which has never occurred in the EU in the last two decades.

However, these federal decisions do not exhaust public interventions as the States have the right to intervene without any close federal control. One of the principles of the US Constitution (the Commerce Clause[25]) reserves the right to regulate inter-state commerce to the central power, and this is interpreted as a way to prohibit discriminatory development measures (tax/subsidy) which distort inter-state commerce. Any violation of this principle would be settled directly through the judicial system, without an explicit political mediation. However, it is now widely accepted that states may offer substantial subsidies to firms interested in investing in their territory, and procedures similar to open auctions take place among and within states, through which companies choose where to make their investments depending on the package of infrastructures, direct subsidies, tax exemptions, training aid and so on offered in the different locations.

This has led in particular to a re-location of a considerable part of the US car sector from the Detroit area to Southern States such as Alabama, Kentucky and Tennessee where a number of companies have been attracted by low wages and substantial public

[24] This bailout is described in details in Luger (1999, p.98-108). The author discusses the bailout along with the relevance of Chrysler's size in the economy, the firm's political influence and lobbying activities.
[25] Article I, Section 8, Clause 3.

incentives.[26] However, no central record is kept of the amounts which are invested by the States, as these operations are rarely debated from the perspective of competition policy (any firm can have access to these programmes).[27] Notice that these funds go to a very large extent to new entrants, which are mainly EU and Asian firms.

In other terms, in the US a two-tier system operates. Direct federal interventions target large rescue and restructuring operations, managed with criteria comparable to those followed by private investors. On the other hand, state interventions are analyzed as issues of regional development, rather than as competition policy problems.

4.2 A focus of EU member states

In the international state aid game, EU member states act quite independently under the control of the European Commission. Let us now see how different member states have operated in this period, looking at the car sector data reported in Table 3.

Table 3 – State aid amount to the car sector by country, 2000/2008

Country	Nr of cases	Cumulated amount of nominal aid (Million €, 2000)	Average nr of employees	Aid per employee (€ 2000)
Austria	2	37.0	31,642	1,169.6
Belgium	12	89.0	48,989	1,816.5
Czech Republic	1	169.5	107,183	1,581.1
France	3	61.1	234,926	260.0
Germany	4	494.3	864,436	571.8
Hungary	1	71.4	43,782	1,631.3
Italy	8	371.6	170,518	2,179.2
Poland	6	86.7	111,607	777.1
Portugal	3	45.1	24,384	1,848.3
Romania	2	174.1	63,439	2,744.1
Slovakia	3	85.5	27,508	3,108.2
Spain	7	163.1	205,513	793.5
Sweden	2	17.5	205,513	85.2
United Kingdom	16	191.3	196,294	974.8
Total	**70**	**2,057.1**	**2,335,734**	**880.7**

Source: Data from OJ and DG Competition, deflated values, base year is 2000.

[26] On these considerable shifts of production and assembly plants, see Klier and Rubenstein (2008).
[27] A relevant consequence is that - to the best of our knowledge – no reliable information on the amounts spent by the different states seem to exist.

In terms of total amount, the most generous countries have been Germany and Italy, which together cover around 42% of the total amount of aid, followed by the UK with around 200 M€. Not surprisingly, the newest EU member countries play a particularly relevant role, even if they were not present throughout the period considered. Since their accession, the Czech Republic, Hungary, Poland, Romania and the Slovak Republic have granted together aids to the sector for more than 580 M€. It is clear that the accession of previously centrally managed economies has determined a wave of subsidies to the car plants there located: a further evidence is provided by the fact that the very high total amount of aids by Germany is mainly driven by the huge subsidy (about 363 current M€) granted to the new BMW plant located in East Germany (Leipzig) in 2002.

If we scale total aid by the number of employees - as we see in the last column in Table 3 above - we observe however that Germany does not emerge as the most generous country. In the "old Europe", Italy sticks out as a record donor, and it is the only EU12 country which is comparable in terms of state aid to Romania or Slovakia.

4.3 The *new* national champions and employment concern

In the EU, the terms of the game are quite clear. Industrial lobbies, trade unions, local communities or others put member states under pressure to pay firms substantial subsidies, while the EC tries to limit these subsidies. The effectiveness of the Commission's efforts is not always clear, but as we will later see some successes must be acknowledged.

