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# The Dynamics of Institution Building: State Aids, the European Commission, and the Court of Justice of the European Union

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## Abstract

This work studies the interactions between European Union institutions and the Member States with regard to state aid control. The European Commission is mandated to maintain and reinforce economic integration and is thus inclined to punish Member States that might rely on state aids and other means that undermine achievement of the single market. Relying on an original database covering all state aids programs between 2000 and 2015, we show that the Commission tends to reject programs originating from countries that are resistant to EU integration, which is proxied by transposition deficit. On the other hand, we show that when firms or national governments appeal the decisions made by the Commission, the reversal of the Commission's rejection decisions by the Court of Justice of the European Union is positively correlated with transposition deficit. This is evidence that the Commission is actually biased against countries with greater resistance to integration, while the Court corrects this bias. We claim that these revealed policy preferences are consistent with the assumptions that these two bodies attempt to strengthen their legitimacy by making decisions in line with their mandates. In addition, the interaction between these two quests for legitimacy tend to reinforce the overall legitimacy of the Union. This suggests another driver of evolution in an equilibrium approach of institutions.

Keywords: Checks and Balances European Union Institution Building State Aids

JEL Codes: F55, K33

## 1 Introduction

The European Union is primarily designed to be an economic confederation. It seeks to establish *i.a.* an internal market in which people, labor and capital flow freely. The single market is clearly aimed at triggering further political integration. At the same time, this is an acceptable

objective for nation states and their citizens, at first blush, since it promises economic benefits without requiring too much sovereignty to be relinquished. The EU treaties were very careful in delineating the powers conferred to the EU and the Member States, since the Union aims at preserving the sovereignty of the latter. The authority granted to each level of government might, however, be subject to interpretations and might evolve over time. Such ambiguities may lead to conflicts between the European Institutions and Member States, even if the main policy decisions are voted by representatives of national governments and are implemented by national public administrations.<sup>1</sup> Member States tend thus to have a complex relationship with EU system of government. On one hand, they are likely to compromise since on many issues the benefits of European integration are high in terms of both wealth and political influence at the global level. On the other hand, national politicians and voters would like to minimize the costs of adaptation of national “social contracts,” potentially resulting in slowness in implementing reforms and imperfect compliance with EU commitments. This resistance to integration is also the outcome of the differences in the endowments of the various socioeconomic groups and local communities resulting in imbalances in the distribution of costs and benefits of integration within each Member State.

It is not an overstatement that the European Union is built on an unresolvable, at least for now, conflict of objectives between the European Commission and the Member States. The Commission is given a mandate to build a more integrated Europe, and its policies aim mainly at promoting the single market. National governments and parliaments, however, respond to and are accountable to their fellow citizens. In principle, EU and national objectives should be aligned, at least from a long-run perspective. In practice, however, voters tend to be short-sighted, and care mainly about their own personal/local interests. They might consider that the short-term cost of adaptation is hardly offset by the long-term benefits of integration. Moreover, since there are winners and losers, the latter might form coalitions to resist integration. National politicians are therefore led to take into account these interests groups, protecting them against integration, which might be an easier policy to implement than managing active redistribution and supporting those who have to adapt. These divergences among “national” interests is the *raison d’être* of the European Institutions. They are there to tie the hands of national governments involved in a collective action dilemma. If interests were aligned on each stake, central/federal levels of government would not be needed or formed in the first place, and the best outcome would be achieved for all parties.<sup>2</sup>

The clash of objectives is well illustrated by state aid control, which is a part of EU competition policy. Competition policy is actually the most effective tool granted to the Commission, which is tasked with the mandate of removing barriers to trade and market protections. National governments agreed to relinquish sovereignty in this matter since it is essential to building the single market and enjoying the benefits expected from larger, more open markets—assumed to

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<sup>1</sup>Member States are *de facto* granted veto power both at the decision stage and at the implementation stage.

<sup>2</sup>This point is closely related to the vast literature on the European Union’s democracy deficit. See [Follesdal and Hix \(2006\)](#) and [Scharpf \(2010\)](#) for more detailed discussions.

bring advantages in terms of scale to producers, incentives to the supply side, possible entry for innovators, and finally higher quality and lower prices for customers. Many other dimensions of public policies considered as crucial dimensions of sovereignty—choice of energy mix, organization of transportation systems, regulation of utilities, local development, etc.—remain in the hands of national and sub-national governments, resulting in numerous biases hindering further economic integration. This has led Member States to give authority to the Commission to check whether “state aid”—*i.e.* any subsidy in the form of grants or tax cut granted to investors and business—would not lead to unfair competitive conditions in a given jurisdiction. Member States are eager to support their own industries, or some specific local interests, but their aid could tilt the level playing-field and thus go against the principle of the European single market and related fair competitive conditions. State aid is thus not allowed by the Commission. However, major categories of exemptions include aid to cultural activities, support to recession-hit industries, and aid to support local employment. The right to obtain an exemption is not crystal-clear and every case, whether an ear-marked support or a predefined program, has to be submitted to the Commission, which may, or may not, approve it. Undoubtedly the Commission benefits from discretionary power in the matter and attempts to intervene in any aid that tilts the level playing-field, and may even utilize its authority to achieve some political aims. On the other hand, politicians of the Member State seize any chance to please voters and local/national interests.

Given the limited will of the Member States to grant the Union too much power, the Commission is limited by its bounded authority in the matter of public policies, and the exercise of this authority is checked by the Court of Justice of the European Union (hereafter, the Court), which was established to ensure that Commission decisions are in line with the European treaties and laws. However, the Court is not a political instrument in the hands of national governments to help them resist the policies of the Commission. It was established as a credible court of justice, and the appointed judges have strong incentives (related to career concerns) to establish their reputation as independent and skilled judges guaranteeing due process and the rule of law.

