

# Is There a Role for Economic Analysis When Deciding on State Aid to Public Broadcasters?

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*By means of text analysis, this article examines the use of economic concepts and tools in State aid decisions regarding public broadcasters. We find that broad and general concepts are most frequently used and that more specific economic terms that can be found in the Broadcasting Communication surface rather seldomly in the public version of decision texts. Furthermore, we do not observe a substantial difference between the use of these terms before and after the adoption of the v2009 Broadcasting Communication suggesting that economic concepts are not more frequently used in recent years. We believe that economic analysis could bring additional clarity and support in several of the studied decisions, especially in cases where, for example, it is quite debatable which tasks fall under a public service obligation and which do not. Economic analysis would foster the evolution to a stricter and more rational State aid control in this exceptional sector preventing potential spillover-effects of aid into new activities.*

*Keywords: State Aid; Media; Public Service Broadcasting; Economic Analysis.*

## I. Introduction

Diverse stakeholders in the media industry receive substantial amounts of government support. Since the early 1990s, especially the funding of public broadcasters has been the centre of multiple policy and academic debates. It took until 1996 for the European Commission (hereinafter ‘the Commission’)

to adopt its first broadcasting aid decision. In the meantime, there have been over 40 State aid decisions. These State aid investigations regarding the provision of public service media (hereinafter ‘PSM’) have led the Commission and the Member States more than once into quite a kerfuffle, some procedures even taking up to 10 years.

The Amsterdam Protocol was one of the first to put forward an explicit guiding framework for public broadcasting.<sup>1</sup> It stresses the importance of public broadcasting in European democracies and Member States’ competencies in terms of organising such a system, leaving some, albeit limited, room for European intervention in this area. Although public broadcasting is considered to constitute a service of general economic interest (hereinafter ‘SGEI’), it is not captured by the SGEI State aid framework. The rules the European Commission sets out for the assessment of funding of PSM are part of a specialised communication, that has evolved with different versions in 2001<sup>2</sup> and 2009.<sup>3</sup> Current decisions are guided by three important principles, *i.e.* a clear definition of the public task, formal entrustment, and proportionality of aid. Next to legal and policy documents, also economic analysis guides these aid deci-

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1 A more detailed explanation on the history and evolution of State aid in public broadcasting can be found in C Gerlach and D Pikios, ‘Aid to Broadcasting, Culture and Sport’ in P Werner and V Verouden (eds), *EU State Aid Control. Law and Economics* (Kluwer 2017).

2 European Commission, Communication on the Application of State Aid Rules on Public Service Broadcasting, OJ 2001 C235.

3 European Commission, Communication of 27 October 2009 on the Application of State Aid Rules to Public Service Broadcasting, OJ 2009 C257.

sions. Following the development of a more refined economic approach in State aid control, also the role of economic analysis in broadcasting decisions has grown over the years – at least in theory.<sup>4</sup>

It is especially interesting to study the broadcasting sector given the exceptional nature it enjoys within State aid control because of the Amsterdam Protocol giving a relatively wide discretion for Member States. That wide discretion was in fact the consequence of high-level political efforts of among others former Belgian Prime Minister Dehaene and former German Chancellor Helmut Kohl to safeguard the position of public broadcasters in the European Union, not so much as a recipe to restore market failure, but more so as a basic feature of democratic media systems. Needless to say the Protocol has at times frustrated the European Commission in its pursuit of fair competition. Member States and the European Commission have more than once clashed severely on this issue, investing time in legalistic discussions on competence divisions. Given the controversy and sometimes political discussions concerning PSM aid cases, economic analysis certainly has the potential to bring clarity following a more facts-based approach. It is the aim of this article to study the current use of economic concepts in decisions concerning public broadcasters and to verify whether an evolution is noticeable. Therefore, by means of software guided content analysis, we analyse the PSM aid decisions on key economic concepts.

The remainder of this article is organised as follows: the next part introduces the role of economics in State aid matters as well as its evolution. Section III briefly describes the specific policy and legal framework governing State aid to public broadcasters. Section IV puts forward our research questions and explains the methodology. Next, results of document analysis by means of QDA Miner will be discussed. The final part concludes putting forward policy implications and making suggestions for future research.

## II. The Economics of State Aid

Economics can play an important role within State aid policy for at least four reasons. First, economics helps to clarify the rationale behind aid measures by means of defining market failures or equity con-

cerns. In other words, it can explain the fundamental reason(s) of existence of aid measures. Second, through several theories of harm, it also justifies the need for a supranational State aid control when studying government behaviour in competing jurisdictions and describing the wish to avoid a wasteful subsidy race. Next, several economic terms and tools, such as the market economy investor principle, are important when investigating proposed State aid measures and deciding on the aid character or the compatibility. Last, economics is of fundamental importance when carrying out *ex post* evaluations and contributing to a genuinely closed policy cycle where the evaluations feed into improved future policy.<sup>5</sup>

The role for economics in State aid control has not always enjoyed this level of importance. In fact, an increased role for economics in State aid practice is quite recent. The elevated standing of economics is largely the result of two substantial makeover projects of the State aid rules. Along with the State Aid Action Plan (SAAP),<sup>6</sup> Friederiszick et al.<sup>7</sup> lay out a clear role for economic analysis in aid assessments. The refined economic approach<sup>8</sup> and resulting balancing test were introduced. Hence, positive effects of an aid measure are to be weighed against negative effects. In a nutshell, for an aid measure to be allowed, a market failure or another objective of common interest must be present, the aid measure needs to be targeted and a distortion of competition limited. The focus changed somewhat with the more recent State Aid

4 See amongst others, D Neven and V Verouden, 'Towards a More Refined Economic Approach in State Aid Control' in W Mederer, N Pesaresi and M van Hoof (eds), *EU Competition Law: Volume IV State Aid*, (Claeys and Casteels 2008), 99.

5 The analysis in this article will strictly focus on the third aspect, i.e. the role of economic analysis in State aid investigations and decisions.

6 European Commission, State Aid Action Plan. Less and better targeted State aid: a roadmap for State aid reform 2005-2009, 2005, available <[http://ec.europa.eu/competition/state\\_aid/reform/archive.html](http://ec.europa.eu/competition/state_aid/reform/archive.html)> (last accessed on 5 November 2017).

