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## Working Paper

State aid modernization and its implications for the assessment of large investment projects: The relevance of market screens in the regional aid guidelines

ESMT Working Paper, No. 12-05

## Provided in Cooperation with:

ESMT European School of Management and Technology, Berlin

*Suggested Citation:* Friederiszick, Hans W.; Tosini, Nicola (2012) : State aid modernization and its implications for the assessment of large investment projects: The relevance of market screens in the regional aid guidelines, ESMT Working Paper, No. 12-05, European School of Management and Technology (ESMT), Berlin,  
<https://nbn-resolving.de/urn:nbn:de:101:1-201303269153>

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# ESMT Working Paper

## STATE AID MODERNIZATION AND ITS IMPLICATIONS FOR THE ASSESSMENT OF LARGE INVESTMENT PROJECTS

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### THE RELEVANCE OF MARKET SCREENS IN THE REGIONAL AID GUIDELINES

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# Abstract

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State aid modernization and its implications for the assessment of large investment projects: The relevance of market screens in the regional aid guidelines<sup>†</sup>

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The Regional Aid Guidelines foresee specific screens for an in-depth assessment of Large Investment Projects (LIPs): an in-depth assessment is initiated if the market share of the aid beneficiary is above 25% or the investment results in a capacity expansion above 5% in a declining market. It is currently being discussed within the broader State Aid Modernization package and also due to a recent court ruling on the case Propapier whether these market screens should stay as they are. Based on a dataset of all LIP cases notified under the 2006 Regional Aid Guidelines, we evaluate those market screens and find that the screens do have power to identify problematic cases - cases with a below average expected aid effectiveness and aid measures targeting specific industries. We also find, however, that the market screens are affected by a severe implementation problem and, hence, do not help to shorten phase I investigations. From a conceptual perspective, they are also not capable of identifying some of the potentially most problematic regional State aid cases. Policy options are discussed.

**Keywords:** competition policy, regional state aid, subsidies, anti-competitive effects

**JEL Classification:** H81, L4, O25, R58

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+ This paper is based on a presentation held at the 10th EStALI Experts' Forum on New Developments in European State Aid Law, 2012, Brussels. We would like to thank Massimo Merola, Rainer Nitsche and Vincent Verouden for comments on this paper. We also benefited from the discussion at the conference and with the other members of the panel, Rose D'Sa, Kai-Uwe Kühn and Fiona Wishlade. We also would like to thank Jakob Meinel for research assistance. The responsibility for all opinions, errors or omissions stays with the authors.

## I. Introduction

The EU Commission is continuing to modernize its State aid regime. The State Aid Modernisation package (SAM) provides a first outline of the most recent reform proposal.<sup>1</sup> It is a principal intention of this reform to give the incentive effect a more central role in the assessment of a measure, to the detriment of other elements of the existing assessment, including any screens focusing on the distortions of competition and effects on trade.<sup>2</sup>

The Regional Aid Guidelines are one of the first sets of guidelines to be revised under this modernization programme. Within this framework, SAM may put into question the importance of the market share and capacity increase screens. The two market screens are also under pressure from a recent decision of the General Court of 10 July 2012 on the case Propapier.<sup>3</sup> The Decision clarifies that the approval of an aid measure by the Commission cannot – in the sphere of Article 107(3)(a) TFEU – be justified based on an assessment of the market share and capacity increase criteria only, but requires a broader balancing of positive and negative effects of the aid.

This paper discusses the pros and cons of the existing market share and capacity increase screens based on a dataset of all LIP cases notified between January 2007 and June 2011. Its purpose is not to evaluate the SAM package itself, but to contribute to its implementation in relation to regional State aid.

We find that, out of the 133 notifications under the Regional Aid Guidelines since January 2007, 38 involve LIP cases. In ten of these notifications a formal investigation was opened, and in seven of these ten cases proceedings were opened on the grounds of the market screens.

The seven cases for which the market share and capacity increase screens indicated compatibility concerns are labelled in the following the “selected group”. We compare those seven selected cases to the 28 cases in the sample for which no formal investigation was opened (the “comparator group”).<sup>4</sup> We find the following:

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<sup>1</sup> Commission Communication, EU State Aid Modernisation (SAM), 8.5.2012, COM(2012).

<sup>2</sup> See, *Almunia*, The State Aid Modernisation Initiative, *Koopman*, State aid modernisation and *Kühn*, Making State Aid Rules More Effective: The Reform of the Regional Aid Guidelines, all three presentations held at the EStALI Conference in Brussels, 7-8 June 2012.

<sup>3</sup> T-304/08

<sup>4</sup> We exclude from both the selected group and the comparator group the three cases in the sample for which a formal investigation was opened on grounds other than the market screens. These three cases are Propapier (C-30/2010), Deutsche Solar AG (C-34/2008), and Fri-el Acerra s.r.l. (C-8/2009). On 10 July 2012 the General Court annulled the original Propapier decision of the European Commission, which approved the aid measure without opening a formal investigation.

The selected group exhibits a 20% higher investment level than other cases, 27% higher aid amounts and, as a result, 2.5 percentage points higher aid intensities. The selected group creates – according to the expectations documented in the Commission’s decision – on average 19% more jobs than the comparator group.<sup>5</sup> However, the selected group also shows a lower expected aid effectiveness in creating jobs: the aid per expected job created is 60% higher in the selected group than in the comparator group. These results depend on two individual cases. Considering the rather small number of cases overall, and in the selected group in particular, it is not surprising that the results are sensitive to the influence of individual cases.

We also find that the current screens, and in particular the screen on capacity increase, select specific industries: 71% of the cases, i.e. five cases out of seven, selected by the screens are in the automotive industry. This industry is present among the LIPs which are not selected by the market screens in only 18% of the cases, i.e. five cases out of 28. The most prominent sector in the comparator group is the computer and electrical equipment industry (11 out of 28 cases, or 39%), mostly related to solar energy generation equipment.

Finally, we find that the duration between notification and opening of the formal investigation for the selected group and the duration between notification and final decision for the comparator group (that is the duration of phase I of the investigation) is broadly the same in both groups (9 to 10 months on average). This result indicates that the market share and capacity increase screen do not help to shorten phase I investigations.

In light of these empirical findings and based on a conceptual as well as practical assessment of the market screens we derive two reform options. Which one of the two is the superior depends on the accompanying elements of the reform package:

Assuming that the Commission wins additional investigative powers, we argue in favour of keeping market screens, but broaden the battery of market indicators and use them to define soft negative presumption areas only. This will reduce the focus on market definition and the exact measurement of market shares and capacity figures. The resources would then become available for a less indicator based but comprehensive assessment of the distortions of competition and effects on trade. Cross-border externalities remain the key justification for the Commission’s intervention under this approach.