On the one hand, the European Commission was established with a clear mandate to advance harmonization and integration among Member States. It is designed as a trustee and not simply as an agent of its stakeholders (Majone, 2001). Member States granted authority to the Commission so as to allow it to impose decisions on Member States in the matter of implementation of the European treaties. This trusteeship system results from the necessity for Member States to credibly commit to the integration. The Commission is thus mandated to promote integration, which is not different from an extension of authority over national sovereignty. In this context, the Commissioners tend to be driven by their ability to show to their peers (the politicians and top-tier bureaucrats in the system of transnational governance) their ability to navigate the complex political environment of the EU political game characterized by a persisting tensions between national (sometimes local) interests and the mandate to build a stronger Union. They are indeed

concerned about future appointments in the system of power either at the international level or in their home country. On the other hand, the Court and its judges have incentives to confirm and develop their credibility in establishing and guaranteeing the rule of law. A virtuous loop might therefore be at play: Bit by bit the Commission might succeed in expanding its power and the Court might reinforce its independence. These dynamic interactions could reinforce the legitimacy of both organizations, resulting in a reinforced, more credible, EU institutional framework.

The process described above might be largely unintentional. When Robert Schuman launched the process that led to the establishment of the European Union, his idea was to make war not only unthinkable, but also materially impossible. More than 60 years after the EU Steel and Coal agreement that triggered the dialogue of a stronger relationship among European countries, the European Union has evolved and reached a state no one had imagined 50 years ago. Although its success may require a hundred years to be concluded, it has undoubtedly established the basis of stable and strong institutions. The fact that it is a system of government that is still being developed makes it a stimulating environment to study the decision making process and its institutional dynamics. Despite their careful design and implementation, it is not necessarily the case that institutional systems will perform as forecasted by those who designed and implemented them. In this context, some explanatory factors for the design and performance of political and economic institutions are competition between the different components of a power system (Weingast, 2017) and the dynamic through which their legitimacy is progressively established (Greif and Rubin, 2014). Such a dynamic is nicely presented by Greif and Rubin (2014) in their discussion of endogenous political legitimacy. Henry VIII of England empowered the parliament, which limited its political discretion, to benefit in turn from a recognition by the Parliament of the legitimacy of the British Crown. The dynamics went on and the Parliament gradually encroached the power of the Crown and even dethroned two kings in 1640 and 1688. While certainly unplanned by the Tudor dynasty, this development has contributed to the construction of arguably the most stable and successful constitutional monarchy in world history.

In this paper, we would like to use state aid cases to explore whether a similar dynamic is currently occurring in the EU. Indeed, any overreaching of the hand of the Commission into the sovereignty of the Member States should be stopped by the Court. Fair and independent judgments gradually establish the Court as the respectful arbitrator. Meanwhile, any green light by the Court establishes the Commission's status as the legitimate leader of European integration. European Institutions might thus be built through the repeated interactions among the Commission, the Court, Member States, and the private sector. Considering its mandate to favor economic integration, the Commission should be more resolute in dealing with Member States who are less open to European integration. Conversely, the European Court of justice should correct any bias shown by the Commission when it does not comply with the EU law.

Empirically studying this dynamic is a challenging task. First, no systematic database is available to analyze the decisions of both the Commission and the Court. Second, there is no identical process of decision across all cases. State aid decisions can be reversed across different steps, and it takes substantial efforts to track the timeline of each case. Finally, it is not straightforward to establish connections between the Commission’s verdicts on state aids and their judicial reviews by the Court. In this work, we did our best to construct a complete dataset covering all state aid programs from 2000 to 2015. We then rely on a Probit model, where the dependent variable is whether the state aid program is green-lighted, to estimate the conditional probability of approval at the Commission stage.

We find that the Commission’s favorable decisions are negatively correlated with the transposition deficit, by which we proxy resistance to European integration at the governmental level. Next, we collect those cases appealed to the Court and find that the Court is more likely to give state aid cases originating from states with a higher transposition deficit favorable decisions. Since the Commission acts before the Court, the result is evidence supporting the hypothesis that the Commission is biased while the Court corrects the bias.

To supplement the analysis, we further investigate the CJEU decision dataset to check whether the Court is influenced by the appellants’ characteristics. However, financial power and the number of employees do not significantly explain their likelihood of success, suggesting that the Court is sufficiently independent when rendering judgments.

The paper proceeds as follows. We examine the dynamics of institutions as explained by games among various stakeholders and discuss how this can be applied to understanding EU institution building in Section 2. We give an overview of the mechanisms of state aid control in the European Union and of the roles of the different players involved in this game in Section 3. The description of the data and the regression results follow in Sections 4 and 5, respectively. A discussion of the results and policy implications is presented in Section 6 and the conclusion follows.

## 2 Institutions and their Dynamics: The EU Case

### 2.1 Legitimacy in institution building

As pointed out by [Greif and Kingston \(2011\)](#), there are two main approaches to institutions in the literature. According to the first, institutions are sets of rules designed, for instance, by political rulers or economic entrepreneurs, and institutional evolution is then triggered by new constraints or opportunities in the political arena or in economic competition. This vision characterizes, for instance, the approaches of [North \(1991\)](#) and [Acemoglu et al. \(2005\)](#). In the alternative approach, institutions are understood as self-enforced equilibria of games among those who rely on them to

coordinate. Players comply with rules because they correspond to the best response to others' (anticipated) behaviors.<sup>3</sup> In this approach, institutional change occurs when there is a coordinated change in players' beliefs/motivations/patterns of behavior leading to a new (self-enforcing) equilibrium. This is the vision of Greif, Aoki or Weingast [*e.g.* (Greif et al., 1994; Greif, 2006; Aoki et al., 2001)].

In both approaches, and especially in the second, legitimacy appears as a central concept to understand the emergence and evolution of institutions through endogenous and dynamic models of institutional change. Legitimacy is a concept meant to capture the beliefs that bolster willing obedience (Levi et al., 2009). It deals with why and how some players might influence others' beliefs to follow mutually recognized roles and rules. Two types of legitimacy can be distinguished: value-based and behavioral-based legitimacy. The former represents the sense of obligation to obey authorities that leads to the latter, which is actual compliance with the norms it promotes. Legitimacy is the basis of every system of authority (Weber, 1964) and has its roots in the observation that rules have been followed and are essential to the perpetuation of coordination (Greif, 2006). It is likely to increase with the effectiveness and trustworthiness of the governing institutions (Levi and Sacks, 2009).