7 HW Friederiszick, LH Röller and V Verouden, 'European State Aid Control: an Economic Framework' in P Buccirosi (ed.), *Handbook of Antitrust Economics* (MIT Press 2008), 625.

8 For more information on the refined economic approach, see among others, P Nicolaides, 'Compatibility of State Aid and the Balancing Test' in J Derenne and M Merola (eds), *Economic Analysis of State Aid Rules – Contributions and Limitations*, (Lexion 2007), 161 and D Neven and V Verouden, 'Towards a More Refined Economic Approach in State Aid Control' in W Mederer, N Pesaresi and M van Hoof (eds), *EU Competition Law: Volume IV State Aid* (Claeys and Casteels 2008), 99.

Modernisation (SAM).<sup>9</sup> This makeover project introduced *ex post* evaluation of certain large aid measures. An evaluation plan needs to be provided already at the time of notification to ensure a high quality and robust assessment. This should shed light on the performance of several aid measures and lead to organisational learning and an improved future aid design or a well considered prolongation of an aid measure.

Economic analysis is thus present in current State aid policy. Several specific economic-based concepts, such as market definition, net present value (NPV), and market economy investor frequently surface when evaluating State aid measures. Defining the relevant market is crucial when estimating the impact of an aid measure on competition and usually consists of two parts, *i.e.* defining the product- and geographic market as explained by Peeperkorn and Verouden.<sup>10</sup> An aid can impact not only directly on the beneficiary and its competitors, but also on up- and downstream markets.<sup>11</sup> An NPV is used to assess whether a certain project is worth carrying out, and, if not, to reveal the funding gap.<sup>12</sup> The market economy investor principle can come into play when evaluating whether the proposed aid measure confers an advantage, in other words, a benefit that could never be obtained under normal market conditions.<sup>13</sup> A public authority that invests as a normal market play-

er is not conferring an advantage. Hence, the measure cannot be considered to constitute a State aid.

Not only the policy environment, but also scientific literature witnesses a gradual increase in the economics of State aid. Literature discusses, for example, distortions of competition,<sup>14</sup> welfare effects<sup>15</sup> and effectiveness and/or efficiency of specific aid measures.<sup>16</sup>

We can thus conclude that, in general, the role for economics within State aid control is growing. The next paragraphs will describe the legislative framework governing State aid to public broadcasters and will point out the role of economics in this specific context.

### III. EU Legal Framework Governing State Aid to PSM

Article 107 of the Treaty on the Functioning of the European Union (TFEU) forbids State aid, but at the same time recognises that exceptions to this general prohibition are possible. In the context of public broadcasting, these exceptions can be found in Article 107(3)(d) TFEU as well as in Article 106(2) TFEU. Where the former allows aid for cultural reasons, the latter makes an exception for SGEI.<sup>17</sup> Given the wide

9 European Commission, State Aid Modernisation, 2012, available at <[http://ec.europa.eu/competition/state\\_aid/modernisation/index\\_en.html](http://ec.europa.eu/competition/state_aid/modernisation/index_en.html)> (last accessed on 5 November 2017).

10 L Peeperkorn and V Verouden, 'The Economics of Competition' in J Faull and Nikipay A (eds), *The EC Law of Competition* (Oxford University Press 2007), 3.

11 More information on market definition can be found in J Fingleton, F Ruane and V Ryan, 'Market Definition and State Aid Control' in European Commission, *State Aid and the Single Market*, European Economy Report Studies n°3 (1999), 65.

12 More information can be found in V Verouden and P Werner, 'The Law and Economics of EU State Aid Control' in P Werner and V Verouden (eds), *EU State Aid Control. Law and Economics* (Kluwer 2017).

13 J Haucap and U Schwalbe, 'Economic Principles of State Aid Control' in F Säcker and F Montag (eds), *European State Aid Law* (Hart Publishing 2016).

14 See JA Garcia and D Neven, 'State Aid and the Distortion of Competition, a Benchmark Model' (2005) 6 HEI Working Paper; Y Katsoulacos, 'State Aid to R&D and Competition: an Economic Assessment Methodology' (2005), available at <<http://www.intertic.org/Strategic%20Trade%20Papers/Katsoulacos!.pdf>> (last accessed on 14 April 2016); M Jegers and C Buts, 'State Aid and between Country Competition in an Economic Union: a Micro-economic Analysis' in M Dumont and G Grayp (eds), *International Business, not as Usual* (Garant 2011), 81; C Buts and M Jegers, 'A Note on State Aid and Concentration: the Case of Belgium' (2012) 8 European Competition Journal, 153 and C Buts and M Jegers, 'The Effect of State Aid on Market Shares: an Empirical

Investigation in an EU Member State' (2013) 13 Journal of Industry, Competition and Trade, 89.

15 Welfare effects of aid in diverse contexts are discussed by D Collie D, 'State Aid in the European Union: the Prohibition of State Aid in an Integrated Market' (2000) 18 International Journal of Industrial Organization, 867; S Martin and P Valbonesi, 'Equilibrium State Aid in Integrating Markets' (2008) 8 The BE Journal of Economic Analysis and Policy, 1; D Chor, 'Subsidies for FDI: Implications from a Model with Heterogeneous Firms' (2009) 78 Journal of International Economics, 113; P-A Buigues and K Sekkat, 'Public Subsidies to Business: an International Comparison' (2011) 11 Journal of Industry, Competition and Trade, 1 and M Mariniello, 'Should Variable Cost Aid to Attract Foreign Direct Investment be Banned? A European Perspective' (2013) 13 Journal of Industry Competition and Trade, 273.

16 On R&D, see for example, PA David, BH Hall and AA Toole, 'Is Public R&D Spending a Complement or a Substitute for Private R&D? A Review of the Econometric Evidence' (2000) 29 Research Policy, 497 and S Afcha and L Guillen, 'Public Funding of R&D and its Effects on the Composition of Business R&D Expenditure' (2014) 17 Business Research Quarterly, 22. On rescue and restructuring aid, see for example, R Chindooroy, P Muller and G Notaro, 'Company Survival Following Rescue and Restructuring State Aid' (2007) 24 European Journal of Law and Economics, 165. On employment effects, see for example, F Bergström, 'Do Capital Subsidies to Firms Increase Employment?' in G Eliason and N Karlson (eds), *The Limits of Government: on Policy Competence and Economic Growth*, (Transaction Publishers 2001)

17 In practice, the cultural exception has not been accepted.

democratic, social and cultural task of public broadcasters in Europe, the Commission deems the cultural exception not to be applicable.