In an environment where the Commission does not gain market investigation tools, abolishing the screens may indeed be required to avoid the practical problems associated with them. The

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<sup>5</sup> The assessment is based on the employment numbers as mentioned in the Commission’s decisions. Note that these are expected values according to the aid beneficiary and the aid granting Member State. See Section V of this paper for more details on the construction of the dataset and the assumptions made for the purpose of this analysis.

alternative screens (e.g., the incentive effect and an increase in the threshold for LIPs) require a thorough assessment of schemes and an ex post evaluation of aid measures in order to avoid regulatory loopholes or a loss in oversight by the Commission.

The paper is structured as follows: Section II briefly reviews earlier State aid modernisation initiatives, while Section III introduces the 2006 Regional Aid Guidelines (RAG) with respect to Large Investment Projects (LIPs) and the current modernisation initiative (SAM).<sup>6</sup> Section IV discusses the economic rationale behind the two screens. Section V describes the sample of cases and presents the main empirical outcomes. Section VI discusses the findings and draws policy implications.

## **II. A brief history of State Aid Modernisation**

The SAM package is the third major attempt to modernize European State aid control. A first major effort was put forward under Commissioner Mario Monti proposing the LET (“Lesser Effect on Trade”) and LASA screens (“Lesser Amount of State Aid”) at the end of his tenure as Competition Commissioner in 2004, but this effort failed to win the support of the College.<sup>7</sup> While the LASA screen was proposing a simplified procedure for aid measures falling slightly above the *de minimis* thresholds, the LET test was designed to identify aid measures with no or a lower likelihood of negative effects on competition and trade. In its earlier versions, this screen contained a “black” and/or “white” list of sectors in which negative spillovers were considered to be very likely or unlikely. Identifying specific sectors turned out to be difficult, however, both on economic (e.g. how to handle the service sector) and on political grounds. The later version of the test offered less specific economic criteria and principles under which the distortive effects of an aid measure could be assessed. While neither of these screens won the support of the College at that point in time, the criteria and principles of the LET screen formed the basis for the later development of economic criteria and principles applied within an in-depth assessment of individual State aid measures.<sup>8</sup>

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<sup>6</sup> Commission Communication, EU State Aid Modernisation (SAM), 8.5.2012, COM(2012).

<sup>7</sup> In fact State aid modernisation was the remains of the broader modernisation initiative regarding EU competition law and its application. The *refined economic approach*, which was initiated by Mario Monti, arrived only with some delay in the field of State aid control. For some of the earlier contributions arguing for a comparable modernisation push in the field of State aid as in other fields of competition law, see *Ahlborn/Berg*, “Can State Aid Learn from Antitrust? The Need for a Greater Role for Competition Analysis under the State Aid Rules”, in: Biondi/Eeckhout/Flynn (eds.), *The Law of State Aid in the European Union*, 2004.

<sup>8</sup> The concept of the LASA screen – that is, to simplify notification requirements and assessment criteria for aid measures with a medium amount of aid – was finally implemented through higher *de minimis* thresholds and the so-called “super block exemption”. For a summary of these early screens see, e.g., *Nitsche/Heidhues*, “Study on methods to analyse the impact of State aid on competition”, European Commission Directorate-General for Economic and Financial Affairs, Economic Paper Number 244, February 2006.

Commissioner Kroes started the second and even more ambitious attempt to reform European State aid control. With the State Aid Action Plan<sup>9</sup> a comprehensive reform package was brought on its way, this time focusing on the positive elements of an aid measure in particular, i.e. what are the policy objectives? How effectively are they achieved? The reform package was designed in the spirit of the Lisbon agenda, aimed at fostering European growth and competitiveness.

The State Aid Action Plan delivered what is known by now as the “balancing test” of State aid control. While not being truly novel, it is explicit about the set of guiding principles applicable to all aid measures. This balancing test together with a firm commitment to the principle of counterfactual analysis formed the basis of a proper economic analysis of State aid cases.<sup>10</sup>

What was still missing, however, was a clear delineation of the sequencing of the test and the depth of the required assessment of individual factors. In fact, the test was interpreted in various decisions in rather different ways; some decisions put a lot of emphasis on the assessment of market failures while others left more room for distortion of competition and effect on trade.

From a screening perspective, two approaches were followed. First, a distinction was drawn between the standard assessment and the in-depth assessment. Here it was mostly the aid amount, often in combination with some other aid type-specific criteria, which triggered an in-depth assessment. For example, the R&D&I Guidelines define a specific aid amount which decreases as the R&D&I moves further away from basic research and closer to the market. Second, within the in-depth assessment and for cases directly assessed under Article 107(3)(c) TFEU each element of the general balancing test was considered essential. An aid measure would be considered incompatible if any one of the different criteria was violated. This was most obvious in the terrestrial TV cases, in which aid was rejected because it did not meet the “necessity” criterion.<sup>11</sup> This approach exposed the Commission to criticism for declaring aid incompatible without having shown any negative externalities to other Member States, thereby extending its competencies towards national budget considerations and ignoring the subsidiarity principle.

The latest modernisation package, initiated under Commissioner Almunia and Deputy Director General for State aid, Gert-Jan Koopman, takes the middle prong of the test, i.e. the incentive effect (and potentially also the questions of whether the aid is the “*appropriate instrument*” and

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<sup>9</sup> State Aid Action Plan: Less and better targeted State aid: a roadmap for State aid reform 2005–2009, COM(2005) 107 final.

<sup>10</sup> See the State Aid Action Plan (para. 19, for example) for the general balancing test. For a discussion of its economic foundations, see *Friederiszick/Röller/Verouden*, “*European State aid control: An economic framework*”, in: *Buccirossi (ed.), Handbook of antitrust economics*, 2008, pp. 625–669.

<sup>11</sup> C 25/2004 DVB-T in Berlin-Brandenburg.

whether the aid is “*to the minimum*”), as a central theme.<sup>12</sup> From a broader perspective, the current proposal seems to suggest replacing the current legal architecture of State aid – block exemptions, standard assessment, and in-depth assessment – with a new grand design that only comprises block exemptions and a more substantive (in-depth) assessment. As before, the predominant quantitative thresholds for an aid measure being block-exempted, (in-depth) assessed or declared incompatible are aid amount and aid intensity levels, possibly in combination with aid objective-specific criteria. The new element is that the standard assessment will be dropped and replaced by a more substantive (in-depth) assessment which considers the incentive effect a necessary pre-condition for approval of an aid measure.<sup>13</sup>

### **III. The Regional Aid Guidelines and the reform proposal**

Compatibility of regional aid and the overall aid levels are defined through region-specific aid intensity thresholds, which are the result of comprehensive negotiations between Member States taking into account various region specific growth measures. For LIPs, maximum aid intensities are then reduced depending on the investment amount of the supported project, resulting in adjusted maximum aid intensities that approach a third of the original region-specific intensities as the project size grows. The income level of a region relative to other regions and the size of the investment project are therefore already screens which are built into the Regional Aid Guidelines. It is our understanding that this will not change with the new reform package.<sup>14</sup>

A more specific debate – to which this article tries to contribute – is on whether in addition to those criteria, the existing market criteria, i.e. the 25% market share and the 5% capacity increase

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<sup>12</sup> *Almunia*, The State Aid Modernisation Initiative, and *Koopman*, State aid modernisation, both presentations held at the EStALI Conference in Brussels, 7-8 June 2012. See also, Commission Communication, EU State Aid Modernisation (SAM), 8.5.2012, COM(2012).

