

Getting State Aid Approved by the European Commission: Explaining the Duration of Preliminary Investigations in the State Aid Notification Procedure*

RUUD VAN DRUENEN,  PIETER ZWAAN and ELLEN MASTENBROEK
Radboud University, Nijmegen

Abstract

This article aims to explain the variation in duration of preliminary investigations in the state aid notification procedure. While this procedure is guided by objective standards, preliminary investigations result in an overwhelming majority of cases being approved in combination with a large variation in duration. This study explores the explanatory power of political and managerial factors at the member state and state aid case level to account for this variation. Based on multilevel regression analysis of a newly created dataset, results show that both political and managerial factors at the state aid case level affect the duration of preliminary investigations. No evidence was found for member state level factors having an effect.

Keywords: state aid policy; preliminary investigations; EU enforcement; multilevel regression analysis

Introduction

The European Commission is the guardian of the EU treaties: it is responsible for monitoring and enforcing EU law. To fulfill this role, it uses different procedures. The infringement procedure (under article 258 of Treaty on the Functioning of the European Union (TFEU)) provides a general method to enforce EU legislation. Several studies show that the Commission acts politically when opening, escalating and closing this procedure (for example König and Mäder, 2014; Fjelstul and Carrubba, 2018). This political approach to enforcement is also practised in policy-specific enforcement procedures, such as the Excessive Deficit Procedure (EDP), which can be triggered when member states do not comply with the criteria of the Stability and Growth Pact (SGP). For example, In 2018, the Commission decided not to open an EDP against Italy, even though it violated the SGP's criteria (Politico, 2018).

In this study, we examine to what extent such a political approach can also be found in the EU state aid regime. State aid – defined ‘as an advantage in any form whatsoever conferred on a selective basis to undertakings by national public authorities’ – is used by member states to reach a variety of objectives, including the promotion of research and development, regional development and environmental protection (European Commission, 2019a). Because state aid may distort the functioning of the internal market, it is strictly regulated by Article 107 to 109 TFEU. Member states must notify their state aid plans to the Commission and wait for approval. This process takes place in so-called

*We thank Pieter Kuypers and Johan van de Gronden for their helpful feedback on earlier drafts of this article.

preliminary investigations (PIs). At the end of a PI, the Commission approves the aid, or opens a formal investigation. Formally, this decision must be taken within two months, provided that the Commission has all the necessary information. If not, it can request additional information, which extends the procedure.

Our data show that almost all notified aid measures decided on from January 2015 to December 2018 – thereby excluding cases that were withdrawn during the procedure¹ – obtained a positive decision (that is, decision not to raise objections or decision that a measure does not constitute aid). In only 15 cases (1.5 per cent), the Commission decided to open a formal investigation (Register, 2019). The data, however, indicate a large variation in the duration of PIs. Within our population of approved measures ($n = 975$), the duration varies from 1 to 2,319 days. Furthermore, the average duration of 169 days is accompanied by a standard deviation of 195 days, indicating a large dispersion (Register, 2019).

So far, there has not been any systematic research on the factors that drive the variation in duration. Existing state aid research has mainly focused on the historical development of the state aid regime (Cini, 2001; Cini and McGowan, 2009; Doleys, 2013) or its impact on aggregate spending on national state aid policies (Blauberger, 2009; Franchino and Mainenti, 2013; Zahariadis, 2013). While several scholars have argued that political considerations play a role in the notification procedure (for example Doleys, 2013; Kassim and Lyons, 2013; Aydin, 2014), studies systematically testing the impact of (political) factors on individual state aid decisions remain rare; exceptions are studies by Buts *et al.* (2011) and Brouwer and Ozbugday (2011) on policy-specific characteristics influencing state aid decisions and a recent study by Finke (2020) focusing on political characteristics of member states to explain the outcomes of formal investigations.

In this study, we build upon the literature on state aid and the more general EU enforcement literature to formulate expectations about the impact of several political and managerial factors on duration. By combining these insights and bringing together factors at the state aid case and member state level, this study thereby seeks to establish *to what extent political and managerial factors explain the duration of preliminary investigations in the state aid notification procedure*.

To answer this question, this study reports on multilevel regression analyses of newly collected data on individual state aid cases obtained from the State Aid Register. The dataset contains 975 aid measures approved between January 2015 and December 2018.² January 2015 corresponds with the situation that was created by the coming into force of the new General Block Exemption Regulation (Regulation 651/2014/EU), one of the most important elements of the broader State Aid Modernization (2012–16) that constituted a major overhaul of the state aid regime.³ The dataset is used to test several

¹This can be the result of the Commission signaling that approval of a particular state aid measure was unlikely. Therefore, it is likely that the real number of aid measures that were not assessed positively by the Commission is higher. Unfortunately, no data were available on the cases, as this information is confidential.

²These include decisions not to raise objections ($n = 935$) and decisions that a measure does not constitute aid ($n = 40$).

³The adoption of the new General Block Exemption in 2014 shifted a large degree of responsibility to the member states by exempting a large number of state aid cases from the obligation of prior notification (European Commission, 2014). As all included aid measures were assessed under the reformed regime, it can be assumed that the organizational capacity available to the Commission was constant; this was confirmed by Commission and adding half year dummies to control for caseload did not result in different results for our models. The time interval also coincides with the Juncker Commission, thereby controlling for variation in enforcement behavior between different Commissions.

hypotheses about the impact of different political and managerial factors on the duration of PIs.

This study makes a number of contributions. Firstly, this study improves our understanding of assessment in PIs. Secondly, it allows for a comparative assessment of the functioning of different enforcement procedures. As most EU enforcement studies focus on the infringement procedure (for example Börzel *et al.*, 2012; Hofmann, 2018), the functioning of policy-specific enforcement procedures remains under-researched. This study, thirdly, contributes to debates about the efficiency of the notification procedure. A long duration of PIs places a burden on the capacity of the Commission and member states, but also imposes costs of legal uncertainty on member states. As long as a case is not approved, it cannot be implemented. This may deter member states from granting aid in the first place, thereby leading to socially inefficient outcomes (Blauberger, 2009). A long duration of PIs is also problematic given the limited transparency during the process. Information on a notified case is only provided afterwards (European Court of Auditors, 2011, p. 32).