In this perspective, the role of legitimizing agents is central because those who are willing to exercise leadership or authority have to convince a critical mass of players in the social game that they should adopt behaviors consistent with the equilibrium and systems of norms preferred by the leader/ruler. Each individual in the society (or in the governing coalition) is more likely to comply with the order proposed by one given leader if some influential and powerful players recognize the leadership of this agent. In medieval Europe, for instance, the Church and the Pope were the legitimizing agents of sovereigns. After the English Crown broke with the Roman Church, the former transformed the British Parliament in its legitimizing agent by guaranteeing it more independence and power. It triggered a (virtuous) loop by which the Crown started to promote policies more in line with the preferences of Members of Parliament to maintain their interest in recognizing its authority. Also, the Parliament progressively eroded the discretionary power of the Crown, in particular because of its adverse effects in terms of taxation and economic freedom. The resulting economic and institutional reforms triggered the UK's economic growth but also resulted in a social and political orders more acceptable to a majority of the elite, then to a majority of the people. There was a progressive increase in the legitimacy of both branches of the government that contributed to their survival, strength, and stability (Greif and Rubin, 2014). We can conclude

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<sup>3</sup>As explained in Greif (2006): "Each individual, responding to the institutional elements implied by others' behavior and expected behavior, behaves in a manner that contributes to enabling, guiding and motivating others to behave in the manner that led to institutional elements that generated the individual's behavior, to begin with. Behavior is self-enforcing in that each individual, taking the structure as given, finds it best to follow the institutionalized behavior that, in turn, reproduces the institution in the sense that the implied behavior confirms the associated beliefs and regenerates the associated norms."

from the British case that legitimacy over time is dependent upon the politico-economic outcomes expected first by the legitimizing agents, and second by the other stakeholders involved in the game. Logically, they expect that players in the institutional game act according to the mandates assigned to them and accepted by the other players.

This is in line with the perspective proposed by (Greif and Laitin, 2004), who point to self-reinforcement as an essential mechanism for explaining institution persistence and evolution over time. It refers to the set of loops between beliefs, expectations and outcomes that result in stability of the responses mutually adopted by the players involved in the game. In this paper we contribute to such an analysis of the dynamic at play in the building of the European institutional framework in the context of European economic and political integration. The emergence of credible and stable institutions has been an essential challenge for the European integration project. Ad-hoc intergovernmental organizations have been built to guarantee compliance with the various treaties signed by Member States since the end of World War II and to coordinate the process of economic, then political integration. Political legitimacy and self-reinforcement are relevant concepts to understand their equilibria. As Moravcsik (2002) has observed, European institutions are constrained by constitutional checks and balances that successfully maintain the legitimacy of the Union. However, some research has pointed to a democratic deficit in EU institutions that could undermine their legitimacy. Member States, which are entrusted by their people, bestow legitimacy on European institutions. Its maintenance depends on the behavior of the branches of EU system of government that would reinforce or undermine both value-based and behavioral-based legitimacy.

In this paper we aim to document and study how various players involved in the building of the EU power system interact among each other. According to many, both in the civic-political sphere and in academia, the European political game is dominated by bargaining between the European bureaucracy, the most powerful governments (*i.e.* those of large countries), and prevalent economic interests. An alternative view sees European integration as the result of the balance of power between these three categories of agents. We seek to dig deeper by analyzing the revealed policy preferences of those bodies in charge of making decision within the European Union. Following the approach proposed by Beuve et al. (2017), we systematically study a set of decisions made by European Union bodies to identify their main drivers and infer their rationale. As compared to the case study proposed by (Greif and Rubin, 2014), we face a different case which is not a game between the Parliament and the Executive Branch of the government, but a game involving more parties: two components of the European Institutions, the national governments, and businesses. Due to the large numbers of players and the heterogeneity of their interests, the probability of stable coalitions forming over time is low. This is why it can be a relevant and sustainable strategy for some players, in particular the European bodies which have a mandate for that, to try to establish themselves as the drivers of a new equilibrium in which European Institutions would prevail in the power system. Establishing their legitimacy as efficient and independent rulers is a dominant

strategy since they were initially endowed with a very limited authority and weak capabilities. Gaining in legitimacy is the only way to have their authority recognized and accepted by the other players.

With that aim, we study the decision-making of the two key European bodies concerning (national) government support; qualified as "state aids". They are a core source of friction between the Member States, that are eager to preserve their sovereignty in the matter of public policies, and the European Institutions, whose mandate is to guarantee enforcement of the integration commitments made by the same Member States. They are also key for businesses as they might cover significant tax incentives in their favor and result in rents due to a distortion of competition. They could also trigger opposition among the components of the EU power system since two branches of the government—the Executive and the Judiciary—might be involved. We believe therefore this is a stimulating case for the analysis of the process of EU policy-making, in addition to a significant case for the analysis of the building of a supra-national system of governance. As pointed out by [Brousseau and Glachant \(2020\)](#), transnational governance frameworks do not only result from treaties among governments, but also from the endogenous emergence and evolution of a wide set of governance arrangements of various kinds at different levels, which specific dynamics have to be documented and analyzed.

## **2.2 The European Commission as a trustee**

The European Commission is a central component of the executive and legislative power of the European Union. Its duties include initiation of the legislation process, the management and implementation of EU policies and budgets, and the enforcement of EU law. A noteworthy aspect of the Commission's attributions is that it has a double role: a legislative one when it proposes new laws and regulations, and a supervisory one when monitoring the implementation of EU policies. Such a broad scope of actions is reflected in the profile of those working for the Commission, combining technical staff who are members of the EU civil service with political actors who are the appointed Commissioners.

Because the European Commission was entrusted to defend the general interests of the EU, the appointment of Commissioners and the decision-making process were both designed to safeguard the independence of the Commission. National governments select the Commissioners, who are also subject to the approval of the Parliament, for a 5-year mandate. The Commission does not answer to the Parliament. Thus, pressures from partisan interests, voters, and nationally elected politicians tend to fall off.

In the governance structure of the Commission, the bureaucracy supports both their legislative and regulatory tasks. Final decisions, however, are agreed on by the college of Commissioners. This

collegial oversight prevents Commissioners from pursuing their own political interests or acting as simple agents of their national governments. We cannot ignore that they are political actors that have usually acquired previous experience in other political positions either at the national level or the supra-national level. In order to be influential within the Commission, they are however constrained by the need to actually contribute to the fulfillment of the mandate of the college. Moreover, they also have to establish their own legitimacy *vis-à-vis* this bureaucracy consisting of this specific group of civil servants dedicated to the building of the Union. Last but not least, Commissioners are certainly driven by career concerns and have to consider the next steps: getting a position in the transnational system of governance, which certainly requires an established record in terms of loyalty to the inter-governmental organizations in which they worked, or in the national political system they came from and in which they no longer have a strong position. A record of independent and competent EU governance is certainly their best asset in this game.