<sup>13</sup> There are several other key elements of the SAM package which are of importance. First, the Commission is considering increasing its control of aid schemes, which so far can only be assessed to a very limited extent. It is proposing to do so – and this is a second important element of the reform – in particular by strengthening the obligations of Member States to assesses *ex post* the fulfilment of the awarding criteria and potentially also the *ex post* effectiveness of the scheme or individual measures. Third, the Commission is attempting to get better investigative tools, comparable to those in other fields of competition policy. All three policy measures of the proposal – a stronger focus on schemes, stricter *ex post* assessment and more powerful investigative tools – would significantly increase the competencies of the Commission.

<sup>14</sup> It is discussed though whether European inter-Member State income convergence should be considered more important than intra-Member State income convergence, i.e. whether the guiding principle for Article 107(1)(a) TFEU regions will become the general principle. See *Kühn*, (fn. 2) and *Wishdale*, The Overhaul of the Regional Aid Guidelines and the Implementation of Economic Analysis: Some comments, presentation at the EStALI Conference in Brussels, 7-8 June 2012 on this. For examples of empirical analyses of intra-Member State convergence see: *Juessen*, A Distribution Dynamics Approach to Regional GDP Convergence in Unified Germany, *Empirical Economics*, 2009, 37, 3, pp. 627-652 and *Vollmer/Holzmann/Ketterer*, Distribution Dynamics of Regional GDP per Employee in Unified Germany, *Empirical Economics*, 2011, DOI: 10.1007/s00181-011-0543-3.



criteria should be maintained or abolished. The current guidelines state that a “*detailed verification*”, after the opening of a formal investigation, must be carried out if:

- Actual aid exceeds 75% of the maximum amount of aid for an investment with eligible expenditures of €100 million, AND
- the market share of the aid beneficiary is above 25%, OR
- the capacity increase generated by the project is above 5% in an under-performing market (defined as a market having grown by less than the European Economic Area’s overall GDP over the last five years).

An exemption to the application of these screens is offered by footnote 65 in the Guidelines, which states that conformity with the adjusted aid intensity ceiling is sufficient when the aid beneficiary creates a “*new product market*”.<sup>15</sup>

Criteria for an in-depth assessment are provided in a Communication of 2009, which also introduces the broad distinction between (re-)location incentive and investment incentive.<sup>16</sup>

The recent Judgment of the General Court (First Chamber) on case T-304/08, 10 July 2012, in the Propapier case further clarifies the relevance of the current criteria. In particular, the decision determines that “[*b*]y inferring from the fact that the thresholds laid down in paragraph 68 of the Guidelines were complied with that the aid in question was compatible with the common market, the Commission [...] misconstrued the scope of that paragraph” (para. 89 of the decision).

The decision goes on to state that, in the field of State aid granted on the basis of Article 107(3)(a) TFEU, “*the Commission is required to exercise its wide discretion under Article 87(3) EC as to whether State aid granted in a region in difficulty is compatible in order to ascertain whether the expected benefits in terms of regional development outweigh distortions of competition and the impact of the subsidised project on trade between Member States.*” (para. 91 of the decision). This is a discretion that, according to the Court, the Commission fell short of exercise, as it “[...] confined itself to verifying that the disadvantages caused by the subsidised project in terms of distortions to competition would be kept at a limited level, but not that the advantages in terms of regional development would outweigh the disadvantages, however

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<sup>15</sup> As the BMW Leipzig (SA.32009) shows, however, this exemption may also induce circularity in the Commission’s decision-making process, as a formal investigation may need to be opened to determine whether a new product market is in fact created.

<sup>16</sup> Communication from the Commission concerning the criteria for an in-depth assessment of regional aid to Large Investment Projects (2009/C 223/02). The investment and the relocation incentives are described in paras. 22(1) and 22(2), respectively. For a comprehensive review of the current Regional Aid Guidelines, relevant cases and the historical development of State aid regulation in the field of regional aid, see *Merola*, Regional Aid: Recent Trends and Some Historical Background – with special focus on Large Investment Projects, EStAL, 03/2010.

*minimal the latter might be*” (para. 94 of the decision). In other words, the Court holds the position that showing on the one hand that the formal requirements laid down in the Regional Aid Guidelines are fulfilled and that on the other hand the market criteria are not violated is not sufficient to generate a positive decision.

In the field of regional aid, the SAM reform package proposes according to our understanding a higher threshold for LIPs (thereby reducing the overall number of LIP cases) while at the same time eliminating the market share and the capacity increase screens, so that all remaining LIP cases will be assessed under the relevant guidelines for an in-depth assessment. Within such a modernised (in-depth) assessment, the incentive effect will play a central role.

#### **IV. The economic rationale for market share and the capacity increase screens**

In this section we briefly discuss the underlying rationale for the market share and the capacity increase criteria, taken in isolation. However, it has to be recalled that these screens are not used in a stand-alone manner. Rather, they come in addition to region and investment size-adjusted aid-intensity ceilings to identify the most problematic cases.

We will start with the capacity increase criterion as it seems most robustly defensible from an economic point of view.

##### **1. Capacity increase criterion**

From an economic perspective, capacity-centred criteria generally appear to be a reasonable starting point for screens identifying negative externalities between Member States.

Capacity driven industries, such as the shipbuilding, automotive and cement industry to name just a few, are by definition capital intensive. Hence, they require significant financial funds and – with varying degrees across industries - promise technological spillovers to a region. The investment offers, due to its sunk cost character, also a mid- to long-term commitment to a particular region and attracts further businesses to the region, thereby laying the foundations of a regional industrial cluster. Hence, attracting capacity-driven industries is an important part of regional development plans.

However, capacity investments are often not region-specific. A computer manufacturer may serve its European customers equally well from a plant located in Eastern Europe and one in a Mediterranean country. To the extent that national production delivers positive regional spillovers governments compete for this investment.