Member states often engage in such policies to support "special" firms sometimes called "national champions". These firms have a long and established relationship with governments, and are sometimes expected to pay special attention to national interests, and in particular to employment in less developed areas of the country, in exchange for continuing public support. This traditional vision is more and more detached from reality and - hopefully - the perception of the public opinion is changing, With open financial markets the nationality of control shareholders is more and more difficult to identify. In the same way, most firms are multinationals which may not be "national" firms in any sense, but which may nonetheless significantly contribute to local employment.

Another way to pose the question is to observe that any subsidy has potential consequences on competition, but which competition is now the most relevant one to member states' policies? While the main and more widely discussed aspect is competition among firms, the type of competition which is affected in the most direct way is the one among different regions of the EU, competing in order to attract investments and protect jobs. Are governments focused on protecting national champions, or rather any car manufacturer which creates employment within national boundaries? The answer is not easy, and different countries show different attitudes in this respect.

A relatively instructive story is the one of Italy, where the car industry basically consists of one large company, Fiat, employing directly almost 70,000 people. This is one of the main recipients of state aid in Europe of the last years, even more so if one considers applications which were eventually rejected, which shows the determination to help a firm, quite beyond what local and contingent conditions would call for. For instance, six planned measures were notified in 1997, and two of them (regional aid) have been blocked by the EC. In both cases, the regional aid was being claimed for projects in an area which had been declared eligible for assistance under Article 107(3)(c) of the EC Treaty *after* the beginning of the project for which the aid was to be given. In the other four cases Fiat received state aid for the sum total of 72,6 M€.

Analogously, in 2001 the Italian government tried to subsidize a project of a subsidiary of Fiat (Iveco) with 16.1 M€, but such aid was considered incompatible. The project was carried out in the period 1994 to 1999, the company applied for aid from the national government in 1996 and the request of the Italian government to the EC arrived in November 1999. Not surprisingly, the request failed to pass the necessity test… However, a substantial compensation arrived to Iveco in 2003 under the heading of "regional aid", when a grant of the nominal amount of 121.7 M€ was accepted by the Commission.

Another intriguing case, which instead casts some doubts on the national champions story, is the one of the numerous subsidies which the Belgian government has given to plants of the Ford Motor Company in Belgium (one Ford plant in Genk, one of Volvo in

Gand/Gent). Since 2000, these plants benefited of subsidies for a sum total of about 80 M€ in 2008 values, and this in order to support, at the end of 2008, around 9.500 jobs.[28]

Even if it is not obvious that such total effort by Belgian governments can really be justified by the attempt to defend less than 2% of the jobs of the Belgian manufacturing sector, it would be even harder to explain it as an attempt to defend a US company, that can hardly qualify as a national champion. It appears that in many cases a new notion of “champion” is emerging, no longer linked to traditional brands or to the actual nationality of the control shareholders, but rather (more pragmatically) to whether a firm is really interested in creating employment in a certain region.[29] Net of the tighter controls which are now standard, the willingness of member states to pay for these firms does not seem to be much lower than the one shown towards the old national champions.

5. The EU aid policy: control without a strategy?

What should a EU policy towards state aid consist of? The economic literature has clearly showed (since the seminal model by Brander and Spencer, 1985) that subsidies to national firms competing in an international market typically lead to a reduction in social welfare if other countries adopt a similar policy. State aid has negative effects on market integration – as theoretically highlighted by Martin and Valbonesi (2008) – neutralizing the exit of the less efficient firms (i.e.: the concentration effect of the integration process) and this, in turn, destroys an efficient specialization of production and a division of labour in the enlarged market. In countries where subsidies are granted, X-inefficiency can increase: there is no reason to expect that the winner picked by each national government will be the most efficient firm among those which are in troubles. And if this is the case, in a general equilibrium setting where different goods are produced, the disparity in treatment between

[28] Ford received 7.7 M€ in 2001 for training and further 45,1 M€ in 2003 for regional aid (renewal of a plant). At the end of 2003, Ford cut employment by 3,000 units. In 2006 and twice in 2008, Ford received training aid for 6.2 M€, 1 M€ and 0.8 M€. In the same period, Volvo cars received aid for training for 6.5 M€ in 2003 and 3.5 M€ in 2008.