The multiple attributions of the Commission transform it into a powerful actor in the European Union. That being said, while it is an agenda setter, it does not have a hegemonic position in the power system. The policy-making process also depends on the Parliament, which must approve and might amend proposals made by the Commission. Final decisions are always made by the European Council, in which all national Governments have a seat. They should compromise and might also amend decisions proposed by the Council and potentially revised by the Parliament. Last but not least, EU policies are not implemented by the EU bureaucracy, but by each national government, which has to transpose EU directives into the national legal framework and manage public policies accordingly. The Commission is, however, in charge of supervising how the Member States implement these EU policies once finally adopted. It has the ability to sanction Member States. These sanctions must be submitted to approval by the Council and are subject to judicial review by the Court of Justice of the European Union.

The central role of the Commission in the development of the EU project has attracted the attention of many researchers, who have studied its characteristics, behaviors, and influence on the institutional development of the Union. The extensive discussions on the role played by the European Commission (Pollack, 1997; Thomson, 2008) suggest a principal-agent relationship between the Member States and the Commission. However, the very specific structure of the European Union allows the Commission to enjoy some freedom in setting the agenda. The Commission is thus a trustee that is more powerful and independent than a “pure” agent, since a trustee is endowed with a transfer of decision rights guaranteed through constitutional means. While Majone (2001) affirms that upgrading an agent to a trustee allows incomplete contractual arrangements to be completed, thus avoiding the potential lack of credibility of self-enforcing treaties among sovereign states, Wilks (2005) claims such power allows the Commission to pursue its own agenda and, thus, increases the risk of institutional drift.<sup>4</sup> In any case, many authors agree that the Commission

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<sup>4</sup>For some authors, the roots of the risk of institutional power lie in the double-hat profile of the Commission

acts on behalf of its supranational objectives (Majone, 2002; Pollack, 2003).<sup>5</sup>

It is also relevant to keep in mind that organizations might influence individuals' behavior. In line with the significant tradition initiated by Max Weber, bureaucracies may well develop procedures and human resources management practices favoring an adhesion of individuals to their goals. Socialization research, focusing on processes of inducing actors into the norms and rules of a given community that results in sustained compliance based on the internalization of these new norms (Checkel, 2005), tends to highlight the European Union's success in the matter. The Commission's agents seem to be acting in line with the EU's interests, being immune to the influence of their national authorities, and developing a European ethos. Abélès and Bellier (1996) affirm that the experience of working for the Commission transforms the agents that progressively replace their national identification with a professional identity that embraces achievement of the collective project. Hooghe (1999) highlights that socialization in the Commission is powerful, and that the greater their seniority, the more likely staff members are to embrace supra-nationalist values.<sup>6</sup>

### 2.3 The Court of Justice of the European Union as a check and balance

The Court of Justice of the European Union is the central institution for the enforcement of EU law. Its mission includes ensuring the lawfulness of decisions of other institutions of the European Union and ensuring that Member States respect their obligations as stated in the EU Treaties. It also interprets EU law as requested by national courts. The Court and the process for appointing judges were carefully designed. Two courts form the Court of Justice of the European Union: The European Court of Justice (ECJ) and the General Court.<sup>7</sup> While the Court of Justice is made of 28 judges (one from each Member State) and 11 Advocates General, the General Court has 47 judges (at least one per Member State). The appointment of judges is similar in both Courts. The judges must be independent and able to exercise the highest jurisdictional functions. Member

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that aggregates both regulatory and agenda-setting functions (Pollack, 1997).

<sup>5</sup>Some political scientists have suggested that the Commission keeps encroaching on the sovereignty and focus on national resistance to European policies was (Bauer and Hartlapp, 2010; Börzel, 2005; Mathieu and Bauer, 2018). For instance, Prechal (2010) suggests that the Commission has a tendency to competence creep that makes the Member States cautious in accepting the centralization of power at the European level.

<sup>6</sup>In another paper, she adds that national political socialization influences how agents embrace supra-nationalism: Individuals originating from countries that are more supportive of the EU project demonstrate a higher level of supra-nationalism (Hooghe, 2005).

<sup>7</sup>The General Court was created in 1989 with a twofold mission. First, to relieve the load of cases that was generating bottlenecks in the Court of Justice. Second, to offer a second level of decisions, where the General Court would be the first instance and the Court of Justice the second instance. This measure increases the judicial protection of natural and legal persons that decide to appeal. The complexity of the cases determines the number of judges assigned to a case, the average being from three to five judges. The Court of Justice exists since 1952. It deals with requests for preliminary rulings from national courts, some actions for annulments of illegal actions of EU institutions and appeals of cases judged in the General Court.

States appoint them for 6-year terms. The Member States' choices are pre-screened by a panel of 7 specialists that assesses the candidates' ability to meet all the requirements. The President of the Court suggests the composition of the board and the Council approves it.

Courts are often assumed to be independent, but they may also be subject to pressures from various stakeholders. Judges are often swayed by governments (Posner and De Figueiredo, 2005), by policy preferences (Voeten, 2008) or by the economic environment (Ichino et al., 2003). Appointments to the Court of Justice of the European Union, and the rules under which it operates, were designed to guarantee independence. Since the Court has much power in the European arena, its decision-making has piqued the interest of researchers. Carrubba et al. (2008) suggest that the risk of a decision override by the Council or the threat of noncompliance of a Member State may constrain the Court's rulings. Sweet and Brunell (2012) contest Carrubba et al. (2008)—using the same data they show that the Court is usually aligned with Commission's preferences. However, there is no evidence of the influence of Member States on the Court. Garrett et al. (1998) claim that analysis of the Court's decisions should outpace the ideological discussions of "European Integration theories." They contend that the Court is a strategic actor that enforces the law impartially to protect its reputation while avoiding decisions that provoke Member States to circumscribe the Court's authority. Also, a recent study by Pollack (2017) discusses the legitimacy of the Court and concludes that despite much research confirming that its rulings comply with the rule of law, there has recently been a spate of debates about bias and judicial activism in the Court. Our work contributes to this area by exploring state aid cases that involved both the Commission and the Court to better understand the Court's decisions.