The following section provides a brief description of PIs in the notification procedure. We argue that PIs allows for mutual accommodation and bargaining. This is followed by a presentation of political and managerial factors at the member state and state aid case level that may explain the variation in duration of PIs, and an overview of the dataset used, operationalization and methods of analysis. Subsequently, the findings are presented. The conclusion and discussion is found in the final section.

I. The State Aid Notification Procedure

Article 107 (1–3) TFEU contains both the general prohibition to grant state aid as well as categories of aid that shall or may be compatible with the internal market (European Commission, 2013). The competence to interpret, apply, and enforce these substantive provisions, which are further elaborated in secondary legislation and soft law, is attributed to the Commission under article 108 TFEU (Doleys, 2013, p. 26).

Regulation 1589/2015, based on Article 108 TFEU, obliges member states to notify intended aid measures to the Commission for approval before they are implemented (the ‘stand-still’ obligation) (European Commission, 2013). The notification can be preceded by a pre-notification phase in which informal contacts take place between the Commission and member states. After an intended measure is formally notified, a PI starts, at the end of which the Commission decides on the compatibility of aid with the internal market. The Commission must take a decision within two months after it deems the information provided complete (European Commission, 2013).⁴ The Commission may therefore request additional information. If the Commission requests more information, the two-month clock starts again at the moment the member state has fulfilled the request. These additional information requests are common, as can be derived from the fact that PIs take longer than 60 days in 72.9 per cent of the cases (Register, 2019).⁵

⁴The state aid measure is automatically authorized if the Commission does not meet the condition within this stated time period.

⁵It should be noted that further delays can be caused by member states not submitting all requested information or the Commission deciding that it requires even more information.

If the Commission cannot take a positive decision because it has serious doubts about the compatibility of a state aid measure with the internal market, it has the legal obligation to open a formal investigation. In a formal investigation, which is outside of the scope of this study as it has a very different nature, the Commission may conclude that an aid measure is compatible with EU law. It may, however, also take a negative decision on the compatibility of a state aid measure, thereby blocking a member state's implementation of that measure.

Although there are formal requirements for deciding on the compatibility of state aid during a PI, the notification procedure provides the Commission room to manoeuvre (Doleys, 2013; Cini and McGowan, 2009, p. 166). As is argued by Akman and Kassim (2010), the procedure has been crafted in such a way 'to offer opportunities for extensive consultation with the concerned parties' because of the sensitivities involved in state aid. Zahariadis (2010, p. 966) describes the interaction that takes place during the procedure as a 'synergistic relationship of co-operation and cooptation, more accurately described by mutual adjustment than political conflict'. The Commission, hence, 'prefers a process of political negotiation and persuasion' (Wilks, 2005, p. 123). During the PI, this happens when the Commission, for example, provides suggestions on how to make use of the exceptions provided by EU law by adjusting the aid measure (for example Einardsson and Kekelis, 2015, p. 142; Zwaan, 2012). According to its European Commission (2018b, p. 9), the PI should be suspended in this case; in practice, additional request for information are made to grant states more time. The latter has been expressed as a concern by the European Court of Auditors (2011). To increase the transparency of the PI, a decision should be taken within two months and letters for information should be used only for the Commission's substantive assessment. Member states, however, may perceive a longer duration as an opportunity to involve themselves politically, as is suggested by Lübbig (2019) and Zwaan (2012).

This tendency to engage in a process of 'compliance bargaining' has also been documented in the literature on the EU infringement procedure. This literature also identified several factor impacting this process (for example Jönsson and Tallberg, 1998; Tallberg, 2002; Hartlapp, 2007; Börzel *et al.*, 2010, 2012; Hofmann, 2018). Below, we turn to this literature to explain the variation in duration of PIs. We believe this is a useful starting point, as PIs bear several similarities to infringement proceedings. In terms of institutional design, we find that in both procedures: (i) there is room for a large number of formal and informal contacts; (ii) the Commission has some leeway in how to apply EU rules; and (iii) the Commission has the ability to gradually increase pressure to direct member states towards an agreement by threatening to move to a next stage. This provides a setting to find amicable solutions.

The EU enforcement literature shows that different factors affect the usage of this setting to find an amicable solution. To explain this, it provides explanations from political and management approaches to compliance (Tallberg, 2002; Börzel *et al.*, 2012; Treib, 2014; Hofmann, 2018). The political approach regards a member state's willingness to comply and the enforcer's willingness to enforce rules as the most important explanatory factor. The management approach regards a member state's and enforcer's ability to respectively comply with and enforce the rules as the most important

explanatory factor. According to Tallberg (2002), both approaches can play a role in explaining the interaction between the Commission and member states in compliance processes.⁶

II. Theoretical Framework: Explaining Duration

This study builds upon the aforementioned distinction between politics and management, but supplements it with an explicit distinction between variables at the member state and the state aid case level. Doing so allows us to examine variation in duration between PIs at two levels of analysis and weigh their relative importance.

Political Explanations at the Member State Level

A preference-based account – often associated with the ‘enforcement approach’ to compliance – assumes that compliance is dependent on a cost–benefit analysis (Downs *et al.*, 1996; Tallberg, 2002).

In the setting of a PI, this analysis will focus on the costs and benefits associated with accepting the Commission’s interpretation on the compatibility of aid measures, and those associated with attempts to gain more leeway.

These costs, however, will be different for different member states. From a preference-based perspective, it is expected that the Commission will also make a cost–benefit analysis when deciding to grant leeway to a member state or stick to its own interpretation. Likely, the Commission will take into account that its authority depends on the support from individual member states (Abbott *et al.*, 2000) and that it needs this support in future policy-making initiatives and for the EU’s legal system in general (Zahariadis, 2013, p. 148; Jönsson and Tallberg, 1998, p. 392). As the Commission feels more dependent on the support from more powerful member states, it is expected that it will be more willing to grant leeway or to accept an interpretation of state aid rules that is favourable to the aid measures of a more powerful member state. This results in the following hypothesis.

H1: The more powerful a member state, the shorter the duration of a PI.