In principle, an SGEI support can avoid being labelled as State aid if the *Altmark* criteria are met. This is the case when there is a clear definition of the service, the calculation of the compensation is transparent and *ex ante* known, the aid can only cover the costs (and a reasonable profit), and these costs are not higher than for an efficient company. Donders,<sup>18</sup> however, explains that the *Altmark* criteria are for escaping Article 107(1) TFEU of little relevance as public broadcasters are typically historically entrusted with their service.

State aid is then generally assessed under Article 106(2) TFEU. Defining the SGEI is largely up to the Member State, where the Commission will check for manifest errors. This also means that the Member State has a wide discretion to define the service obligation. As such, it is not solely based on the concept of market failure, but can also be the result of a political choice.

Three criteria are especially relevant for the assessment of the aid: a clear definition of the public service remit, a formal entrustment, and a proportionality test. These criteria have been elaborated upon, also taking into account the Amsterdam Protocol, in the 2001<sup>19</sup> and, subsequently, the 2009 Broadcasting Communication.<sup>20</sup> A public broadcaster can moreover be publicly owned, can be funded by license fees, through a combination of public fees and advertising or by State funding and advertising. One of the most substantial changes brought by the 2009 Communication is a stricter treatment of new tasks or services. This relates to public broadcasters' activities on digital and online platforms. Gerlach and Pikiotis explain that an *ex ante* test must verify from both a public value and market impact perspective whether a new service should be carried out by the public service broadcaster.

From an economics perspective, the matter can be quite complicated as public broadcasters are active in different markets, some of which competitive through the presence of privately owned broadcasters, newspapers and online media companies. Subsequently, any advantage given to the former could affect activities that are in competition with those of private players. We also observe that the industry has evolved from a dual system of public and private broadcasters to a more complex structure. The Inter-

net has brought new stakeholders, *e.g.* online players, causing pressures on the traditional players. The Commission is in particular fearful of a so-called 'mission creep': public broadcasters delivering new services that are not explicitly authorised by their government. It seeks for a detailed description of public broadcasters in new media markets. This desire often clashes with the broad task of public broadcasters and Member States' near-sovereign powers in this domain. Most countries still have a certain level of financial support for their public broadcasters, which often represent a substantial part of the broadcasting market (especially when including radio).<sup>21</sup>

The economic concepts and tools to be used when designing the support scheme for these public service broadcasters are clarified in the Broadcasting Communication.<sup>22</sup> It sets out diverse funding schemes and requires separate accounts for the activities that fall under the public service and others. This is important to investigate potential cross-subsidisation. The calculation of the aid itself also requires substantial cost accounting skills. The public service can be compensated (but not overcompensated) which requires the use of objective cost accounting principles. The compensation can cover the net costs of the service, and usually a reasonable profit.

#### IV. Research Questions and Methodology

PSM certainly represents a quite peculiar area within State aid control given its political nature and substantial discretion of Member States, but also because a market failure does not always constitute the starting point. Given the special nature of the sector within State aid control, it is interesting to study to what extent economic analysis has gained importance.

18 K Donders, 'State Aid to Public Service Media: European Commission Decisional Practice before and after the 2009 Broadcasting Communication' (2015) 14(1) *European State Aid Law Quarterly*, 68.

19 European Commission, Communication on the Application of State Aid Rules on Public Service Broadcasting, OJ 2001 C235.

20 European Commission, Communication of 27 October 2009 on the Application of State Aid Rules to Public Service Broadcasting, OJ 2009 C257.

21 C Gerlach and D Pikiotis, 'Aid to Broadcasting, Culture and Sport' in P Werner and V Verouden (eds), *EU State Aid Control. Law and Economics* (Kluwer 2017).

22 European Commission, Communication of 27 October 2009 on the Application of State Aid Rules to Public Service Broadcasting, OJ 2009 C257.



Hence, in the remainder of this article we attempt to assess to what extent economic concepts and tools are present in State aid decisions to PSM and evaluate their evolution. More specifically, we formulate the following two research questions:

*RQ1: What are the economic concepts and tools that are used in the existing State aid decisions regarding PSM?*

*RQ2: Is there a trend to be spotted in the use of economic concepts and tools over time?*

While the former question focuses on the frequency of the concepts used, the latter specifically looks at differences in the use of economic concepts and tools before and after the 2009 Broadcasting Communication. Our methodology thus consists mainly of document analysis by means of the software QDA Miner. Document analysis on all relevant State aid cases sheds light on which economic concepts and methods are used as well as on their frequency and evolution. The results should enable us to evaluate the extent to which economic analysis is used in current State aid decision making and whether and how it adds to the actual decision making.

Social sciences have a longstanding tradition with regard to content analysis. Bergman<sup>23</sup> explains that the analysis of textual data is clearly valued since 1940 and the origin of the practice can even be traced back to the 17<sup>th</sup> century.<sup>24</sup> Krippendorff (2013) describes content analysis as “a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use”.<sup>25</sup> According to Hodson,<sup>26</sup> the technique delivers, based

on systematic textual analysis and coding, in-depth descriptions and new insights and allows for the testing of hypotheses and theories. The Methodology has evolved over time and both qualitative and quantitative approaches are widely used. As we analyse the use of economic concepts and economic tools in State aid decision making practice, we proceed with conventional content analysis, but within a mixed method framework. Hence, we start with a qualitative part where policy documents are analysed and screened for economic concepts and tools. This will already provide insights in the concepts that are most relevant in this specific PSM context. As explained, among other, by Bergman<sup>27</sup> we follow the usual four stages, *i.e.* codes, concepts, categories and theory. Next, we proceed with a quantitative content analysis on all decision texts to provide complementary insights. This is done with a selection of the most important concepts from the initial screening and coding of policy documents. This results in a coding instrument where coded concepts and tools are transformed into variables. We opt for dichotomous coding as well as intensity coding.<sup>28</sup> This allows us in the first place to evaluate the presence of certain concepts and tools, but secondly also to study their frequency. The coding instrument is then put to work on all accounts, which in the present case are the State aid decision texts. Finally, results of the qualitative and quantitative part are matched to come to a number of conclusions.