### 3 State Aids and the Single Market Policy

When examining state aids it is stimulating to analyze the interactions among the various stakeholders—both internal and external to EU institutions—involved in the dynamic of the EU system of governance. The Commission is in charge of approving or rejecting the proposed subsidies. Its decisions can be scrutinized by the Court. Member states and European firms are also part of the game because they are granters or beneficiaries of the aids. In this matter, the Commission and the Court are the institutions responsible for the enforcement of EU treaties. The first has a clear mandate to increase integration. The latter is responsible for litigation resolution. Step by step they lay the groundwork for further evolution of the integration process.

### 3.1 Competition policy as a central mandate of the European Commission

The European Union brings together many sovereign states. Moreover, Member States are characterized by very contrasted characteristics in terms of economic and social structure, climatic and geographical conditions, and cultural and political traditions. The building of the Union has always been characterized by a dialectic. On one hand, there is a clear will to integrate these heterogeneous nations into a united political and economic space, because of the expected benefits in terms of peace across the continent, the need to unite to face competition from geopolitical giants or alternative alliances, and economic benefits expected from integration into one of the wealthiest and largest economic spaces. On the other hand, the government and citizens of each nation, as well as local communities, may resist European integration because leaders could lose power, entrepreneurs could lose rents, and individuals could lose protection. In addition, integration translates into changes that have a cost, increase uncertainty, and might trigger redistribution from losers to winners. In this context, the building of the EU has always amounted to a game in which national governments have pushed for integration while trying to retain as much sovereignty as possible. European Institutions are there to tie their hands and make their commitment to integration credible. At the same time, they were designed to be weak enough to leave national governments in the driver's seat. This explains both the existence of the Council in parallel to the Commission and the constitutional principle of subsidiarity that reflects the fact that many policy domains remain under the sovereign jurisdiction of each government and that the national systems of government implement the European policies; depriving the EU of a strong and powerful civil service.

In this context, the establishment of a single market and related policies have constituted a central compromise among the member states. Not only removing barriers to trade but also establishing a level playing field by removing any distortions to competition were understood to be necessary conditions for achieving economic integration and enjoying its expected benefits: a more efficient productive system, a larger scale for writing off fixed cost, a more friendly environment for innovation, as well as elimination of all kinds of transaction costs due to technical and legal harmonization. Moreover, on several issues like product safety or financial stability, the joined forces of the Member States, together with the one of the European authorities, were deemed able to surpass the capability of each Member State, so that it was not a big deal to abandon sovereignty on these issues. At the same time, it was well understood that the decision to launch the single market policy would result in many specific interests being hurt and that each national government would struggle to resist pressures from them. Hence, it is necessary to grant a significant authority to the Commission in the specific domain of the competition policy.

In comparison to other policy domains, economic or not, the Commission exercises significant

authority in the matter of competition policy, with a clear policy mandate: establishing a level playing field. The Commission is empowered to punish unfair market behavior as well as to influence market structure by overseeing mergers and acquisitions. Moreover, the Commission has authority to intervene when public authorities, whether local or national, take actions that distort competition. This ranges from harmonizing regulations to controlling state aids.

The Commission's competence in this area has, however, progressively expanded. Clearly, the mandate to build a single market, dating back to the Single European Act (1986), then reinforced by the Treaty of Maastricht (1992) was relied upon by the Commission (and other pro-EU-integration forces) to progressively block the capability of national governments to protect specific interests and limit economic integration and the free flow of innovation and market incentives in the name of national sovereignty. The Commission incrementally gained autonomy and authority in its decisions, and all kinds of public decisions are now considered to fall under its purview. From that perspective, state aids are a particularly sensitive issue because, as in the case of mergers, the Commission is entitled to judge *ex ante* whether aids would distort competition and should therefore be prevented. From the Member States' perspective this constitutes a very clear encroachment on their sovereignty, and the stakes are very well understood by both parties. This is why the oversight of the Court of Justice of the European Union is also crucial here. Its role is clearly to control for the fact that the Commission is actually ruling according to its mandate.

We thus claim that this policy area is strategic to building the European project. The stakes clearly surpass the amount of public subsidies distributed by the Member States and scrutinized by the Commission and the Court. By studying the distribution of how state aids are approved we contribute to understanding the actual political interactions between the Union and the Member States.

### 3.2 State Aid Control

In the matter of state aid control, strict rules define the types of aid and circumstances in which it is allowed in the European Union.<sup>8</sup> This legislation limits the discretion with which a Member State can intervene in a competitive market and empowers the Commission to investigate and to decide about the lawfulness of any state support. According to the law, the European Commission should allow government support to deal with social issues and exceptional occurrences, like natural disasters. The Commission can also allow government support for other purposes, provided it does not harm competition. Thus, the legislation opens opportunities for extending several types of supports and, strategically, establishes the Commission as a powerful decision-maker with regard to state aids.

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<sup>8</sup>Article 107 and 108 (TFEU) set out the main rules for state aids and Council Regulation 659/1999 descants on the approval process.

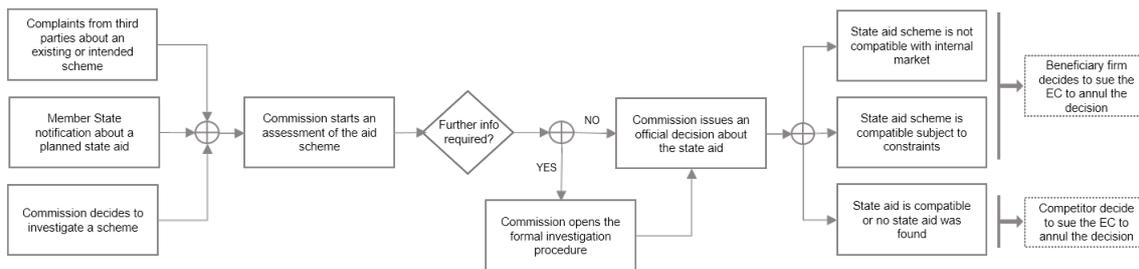


Figure 1: The process of government support approval or denial.