Adding capacity in a market with low or moderate growth, however, can produce severe negative effects within the entire. Prices, and hence margins are typically strongly depressed in phases of

underutilization in these industries. A subsidy-driven capacity expansion - even if based on justifiable regional growth objectives - may result in severe economic imbalances in the overall industry. The capacity increase screen helps identifying these critical cases and puts them under closer scrutiny.

While not winning an investment may always be perceived as a loss for a region, the loss is large in particular when an existing plant is closed and relocated to another region. In this case, social adjustment costs are felt in the displacement region as workers need to find new jobs (possibly through skill requalification measures) and factory sites need to be reclaimed, etc. Hence, a screen identifying capacity driven industries in a state of low or negative growth helps to refocus regulatory attention to cases with the potential of above average negative externalities on other regions. Note, however, that such relocation cases are not picked-up by the capacity increase screen as currently set up: in a European-wide market, capacity increases in one part of the region, which are counterbalanced by decreases in another region, are not counted as capacity addition. We will come back to this point in the latter section.

In addition, in capacity driven industries structural changes – like technological change, demand contraction or expansion or entry of new low-cost competitors – typically require an adjustment to the long-term industry-wide capacity level. It is in particular in phases of downturns where pressure is put on aid granting institutions to buffer the costs of adjustment. Regional aid can *de facto* then form part of the restructuring plan of a firm. Rescue and Restructuring aid is viewed as one of the most distortive types of aid: It not only distorts the exit process during downturns, but it also artificially inflates the incentives to invest in boom phases, shielding the firms from part of the anticipated costs of downsizing in future downturns. The capacity increase screen helps to identify such *de facto* Rescue and Restructuring measures disguised as regional aid cases.

## **2. Market share criterion**

The market share criterion – which is a standard criterion in other fields of competition policy –<sup>17</sup> is, first of all, a criterion for measuring (single firm) market power.<sup>18</sup> Accordingly, we will discuss the relevance of market power screens to identify negative cross-Member States spillovers. In addition, in the field of State aid, market definition may follow other purposes than measuring market power, namely identifying in broad terms the markets affected by the aid

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<sup>17</sup> See, for example, paras. 17 and 18 of the EU Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (C-31/03/2004).

<sup>18</sup> It is well known that market shares may be a more informative measure of market power in undifferentiated than in differentiated product markets. See, for example, para 5.3.4 of the 2010 Merger Assessment Guidelines of the OFT and the Competition Commission (OFT 1254 and CC2 (Revised)).

measure.<sup>19</sup> In these cases, the markets defined will tend to be broader and the market share criterion is less motivated by economic theory.

Regarding market power screens, various arguments can potentially justify their application. First, windfall profits to dominant firms may be considered particularly problematic. The reason is that in a competitive downstream market, firms may have to pass-on those windfall profits to their customers, limiting the distortive effects of the aid measure. In the same way in which firms with buyer-power may extract lower prices for input products, firms with negotiation power vis-à-vis public authorities may effectively extract a very low (that is a negative) price for regional infrastructure. It is in particular when downstream competition is effective that this will have positive implications for end-consumers.<sup>20</sup>

In the same manner, it could be argued that inefficient market structures can survive in particular in markets protected by significant entry barriers. Entry barriers are a precondition for market power, and may therefore justify market power-related screens. Admittedly, however, a response to this concern would need to be a more direct assessment of entry barriers.

Finally, and potentially most importantly, national champion policies may be detected based on (national) market share criteria. Governments are often prone to support formerly State-owned enterprises in the hope of retaining political influence in a more broadly liberalized (European) market. An aid beneficiary's high market share in particular on the national market might indicate the pursuit of national champion policies. A more modern (and more positive) interpretation<sup>21</sup> of such policies, however, may be that with such policies governments aim at attracting leading firms in "strategic" industries in order to build clusters of industrial development. Notwithstanding this interpretation of national champion policies, we would consider these cases in need for a deeper scrutiny compared to other cases.

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<sup>19</sup> See, e.g., *Fingleton/Ruane/Ryan*, A study of market definition in practice in State aid cases in the EU, Report to DG ECFIN, 1998.

<sup>20</sup> Note that this does not ensure the compatibility of an aid measure as – in contrast to standard buyer power cases – the input provider is not an enterprise but a government, adding other relevant dimensions, like the costs of funding, that need to be taken into account.

<sup>21</sup> See *Aghion/Boulangier/Cohen*, Rethinking Industrial Policy, in Bruegel Policy Brief, June 2011 and *Nunn/Treffler*, The Structure of Tariffs and Long-Term Growth, *American Economic Journal: Macroeconomics*, 2, 4, 2010, pp. 158-194. See also *Crisuolo/Martin/Overman et al.*, The Causal Effects of Industrial Policy, NBER Working Paper 17842, 2012.

## V. An empirical assessment of recent LIP cases

In this section we provide an overview of the seven cases<sup>22</sup> of LIPs assessed under the 2006 Regional Aid Guidelines for which a formal investigation has been opened on grounds of the market share and capacity increase screens (para. 68 RAG 2006). We then compare their characteristics to the characteristics of the LIP cases, notified over the same period, for which no formal investigation was opened. This comparison will shed some light on the value of the screens in identifying potentially problematic State aid measures.<sup>23</sup>

A formal investigation has been opened, on grounds of the market share and the capacity increase screens, for the following seven cases, which we list in order of notification:

- Dell Poland, C-46/2008;
- Petrogal, C-34/2009;
- Audi Hungaria Motor, C-31/2009;
- Fiat Powertrain Technologies PL, SA.30340;
- BMW Leipzig, SA.32009;
- VW Sachsen, SA.32169;
- Linamar Powertrain, SA.33152.

Before we turn to describing these cases and comparing them to the set of cases that were not selected by the market share and the capacity increase screen, we document the search process through which we arrived at the set of cases considered and other relevant aspects of the construction of our dataset.

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<sup>22</sup> As described in more detail below, we focus on measures registered or notified between 1 January 2007 and 1 July 2011. This leaves a time window of a little less than a year from the latest possible notification date with regard to the extraction date (13 June 2012), thereby limiting a potential statistical censoring problem: for cases notified more recently, a formal investigation may not have yet been opened, not due to the facts of the case but because a phase-I decision has not yet been taken. We document below that the average time between notification and a phase-I decision is about 10 months.

<sup>23</sup> Note that this is an informative but not perfect test of the identification power of the two economic screens. Ideally one would carry out a proper *ex post* in-depth assessment of all cases and check whether any of the cases which are considered problematic based on the *ex post* in-depth assessment have been overlooked, as well as whether unproblematic cases have been identified by the screens as being problematic. However, the collection of the data that are necessary for such an *ex post* evaluation was beyond the scope of this project, if available at all.