[29] Analogous considerations hold for almost all countries, which do not have established national producers (new member states such as Romania, Poland, …) or which do not have them any more (the United Kingdom).

firms in different sectors is likely to be welfare-reducing at national level. Moreover, firm size matters: the larger the firm receiving the subsidy, the higher the potential distortion in competition in terms of pricing and of strategies to limit entry.

Even worse, considering the issue of financing of state aid, Collie (2000) shows that each national government has the incentives to grant state aids whereas the prohibition of subsidies would increase the welfare of all member states. Finally, Dewatripont and Seabright (2006) present EU evidence - and theoretically show - that wasteful state aid can be granted by national politicians to improve their chances of re-election by signalling their commitment to supplying “public goods”.

Absent externalities, the EC presumption that state aid should be subject to a tight control stands on a fairly firm ground. However, the Treaty itself acknowledges that aid may be acceptable if primarily devoted to especially sensitive aims (regional development, R&D, training, etc.) and if it does not interfere “too much” with competition.[30] As stressed recently by Vives (2009), “a tension is perceived between a competition approach (according to which aid to firms with no market power or not generating cross-border externalities should be allowed) and a more encompassing approach (where aid not targeted in general to remedy a market failure should be forbidden”).

In this perspective, two questions arise. The first one is whether the EC controls have proved effective in this direction. The second one is whether, in so doing, the EC pursues (or should pursue) something which could be labelled a “strategy”. Let us tackle the two issues in turn.

5.1 Effective controls of fig leaves?

One way of analyzing the effectiveness of the EU policy is to see whether the Lisbon qualitative targets have been met, and in this respect the answer is mixed. As shown in the tables above, we do have less aid earmarked to the car sector, and most of it is now justified

[30] The assessment of state aid control – i.e. how much distortion in the market is induced by the aid – is by itself an issue. Friederiszick *et al.* (2008) discuss an effects-based approach – essentially based on a general balancing test - to distinguish “good” from “bad” aid, but many features of the test still remains to be defined and its implementation seems to be cautious, case by case.

by regional or training objectives. However, the real problem is whether a reasonable balance between the conflicting objectives assigned to the Commission has been reached.

To explore the issue, it is useful to examine how state aid given to the car industry for the main horizontal objectives (i.e., training and regional development, in the 2000-08 period) have been analysed and evaluated by the EC. Starting from the training objective, notice that the usual issue the Commission should assess is the nature of training activities to be financed. If these activities are normally carried out by car producers, the aid would be equivalent to operating aid – thus, distorting competition - and should be prohibited. If training activities qualify as “additional”, going beyond what normal market considerations would imply, the aid should be considered compatible with the Treaty. Such an assessment is clearly not easy, particularly in a sector where firms compete through the introduction of new models, and innovation is thus a basic element of their survival. Notice that in many of the cases considered, the assessment is based on arguments such as increasing employability of workers involved, or job creation or preservation.

Aids given under the heading “regional development” raise greater concern, as they support productive capacity with a direct impact on competition. As competition in the sector is at least continental, the benefit from state aid to a plant located in a less developed region should be – at least – traded off against the possible distortions to the competitive process. The first effect is likely to be on the competitors’ profits, which is a relevant issue if one cares about a level playing field. Moreover, if there is already excess capacity in the sector, helping new plants might create serious problems to plants elsewhere in the EU.

The assessment of aid of this kind controls for the increase in the beneficiary’s production capacity and market share induced by the aid. According to the guidelines on regional aid, the capacity created through the aid should remain below 5% of the apparent consumption of the product at stake in the European economic area and the beneficiary’s market share must remain below 25% in all relevant product markets. Are these thresholds defined correctly for a sector where firms - even if located in EU less developed regions -

face international competition?[31] Moreover, are the thresholds for regional development aid the right tool to evaluate the potential distortive competitive effects in the sector?