Any Member State planning to grant a state aid program must notify the European Commission, and no support scheme should enter into force before it is authorized. If an aid program extends over several years, the Commission must periodically assess if it is still compatible with the single market policy. Also, concerned parties play a surveillance role in the process because they can notify the Commission about the misuse of authorized funds or the existence of unlawful ones. After being notified, the Commission evaluates the information and publishes an official decision. Favorable decisions may include provisions to align the aid program with the rules of the internal market. If an ongoing aid program receives a negative decision, a recovery aid clause may apply. Between 2000 and 2015, the European Commission department for competition analyzed more than 6000 cases, of which only 6% were rejected.

State aids are restricted to selected beneficiaries and, as a consequence, the decision to approve or reject them may not please all stakeholders in the market. On one hand, an unfavorable ruling from the Commission jeopardizes the interests of the undertakings that would have received the aids. On the other hand, a positive decision may undermine the performance of their competitors. Both circumstances may result in legal disputes that the Court will be invoked in reviewing the decisions. Figure 1 summarizes the functioning process of state aid control in the European Union.

The General Court works as the first instance court in the resolution of state aid cases. Cases can be appealed in the Court of Justice, the second instance court. Both applicants and defendants may call interveners that give support to their claims. However, only parties that are able to prove the case directly affects them are allowed to intervene.

### 3.3 The role of EU Institutions in state aid control

State aid control, while being a significant dimension of EU integration policy, has not elicited a significant amount of attention from researchers (in economics) so far. Most research on EU government supports focused either on their general impacts on the economy or on their alignment with EU law. Less research has been dedicated to the way decisions are made and whether they

are biased. Dewatripont and Seabright (2006) argue that political accountability may encourage more wasteful public spending and thus a trans-border agency is helpful in stopping excessive government support programs. Nicolaidis and Bilal (1999), however, find that the actual practice of the European Commission often acts in a way that accommodates some industries and countries, while Buts et al. (2011) find that most of the Commission's decisions are in line with the *State Aid Action Plan* (2005–2009).<sup>9</sup>

Previous research has given us some clue about the institutional games at play in the EU system of governance. For instance, according to Majone (2002) and Wilks (2005), the expansion of the Commission's competencies in competition regulation at the European level has increased the number of judicial reviews as private parties appeal to the Court to seek justice. Thus, the Court has also become an essential actor in the policy-making process responsible for reinforcing and expanding the application of EU law. Also, Kleiner (2011) points out that during the development of state aid control, the Court had a crucial role in limiting its boundaries, by either confirming or curtailing the Commission's decisions. The Court's judgments contributed to pushing for better framing of the aids allowed.

Some research has demonstrated that even if the private sector is not a protagonist in the government supports process, it contributes to changing the dynamics. The participation of private actors as plaintiffs in government support cases has increased since the 90s (Adam, 2016; Smith, 1998). Meanwhile, there was a decrease in national governments' appeals, suggesting that private actors have developed strategies related to litigation and aimed at influencing governmental practices (Adam, 2016).

In this research, we propose to explore the institutional dynamics of EU institutions. Specifically, we argue that political legitimacy and self-reinforcement are necessary for their sustainable development, contributing directly to the achievement of more economic integration. We expect that EU institutions will act according to the mandate they have received from Member States. The primary mission of the European Commission is to promote EU integration, whereas the European Court of Justice applies EU law. By transposing this analysis to state aid control, we propose that the Commission will use the authorization of state aids to push for more integration. In practice, this implies that its decisions will be biased to favor countries that are receptive to European integration. In the same rationale, we expect that the European Court of Justice will pursue its mandate of applying EU law and that it will be independent and just on its rulings. This means that if the Commission introduces any bias, the Court will reverse it through fair judgments.

It is relevant to highlight that if these institutions persist over time and are both increasing

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<sup>9</sup>Özbuğday and Brouwer (2016) highlight that cases with multiple objectives tend to have a longer duration approved and more substantial state aids received.

in legitimacy, we would doubt that any bias is strong enough to damage their reputations. The rejection rate of government support cases is only 6%. If there is any bias, it must come from the cases where a specific jurisprudence is absent. In these cases, the behavior associated with the institutions—to pursue further integration—would prevail and lead to some bias. Nevertheless, a Court ruling that gives the correct interpretation of the case would work as feedback that the Commission will abide by and use as an input in the evaluation of future cases. That would be the dynamic of the self-reinforcement process. Because of their interactions, the Commission might succeed in gradually expanding its power, and the Court would build up independence and credibility. As a result of this self-reinforcing behavior, they would increase their mutual legitimacy.

Before we move on to the empirical sections, we wrap up the discussion so far. Institutions are not simply rules, but require applying those rules in a legitimate manner so that they could persist with sufficient legitimacy. In the EU context, the Commission is given a mandate to promote and expand the single market within the Union, while the Court is supposed to ensure the Commission rules according to the law. Competition policy is the center of this dynamic as it is the main mandate for building an economic confederation, and state aid control is one of the tools on which the Commission possesses some discretion. In the process of building up the legitimacy of the EU institutions, the interactions among the Commission, the Court, the Member States, and the private sector drive the Commission to discipline Member States by the available means, and the Court to correct any biases according to the law. In the next sections, we present the data and the empirical approach applied to test two main propositions. Firstly, the Commission is more likely to reject applications of state aids originated from integration-resistant Member States. Secondly, the Court corrects this bias to a certain extent.

## 4 The Data

To understand state aid control in the European Union we have two complementary analyses. The first aggregates state aid cases subject to review by the Commission. The second analyzes the cases appealed to the Court in an attempt to overturn the Commission’s decisions. The next subsections present in more detail the construction process of these datasets and their main variables.

### 4.1 Dataset of the Commission’s state aids cases

Competition cases in the European Union are registered in the ISEF database where the data is open to the public. Within the Commission, not only the competition department is in charge of the analysis of state aid cases, the agriculture and fisheries teams also evaluate those notifications in their respective sectors. However, in this paper, we limit our sample to cases decided by the competition team from 2000 to 2015. Taking into consideration that the agriculture and fisheries sectors are subject to specific policies that may come into play in the granting of state aids, we

think it prudent to disregard these cases. We consider only cases after 2000, because that is when the procedural regulation of state aids entered into force.