## 1. Search criteria and construction of the dataset

To identify all LIP cases notified under the 2006 Regional Aid Guidelines between 1 January 2007 and 30 June 2011, we ran a search in the EUROPA website's competition case repository with the following criteria:<sup>24</sup>

- Policy area: State Aid;
- Primary objective: Regional development;
- EU primary legal basis: Article 107(3)(a) TFEU – Least developed regions or Article 107(3)(c) TFEU – Certain economic activities/areas;
- EU secondary legal basis: Regional – Regional Aid Guidelines, 2007 – 2013;
- Notification or registration date: from 1 January 2007 to 30 June 2011.

Of the 133 cases that were retrieved in this way, 66 were *ad hoc* cases or individual applications (as opposed to schemes), and 33 of such cases bore “LIP” in their title and were thus included in the dataset. A case-by-case review of the remaining 33 cases (excluding schemes) identified five additional LIP cases which were added to the list. Finally, the BMW Leipzig (SA.32009) and the Linamar Powertrain (SA.33152) cases were added to the resulting list, while two cases were discarded from the list since they concerned amendments to earlier cases.<sup>25</sup>

Among these 38 cases, the seven cases for which the market share and capacity increase screens triggered an in-depth assessment became our “selected group” and the other 28 cases for which no formal investigation was opened became our “comparator group.” This leaves us with three cases<sup>26</sup> of individual applications or *ad hoc* cases for which a formal investigation was opened but was not triggered by the market share and capacity increase screens.

We extracted information on the value of the investment, the value of the aid, and the expected number of jobs created (assuming there is an incentive effect) from the most recent decision

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<sup>24</sup> The search was run on 13 June 2012.

<sup>25</sup> Amendment to the approved MSF 1998 aid and to the approved MSF 2002 aid, N575/2008, and Amendment ersol Solar Energy, SA.32582, amending N539/2008.

<sup>26</sup> These three cases are Propapier (C-30/2010), Deutsche Solar AG (C-34/2008), and Fri-el Acerra s.r.l. (C-8/2009). As described in more detail above, the General Court annulled the original Propapier decision by the European Commission on 10 July 2012 which approved the aid measure without opening a formal investigation. In the Deutsche Solar AG case, the main question was whether the project constituted a Single Investment Project (para. 60 RAG 2006). In the Fri-el Acerra s.r.l. the main questions concerned the formal criterion for the incentive effect (for *ad hoc* cases), eligible expenditures, and the objective of regional development. In the Propapier case the General Court argued that the economic screens are not sufficient to conclude that aid is compatible. Rather, it is required for cases falling under Article 107(3)(a) TFEU that a positive contribution to regional development be shown.

available.<sup>27</sup> Unless the decision left it open whether a measure belongs to a Single Investment Project ("SIP") or not (para. 60 RAG 2006), the value of the investment and of the aid that we report refer to the whole SIP, in present-value terms. This is in line with the gross grant equivalents approach taken by the European Commission for determining aid intensity (para. 41 RAG 2006).

## **2. Description of the LIP cases that have been selected by the market share and the capacity increase screens**

Turning our attention to the description of the seven cases in the selected group, Table 1 offers some initial observations about the cases. Five out of seven of these cases concern investments in the automotive industry (including electric cars), and the two remaining cases are in the computer manufacturing and the oil refinery sectors. All but one investment are geographically located in Central and Eastern Europe (the only exception being the Petrogal case in Portugal) and in so-called "a) regions", that is assisted regions whose income is significantly below the EU-wide average (the only exception being the BMW Leipzig case, in a so-called "statistical effect" region). Two of the seven selected measures have a aid beneficiary which is not based in the EU, and for five of these seven measures the formal investigation is still ongoing.

[Table 1]

Table 2 looks instead at the regulatory timeline for the seven cases in the selected group. The aid measures in this group were notified between 16 July 2007 and 9 June 2011, with three measures notified over the course of 2010. On average, 10 months elapsed between the notification date and the date of the opening of the phase-II investigation, with times ranging from only five months (for the most recently notified measure, in Linamar Powertrain) to as long as 17 months (for the earliest notified measure, in Dell Poland). For the two cases in which the phase-II investigation has already been concluded (both with positive decisions), the total duration of the regulatory proceedings was 29 months, or about 2 and a half years, on average.

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<sup>27</sup> As noted in Section I of this paper, the assessment is based on the employment numbers as mentioned in the Commission's decisions. Note that these are expected values according to the aid beneficiary and the aid granting Member State. For cases not verified in detail by the Commission the incentive effect, and hence the plausibility of these expectations, is not re-assessed by the Commission. Furthermore, in case of relocation the numbers of jobs created may refer to jobs created in that particular region only and not to the net job creation within the overall EU. Finally, cases for which aid was given to maintain an existing job level were not included in our assessment for practical reasons.

[Table 2]

When it comes to evaluating the effectiveness of a State aid measure, the information available in the regulatory decisions is fairly limited. To begin with, when dealing with State aid cases, the European Commission does not have to the same degree access to market information tools as it does when dealing with antitrust and merger control cases. Furthermore, and in line with a merger control setting, the evaluation of State aid measures is a challenging prospective exercise in which data need to be combined with conceptual reasoning to form a prediction on future economic outcomes. Nonetheless, and with an eye on the regional development objective of regional aid, we can make use of the number of expected direct and indirect jobs resulting from the investment (which is typically reported in the decisions) and combine it with the amount of aid to construct a measure of aid effectiveness.

In Table 3 we set out to do precisely that. After reporting the size of the investment (on average, €440 million) and the size of the aid (on average, €54 million), this table reports the number of expected direct and total jobs created with the investment, equal to an average of 735 and 1,045 jobs, respectively.<sup>28</sup> Dividing the size of the aid by the number of expected jobs created returns our measure of aid effectiveness, which is on average equal to €230,000 per expected direct job and €130,000 per expected total job (direct and indirect jobs).

[Table 3]

The last two columns of Table 3 report the actual aid intensity of each project, and whether the aid intensity ceiling was reached or not: in 57% of the cases, the ceiling on aid intensity was in fact reached.

The last table of this section, Table 4, summarises additional characteristics of the seven cases caught by the market screens. It shows that, apart from the Dell Poland case, these investments

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<sup>28</sup> Total jobs are constructed as the sum of direct and indirect jobs. When no indirect jobs are reported in the decision, we assume that total jobs are equal to direct jobs. In calculating the average number of jobs created and the average aid effectiveness, we exclude cases, like the VW Sachsen case, in which the aid only ensures that existing jobs will be maintained. This is largely driven by data limitations: although at times (like in the case of VW Sachsen) we see in the decisions the number of existing jobs that will be maintained thanks to the investment, this number is only likely to provide an upper bound on net job creation. When we include in the calculation the 5,300 jobs that the aid-granting Member State indicates will be maintained through the investment (5,300 jobs), we find that the average number of direct jobs created in this group increases from 735 to 1,387.



build on a pre-existing plant and that in four of the six other projects the investment is part of a Single Investment Project, together with contemporaneous or earlier investments.