Bowen<sup>29</sup> puts forward a number of limitations to content analysis. First, one of the main criticisms refers to a lack of detail as the documents have not been drafted for academic purpose. Second, there can be complications in retrieving all documents. Last, an incomplete collection can result in selection bias. To the best of our ability, these limitations are taken into account. The decision texts are indeed not drafted for academic purposes, but are of high quality and contain a reasonable amount of detail as they disclose the important points of analysis and discussion for each case. We try to avoid a selection bias by studying all decisions. The remaining bias stems from language selection. Only English texts are selected, meaning that a part of the data is indeed missing. This concerns, however, only a minority of the decisions. Moreover, the most important and debated texts are available in English.

Our sample includes all State aid decisions to ‘main’ public broadcasters. We thus exclude *de min-*

23 M Bergman, ‘Hermeneutic Content Analysis’ in A Tashakkori and C Teddlie (eds), *Mixed Methods in Social & Behavioral Research* (Sage 2010), 379.

24 For more information on the history of content analyses, see for example, K Krippendorff, *Content Analysis: An Introduction to its Methodology* (Sage 2013).

25 K Krippendorff, *Content Analysis: An Introduction to its Methodology* (Sage 2013), 18.

26 R Hodson, *Analyzing Documentary Accounts*, Series: Quantitative Applications in the Social Sciences (Sage 1999).

27 M Bergman, ‘Hermeneutic Content Analysis’ in A Tashakkori and C Teddlie (eds), *Mixed Methods in Social & Behavioral Research* (Sage 2010), 379.

28 A L Strauss and J Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (Sage 1998).

29 G A Bowen, ‘Document Analysis as a Qualitative Research Method’ (2009) 9(2) *Qualitative Research Journal*, 27.

*imis* cases as well as aid to very local radio and/or TV. We focus on the decisions after 2001 only, following the 2001 Communication.<sup>30</sup>

We evaluate the entire sample, but also look at specific periods in time and thus also study the evolution of economic concepts and tools. During the interpretation of the results, we also briefly look at different objectives of the aid as we expect different economic analyses for diverse objectives. The most rudimentary distinction is that between decisions on the service obligation itself and other types such as a restructuring aid.

## V. Content Analysis and Results

Based on the relevant State aid policy document in this context, *i.e.* the Broadcasting Communication,<sup>31</sup> we compose and code a list of economic terms. More specifically, we first focus and derive relevant general economic terms. Next, we complement with more specific State aid and broadcasting related economic concepts.

As suggested by Hodson,<sup>32</sup> we list all aspects in case a certain topic is complex and has multiple facets. Hence, diverse versions of our keywords are included as well as UK and US spelling varieties. Following Bansal,<sup>33</sup> also an independent researcher coded the same documents.<sup>34</sup> As a result, we obtain our coding instrument comprising 58 concepts. Again, following Bansal,<sup>35</sup> the list of items is then further divided among several categories. Standard procedures, as explained in Hodson,<sup>36</sup> recommend to field test the coding instrument on a limited number of accounts. This is done before starting the full analysis.

This section is further divided into two parts, building on the research questions. We first discuss which concepts and tools are mainly used in the existing State aid decisions. Next, we focus on the evolution of the use of these concepts and tools over time.

### 1. Which Economic Concepts and Tools Are Used in the State Aid Decisions Regarding PSM?

We start our analysis with a simple review of the most used concepts. Table 1 provides an overview of the 10 most frequently encountered concepts, study-

ing all decision texts. For each of these 10 concepts, the table indicates the total count over all decisions texts, how many times this concept was detected as a percentage of the total count of all concepts, how many times the concept is counted as a percentage of the total amount of words in all texts, and the number of cases in which the concept is detected.

The terms listed in Table 1 do not come as a surprise. A number of these concepts such as market, undertaking and contract are quite general. Also the public service character is prominently present. It is however interesting to note that, from these 10 most frequently used concepts, only the concepts market, competition, and trad<sup>37</sup> are detected in all 20 decision texts.

When we study the list further,<sup>38</sup> we notice that key concepts to the analysis, *i.e.* proportionality and proportionality test, only rank on place 17 and 33 respectively of the frequency count. Surprisingly, proportionality is detected in only 15 out of 20 decision texts. Also, typical cost accounting principles do not appear in the top 10. Net cost, cost allocation, and net benefit rank in places 12, 26, and 40 respectively.

While it is to be expected that more general concepts rank higher on the frequency count, it is rather surprising that key concepts for the analysis, *e.g.* proportionality, do not appear in all cases. We also note that the concepts financing scheme, commercial investment, and cost recovery are detected in only one decision text.

30 European Commission, Communication on the Application of State Aid Rules on Public Service Broadcasting, OJ 2001 C235.

31 European Commission, Communication on the Application of State Aid Rules on Public Service Broadcasting, OJ 2001 C235; European Commission, Communication of 27 October 2009 on the Application of State Aid Rules to Public Service Broadcasting, OJ 2009 C257.

32 R Hodson, *Analyzing Documentary Accounts, Series: Quantitative Applications in the Social Sciences* (Sage 1999).

33 P Bansal, 'Evolving Sustainably: a Longitudinal Study of Corporate Sustainable Development' (2005) 26 *Strategic Management Journal*, 197.

34 More information on coder reliability can also be found in MJ Milne and RW Adler, 'Exploring the Reliability of Social and Environmental Disclosures Content Analysis' (1999) 12(2) *Accounting, Auditing & Accountability Journal*, 237.

35 P Bansal, 'Evolving Sustainably: a Longitudinal Study of Corporate Sustainable Development' (2005) 26 *Strategic Management Journal*, 197.