Beliefs – often associated with the legitimacy approach to compliance – also impact a member state’s willingness to comply. In this case, a member state’s decision to comply is the result of normative considerations (Hurd, 1999; Checkel, 2001). EU enforcement studies have mostly tested for general normative variables related to legitimacy of rules or to legitimacy of the EU (for example Börzel *et al.*, 2010, 2012). In this study we build upon earlier studies in this field (for example Gibson and Caldeira, 1995) by employing a more institution-specific dimension of legitimacy: public trust in the European Commission. We follow Carrubba’s (2009) and Finke’s (2020, p. 7) argument that high levels of public trust in supranational institutions are related to the perceived legitimacy of the behavior of these institutions.

Translated to a PI, we expect that member states with a higher level of public trust in the Commission will be also more willing to accept its legal interpretation of state aid rules and follow its suggestions in specific state aid cases. Looking for leeway is less

⁶Tallberg (2002) refers to the political approach as the ‘enforcement’ approach.

likely in this case, which will lead to a shorter duration of PIs. This is captured by the following hypothesis.

H2: The higher a member state's level of public trust in the Commission, the shorter the duration of a PI.

Political Explanations at the State Aid Case Level

Political explanations can also be identified at the level of state aid cases. A key factor to consider at this level are the Commission's policy preferences. Several EU enforcement studies show that the Commission's policy preferences are a relevant factor in shaping its handling of violations of transposition requirements (for example Thomson *et al.*, 2007; Steunenberg, 2010). In line with these findings, we expect the Commission's preference for certain types of aid will impact how much time it takes to assess aid measures.

As can be derived from an earlier reform package (the 2005 State Aid Action Plan), the Commission prefers economy-wide types of aid, so-called horizontal aid, over aid targeted to specific sectors (vertical aid) (European Commission, 2005). Horizontal aids are considered to be better able to address market failures and create less market distortion (Jones and Sufirin, 2016, p. 138). Based on this, it is expected that the Commission will be less likely to ask critical questions or request additional information about planned horizontal aid. This leads to the following hypothesis.

H3: If a measure constitutes horizontal aid, the duration of a PI is shorter than if a measure constitutes vertical aid.

Managerial Explanations at the Member State Level

The management approach to compliance assumes that states are willing to follow international rules. This general propensity, however, does not automatically produce compliance: it also depends on their ability to live up to obligations (Chayes and Chayes, 1993; Tallberg, 2002). This ability depends largely on member states' administrative capacity (Mbaye, 2001; Börzel *et al.*, 2012, p. 460). In the framework of PIs, administrative capacity relates to the material resources available (for example, staff) and the expertise to apply substantive state aid rules properly and follow the procedures governing the notification procedure. A higher degree of capacity results in a higher quality of initial notifications, but also increases governments' ability to react satisfactorily and timely to requests to provide additional information. In this way, higher administrative capacity tends to shorten the duration of PIs. This leads to the following hypothesis.

H4: The higher a member state's administrative capacity, the shorter the duration of a PI.

Managerial Explanations at the State Aid Case Level

In the framework of PIs, two managerial variables can be identified at the state aid level: complexity of the measure and the treaty article under which a state aid measure is assessed. By impacting the Commission's ability to take a decision, these characteristics of individual aid measures can influence the duration of PIs.

Firstly, the degree of complexity of a state aid measure influences the time needed to make an assessment of an intended aid measure. This argument builds upon earlier EU compliance studies that found that a higher complexity of EU policies contributes to lower compliance scores and a delay in the transposition of directives (for example Kaeding, 2006; Steunenbergh and Rhinard, 2010). It follows that a higher complexity of an aid measure will also take longer to assess, as more (complicated) information needs to be assessed. This leads to the following hypothesis.

H5: The higher the complexity of a measure, the longer the duration of a PI.

Secondly, the treaty provision under which the state aid measure needs to be assessed may have consequences for the duration of PIs. A basic distinction can be made of assessments on the basis of article 107(2) and article 107(3) TFEU. Article 107(2) TFEU relates to categories of aid that *shall* be compatible; it includes aid that has a social character to individual consumers and aid for damage-relief in natural disasters or exceptional circumstances (European Commission, 2013).⁷ Article 107(3) TFEU relates to categories of aid that *may* be compatible. The categories of aid associated with Article 107(2) TFEU are expected to be less difficult to assess, as the Commission has less discretion in deciding over these cases. This results in the following hypothesis.

H6: If a state aid measure is assessed under article 107(2) TFEU, the duration of a preliminary investigation is shorter than if a state aid measure is assessed under article 107(3) TFEU.

Control Variables

When testing the hypotheses, some contextual factors will be controlled for. A first factor is the presence of pre-notification, which offers room for contacts between the Commission and member states and may significantly improve the quality of a measure or its alignment with Commission's preferences. This can decrease the duration of a PI. A second control factor is emergency aid to the financial sector. These measures often involve bailouts to financial institutions that have to be granted on a very short notice due to macroeconomic risks (see Botta, 2016). Often, the duration of these PIs is significantly shorter. A third control factor is the organizational capacity of the DGs that assesses aid measures. As aid measures comprise different policy domains, the assessment and approval of aid measures was executed by different Directorates General (respectively Competition, Agriculture and Rural Development, and Maritime Affairs and Fisheries).⁸ The DG that handles the state aid may have an impact on the pace in which notifications are handled.

III. Methods and Data

To test the hypotheses, we created a new dataset consisting of all aid measures approved by the Commission in the period January 2015 through December 2018. Data were obtained from the publicly accessible Commission's State Aid Register, encompassing

⁷A considerable share of the aid granted in the aftermath of the COVID-19 crisis was granted on the basis of this last provision in 107(2)b TFEU.

⁸In December 2019, The Commission announced that all state aid competences would be moved to DG Competition (European Commission, 2019b)

detailed information on all state aid cases that have been decided on since 2000 (Register, 2019). The dataset included all cases in which the Commission eventually decided not to raise objections or decided that the measure did not constitute aid. This led to a dataset consisting of 975 state aid cases distributed over 28 member states.⁹

Operationalization

The dependent variable, the *duration of a preliminary investigation*, equals the number of days between the date of the formal notification and the Commission's final decision. The dates were obtained from the State Aid Register.¹⁰ Diagnostic tests showed this variable to violate the assumption of normally distributed residuals for linear regression. Therefore, the values on this variable were log-transformed (see Appendix 1).