[Table 4]

Table 4 also lists the main reasons why a formal investigation was opened. Interestingly, it is often the case that a formal investigation is opened not (necessarily) because the market-share or capacity increase screens are met but because more information is required to evaluate the screens. This circularity problem points to the fact that, if screens are to be used to determine whether an in-depth assessment should be performed, such screens should be based on information that can be reliably obtained by the regulator over the course of the phase-I investigation.

The Regional Aid Guidelines allow for an exemption from an in-depth investigation when the aid beneficiary creates a “new product market” (footnote 65, RAG 2006). BMW Leipzig is a case in which the on-going formal investigation will also need to determine, according to the phase-I decision, whether a new product market would in fact be created.

### **3. Comparison between the LIP cases for which a formal investigation was opened and those for which it was not**

Of the 38 Large Investment Project cases notified between 1 January 2007 and 30 June 2011 that we identified, in ten cases (or 26%) a formal investigation was opened. In seven of these cases the investigation was opened in relationship to the two screens defined in para. 68 of the 2006 Regional Aid Guidelines.

Having reviewed each of the selected cases in some detail in the previous section, we now compare the characteristics of these cases with those of the 28 cases in which aid was approved without a formal investigation. This comparison enables us to tell whether the cases identified by the screens are different - in ways that are observable on the basis of the information contained in the regulatory decisions - from the cases for which no need for a formal investigation and an in-depth assessment arose. If so, we would like to see whether the characteristics of the selected cases make them indeed more likely to be incompatible with the single market, by distorting competition and affecting trade between Member States.

Table 5 reports, side by side, average characteristics for the group of selected cases and the comparator group, as well as the difference between the two. Then we compare the group of selected cases, with the comparator group and find that on average the selected group exhibits a 20% higher investment than other cases, 27% higher aid amounts and 2.5 percentage point higher aid intensities. Assuming there is an incentive effect, the selected group creates an average of 19% more jobs in the region concerned than the comparator group. However, the selected group also shows a lower expected aid effectiveness in creating jobs: the aid per expected job created is 60% higher in the selected group than in the comparator group. The aid ceiling is reached more often, and Single Investment Projects are more frequent, in the selected than in comparator group.

[Table 5]

Considering the rather small number of cases included in the dataset (33 cases), and in particular in the selected group (seven cases), it is not surprising that these results are sensitive to the influence of individual cases. In particular, the average size of the investment and of the aid amount (but not of the aid intensity) would be similar between the selected and the comparator groups if the Petrogal case (C-34/2009) was dropped from the selected group. The difference between the two groups in the average aid effectiveness (assuming an incentive effect) in creating jobs is instead driven by the Audi Hungaria Motor case (C-31/2009), belonging to the selected group.

We also find that the current screens, and in particular the screen on the capacity increase, select specific industries: 71% of cases (five cases out of seven) selected by the screens are in the automotive industry. This industry is present among the LIPs which are not selected by the screens in only 18% of cases (five cases out of 28). The most prominent sector among this comparator group is the computer and electrical equipment industry (11 out of 28 case, or 39%), mostly related to solar energy generation equipment.

## **VI. Discussion**

Based on a dataset covering all Large Investment Projects notified or registered between January 2007 and June 2011 we have analysed whether the market screens have power to identify problematic cases. Note that the available data allow for an informative but not perfect test of the identification power of the two economic screens. Ideally one would carry out a proper ex post

in-depth assessment of all cases and check whether any of the cases which are considered problematic based on the ex post in-depth assessment have been overlooked, as well as whether unproblematic cases have been identified by the screens as being problematic. However, the collection of the data that are necessary for such an ex post evaluation was beyond the scope of this project, if such data are available at all.

Despite the limitations of our evaluation method, we consider the following results of importance for the political debate of whether to maintain the indicators as they are or not.

First, the market screens help to identify problematic sectors in a way that automatically adjusts to the relative performance of one industry over another as the economy changes: While currently an under-performing sector may be identified in the automotive sector, other industries may fall into the clutches of the capacity-increase screen (which, recall, only applies to declining markets) as the relative success of different industries changes, therefore avoiding the need for the repeated publication of a list of under-performing sectors or the constant revision of the guidelines over time.

Second, the market screens are also helpful in identifying cases with lower expected aid effectiveness. This is indicative of some identification power of the screens. It shows that the cases identified by the screens have distinct properties: properties which are generally associated with more problematic cases. However, the limitations of our evaluation method have to be kept in mind, as well as the small sample of cases on which this conclusion is based.

We complemented the empirical assessment with a conceptual assessment. It is argued that both screens have theoretical justifications in identifying problematic cases. Market screens need a broader interpretation, though: market shares and capacity increases should also be calculated on Member State level to identify measures pursuing a national champion policy. Furthermore, market structure indicators, like the HHI or entry barrier assessment, should be calculated in parallel to pure market share indicators in order to get at least a rough understanding of the overall functioning of the downstream markets (and potentially the upstream markets as well).

The current screens are also too narrowly defined: they cannot identify all potentially problematic cases, including some of the most problematic ones. In particular, the market share and capacity increase screens do not help in identifying problematic cases related to relocation investments, i.e. cases in which State aid determines where within the European Union such investment will occur (as opposed to whether the investment will occur at all).

Indeed, unless the relevant geographic market (and the resulting market share of the aid beneficiary) is in some way affected by the location of the new investment, the screens will return

an identical outcome independent of where the investment is ultimately made. Unfortunately, it turns out that such cases are in fact the most problematic cases, since they have the potential to trigger subsidy races between Member States and/or allow subsidy hopping of aid beneficiaries (that is investors requesting new subsidies whenever the location commitment has phased out). Also, these cases often do not add to Europe's overall competitiveness. Hence, they require close scrutiny.

From a practical perspective market screens are also affected by a severe implementation problem. Market definition in the field of State aid is still not a well-established practice and there are inherent imprecisions in market definition in the field of State aid. To the extent that market definitions are available from other fields of competition policy, this might offer a starting point, although it finds its limitations in the specificities of State aid: more markets are affected and the affected markets have to be defined more broadly in the field of State aid control compared to other areas of competition policy, like merger control or antitrust cases. This is so for the following reasons.

First, one of the purposes of market definition in the field of State aid is to trace the effects of State aid across markets. This can and has to include input markets, like labour markets or capital markets, which are often much wider than the relevant downstream market and which "connect" various downstream markets. Hence, more and broader markets need to be analysed in the field of State aid, raising some questions on the rigour with which these markets can be delineated.