36 R Hodson, *Analyzing Documentary Accounts, Series: Quantitative Applications in the Social Sciences* (Sage 1999).

37 The asterisk refers to diverse potential combinations with 'trad', for example, trade or trading.

38 See Table 2 in the Appendix.

*Table 1*  
*Top 10 Concepts Used in the Broadcasting Decisions*

Rank	Concept	Frequency	% of List	% of Text	No of Cases
1	MARKET*	723	13.3%	0.5%	20
2	REVENUE*	632	11.6%	0.4%	19
3	UNDERTAKING*	452	8.3%	0.3%	19
4	PUBLIC_SERVICE_REMIT	442	8.1%	0.3%	18
5	CONTRACT*	339	6.2%	0.2%	15
6	COMPETITION	319	5.9%	0.2%	20
7	COMMERCIAL_ACTIVITIES	281	5.2%	0.2%	17
8	TRAD*	200	3.7%	0.1%	20
9	INCOME	187	3.4%	0.1%	18
10	PUBLIC_SERVICE_ACTIVITIES	176	3.2%	0.1%	17

Source: Own Compilation Based on Data Mining Results.

Reading through all the decision texts, we directly notice that the economic analysis, or at least the public version thereof, is not very detailed. It is even hard to derive from the decision texts which types of analysis have been carried out. In most of the cases, necessity and proportionality of the aid is verified, be it very briefly. It is with regard to these two concepts that most of the economic analyses can be found. The terms net cost and overcompensation are quite often mentioned. We also remark that the texts frequently discuss the distinction between the public service and ancillary or commercial activities.

Finally, we report that most calculations seem to be rather qualitative. Only one out of our 20 decision texts reports an econometric test. It seems that the focus on the definition of the remit (and how precise it is or is not) – actually a domain where the Commission has very limited competences – takes away attention from a more facts-based approach of specifically the third criterion of proportionality.

## 2. Is There a Trend in the Use of Economic Concepts and Tools?

We wonder whether the use of economic concepts and analyses has intensified over the years. Therefore, we conduct a comparative analysis and divide our sample into two groups. As we expect a change following the 2009 Broadcasting Communication (which followed the adoption of a more economics based State aid approach by the Commission), we split the decision texts into decisions taken until 27 October 2009 and cases decided from 28 October 2009 onwards.

To check for differences between the two periods, we first crosstabulate the keywords against all decisions texts.<sup>39</sup> Next, we calculate the Z-scores for every keyword. Tables 3.a and 3.b (see Appendix) present an overview of the interpretation of the Z-scores. We expect that a number of keywords will have a higher Z-score in the second period. We specifically focus on the following extreme values in Tables 3.a and 3.b (see Appendix).

- A Z-score lower than -1 indicates that the keyword is used relatively less in this decision text than in the average decision text. These cells are white.

<sup>39</sup> Results of the cross-tabulation – Tables 4.a and 4.b – can be found in the Appendix.

- A Z-score higher than 1 indicates that the keyword is used relatively more in this decision text than in the average decision text. These cells are black.
- A Z-score between -1 and 1 indicates that the use of this keyword is in line with the overall use of the concept. These cells are grey.

As we expect to find a more frequent use of certain keywords after the 2009 Communication, we anticipate more black cells for the second group.

As can be seen from Tables 3.a and 3.b (see Appendix), we do not find substantially more black cells in group 2, meaning that economic concepts are not more intensely used after the 2009 Broadcasting Communication. At least two potential explanations come to mind. Either there is indeed no increased use of these economic terms or, there is, but this does not show up in the public version of the decision text. In any case, this means that the texts did not become more transparent in terms of economic analysis, where more transparent decision making would be in line with expectations.

When we look at the individual decision texts, we directly notice that the German case in our sample, E3/2005, has by far the most intensive use of economic concepts and tools. Next in line is E5/2005, a decision text on the public broadcaster in the Netherlands. This strongly contrasts the use of economic concepts in the other decision texts regarding the Netherlands in the sample, C2/2004. The more recent of both decisions uses substantially more economic concepts and tools. On the third place for most economic concepts is the Austrian case, E2/2008.

Studying the topic of the decision, *i.e.* main broadcasting decisions *versus* other decisions (such as restructuring) we notice a slightly more intense use of economic concepts in the main broadcasting decisions. This may not come as a surprise as these decisions usually cover a broad task and analysis. The decisions that entail a country's main public broadcaster do not use substantially more economic concepts than the decision texts concerning a more local broadcaster or radio.

## VI. Conclusion and Recommendations

This article studies the use of economic concepts and tools in State aid decisions regarding public broadcasters by means of text analysis. We look at how of-

ten concepts are detected and check whether the use intensifies following the 2009 Broadcasting Communication.

While many concepts are counted in the decision texts, the rather general ones show the highest frequency counts. Other, more specific concepts, such as proportionality and specific cost accounting principles are considerably less used. Studying the texts, we note that it is indeed not only impossible to derive specific amounts and costs, but that it is usually also not possible to detect which tests or calculations have been carried out. When the text mentions that something is calculated, it usually does not give more information regarding methodology. In addition, the terminology is regularly quite vague. We read, for example, about fair charges without defining what is meant by the notion fair. Most economic analyses are found in the texts when dealing with necessity and proportionality. Net cost as well as over-compensation are terms which are frequently used in these discussions. Also here, we usually only read the outcome of an analysis, rather than learn about the methodology.

With regard to a potential evolution in the use of economic concepts, we observe no significant difference between the decision texts before and after the 2009 Broadcasting Communication. This could be the result of truly no difference in the number of times that economic concepts surface. However, there could also be a more intense use of economic tools, which does not show in the public versions of the decision texts. Further research and in-depth interviews might provide additional insights. As for the individual cases, we observe that the German decision text makes most intensive use of economic concepts. It is also worth noting that the latest of the two decision texts concerning the Netherlands uses substantially more economic concepts than the older one. Also, decisions concerning the main broadcasting assignment carry more economic terminology than other decisions, such as restructuring aid decisions.

While we acknowledge that certain information is confidential, we do believe that there is substantial scope to extend the role for economic analyses as well as to disclose more information with regard to methods and calculations used. Increased transparency, especially with regard to economic analyses, would better support the arguments made and would provide additional guidance. For example, in case the Commission is convinced that online



activities of public broadcasters might be market distortive or over-funded, an economic analysis supporting such an argument would be more forceful in negotiations with Member States. In recent cases, we observe discussion on which aspects are indeed under scrutiny of the Commission and which elements remain responsibility of the Member State. Also in this context, it is a pity that we do not observe a more intense use and disclosure of sound economic analyses. For example, it remains often at least debatable whether or not certain activities can fall under the public service obligation. Economic analysis can take on a clarifying role and help to support the arguments made, especially in this exceptional and rather political sector where Member States have a wide discretion compared to other areas of State aid control. Economic analysis could promote a stricter and certainly more rational control, preventing potential spillovers of an aid into new activities.