Member state power was operationalized as the political power of a member state within the EU. We measured this variable using the Shapley Shubik Index. This indicator measures the number of times a member state is the pivotal player in forming decisive majorities under qualified majority voting rules in the Council of Ministers (Antonakakis *et al.*, 2014).

To measure the institution-specific legitimacy variable *public trust in the Commission*, we used survey data from the 2018 autumn standard Eurobarometer report. The value on this variable reflects the percentage of respondents in a country that 'tends to trust the European Commission' (European Commission, 2018a).

To measure the *Commission's preferences*, we constructed a dummy on state aid type, using the State Aid Register. This dummy covers all measures that constitute horizontal aid as opposed to vertical aid. Horizontal aid measures includes all cases for which the economic sectors targeted were coded 'all economic sectors eligible to receive aid' and 'all economic sectors, except banks, credit institutions and large quoted enterprises'.

To measure *administrative capacity*, we used the index constructed by Kaufmann *et al.* (2010) on governance effectiveness. This index scores countries on different elements, such as the quality of the civil service and government's credibility in committing to policies. Although this index measures general government capacity, we consider it the best available proxy of the state aid specific capacity needed to notify state aid and react to Commission requests efficiently. Data for 2018 were obtained from the World Bank (2019).

Complexity was operationalized in two different ways: (1) the complexity of the Commission's task in relation to other decisions and (2) the complexity of the substance of the measure. The first element was measured by the presence or absence of related cases for a specific state aid case. Cases that are substantially linked to other state aid decisions complicates the assessment, as the decisions have to be legally consistent. Data on related cases were obtained from the State Aid Register. The second element was measured by taking the length (number of pages) of the Commission's decision. This measure is considered to be a proxy for the internal legal complexity: decision letters on more complex

⁹The negligible number of 'non-approval' decisions – cases for which a formal investigation was opened – were excluded ($n = 15$). See Finke (2020) on decision-making in formal investigations.

¹⁰All notification dates in the original data set were checked against the Commission decisions in Official Journal publications. As a result, the notification dates of 376 cases were corrected on the basis of these Official Journal dates.

Table 1: Operationalization

	<i>Variable (hypothesis number)</i>	<i>Indicator</i>	<i>Variable</i>	<i>Expected effect</i>
Politics	Member state power (H1)	Shapley Shubik Index	Interval	–
	Public trust in the Commission (H2)	Percentage of population that tends to trust the European Commission	Interval	–
	Commission's policy preferences (H3)	1: horizontal aid 0: vertical aid	Dummy	–
Management	Administrative capacity (H4)	Index on government effectiveness	Interval	–
	Complexity (H5)	1: related cases 0: non-related cases	Dummy	+
	Treaty basis (H6)	Number of pages decision 1: assessment under 107(2) 0: assessment under 107(3)	Interval Dummy	+ –
Control variables	Pre-notification	1: pre-notification 0: no pre-notification	Dummy	–
	Emergency aid to financial sector	1: emergency aid to financial sector 0: no emergency aid to financial sector	Dummy	–
	DG responsible	1: DG Competition 0: DG Fisheries/DG Agriculture	Dummy	?

cases include more information about the measure, the guidelines applicable and comprise a more extensive legal argumentation.

The variable *treaty basis* was operationalized as a state aid measure assessed under article 107(2) and 107(3) TFEU. This operationalization results in a dummy that covers all measures for which the 'primary legal basis' was 107(2) TFEU, supplemented by those measures for which no primary legal basis was mentioned and that had the objective of 'social support to individual consumers', 'natural disasters and exceptional occurrences' or 'compensation of damages caused by natural disaster'. Assessment under 107(3) TFEU is the reference category. Data were obtained from the State Aid Register.

Information on the control variable *pre-notification* was obtained from the section 'procedure' in the Commission's decision letters. Cases were coded as pre-notified if these contacts were mentioned and as non-pre-notified if such a reference was absent. The second control variable *emergency aid to financial sector* included aid that aimed to 'remedy for a serious disturbance in the economy' in combination with the target sector 'financial (service) and insurance activities'. Finally, for measuring the control variable *responsible DG*, a dummy was created for DG Competition with DG Agriculture and Rural Development with DG Maritime Affairs and Fisheries as a reference category.¹¹ Data on all control variables were obtained from the State Aid Register. All variables, indicators, variable types, and their expected effects have been displayed in Table 1.

¹¹The latter two were combined in one category, because of the low proportion of cases (3 per cent) belonging to DG Maritime affairs and fisheries causing collinearity between a separate DG Competition and DG Agriculture dummy.