Second, supply-side considerations are of higher relevance for market definition in the field of State aid. This is so because State aid often more directly affects production facilities than the consumer side (e.g. in the case of investment aid). The distortionary effects in the field of State aid are also more focused on negative effects to competitors than on reducing consumer prices and choices directly. As the supported production facilities often supply or potentially could supply several downstream markets – and given the longer time windows relevant for the assessment of investment projects – wider relevant markets will be derived.

Finally, State aid – at least in the short term – might reduce market prices of supported products. Market definition has to be carried out at this lower price level to understand the competitive effects of the measure. At this lower price level markets may converge which otherwise are separated e.g. an environmentally friendly technology may become competitive to a conventional technology after State support. State aid also often directly supports entry into new market segments or directly targets increasing production flexibility.

As a result of this, but also because of the limited investigative tools available to the Commission to analyse markets, the two market screens absorb significant resources without contributing to a better understanding of the central economic questions of a case. Put differently, the information requirements of the screens are often too large for the screens to fulfil their purpose of being initial filters which are easy to assess and introduce some “automatisation” in the opening of in-depth assessments.<sup>29</sup>

In fact, it has occurred that a formal investigation is opened not because the screens are not passed but because more information is required in order to evaluate them. In the ongoing BMW Leipzig case, for example, “[o]n the basis of the available data, the Commission is not able to exclude without doubts at this stage that the market shares of BMW on all considered plausible markets do not exceed the 25% threshold as laid down in point 68(a) RAG” (para. 91 of the phase-I decision). Analogously, in the ongoing Linamar case, “[...] given the difficulties in obtaining reliable price estimates, the Commission considers that only volume data are to be used to define markets and markets evolutions” (para. 61 of the phase-I decision). As a consequence, the triggering of a detailed verification and the opening of the formal procedure is not necessarily due to the results of the screens but is rather required in order to assess the screens themselves: this is clearly an inefficient and undesirable development both from a procedural perspective (as the screens do not help to identify the problematic cases more quickly) and from an economic perspective (as the assessment would then focus as much on the core issues of the case as on a more detailed assessment of the screens).<sup>30</sup>

To the extent that alternative (pre-)screens exist, abolishing the market screens may be considered appropriate given their limited scope and the difficulties in their implementation. An increasing role of the incentive effect and/or an increase in the minimum investment amount (which defines a LIP) may offer such alternatives, since both do not depend on market-wide information but nevertheless allow narrowing the group of cases for further assessment. However, such a step would require a rigorous ex post assessment of schemes and of smaller aid measures, in order to reduce the risk of a regulatory loophole to arise. It would in our view also expose the

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<sup>29</sup> See Merola (fn. 16) for the Commission’s attempt to reach more “automatisation” in its application of regional aid rules which however eventually returns to a more case based approach – albeit on a narrower and more focused set of cases.

<sup>30</sup> This translates into a deeper assessment problem, though, as the Commission seems to lack the investigative tools for a proper market assessment even within the formal investigation. For instance in the Dell phase-II decision it is stated: “The Commission considers [...] the information received during the formal investigation [...] insufficient [...] for the Commission to conduct a meaningful market investigation which could enable to define the relevant product market(s) for desktops and notebooks.” [para. 130 of the Decision. See also footnote 35 of the same Decision.].

Commission to the criticism not to assess the distortive effects of an aid measure sufficiently and thereby losing its focus on cross-country externalities.

Alternatively, one may define the market screens as a soft negative presumption, reducing thereby the focus on market definition and the exact measurement of market shares and capacity figures. The resources are then available for a less indicator based but comprehensive assessment of the distortions of competition and effects on trade. This approach is in our view the superior approach in a situation where the Commission is equipped with more powerful tools for market investigations. Cross-border externalities remain the key justification for the Commission's intervention under this approach. It is also in our view in line with the Judgment of the General Court in the Propapier case. There the Court held the position that the criteria form a sufficient condition to call for an in-depth assessment but not to clear compatibility concerns. The Commission is thus required to carry out a broader assessment already before the opening of the proceedings to come to a final positive decision.

## **VII. Conclusion**

The State Aid Modernisation package is at this stage a proposal, and it remains to be seen how exactly it will be implemented. The principal intention of this reform to give the incentive effect a more central role in the assessment of a measure, to the detriment of other elements of the existing assessment, including any screens focusing on the distortions of competition and effects on trade is already visible though. We discussed this policy reform with focus on the Regional Aid Guidelines and asked whether the existing market screen indicators (being indicators of the distortionary effects of an aid measure) should be abolished to the benefit of an extended assessment of the incentive effect.

In our view this depends on the accompanying elements of the reform. Assuming that the Commission wins additional investigative powers we argue in favour of keeping the market screens, but broaden the battery of market indicators and use them to define soft negative presumption areas only. This will reduce the focus on market definition and the exact measurement of market shares and capacity figures. The resources would then become available for a less indicator based but comprehensive assessment of the distortions of competition and effects on trade. Cross-border externalities remain the key justification for the Commission's intervention under this approach.

In an environment where the Commission does not gain competency regarding market investigation tools abolishing the screens may indeed be required to address the practical problems associated with the screens. The alternative screens (size of the project and incentive

effect) require a thorough assessment of schemes and an ex post evaluation of aid measures in order to avoid regulatory loopholes or a loss in oversight by the Commission.

## Tables

**Table 1: Main characteristics of the cases for which an in-depth assessment was carried out**

Name	Case number	Industry	Region	Art. 107(3) a or c?	107.3.(a) ceiling	Headquarter of aid beneficiary	Status of proceedings
Dell Poland	C 46/2008	C26.02 - Computers (PCs and servers)	Poland	a)	50%	U.S.	Aid approved on 23.09.2009 (published on 02.02.2010)
Petrogal	C 34/2009	C19.02 - Refined petroleum products (refineries)	Portugal	a)	30% and 40%	Portugal and Italy	Aid approved on 03.08.2011 (with corrigendum on 14.02.2012)
Audi Hungaria Motor	C 31/2009	C29.03 - Parts and accessories for motor vehicles (new engines)	Hungary	a)	30%	Germany	Investigation opened on 28.10.2009 and extended on 06.07.2010
Fiat Powertrain Technologies PL	SA.30340	C29 - Motor vehicles (new small gasoline engines)	Poland	a)	40%	Italy	Investigation opened on 09.02.2011 and notification withdrawn on 01.12.2011
BMW Leipzig	SA.32009	C29 - Motor vehicles (electric cars)	Eastern Germany	c)	30%	Germany	Investigation opened on 13.07.2011
VW Sachsen	SA.32169	C29 - Motor vehicles (shift from platform- to module-based process)	Eastern Germany	a)	30%	Germany	Investigation opened on 13.07.2011

Name	Case number	Industry	Region	Art. 107(3) a or c?	107.3.(a) ceiling	Headquarter of aid beneficiary	Status of proceedings
Linamar Powertrain	SA.33152	C29.03 - Parts and accessories for motor vehicles (engines and power transmission parts)	Eastern Germany	a)	30%	Canada	Investigation opened on 09.11.2011

Source: Authors' review of EUROPA's competition case repository. Cases are ordered by date of notification.