Multiple authors warn about potential limitations when carrying out document analysis. Bowen<sup>40</sup> points out potential quality as well as availability issues with regard to the studied texts. Further critical reflections about content analysis instruments are made by De Wever et al.<sup>41</sup> Nevertheless, content analysis is a widely accepted and used tool in social sciences and substantial progress has been made with regard to the theoretical as well as empirical base of the existing instruments. In order to deal with potential dangers, several safeguards and additional checks were taken. For example, coding was also carried out by an experienced but independent researcher. Obviously, several (methodological as well as content-related) questions remain unanswered and this article consequently only opens the door for future research. Among others, it would be interesting to compare the outcome of this analysis with that of State aid decisions in another field. Furthermore, additional in-depth insights could be obtained from a number of cases studies where stakeholder opinions with regard to economic analysis are analysed. Finally, access to the full case files, including confidential information, would increase insight in the economic analysis, its role and evolution in decision making.

40 GA Bowen, 'Document Analysis as a Qualitative Research Method' (2009) 9(2) *Qualitative Research Journal*, 27.

41 B De Wever, T Schellens, H Valcke and H Van Keer, 'Content Analysis Schemes to Analyze Transcripts of Online Discussion Groups: a Review' (2005) 46 *Computers and Education*, 6.

# Appendix

Table 2  
Frequency Count

Rank	Concept	Frequency	% of List	% of Text	No of Cases
1	MARKET*	723	13.3%	0.5%	20
2	REVENUE*	632	11.6%	0.4%	19
3	UNDERTAKING*	452	8.3%	0.3%	19
4	PUBLIC_SERVICE_REMIT	442	8.1%	0.3%	18
5	CONTRACT*	339	6.2%	0.2%	15
6	COMPETITION	319	5.9%	0.2%	20
7	COMMERCIAL_ACTIVITIES	281	5.2%	0.2%	17
8	TRAD*	200	3.7%	0.1%	20
9	INCOME	187	3.4%	0.1%	18
10	PUBLIC_SERVICE_ACTIVITIES	176	3.2%	0.1%	17
11	ENTRUSTMENT*	165	3.0%	0.1%	18
12	NET_COST*	158	2.9%	0.1%	17
13	ECONOMIC	145	2.7%	0.1%	20
14	PRODUCTION	128	2.4%	0.1%	20
15	SUPERVISION	127	2.3%	0.1%	16
16	TERMS	118	2.2%	0.1%	18
17	PROPORTIONALITY	108	2.0%	0.1%	15
18	GENERAL_ECONOMIC_INTEREST*	85	1.6%	0.1%	17
19	TRANSPARENCY	85	1.6%	0.1%	13
20	COMMON_MARKET*	64	1.2%	0.0%	14
21	QUALITATIVE	38	0.7%	0.0%	11
22	ENTRY	34	0.6%	0.0%	10

Rank	Concept	Frequency	% of List	% of Text	No of Cases
23	COMMERCIAL_EXPLOITATION	32	0.6%	0.0%	9
24	MARKET_PRINCIPLES	30	0.6%	0.0%	4
25	MARKET_CONFORM	29	0.5%	0.0%	3
26	COST_ALLOCATION	28	0.5%	0.0%	12
27	DEVELOPMENT_OF_TRADE	25	0.5%	0.0%	15
28	MARKET_DISTORTIONS	23	0.4%	0.0%	11
29	MARKET_ECONOMY_INVESTOR	21	0.4%	0.0%	6
30	TRADING_CONDITIONS	20	0.4%	0.0%	10
31	MONITOR	19	0.3%	0.0%	8
32	COMMERCIAL_ACTIVITY	17	0.3%	0.0%	7
33	PROPORTIONALITY_TEST*	16	0.3%	0.0%	6
34	CROSS-SUBSIDISATION	15	0.3%	0.0%	8
35	ATTRIBUTABLE	15	0.3%	0.0%	7
36	COMPENSATION_PAYMENT	15	0.3%	0.0%	4
37	EFFICIENT_COMMERCIAL_OPERATOR	13	0.2%	0.0%	4
38	STAND-ALONE_COSTS	12	0.2%	0.0%	4
39	EXCLUSIVE_RIGHTS	12	0.2%	0.0%	3
40	NET-BENEFIT*	11	0.2%	0.0%	8
41	ANTI-COMPETITIVE_BEHAVIOUR	11	0.2%	0.0%	5
42	FINANCING_MECHANISM*	9	0.2%	0.0%	7
43	COST-ACCOUNTING_PRINCIPLES	9	0.2%	0.0%	5
44	QUANTITATIVE	9	0.2%	0.0%	3
45	DIVERSIFICATION	7	0.1%	0.0%	6
46	TERMS_OF_REFERENCE	5	0.1%	0.0%	5
47	PRICING_POLICIES	5	0.1%	0.0%	3

Rank	Concept	Frequency	% of List	% of Text	No of Cases
48	QUALITY_STANDARDS	4	0.1%	0.0%	4
49	ECONOMIC_INTEREST*	4	0.1%	0.0%	4
50	MARKET_SITUATION	3	0.1%	0.0%	2
51	INTERNAL_ACCOUNTS	2	0.0%	0.0%	2
52	ACCOUNTABILITY	2	0.0%	0.0%	2
53	SINGLE-FUNDING	2	0.0%	0.0%	1
54	DUAL-FUNDING	2	0.0%	0.0%	1
55	COST_RECOVERY	1	0.0%	0.0%	1
56	CROSS-SUBSIDIZATION	1	0.0%	0.0%	1
57	FINANCING_SCHEME	1	0.0%	0.0%	1
58	COMMERCIAL_INVESTMENT	1	0.0%	0.0%	1

Source: Own Compilation Based on Data Mining Results.