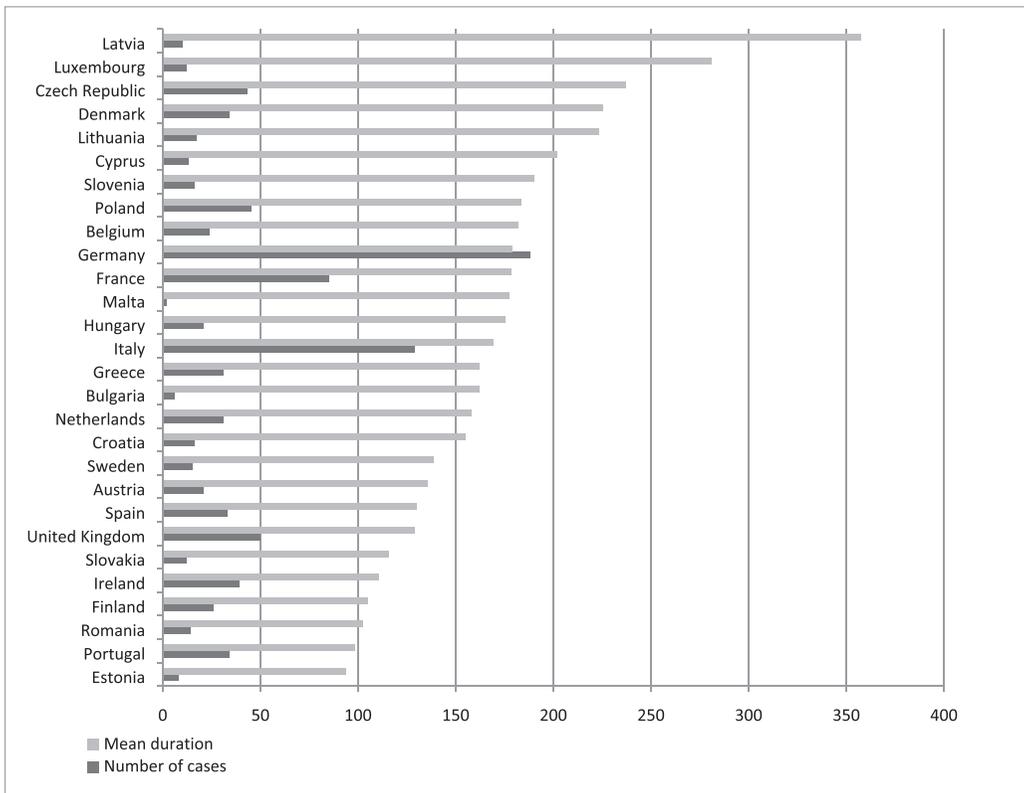
¹²Our data are not censored (that is, we observed the entire duration for all cases) and none of the covariates is time-dependent. Therefore, linear regression modeling is equivalent to Cox regression. We preferred using multilevel linear regression models, because these models are more parsimonious: their results are easier to interpret and they directly provide variance components. The latter allows for calculating Intraclass Correlation Coefficients and explained variance at different levels.

Method of Analysis

Because the data are organized at two different levels (respectively state aid cases and member states), there is a risk of violating the regression assumption of the independence of errors. A solution to this is employing multilevel regression modelling.¹² Multilevel modelling improves the quality of the models by giving a more accurate estimate of standard errors than models that do not take into account the ‘nested’ (that is, organized at two levels) structure of the data (Hox, 2010). In this way, the likelihood of making type 1 errors (claiming there are significant effects, while in reality, these effects do not exist) decreases.

Several models were estimated to test the hypotheses: (1) a fixed-effects model that tests the case level variables only, while controlling for the impact of member state level variance by including member state dummies, (2) a multilevel model that includes the state aid case level variables, and (3) a multilevel model that both includes state aid case level and member state level variables. For these models, missing cases were deleted listwise.

Figure 1: Mean duration of notification procedure (days) per EU member state (2015–18)



IV. Results

Descriptive Results

Figure 1 depicts an overview of the mean duration of PIs per country. Latvia, Luxembourg and Lithuania stand out for having the highest mean duration; Estonia, Portugal and Finland have the lowest mean duration. However, the mean duration per country is influenced by the number of cases per country; a lower number of cases is related to a relatively larger effect of more extreme cases. The black bars show that there is a large variation in the number of measures that were notified to the Commission. The effect of extreme cases is, for example, clearly observable in the member states with the lowest and highest mean duration of PIs, respectively Estonia and Latvia: Estonia's short mean duration of 93.6 days is heavily influenced by three of its cases being decided in less than six weeks, and Latvia's long mean duration of 357.4 days is heavily influenced by four out of ten of its cases taking almost two years to assess before they were approved.

The three countries with the largest number of notifications - Germany, Italy and France - account for over 41 per cent (402/975) of notifications. Given the large

Table 2: Estimates of fixed effects (1) and multilevel (2 + 3) models on duration of PIs (log) in 28 EU member states 2015–2018^a

Model	1 Estimate	2 Estimate	3 Estimate
Intercept	4.36*** (0.15)	4.52*** (0.09)	4.98*** (0.30)
State aid case level			
<i>Politics</i>			
Horizontal aid	-0.12* (0.07)	-0.13* (0.07)	-0.13* (0.07)
<i>Management</i>			
Number of pages decision	0.04*** (0.00)	0.04*** (0.00)	0.04*** (0.00)
Related cases	-0.07 (0.06)	-0.06 (0.06)	-0.06 (0.06)
Assessment under 107(2) TFEU	-0.51** (0.17)	-0.55** (0.17)	-0.55** (0.17)
<i>Control</i>			
Pre-notification	-0.56*** (0.08)	-0.57*** (0.08)	-0.58*** (0.08)
DG Competition	-0.05 (0.08)	-0.06 (0.07)	-0.06 (0.07)
Emergency aid to financial sector	-1.23*** (0.11)	-1.27*** (0.10)	-1.27*** (0.11)
Member state level			
<i>Politics</i>			
Member state power			-0.01 (0.01)
Public trust in the Commission			-0.00 (0.01)
<i>Management</i>			
Government effectiveness			0.13 (0.12)
Variance components			
Individual level		0.66 (0.03)	0.66 (0.03)
Country level		0.05 (0.03)	0.06 (0.03) ^b
N L1/L2	777/-	777/28	777/28
2 Restricted Log likelihood		1920.33	1935.45
Adjusted R ²	0.33		

Source: Register (2019).

* $p < 0.10$; ** $p < 0.01$; *** $p < 0.001$; standard errors in parentheses; two-tailed (t -test). ^a Models were also estimated for random slopes and several interaction terms. However, as no significant results were found in these models, these have not been displayed. ^b Explained variance level 2 in model 3 = 0.30.

economies of these states, these numbers are not surprising. Three countries account for less than 10 aid measures: Malta (2), Bulgaria (6), and Estonia (8). The United Kingdom, having the third largest economy of the EU, is underrepresented in the dataset with only 50 intended aid measures notified to the Commission. This may be explained by the relatively small share of GDP (0.38 per cent of GDP in 2017) spent on aid (World Bank, 2019; European Commission, 2019a). The Czech Republic stands out for being overrepresented; it notified 4.4 per cent ($n = 43$) of intended measures, while its economy constituted only 1.3 per cent of the EU's GDP in 2018.