Our sample of state aid cases contains more than 6200 cases. For each of them, the information available are: the Member State willing to grant the aid, its instrument (i.e. direct grants or tax incentives), its type (scheme, individual application, or ad-hoc case), its purpose, a brief description of the case, the official decision of the Commission and its date. For each observation, we code the official decision, presented in legislative terms, in a binary field to identify whether the aid was approved (1) or denied (0). Some complex cases were subject to many official decisions, and some of them were controversial, for example, a positive decision that changed to a negative decision. In this situation, we classified the aid according to the last decision appearing in the data.

We then enrich the dataset by matching some country-specific variables aligned with the year of the decision date. From World Bank Indicators, we take the GDP per capita and the inflation rate. From the Eurostat indicators, we take the unemployment rate. Additionally, we calculate the length of time a country has been an EU member as the difference between its entry in the EU and the decision date.

We propose using the transposition deficit as a proxy for the degree of resistance to integration at the country level. The transposition deficit is the proportion of directives adopted by the European Union not yet transposed by the member state.<sup>10</sup> It also accounts for directives that were only partially transposed and those considered as entirely transposed by the Member States, but not for which the Commission has opened an infringement procedure.<sup>11</sup> This information is available on the Single Market Scoreboard website that provides some performance and governance indicators of the European Union countries. [Kaeding \(2006\)](#) finds that the higher the number of institutional veto players, the greater the delay in transposition. Following his line of thinking, the transposition deficit is in effect a good proxy for the degree of resistance to integration. The Commission is a political body, whose decisions are not only economic but also political. Thus, we conjecture that the Commission considers the identity and also the behaviors of the Member States when rendering decisions and then calibrates its approval of government support programs to punish or reward “bad students” and “good students” respectively.<sup>12</sup>

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<sup>10</sup>One criticism against using the transposition deficit in statistical analysis is that those directives reported completed may be in fact incorrectly transposed and it takes time for the Commission to verify whether they are correctly transposed. The Commission gives the benefit of the doubt to Member States and excludes those self-reported non-verified completed transpositions from computation of the transposition deficit. However, we believe that the error is small since the cumulative compliance deficits are less than one percent for all Member States.

<sup>11</sup>Legal action against an EU country that fails to implement EU law. Source: [https://ec.europa.eu/info/law/law-making-process/applying-eu-law/infringement-procedure\\_en](https://ec.europa.eu/info/law/law-making-process/applying-eu-law/infringement-procedure_en) accessed on 17/08/2018.

<sup>12</sup>Note that we do not claim that EU decision-makers check the transposition deficit (or any grading system that would be managed internally by the Commission) before reaching a decision. It is a question of relational atmosphere and mindset by those playing a role in the decision. They might be less lenient or open-minded when

Finally, our data include governance indicators borrowed from the Worldwide Governance Indicators survey of the World Bank as described in [Kaufmann et al. \(2011\)](#). They are calculated from a set of surveys that combines companies', citizens', and experts' views on governance. There are six indicators named voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption. They range from -2.5 for weak performance to 2.5 for strong performance in the matter of governance. Indeed, approval of state aids may be influenced by the governance quality of the Member States. According to [Dewatripont and Seabright \(2006\)](#), a more democratic political system may induce more wasteful government support programs because of politicians' incentive to buy votes. Besides, we may expect the Commission to be less inclined to authorize public subsidies in more corrupt or poorly organized Member States. Besides, the inclusion of governance indicators may capture the effect of the general quality of the applications, e.g. the supply and verifiability of information and evidence.

## 4.2 Dataset of CJEU cases on State Aids

To investigate the factors explaining the Court's decisions on state aid cases, we have collected information on all state aid cases with application dates no earlier than 2000 and with rulings issued by July 2017. This data is available in InfoCuria, the European Court of Justice's official case-law database. Observations are constructed at the case-level, resulting in a dataset with 238 observations in which the Commission is the defendant.

We construct a binary variable that indicates whether the government support program is given a favorable judgment by the Court, which means either the state aid program is approved or given a second chance for review by the Commission. Note that the constructed binary variable does not refer to a favorable decision by the Court—an unfavorable decision on a competition case filed by a competitor to the beneficiary means the aid program is actually given a favorable judgment. To correctly code the outcome, we carefully studied all 238 cases and identified the nature of the cases; whether the case is presented by the potential beneficiary (the aid is not approved or only partially approved), or by a competitor to the beneficiary of the government support (the aid is approved by the Commission but the competitor is dissatisfied). To maintain comparability, we include the same set of independent variables, which will further be discussed in next section.

Table 1 displays basic summary statistics of the two samples and shows the unpooled variance two-sample  $t$ -test to check the equality of the means of the two samples. Note that it does not reject that the means of the transposition deficits are equal at the 5 percent significance level.

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they face politicians or bureaucrats that are not “cooperative.” From that perspective, the biases in the decision process might be due to the EU officers involved in the preparation of the decisions and in the documentation of the cases.

## 5 Empirical Strategy and Results

### 5.1 Empirical strategy

In brief, a Member State may have to go through two stages to get a state aid program approved. Governments first notify the European Commission, which decides whether the aid program meets the exemptions laid out in Article 107 and Article 108. If the answer is positive, the beneficiary’s competitors have the legal right to sue the Commission in the Court to have the decision repealed. If the answer is negative or conditional, the beneficiary can also demand a judicial review by the Court. Therefore, by comparing the decisions of the Commission and the Court, it is possible to detect biases in the decisions. Several potential scenarios can be categorized into two main types.

#### 5.1.1 The Commission is biased

In principle, the quality of state aid programs should be independent of any country-specific variables, except some economic indicators. By “quality”, we refer to the degree to which the case fits into the exemptions laid by the legislation. If the Commission’s decisions are systematically correlated with some relevant variables, we may conclude that the Commission is deciding cases according to a specific line of thinking. There are two sub-cases. First, the Court is independent and corrects any biases of the Commission. In this case, we should find the correlation reversed in sign. Second, the Court is also biased and judges according to some other rationale. We will find the judgments by the Court correlated with some explanatory variables, but they do not necessarily correct the bias introduced by the Commission.

#### 5.1.2 The Commission is not biased

If the Commission’s decisions are not systematically correlated with any available variables, we may conclude that the Commission is in fact fair in its decision making. However, the Court could still be biased. In this scenario, we find its judgments correlated with some explanatory variables. Failure to observe any systematic correlation between the approval of cases and any relevant explanatory variables in both stages of the decision-making process indicates that there is no evidence of bias in how state aids are controlled at the European level.