Table 3.a  
Visualisation of the Z-Scores<sup>1</sup>

	Group 1										
	N6312001 UK	N372003 UK	C62199 9 IT	SA714 9 DK	C2200 4 NL	NN31200 6 PT	NN820 07 ES	E320 05 DE	E420 05 IE	N28720 08 DK	C19200 9) DK
ATTRIBUTABLE											
COMMERCIAL_ACTIVITIES											
COMMERCIAL_ACTIVITY											
COMMERCIAL_EXPLOITATION											
COMMON_MARKET*											
COMPENSATION_PAYMENT											
COMPETITION											
CONTRACT*											
COST-ACCOUNTING_PRINCIPLES											
COST_ALLOCATION											
CROSS-SUBSIDISATION											
DEVELOPMENT_OF_TRADE											
ECONOMIC											
ENTRUSTMENT*											
ENTRY											
GENERAL_ECONOMIC_INTEREST*											
INCOME											
MARKET*											



	Group 1										
MARKET_CONFORM								■	■		
MARKET_DISTORTIONS								■	■		
MARKET_ECONOMY_INVESTOR			■	■						■	
MARKET_PRINCIPLES								■	■		
MONITOR			■				■	■			
NET-BENEFIT*	■			■	■	■		■	■		
NET_COST*	■	■	■	■	■	■		■	■		
PRODUCTION	■	■	■	■	■	■	■	■	■	■	■
PROPORTIONALITY	■			■	■			■	■		
PROPORTIONALITY_TEST*											
PUBLIC_SERVICE_ACTIVITIES	■	■	■	■	■	■		■	■		
PUBLIC_SERVICE_REMIT	■	■	■	■	■	■	■	■	■	■	■
QUALITATIVE	■	■	■	■	■	■	■	■	■	■	■
REVENUE*	■	■	■	■	■	■	■	■	■	■	■
SUPERVISION	■	■	■	■	■	■	■	■	■	■	■
TERMS			■	■			■	■	■	■	■
TRAD*	■	■			■		■	■	■	■	■
TRADING_CONDITIONS			■	■	■	■			■	■	■
TRANSPARENCY	■		■	■	■	■		■	■		
UNDERTAKING*		■	■	■	■	■	■	■	■	■	

1 Keywords for which the standard deviation could not be determined or which have a standard deviation equal to 1 are left out as the z-scores cannot be calculated.

Source: Own Compilation Based on Data Mining Results.

Table 3.b  
Visualisation of the Z-Scores<sup>1</sup>

	Group 2								
	E22008 AT	E52005 NL	C382009 ES	SA32019 DK	C22003 DK Main	SA3320 1 DK	SA7149 PT	C852001 PT	SA33294 PT
ATTRIBUTABLE									
COMMERCIAL_ACTIVITIES									
COMMERCIAL_ACTIVITY									
COMMERCIAL_EXPLOI- TATION									
COMMON_MARKET*									
COMPENSATION_PAY- MENT									
COMPETITION									
CONTRACT*									
COST-ACCOUN- TING_PRINCIPLES									
COST_ALLOCATION									
CROSS-SUBSIDISATION									
DEVELOPMENT_OF_TRADE									
ECONOMIC									
ENTRUSTMENT*									
ENTRY									
GENERAL_ECONOMIC_IN- TEREST*									
INCOME									
MARKET*									
MARKET_CONFORM									
MARKET_DISTORTIONS									

	Group 2								
MARKET_ECONOMY_INVESTOR	■	■			■				
MARKET_PRINCIPLES		■							
MONITOR	■			■			■	■	
NET-BENEFIT*		■			■				
NET_COST*	■	■	■		■		■	■	■
PRODUCTION	■	■		■	■	■	■	■	■
PROPORTIONALITY	■	■	■		■		■	■	
PROPORTIONALITY_TEST*	■	■							
PUBLIC_SERVICE_ACTIVITIES	■	■		■	■		■	■	
PUBLIC_SERVICE_REMIT	■	■	■		■	■	■	■	■
QUALITATIVE	■	■		■	■	■	■	■	■
REVENUE*	■	■		■	■	■		■	■
SUPERVISION	■	■		■	■	■	■	■	■
TERMS	■	■		■	■	■		■	■
TRAD*	■	■	■	■	■		■	■	
TRADING_CONDITIONS	■	■	■		■		■	■	
TRANSPARENCY	■	■		■	■				
UNDERTAKING*	■	■	■	■	■		■	■	
	Group 2								

1 Keywords for which the standard deviation could not be determined or which have a standard deviation equal to 1 are left out as the z-scores cannot be calculated.

Source: Own Compilation Based on Data Mining Results.

Table 4.a  
Cross-Tabulation Group 1

Concept	1	2	3	4	5	6	7	8	9	10	11
	N6312 001 UK	N3720 03 UK	C621 999It aly	SA714 5 DK	C22004 NN1702 003 NL	NN312 006(CP 164200 1enCP 60200 3) PT	NN82 007 N8402 006 ES	E3200 5(CP2 2003/2 32200 2/4320 03/243 2004) DE	E42005 (NN991 999) IE	N2872 008 DK	C192 009 (2009N 64) DK
ACCOUNTABILITY					1				1		
ANTI-COMPETITIVE_BE- HAVIOUR				1	1	5					
ATTRIBUTABLE					1	2					
COMMERCIAL_ACTIVITIES	2	2	6	20	9	22	1	88	38		
COMMERCIAL_ACTIVITY			1	2				7	1		
COMMERCIAL_EXPLOITATION	3		6	3		3		6	2		
COMMERCIAL_INVESTMENT			1								
COMMON_MARKET*			5	4	4	1	3	8	7	6	8
COMPENSATION_PAYMENT						1					
COMPETITION	5	10	16	18	14	7	5	44	18	9	10
CONTRACT*			7	3	1	52	4	3	2		
COST-ACCOUNTING_PRINCI- PLES				1	2				3		
COST_ALLOCATION			3	1	4	1		4	2		
COST_RECOVERY			1								
CROSS-SUBSIDISATION	3	2		1				3	1		
CROSS-SUBSIDIZATION									1		
DEVELOPMENT_OF_TRADE	1	3	1	2	2		1	2	2	1	
DIVERSIFICATION	1			1				2	1		1
DUAL-FUNDING											
ECONOMIC	1	9	11	6	4	1	4	8	6	10	10