Explanatory Results

Table 2 presents the results of the fixed-effects and multilevel models. Before estimating the models, the intraclass correlation coefficient (ICC) was calculated. This coefficient shows how much of the variance in the duration of the notification procedure can be attributed to the member state level. The ICC in our null model was equal to 0.093.¹³ This means a relatively small proportion (9.3 per cent) of variance can be attributed to this level. Thus, member state factors play a relatively small role in explaining the variation in duration.

Before interpreting the effects of the separate variables, the model fit of the three models is interpreted. The fixed-effects model (model 1) shows an adjusted R -square value of 0.33. This means that this model explains 33 per cent of the variance on the dependent variable. The multilevel models (model 2 and 3) explain 22 per cent of variance at the state aid case level.¹⁴ The fact that the fixed-effects model explains more of the variance can be attributed to the inclusion of member state level dummies controlling for member state level variance. The relative fit of the multilevel models can be assessed by examining the log likelihood score. A lower value on this indicator stands for a better model fit. It shows that model 2 without member state variables reflects the best fit. Including member state level variables in model 3 does not improve the fit of this model and even slightly worsens the log likelihood score compared to model 2. This can be explained by the larger number of variables included in this model.

Turning to the interpretation of the results of individual variables, Table 1 shows that no evidence was found for political factors at the member state level having an effect on the duration of a PI. This means that both Hypothesis 1 on member state power and Hypothesis 2 on public trust in the Commission can be rejected. However, the political variable at the case level, type of aid, shows a significant effect; horizontal aid reduces the duration of a PI with 11.2–12.1 per cent.¹⁵ The effect is more or less equal in all three models, combined with a lower p -value for this variable in the multilevel models compared to the fixed-effects model (respectively 0.071 and 0.072 compared to 0.091). These results are in line with Hypothesis 3: alignment of the type of aid with the Commission's preferences leads to a shorter duration.

Moving to the managerial member state variables, the administrative capacity indicator (government effectiveness) does not have a significant effect on the duration of a PI. This

¹³ $(0.087)/(0.844 + 0.087) = 0.093$, p -value: 0.011.

¹⁴ $(0.844 - 0.656)/0.845 = 0.223$.

¹⁵ $((\text{Exp}(-0.12) - 1) * 100 = -11.2$ and $((\text{Exp}(-0.13) - 1) * 100 = -12.1$. Because our dependent variable has been log-transformed, the size of effects can only be reported in relative effect measures.

means that Hypothesis 4 can be rejected. However, two of the managerial variables at the state aid case level do have significant effects on the duration of a PI. Firstly, one of the indicators for complexity of a measure, the number of pages of a decision, is associated with a significantly longer duration of a PI in all three models (p -values 0.000); for every extra page, the duration increases by 3.6 per cent.¹⁶ This confirms Hypothesis 5 on complexity of a measure lengthening the duration of a PI. The other indicator of complexity, relatedness to other cases, did not have a significant effect. The three models also show evidence for assessment under article 107(2) TFEU shortening the duration of a PI by 39.8–42.2 per cent (p -values respectively 0.03, 0.01 and 0.01).¹⁷ This means that Hypothesis 6 is confirmed.

Finally, interpreting the effects of our control variables shows that pre-notification and emergency aid to the financial sector were, as expected, associated with a shorter duration (respectively associated with a 42.9–44.0 per cent and 70.9–72.1 per cent decrease).¹⁸ The DG that handles a notification did not affect the duration of a PI.

Conclusion and Discussion

The aim of this study was to explain the variation in duration of PIs in the state aid notification procedure. Therefore, hypotheses were formulated about the impact of political and managerial factors at both the state aid case and member state level. These were tested by carrying out (multilevel) regression analyses on a newly created dataset of state aid cases.

The results provide several insights. While descriptive statistics reveal large variation in both the number and duration of PIs among member states, variables at the member state level, stemming from the most important approaches in the EU enforcement literature on EU, had no significant effect. As opposed to the duration of the infringement procedure (see for example Börzel *et al.*, 2012), the length of PIs seems not to be affected by member states attributes. This does not mean that the Commission does not act politically during the PI. Our results show that a political factor at the state aid case level does affect the duration of a PI: horizontal aid measures are approved at an earlier point in the procedure than vertical types of aid. Moreover, it is well possible that political considerations are reflected in other ways during this stage, for example in the adjustments that have been made to state aid measure before getting approval. Unfortunately, on the basis of available data, we were not able to determine whether these adjustments were made. Apart from this political characteristic at the state aid case level, managerial case specific characteristics also mattered for duration: a high degree of complexity increased the duration of a PI and assessment under 107(2) TFEU decreased the duration of a PI.

The models, however, also show that variation in duration can only be partially explained by managerial and political factors. The included variables were able to explain only 22 per cent of variance at the state aid case level. This means that a sizeable proportion of variation in duration remains unexplained by our models. In future research, explaining a larger part of variation could be accomplished by a more in-depth

¹⁶ $((\text{Exp}(0.04) - 1) * 100 = 3.6.$

¹⁷ $((\text{Exp}(-0.51) - 1) * 100 = -39.8$ and $\text{Exp}(-0.55) - 1) * 100 = -42.2.$

¹⁸ $((\text{Exp}(-0.56) - 1) * 100 = -42.9$ and $((\text{Exp}(-0.58) - 1) * 100 = -44.0, ((\text{Exp}(-1.23) - 1) * 100 = -70.9$ and $((\text{Exp}(-1.27) - 1) * 100 = -72.1$

measurement of some of our independent variables. For example, measuring complexity of cases could be improved by including a more substantive measure of complexity by analyzing decisions in detail. However, due to the large number of cases involved, this would require time efficient strategies. Automatic text analysis could play a role here. In addition, administrative capacity could be more specifically measured by looking into member state specific domestic coordination structures regulating competences between local and central governments and between different government departments in the notification of state aid.