Something more accurate would probably be needed. For instance, in *The State Aid Action Plan* (EC, 2005) the Commission has presented a general "balancing" test to analyse state aid cases. In a nutshell, this test addresses the assessment of *a)* market failures or issues of common interest in the objective pursued by the state aid, *b)* incentive effects arising from the subsidy, *c)* distortions on competition and trade and *d)* balance between benefits and costs from state aid. The test tries to propose common principles to evaluate each case, provided the subsidy alleviates the effects of a market failure ("efficiency objective") or produces outcomes which increase social/regional cohesion ("equity objective"). As highlighted by Neven and Verouden (2008), the test has been mainly implemented in the evaluation of cases the area of R&D aid and in the provision of risk capital, but unfortunately there is no evidence of a genuine evaluation of the potential distortive effects of the aid given for training or regional development objectives. To our knowledge, this test has never been applied to evaluate cases in the car sector.

However, in several cases, the EC has led to rejecting proposed aid measures. Besides what we already pointed out in the Italian case, in 1999, Belgium tried to give about 6.5 M€ to Ford Genk (regional aid) for transforming a plant in order to produce a new model without relocating their production, but the Commission's reaction lead to a withdrawal of the request. It appeared totally unclear why the aid was needed, given that no "economically viable alternative for the project" was proved to exist; the test for the necessity of regional aid blocked this subsidy. In other two cases (Ford in 2006, Volvo in 2008) the amounts allowed were little more than half of what had been requested, because only part of the program to be funded appeared to be above what the market would have justified.

Ford Bridgend (2002) and Daimler Berlin (2003)[32] are other major cases of other proposals withdrawn at the beginning of the century. Few cases of refusals or withdrawals

[31] In new accession countries – often characterized by a considerable weight of "objective 3 regions" – the recent wave of aids befitted firms such as Daewoo, Hyunday, Ford and Mercedes Benz which compete and sell their cars mostly in markets other than those where their plants are located.

can be recorded in the last few years; whether this is because only genuinely "good" aid schemes have been proposed since, or because member states have learned the new rules of the game, it is (again) hard to tell.

5.2 The lack of a coherent strategy

The pure control power can be thought as a "negative" power, not meant to shape industrial policy at EU level. This is broadly consistent with the idea that real sector "micro" policies are prerogatives of the member states. In line with this idea, the 1997 Framework on the car industry clearly states that "The Commission does not intend, however, to impose an industrial strategy on the sector". However, this statement looks quite extraordinary, especially since it is quickly followed by the acknowledgment that in assessing rescue and restructuring aid "As structural overcapacity in the motor vehicle industry is set to continue… the Commission will usually require a reduction in installed capacity". It is hard to understand how a body which endorses an intervention conditional on an adjustment in productive capacity refuses to admit that it is pursuing an industrial strategy.

What is a "strategy"? The term is somehow ambiguous. If it were to mean simply a behaviour guided by the pursuit of a goal, the banal answer would be that any rational being does have a strategy. The notion of "industrial" strategy is probably more demanding, as it is linked to a relatively precise idea of how the car sector and possibly the entire manufacturing sector should look like in the future.

It is quite clear that – despite the rhetoric – the Commission does pursue a strategy, both as regards the industry, and as regards other aspects of aid policy, such as regional development. In this direction, for instance, the Guidelines on national regional aid for 2007-2013 (2006/C 54/08) state that "regional aid should be granted under a multi-sectoral aid scheme which forms an integral part of a regional development strategy with clearly defined objectives". This means that the Commission takes the liberty of evaluating whether aid measures are part of a strategy, whose objectives should be clearly specified.

[32] For Ford Bridgend see case C7/02 (ex N 577/01), withdrawn in August 2002¸The Daimler Berlin file is C64/02 (decision on 28/3/03).

Although it would seem that these objectives will not be discussed, this is hardly believable.

What is the industrial strategy implicitly pursued by the EC, then? The guidelines seem to introduce and explicit *do-ut-des*, such that aid is allowed, if the intervention is in line with what the Commission believes to be the general interest of the Union as for the car industry. Unfortunately, a consistent definition of such objectives is lacking.