Concept	1	2	3	4	5	6	7	8	9	10	11
ECONOMIC_INTEREST*						1					
EFFICIENT_COMMERCIAL_OPERATOR	1		6	3							
ENTRUSTMENT*	4	5	4	5	3	3	3	46	28	2	
ENTRY			4	1	4			8	3		2
EXCLUSIVE_RIGHTS								10			
FINANCING_MECHANISM*					3		1	1			
FINANCING_SCHEME											
GENERAL_ECONOMIC_INTEREST*	6	5	5	11	4		3	15	3	3	2
INCOME	1		3	32	3	2	4	3	3		4
INTERNAL_ACCOUNTS	1										
MARKET*	14	19	46	61	35	19	2	82	35	21	40
MARKET_CONFORM								20	7		
MARKET_DISTORTIONS	1			1	1	1	1	7	4		
MARKET_ECONOMY_INVESTOR			4	2						1	
MARKET_PRINCIPLES						1		16	6		
MARKET_SITUATION				1							
MONITOR			2				2	5	3		
NET-BENEFIT*	1			2	1	2		1	1		
NET_COST*	3	3	14	12	12	6	1	4	3		
PRICING_POLICIES			1	2							
PRODUCTION	1	1	5	9	7	3	1	19	4	3	1
PROPORTIONALITY	5	2	5	8	7	2		16	13		
PROPORTIONALITY_TEST*				1		1	2	2			
PUBLIC_SERVICE_ACTIVITIES	12	7	10	17	9	29		10	14		1
PUBLIC_SERVICE_REMIT	9	2	2	6	5	1	1	71	51	3	



Concept	1	2	3	4	5	6	7	8	9	10	11
QUALITATIVE	1	1	1	2	1			5			
QUALITY_STANDARDS			1	1							
QUANTITATIVE		1						3			
REVENUE*	10	7	67	33	68	33	3	85	55	8	13
SINGLE-FUNDING											
STAND-ALONE_COSTS	1		1	5							
SUPERVISION	2		3	1	1	2	1	10	23		3
TERMS	1		4	6	1	1	2	17	10	5	4
TERMS_OF_REFERENCE							1	1	1		
TRAD*	16	13	8	9	7	4	6	26	13	5	5
TRADING_CONDITIONS			1	1						2	1
TRANSPARENCY	4	1	6	3	5			15	11		
UNDERTAKING*	6	13	41	24	20	10	9	48	18	9	6

Source: Own Compilation Based on Data Mining Results.

Table 4.b  
Cross-Tabulation Group 2

Concept	12	13	14	15	16	17	18	19	20
	E22008 (CP1632 004and CP2272 005) AT	E52005 NN170b2 003 NL	C3820 09 NN582 009 ES	SA320 19 DK	C22003 DK	SA3320 1(2011N ) DK	SA714 9 (2001C8 5) PT	C85200 1 PT	SA33294 (2011NN) PT
ACCOUNTABILITY									
ANTI-COMPETITIVE_BEHAVIOUR							2	2	
ATTRIBUTABLE	3				2	1	3	3	
COMMERCIAL_ACTIVITIES	24	19	8	1	21		9	9	2
COMMERCIAL_ACTIVITY	2	2			2				
COMMERCIAL_EXPLOITATION	3	4			2				
COMMERCIAL_INVESTMENT									
COMMON_MARKET*	4	3			3		4	4	
COMPENSATION_PAYMENT	10						2	2	
COMPETITION	32	36	8	22	23	4	15	15	8
CONTRACT*	4	6	4	12	6		114	114	7
COST-ACCOUNTING_PRINCIPLES	2				1				
COST_ALLOCATION		4		1	1		3	3	1
COST_RECOVERY									
CROSS-SUBSIDISATION	1	3		1					
CROSS-SUBSIDIZATION									
DEVELOPMENT_OF_TRADE		1	1	4	2		1	1	
DIVERSIFICATION			1						
DUAL-FUNDING			2						
ECONOMIC	18	6	4	7	17	4	9	9	1
ECONOMIC_INTEREST*				1			1	1	
EFFICIENT_COMMERCIAL_OPERA- TOR					3				

Concept	12	13	14	15	16	17	18	19	20
ENTRUSTMENT*	12	32	3	3	2		4	4	2
ENTRY	1	7	2		2				
EXCLUSIVE_RIGHTS	1	1							
FINANCING_MECHANISM*	1	1	1		1				
FINANCING_SCHEME			1						
GENERAL_ECONOMIC_INTEREST*	1	5	2	10	4		3	3	
INCOME	66	6	14	5	32	1	3	3	2
INTERNAL_ACCOUNTS	1								
MARKET*	74	74	22	34	75	5	30	30	5
MARKET_CONFORM	2								
MARKET_DISTORTIONS	2						2	2	1
MARKET_ECONOMY_INVESTOR	7	1			6				
MARKET_PRINCIPLES		7							
MARKET_SITUATION	2								
MONITOR	4			1			1	1	
NET-BENEFIT*		2			1				
NET_COST*	28	17	26	1	5		10	10	3
PRICING_POLICIES					2				
PRODUCTION	4	2	3	11	11	24	9	9	1
PROPORTIONALITY	12	15	7	1	9		3	3	
PROPORTIONALITY_TEST*	4	6							
PUBLIC_SERVICE_ACTIVITIES	5	12	2	10	17		10	10	1
PUBLIC_SERVICE_REMIT	107	130	7	10	9		13	13	2
QUALITATIVE	14	8			3		1	1	
QUALITY_STANDARDS				1	1				
QUANTITATIVE		5							
REVENUE*	11	27	54	15	103		16	16	8

Concept	12	13	14	15	16	17	18	19	20
SINGLE-FUNDING			2						
STAND-ALONE_COSTS					5				
SUPERVISION	40	24		7	1		4	4	1
TERMS	12	22	2	3	15	1	6	6	
TERMS_OF_REFERENCE	1	1							
TRAD*	10	16	8	19	8	3	10	10	4
TRADING_CONDITIONS	3	6	1	1			2	2	
TRANSPARENCY	8	15		11	4		1	1	
UNDERTAKING*	32	24	17	26	37		55	55	2

Source: Own Compilation Based on Data Mining Results.

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