Several other variables could also be taken into account in order to explain a larger degree of variation. Firstly, by focusing on horizontal aid, this study only partially covered the policy preferences of the Commission. Earlier econometric analyses by Brouwer and Ozbugday (2011) have shown that the Commission also allows for larger degrees of market distortion for aid related to some preferred policy objectives. It would be interesting to delve deeper into how the degree of market distortion linked to substantive Commission preferences (for example, promoting research and development and sustainable energy) may affect Commission behavior and therewith the duration of PIs. Unfortunately, data on financial characteristics of aid measures could not be included in our analyses due to a relatively large number of missing values (missing for 72.5 per cent of cases). Secondly, it could be interesting to delve deeper into how government preferences for specific aid objectives affect these governments' behavior and therewith duration of PIs. Unfortunately, doing so requires detailed study of national state aid politics and was not feasible within the scope of this study.

Besides turning to additional variables to explain a larger share of variation, quantitative research should be complemented by case studies to uncover what other factors matter and especially to find out *how* different political and managerial factors matter in the interaction between the Commission and member states.

More detailed examination of other phases of the state aid notification procedure would also be worthy of further study. These studies could, for example, focus on formal investigations, which stand out for being 'unambiguously adversarial' compared to the more administrative nature of PIs and tend to be associated with higher political stakes (Cini and McGowan, 2009, p. 174). The very different nature of this procedure made us to decide to exclusively focus on PIs, but it would be interesting to see to what extent our findings hold when applied to this different stage. Building upon a recent contribution by Finke (2020) on how member state characteristics explain the outcomes of formal investigations, these studies could focus on the duration of formal investigations and on the impact of state aid case specific characteristics.

Correspondence:

Ruud van Druenen
Institute for Management Research
Radboud University
Heyendaalseweg 141 Nijmegen, NL 6500 HC.
phone number: (+31)628494786.
email: r.vandruenen@fm.ru.nl

References

- Abbott, K.W., Keohane, R.O., Moravcsik, A., Slaughter, A.M. and Snidal, D. (2000) 'The Concept of Legalization'. *International Organization*, Vol. 54, No. 3, pp. 401–19.
- Akman, P. and Kassim, H. (2010) 'Myths and Myth-Making in the European Union: The Institutionalization and Interpretation of EU Competition Policy'. *Journal of Common Market Studies*, Vol. 48, No. 1, pp. 111–32.
- Antonakakis, N., Badinger, H. and Reuter, W.H. (2014) 'From Rome to Lisbon and Beyond: Member States' Power, Efficiency, and Proportionality in the EU Council of Ministers'. Vienna University Working Paper No. 175.
- Aydin, U. (2014) 'Issue Framing in the European Commission: State Aid Policy and the Single Market'. *Comparative European Politics*, Vol. 12, No. 2, pp. 141–59.
- Blauberger, M. (2009) 'Compliance with Rules of Negative Integration: European State Aid Control in the New Member States'. *Journal of European Public Policy*, Vol. 16, No. 7, pp. 1030–46.
- Börzel, T.A., Hofmann, T. and Panke, D. (2012) 'Caving In or Sitting It Out? Longitudinal Patterns of Non-compliance in the European Union'. *Journal of European Public Policy*, Vol. 19, No. 4, pp. 454–71.
- Börzel, T.A., Hofmann, T., Panke, D. and Sprungk, C. (2010) 'Obstinate and Inefficient: Why Member states Do Not Comply with European Law'. *Comparative Political Studies*, Vol. 43, No. 11, pp. 1363–90.
- Botta, M. (2016) 'Competition Policy: Safeguarding the Commission's Competences in State Aid Control'. *Journal of European Integration*, Vol. 38, No. 3, pp. 265–78.
- Brouwer, E. and Ozbugday, F. C. (2011) 'Measuring the Extent of European State Aid Control: An Econometric Analysis of the European Commission Decisions'. CentER Working Paper No. 10.
- Buts, C., Jegers, M. and Joris, T. (2011) 'Determinants of the European Commission's State Aid Decisions'. *Journal of Industry, Competition and Trade*, Vol. 11, No. 4, pp. 399–426.
- Carrubba, C.J. (2009) 'A Model of the Endogenous Development of Judicial Institutions in Federal and International Systems'. *Journal of Politics*, Vol. 71, No. 1, pp. 55–69.
- Chayes, A. and Chayes, A.H. (1993) 'On Compliance'. *International Organization*, Vol. 47, No. 2, pp. 175–205.
- Checkel, J.T. (2001) 'Why Comply? Social Learning and European Identity Change'. *International Organization*, Vol. 55, No. 3, pp. 553–88.
- Cini, M. (2001) 'The Soft Law Approach: Commission Rule-Making in the EU's State Aid Regime'. *Journal of European Public Policy*, Vol. 8, No. 2, pp. 192–207.
- Cini, M. and McGowan, L. (2009) *Competition Policy in the European Union* (Basingstoke: Macmillan).
- Doleys, T.J. (2013) 'Managing the Dilemma of Discretion: The European Commission and the Development of EU State Aid Policy'. *Journal of Industry, Competition and Trade*, Vol. 13, No. 1, pp. 23–38.
- Downs, G.W., Roche, D.M. and Barsoom, P.N. (1996) 'Is the Good News about Compliance Good News about Cooperation?' *International Organization*, Vol. 50, No. 3, pp. 379–406.
- Einarsson, K. and Kekelis, M. (2015) 'Time's Up: Procedural Delays in State Aid Cases; an Overview of the Case Law'. *European State Aid Law Quarterly*, Vol. 14, No. 1, pp. 130–42.
- European Commission (2005) 'State Aid Action Plan: A Roadmap for State Aid Reform 2005–2009'. Available at: https://ec.europa.eu/competition/state_aid/reform/saap_en.pdf
- European Commission (2013) 'State Aid: Manual of Procedures'. Internal DG competition working document on procedures for the application of Articles 107 and 108. Available at: https://ec.europa.eu/competition/state_aid/studies_reports/sa_manproc_en.pdf