For instance, the EC keeps stating that on aggregate the sector suffers of overcapacity, and thus favours capacity reductions. Why overcapacity should be a concern is not obvious, since greater capacity typically means more employment, greater production and lower prices. Moreover, it is usually believed that using state aid to expand capacity distorts market competition.[33] However, especially in less developed regions of Europe state aid is widely used (with the Commission's blessing) to subsidize new plants for car production. It seems that the Commission is unable to coordinate two different chapters of its own action: regional development and sectoral policy. If this coordination were effective, we should find a number of negative decisions on aid to car plants located in least developed regions and large grants to other business in the same regions: the former decisions would be motivated by the sector's overcapacity and the latter by regional development aims. But this is not what we observe.

This establishes a clear contradiction, in that larger state aid may be allowed for some projects, if they entail a reduction in productive capacity, while entirely new plants may be heavily subsidized elsewhere. For instance, in December 2006, Poland was allowed to give State aid for 82 M€ to FSO, also on the ground that the project envisaged a reduction of capacity of about one third (from about 220.000 vehicles a year to about 150.000 a year). Next year, new plants with additional capacity were subsidized in the Czech republic (Hyunday, 194.5 M€) and in Slovakia (Kia, 32,4 M€).

In a sense, the reason is almost obvious, as member states' act in their own interest, and the Commission does not have the authority to deny such aid if, for instance, a well

[33] Again, one may object that capacity expansion is likely to decrease prices, and is thus in the interest of consumers, who are the ultimate beneficiaries of competition policy. A thorough assessment of the rationale behind incentives to reduce capacity is beyond the scope of the current analysis.

built project targets a less developed region of the EU. However, the contradiction remains striking.

5.3 State aid in time of crisis

These problems explode in the period of the crisis since 2008, when new car registrations – despite, as we will see, massive State incentives – dropped from 15.6 millions in EU 27 in 2007 to 14.3 millions in 2008 (-8%) and 14.2 millions in 2009.[34] Notice that the declared trend at the beginning of the crisis was towards greater transparency of State aid, but also towards a reduction in the administrative burden of state aid policy. The "modernization" of state aid policies and the introduction of the Global block exemptions in August 2008 had led to a massive increase in the number of individual measures which do not need prior notification.[35] The crisis led to an increase in state aid already in 2008, and later triggered the Temporary Framework for the years 2009-10, which was probably inevitable, but which has allowed member states to grant more and more aid with even fewer controls.[36]

This general trend has had a particular impact on the car sector, which has been singled out as a "strategic" sector by many countries. The Commission's approach to these claims has been relatively generous, explicitly defending "a proactive stance to support the industry".[37] Although probably inevitable under the circumstances, this has paved the way to a number of specific interventions "to improve access to credit, to clarify the rules for granting state aid in the particular circumstances, to boost the demand for new vehicles through coordinated national action".

[34] Restricting the attention to EU 15 as in Figure 1, one sees that car registrations in 2010-2011 are back to the levels of 1996-1997 (about 12,5 million cars).
[35] EC (2009).
[36] The "Temporary framework for State aid measures to support access to finance in the current financial and economic crisis" is based on two principles. Firstly, allowing more generously short-term measures to boost demand and, secondly, 'smart investment' to yield higher but sustainable growth in the longer term. Among other things, this has lifted the limits of the *de minimis* exceptions, has made it easier to provide aid for "green" products simplified certain procedures, and so on. In particular, an often underestimated consequence of these exemptions from the duty to notify aid and to provide details about the implementation of the schemes and the actual beneficiaries is that actual amounts of total aid for the years 2009-10 will be possible to calculate only in very aggregate terms.
[37] See the Communication issued by the Commission on 25 February 2009.

Since 2009, the bulk of state aid has been given under the Temporary Framework (TF). Not surprisingly, state aid under the TF has mainly taken the form of "defensive" loans and public guarantees, rather than grants for new projects. In a couple of years at least 9 billion Euro were given in loans and guarantees,[38] but the aid content of these interventions is rarely shown in official documents. The only new investment recorded in the period, justified as a regional development aid, has been in Hungary (where Mercedes/Daimler received about 111 M€ in public aid).[39]

The real battle between member states and the Commission has been to turn discriminatory measures into "open" ones. Again, some success must be acknowledged. In particular, the French attempt to introduce a scheme of state guarantees only meant for car producers and with clear discriminatory features in favour of French brands has been stopped, forcing the French government to transform it into a non-discriminatory horizontal scheme (N23/2009).[40] However, it is unclear whether this formal success is a real one in that the application of such schemes is highly non transparent. Notice that under this scheme the government has granted loans for five years, which in practice were repaid after two years, in April 2011.