**Table 2: Timeline of the cases for which an in-depth assessment was carried out**

Name	Measure notified on	Investigation opened on	Measure approved/rejected on	Current status	Months elapsed between notification and opening decision	Months elapsed between notification and approval/rejection decision
Dell Poland	16-Jul-07	10-Dec-08	23-Sep-09	Positive decision	17	26
Petrogal	17-Nov-08	19-Nov-09	3-Aug-11	Positive decision	12	32
Audi Hungaria Motor	26-Feb-09	28-Oct-09	-	Investigation pending	8	-
Fiat Powertrain Technologies PL	28-Jan-10	09-Feb-11	-	Investigation pending	12	-
BMW Leipzig	30-Nov-10	13-Jul-11	-	Investigation pending	7	-
VW Sachsen	27-Dec-10	13-Jul-11	-	Investigation pending	6	-
Linamar Powertrain	09-Jun-11	09-Nov-11	-	Investigation pending	5	-
Average	-	-	-	-	10	29

Source: Authors' review of EUROPA's competition case repository.

**Table 3: Main figures for the cases for which an in-depth assessment was carried out**



Name	Investment (eligible expenditures, million Euros, in present value, for the single project)	Aid (million Euros, in present value, for the single project)	Direct jobs	Total jobs	Aid per direct job (million Euros)	Aid per total job (million Euros)	Actual aid intensity	Ceiling reached?
Dell Poland	€ 190	€ 53	2500	3800	€ 0.02	€ 0.01	27.81%	Yes
Petrogal	€ 974	€ 121	150	600	€ 0.81	€ 0.20	12.43%	No
Audi Hungaria Motor	€ 511	€ 50	150	150	€ 0.33	€ 0.33	9.69%	No
Fiat Powertrain Technologies PL	€ 180	€ 40	400	510	€ 0.10	€ 0.08	22.23%	Yes
BMW Leipzig	€ 368	€ 46	800	800	€ 0.06	€ 0.06	12.50%	No
VW Sachsen	€ 698	€ 83	NA	NA	NA	NA	11.96%	Yes
Linamar Powertrain	€ 157	€ 28	410	410	€ 0.07	€ 0.07	18.03%	Yes
<b>Average</b>	<b>€ 440</b>	<b>€ 54</b>	<b>735</b>	<b>1,045</b>	<b>€ 0.23</b>	<b>€ 0.13</b>	<b>16.38%</b>	<b>57%</b>

Source: Authors' review of EUROPA's competition case repository.

Notes: In the case of VW Sachsen, the aid-granting Member State indicates that this investment ensures that approximately 5,300 jobs will be maintained. See para 28 of C(2011) 4935 final. The average number of direct and total jobs created by these projects does not include the VW Sachsen case.

**Table 4: Main reasons for opening a formal investigation**

Name	Main reasons for opening the formal investigation	Data issues	Pre-existing plant	Single investment project/initial investment	Incentive effect (formal criterion)
Dell Poland	Market definition, market shares, whether the market is declining	Not sufficient for market definition and to determine whether market growth should be measured in volume or in value terms	Greenfield investment	Parallel investments by suppliers do not constitute a single investment project	Unproblematic

Name	Main reasons for opening the formal investigation	Data issues	Pre-existing plant	Single investment project/initial investment	Incentive effect (formal criterion)
Petrogal	Initial investment, single investment project, market definition, market shares	Inconsistent and incomplete data	Pre-existing plant	Investments in two refineries are considered a single investment project	Problematic: not clear whether a letter of intent (for <i>ad hoc</i> cases) exists
Audi Hungaria Motor	Market definition, market shares	Unreliable price estimates	Pre-existing plant	Investments in two sets of production lines are considered a single investment project	Unproblematic
Fiat Powertrain Technologies PL	Market definition, market shares, capacity expansion	Unreliable price estimates	Pre-existing plant	-	Unproblematic
BMW Leipzig	Market definition, market shares, new product market	Not sufficient for market definition	Pre-existing plant	-	Unproblematic
VW Sachsen	Market definition, market shares, capacity expansion, single investment project	Unreliable price estimates	Pre-existing plant	An earlier investment in a press shop at the same plant is considered a single investment project	Unproblematic
Linamar Powertrain	Capacity expansion, inconsistent data	Inconsistent data on eligible expenditures and aid amounts; unreliable price estimates	Pre-existing plant	Earlier investments are considered a single investment project	Unproblematic

Source: Authors' review of EUROPA's competition case repository.

**Table 5: Comparison of cases for which an in-depth assessment was carried out and cases for which it was not**

Statistic	Formal investigation opened	Formal investigation not opened	Difference
Average size of investment	€ 439.66	€ 365.98	20.13%

Statistic	Formal investigation opened	Formal investigation not opened	Difference
Average size of aid	€ 60.16	€ 47.29	27.21%
Average aid intensity	16.4%	13.9%	2.51 perc. points
Percentage of Art. 107(3)(a) regions	85.7%	77.8%	7.94 perc. points
Average number of new direct and indirect jobs created	1,045	878	19.09%
Average aid per job created	€ 0.13	€ 0.08	59.35%
Percentage of cases in which the aid intensity ceiling is reached	57.1%	50.0%	7.14 perc. points
Percentage of single investment projects	57.1%	50.0%	7.14 perc. points
Percentage of greenfield investments	14.3%	14.3%	0.00 perc. points
Duration (in months) from notification to Phase 1 decision	9.7	9.5	2.66%
Duration (in months) from notification to Phase 2 decision	29.3	-	-
Most frequent industries	C29 - Motor vehicles (5 cases)	C26/C27 - Computers and electrical equipment (11 cases), followed by C29 - Motor vehicles (7 cases)	-

Source: Authors' review of EUROPA's competition case repository. When we calculate the average number of jobs created and the average aid effectiveness, we do not include the cases in which the investment will only lead to the maintenance of the existing jobs. When we also include these cases (using the reported number of jobs that in those cases will be maintained), the average number of jobs created in the cases for which a formal investigation is opened increases from 1,045 to 1,652 (due to the VW Sachsen case). It increases from 878 to 1,396 for the cases for which a formal investigation was not opened (due to the Pirelli case N381/2008, Ford Espana cases N473/2008 and SA.32076, and Jaguar Cars Ltd case N559/2010).

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