- European Commission (2014) 'State Aid: Commission Exempts More Aid Measures from Prior Notification'. Available at: http://europa.eu/rapid/press-release_IP-14-587_en.html
- European Commission (2018a) 'Standard Eurobarometer 90 Autumn 2018'. Available at: https://moei.europa.eu/wp-content/uploads/2018/12/Eurobarometer-Nov_2018.pdf
- European Commission (2018b) 'Communication from the Commission – Code of Best Practices for the conduct of State aid control procedures'. Available at: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52009XC0616\(02\)&from=FR](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52009XC0616(02)&from=FR)
- European Commission (2019a) 'State Aid Scoreboard 2018'. Available at: https://ec.europa.eu/competition/state_aid/scoreboard/index_en.html
- European Commission (2019b). 'European Commission 2019–2024: Allocation of Portfolios and Supporting Services'. Available at: https://ec.europa.eu/commission/commissioners/sites/comm-cwt2019/files/team_attachments/allocation-portfolios-supporting-services_en_0.pdf
- European Court of Auditors (2011) 'Do the Commission's Procedures Ensure Effective Management of State Aid Control?' Available at: https://www.eca.europa.eu/lists/ecadocuments/sr11_15/sr11_15_en.pdf
- Finke, D. (2020) 'At Loggerheads Over State Aid: Why the Commission Rejects Aid and Governments Comply'. *European Union Politics*, Vol. 21, No. 3, pp. 474–96.
- Fjelstul, J.C. and Carrubba, C.J. (2018) 'The Politics of International Oversight: Strategic Monitoring and Legal Compliance in the European Union'. *American Political Science Review*, Vol. 112, No. 3, pp. 429–45.
- Franchino, F. and Mainenti, M. (2013) 'Electoral Institutions and Distributive Policies in Parliamentary Systems: An Application to State Aid Measures in EU Countries'. *West European Politics*, Vol. 36, No. 3, pp. 498–520.
- Gibson, J.L. and Caldeira, G.A. (1995) 'The legitimacy of transnational legal institutions: Compliance, support, and the European Court of Justice'. *American Journal of Political Science*, pp. 459–89.
- Hartlapp, M. (2007) 'On Enforcement, Management and Persuasion: Different Logics of Implementation Policy in the EU and the ILO'. *Journal of Common Market Studies*, Vol. 45, No. 3, pp. 653–74.
- Hofmann, T. (2018) 'How Long to Compliance? Escalating Infringement Proceedings and the Diminishing Power of Special Interests'. *Journal of European Integration*, Vol. 40, No. 6, pp. 785–801.
- Hox, J. (2010) *Multilevel Analysis. Techniques and Application* (New York: Routledge).
- Hurd, I. (1999) 'Legitimacy and Authority in International Politics'. *International Organization*, Vol. 53, No. 2, pp. 379–408.
- Jones, A. and Sufrin, B. (2016) *EU Competition Law: Text, Cases, and Materials* (Oxford: Oxford University Press).
- Jönsson, C. and Tallberg, J. (1998) 'Compliance and Post-agreement Bargaining'. *European Journal of International Relations*, Vol. 4, No. 4, pp. 371–408.
- Kaeding, M. (2006) 'Determinants of Transposition Delay in the European Union'. *Journal of Public Policy*, Vol. 26, No. 3, pp. 229–53.
- Kassim, H. and Lyons, B. (2013) 'The New Political Economy of EU State Aid Policy'. *Journal of Industry, Competition and Trade*, Vol. 13, No. 1, pp. 1–21.
- Kaufmann, D., Kraay, A. and Mastruzzi, M. (2010) 'The Worldwide Governance Indicators: Methodology and Analytical Issues', World Bank Working Paper No. 5430.
- König, T. and Mäder, L. (2014) 'The Strategic Nature of Compliance: An Empirical Evaluation of Law Implementation in the Central Monitoring System of the European Union'. *American Journal of Political Science*, Vol. 58, No. 1, pp. 246–63.
- Lübbig, T. (2019) 'The New Best Practices Code for State Aid: A Check against Reality'. *Journal of European Competition Law & Practice*, Vol. 10, No. 1, pp. 3–9.

- Mbaye, H.A. (2001) 'Why National States Comply with Supranational Law: Explaining Implementation Infringements in the European Union, 1972–1993'. *European Union Politics*, Vol. 2, No. 3, pp. 259–81.
- Politico (2018) 'Commission Reaches Budget Deal with Italy'. Available at: <https://www.politico.eu/article/commission-reaches-budget-deal-with-italy/>
- Register (2019) 'State Aid Cases'. Available at: https://ec.europa.eu/competition/elojade/isef/index.cfm?clear=1&policy_area_id=3
- Steunenberg, B. (2010) 'Is Big Brother Watching? Commission Oversight of the National Implementation of EU Directives'. *European Union Politics*, Vol. 11, No. 3, pp. 359–80.
- Steunenberg, B. and Rhinard, M. (2010) 'The Transposition of European Law in EU Member States: Between Process and Politics'. *European Political Science Review*, Vol. 2, No. 3, pp. 495–520.
- Tallberg, J. (2002) 'Paths to Compliance: Enforcement, Management, and the European Union'. *International Organization*, Vol. 56, No. 3, pp. 609–43.
- Thomson, R., Torenvlied, R. and Arregui, J. (2007) 'The Paradox of Compliance: Infringements and Delays in Transposing European Union Directives'. *British Journal of Political Science*, Vol. 37, No. 4, pp. 685–709.
- Treib, O. (2014) 'Implementing and Complying with EU Governance Outputs'. *Living Reviews in European Governance* No. 9.
- Wilks, S. (2005) 'Agency Escape: Decentralization or Dominance of the European Commission in the Modernization of Competition Policy?' *Governance*, Vol. 18, No. 3, pp. 431–52.
- World Bank (2019) 'World Bank World Development Indicators'. Available at: <https://databank.worldbank.org/reports.aspx?source=world-development-indicators>
- Zahariadis, N. (2010) 'Discretion by the Rules: European State Aid Policy and the 1999 Procedural Regulation'. *Journal of European Public Policy*, Vol. 17, No. 7, pp. 954–70.
- Zahariadis, N. (2013) 'Winners and Losers in EU State Aid Policy'. *Journal of Industry, Competition and Trade*, Vol. 13, No. 1, pp. 143–58.
- Zwaan, P.J. (2012) *Struggling with Europe: How Initiators of Horizontal Forms of Governance Respond to EU Formal Rules* (Wageningen: Wageningen University).

Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Data S1. Supporting information

Data S2. Supporting information

Data S3. Supporting information

Data S4. Distribution of residuals duration of PIs (dependent variable)