The German loan to Opel (a historical brand now part of the US group General Motors) raised similar concern, as it was granted for a restructuring plan that entailed no plant closures in Germany. The bridge loan was quickly repaid and no further aid was given since GM stopped the sale process and eventually financed the restructuring on its own. Without this aid[41] probably Opel would have been bought out by another producer; and, in normal conditions, such a loan would have been hardly justified.

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[38] Among the main recipients, Renault and Peugeot (3bn each in France), Opel in Germany (1.5bn), Ford in Romania (400 mn) and in Germany (200 mn), Saab in Sweden (400 mn) and Volvo (680mn in Sweden).

[39] Another major intervention recorded in the period was in Spain (800 mn between grants and soft loans for R&D, environmental projects and training).

[40] Schemes targeted to the car sector (but with less discriminatory nationalistic features) have also been approved in the UK (N71/2009) and in Germany (N27/2009). Equally "suspect" cases are the programmes for subsidized interest rates on loans for "green products" (e.g., UK (N72/2009), France (N11/2009) and Spain (N140/2009)) where green products are defined in such a way that almost only "environmentally friendly" cars are included. See http://downloads.bbc.co.uk/news/nol/shared/bsp/hi/pdfs/22_04_09bud09_completereport_2591.pdf

[41] Grigolon et al. (2012) estimate the aid element as 220 million Euro.

Following the estimates by Grigolon et al. (2012), the aid content of the different interventions undertaken for the car sector under the TF amounts to about 1,2 billion € between 2009 and 2010. Summing up these figures and the "normal" aid, we conclude that in these two years total aid to the car industry has been comparable to the sum total spent in the entire period 2000-2008 (reported in Table 1).

However, notice, this amount does not include either the special effort made through the European Investment Bank (a sum total of 6.8 bn €, as estimated by the EC at the beginning of 2009)[42] or the massive demand side measures undertaken to support the demand for cars. Although demand side measures are not strictly speaking state aid, the policy debate clearly indicates that policies aimed at forcing an early retirement of old and polluting cars are mainly aimed at supporting the industry rather than helping consumers.

Thirteen EU countries have implemented scrapping schemes, almost all envisaging some environmental clause.[43] The sums involved in these programs were much higher than those officially labeled as state aid (5 bn in Germany, more than 1 bn in France and Italy, about 400 M€ in Spain and the UK: a sum total of about 8 bn €).[44] However, notice that the net burden of these schemes for the public budget should consider the increase in taxes on profits and sales, which is rarely calculated.[45]

Although it is still widely recognized that the sector needs restructuring and that excess capacity is widespread, during the crisis European governments have kept pouring money into the sector in order to support employment. The stringency of financial constraints which have become clear at the end of the crisis will most likely force member states to reconsider these policies. Whether this will also bring about a more rational approach, remains to be seen.

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[42] EIB loans were given even before the crisis, but increased considerably in 2009 and 2010 (BMW (26%), Ford (21%) and Daimler (12%) being the largest loan beneficiaries).

[43] The effects of these schemes are usually considered positive, even considering intertemporal substitution effects in demand (Schiraldi, 2011). It is interesting to notice that their impact on the environment is instead highly dubious. For instance, Sinn (2009) claims that the energy balance of the German scheme is most likely negative.

[44] See Global Insight (2010) for further details.

[45] Schiraldi (2011) indicates that in the Italian case until 2004 the net effect may well have been positive.

6. Conclusions

Despite the Lisbon declaration, sector specific interventions are still common, and they witness a certain weakness of the Commission *vis à vis* the states. We agree with Cini and McGowan (2008) that the EC scrutiny has certainly improved in its transparency and in the credibility of the enforcement process. However, sometimes the main effect of this scrutiny seems to be that member states had to submit more complex documents in support of their requests, and that analyses of regional aid cases are getting more and more accurate. But the Commission, by issuing detailed frameworks, has also given member states a clear benchmark to beat: if a member state is reasonably certain to pass the test envisaged in the framework, then the aid can hardly be considered incompatible with EU rules. When "soft laws" become more rigid, they may become double edged swords.

Moreover, our analysis has shown that in practice what qualifies as state aid to a specific sector may be difficult to trace, as it remains hidden under declarations that the primary objective of the aid is horizontal. Nevertheless, over time figures on state aid are reduced, partly because of the EC controls, partly because demand conditions have improved (at least, until 2008), and partly, probably, because members states have become smarter and design aid policies which often circumvent official definitions and controls.

This has negative consequences on the credibility of competition policy rules, which are stated at EU level, but which member states often try to by-pass in the pursuit of own objectives; whether this deserves the label "industrial policy" or is simply the effect of local lobbying efforts[46], is a question that should be answered case by case.

The effect of past coordinated efforts such as the Lisbon declaration (less aid, better aid) appears to be positive, albeit limited. A careful analysis of the data[47] indicates that the decrease in state aid began well before Lisbon, so that the declaration appears to probate an

[46] Luger (2000) investigates the USA automobile industry, paying particular attention to the achievements by the lobbies and to the system of power the large companies shape. Examples of lobbying against federal environmental protection and for extorting local tax breaks are there presented and discussed, Many complementarities with the aims pursued by companies in the EU automobile industry can be found, although the institutional framework and the antitrust rules are very different.

[47] In Nicolini et al. (2012) we provide an econometric analysis of the determinants of state aid to the car sector from 1992 to 2008, showing that the Lisbon declaration did not bring about any drastic change in the aid policy.

agreement which member states had already reached and implemented. Coming to the quality of aid, sector aid is still alive and kicking, although under new labels. However, the new rules have proved effective in blocking some ill founded demands, and in preventing states from submitting measures which clearly did not match the new criteria.

The terms of the subsidy game are also changing, as in many countries the main producers are no longer "national champions" but rather multinationals and several historical producers have shifted a large part of their production abroad.[48] In this perspective, it is hard to share the optimistic view of Mc Laughlin and Maloney (1999) that the Commission has "broken up long standing institutionalized government-industry relationships". On the one hand, the main driving force of the change has probably been the privatization of companies such as Renault, Rover or Alfa Romeo rather than any EC policy. On the other one, the aforementioned cases show that, while the EC has certainly be partially successful in tightening its controls, the defence of national plants is as important as ever.

Nowadays, competition among regions appears more important to national governments than competition among firms. While state aid has been considered a competition policy problem in the EU, where each national government typically had "its" national champion to defend, the US example stresses that industry subsidies may well be considered primarily regional policy issues, where all States compete to be selected as the location of investments, but where all firms are equally likely to be welcomed by States. As traditional firms are no longer confined within the original national borders, in the near future a convergence of EU policies towards this approach may become an option.

Defining an optimal EU policy towards state aid remains extremely difficult. Although the economic literature normally suggests that governments should minimize subsidies to specific sectors, as long as member states remain free to support local investments subsidy races remain likely. Despite the EC scrutiny, vast amounts of public money are paid out every year to firms. This happens whether or not the EC defines an explicit (and consistent) industrial policy, which remains a taboo that should probably be overcome, at least for the

[48] Fiat in Poland or Ford in Romania are two obvious examples.

sake of realism. Advocating *laissez faire* is legitimate, but probably it would be at least a reasonable second best to try and rationalize existing interventions.

A rational EU approach should probably be based on an effort to help the restructuring a sector, where the existence of excess capacity has been acknowledged for long time. For instance, the EC should stress that regional investments should not necessarily focus on the car sector... The current crisis has made the problems of the sector more acute and controls more lax. Unfortunately, it has also made an overall restructuring of the sector less likely, as policies tend to defend existing jobs more than ever.

In all cases, the current behaviour, whereby some member states spend public money to help downsizing, while others spend even more money to encourage new plants, cannot be part of a rational European state aid policy.[49] With more and more stringent budget constraints and high unemployment, this lack of a consistent aid policy is likely to become part of the problem, rather than (as is sometimes claimed) part of its solution.

[49] Notice that this holds in the perspective of building an integrated market as well. There seems to be no self enforcing mechanism which may lead to lower subsidies, as countries with greater availability of public money will probably find it optimal to keep spending more.

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