### 5.2 Empirical results from the first stage: the European Commission

We employ a Probit model to estimate the correlations between the approval of government supports and some country-specific variables.

$$\pi_i = \Phi(\alpha + \beta X_i), \quad (1)$$

where  $\pi$  is the conditional probability of approval in case  $i$  and  $\Phi(\cdot)$  is normally distributed. The vector  $X_i$  are the explanatory variables associated with case  $i$ . Each case is associated with a Member State (where the government support would be approved) and a decision year (when the case is approved or denied by the Commission). Therefore, most of the explanatory variables are

in fact country-year specific. Note that in a given country there will be multiple observations in any year, and thus the dataset is not a panel. To be precise, we consider the following model:

$$\pi_i = \Phi(\alpha + \beta X_i + \tau t + \gamma_c), \quad (2)$$

where  $t$  is a linear trend variable and  $\gamma_c$  is the country fixed effect for country  $c$ . The reason why we include a linear trend instead of 17 binary year fixed effects is that we want to keep the analysis comparable with that of the next section where we cannot afford including too many dummies in a regression of a much smaller sample.

Table 2 reports the results. All reported standard errors allow clusterings in countries. In Column 1, we explain state aids approval, a binary variable, by a linear time trend, the duration (number of years) of EU membership, the log-difference in GDP per capita, the unemployment rate and inflation rate differentials between the Member State submitting the state aid program and the EU average in the decision year.<sup>13</sup> Since it is argued that the Commission is trying to help economically weaker members catch up with stronger ones by approving state aids, the expected approval rate should be higher for low income, high unemployment, and high inflation countries.

In Column 2, we further include the transposition deficit in the regression. We find it negative and significant. We then control for country fixed effects, as shown in Column 3. Unemployment is no longer found to be significant, while the transposition deficit still is. The marginal effect of a one percentage point increase in the transposition deficit on the probability of being approved is -1.4 percent.<sup>14</sup> Note that the overall acceptance rate is 94 percent.

As pointed out above, approval of government supports may be influenced by the quality of governance of the Member States as proxied by WGI indicators. It is indeed possible that the negative coefficient we find for the transposition deficit results from omitting the quality of national governance that could have an impact on both the transposition process and on the quality of the application for state aid. We include three Governance Indicators, namely, Voice and Accountability, Rule of Law and Control of Corruption, compiled by the World Bank, separately and jointly in Columns 4–7. This inclusion does not take away the significance of the transposition deficit. A positive and significant coefficient for rule of law may hint that government supports are likely be approved if applications are filed with care and a fair mind. However, we are surprised that control of corruption enters the equation negatively. Note that the overall correlation between rule of law and control of corruption is 0.9622. Governance Indicators are themselves of interest to political scientists, though explanations for the correlation fall outside of our discussion in this paper.<sup>15</sup>

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<sup>13</sup>This is computed by subtracting the EU average for the year from the country figure.

<sup>14</sup>Obtained from the Stata *margins* command after the Probit estimation.

<sup>15</sup>There is indeed an on-going debate on the relevance of the WGI indicators, in particular because many of the indexes that are relied upon to compute them are highly correlated, while nothing is known on the way the primary

### 5.2.1 Robustness checks

We have not considered the nature or objectives of the state aid applications. As we discussed in the Introduction, government supports would be approved if they fall under certain exemptions. Although all aid programs have to go through the same approval process, some categories are less disputable. Aids to promote regional or national culture are almost certain to get a green light (no rejection in our sample). Programs to promote employment and to restructure struggling industries are much more difficult to judge. Since we aim to explore the leeway the Commission enjoys, we now turn to those more disputable state aid programs.<sup>16</sup> We first identify all major objectives of government support programs and then compute the average approval rate for each category.<sup>17</sup> Only Culture and Energy are associated with a 100% approval rate. Next, we keep only those cases involving at least one objective that has an approval rate less than one. In other words, we exclude government supports of solely Culture, solely Energy, and a mix of the two (zero cases). We then repeat the regression of Column 5 of Table 2 but limit the sample, as shown in Column 1 of Table 3. We still find a significant and negative correlation between the transposition deficit and the approval rate, while the sample size falls to 5923.

We further check the robustness of the results by using other estimation models. Columns 2 and 3 use the same specification, but with objectives associated with a 100% approval removed and estimated on the basis of linear probability and logit models, respectively. The negative correlation is now less significant. In Column 4, we keep the Probit model but bootstrap the standard errors with 278 successful trials. The main result remains and we conclude that the significant correlation is not driven by outliers. We then divide the observations into two types, namely, Scheme and Non-Scheme (i.e. programs vs. earmarked support). Thirty-nine percent of the state aid applications in our dataset belong to various schemes agreed between Member States and the Commission, and they are more likely be approved. The positive interaction suggest that the transposition deficit exerts a stronger effect on the approval rate of Non-Scheme applications, implying the bias is larger with Non-Scheme cases.

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measures and indicators are aggregated in synthetic indexes of governance. Moreover, the fact that many of these indicators are built on subjective evaluations by not clearly identified experts casts doubts about the quality and comparability of the resulting indexes. The limits of the WGI indicators is, however, a constraint shared by many researchers in social science attempting to control for differentials in the quality of governments and institutional frameworks across countries).

<sup>16</sup>Note that rejections are, in fact, rare (6%) in our sample.

<sup>17</sup>We have identified the following objectives: Culture, Environment, Employment, (clean/renewable) Energy, Individuals, Innovation, Regional Development, Rescue, Economic Development, Research, Restructuring, Capital and Finance, SME, Sector Development, and Training. There are some other minor objectives that involve fewer than 10 cases each. Since a government support may involve multiple objectives, the categorization is not mutually exclusive.

### 5.2.2 Instrumental variable estimation

Another issue is the possible endogeneity of the transposition deficit. Member States may react to the expected decisions of the Commission and adjust their strategies for transposing directives. Another possibility is that both variables are driven by an unknown confounder. Certain institutional factors may, on one hand, affect the quality of state aid applications and, on the other hand, the efficiency and the pace of transposing directives. To deal with the endogeneity bias or the omitted-variable bias, we employ the following identification strategy, which was adopted by [Acemoglu et al. \(2014\)](#) and [Yeung \(2017\)](#).

We assume that Member States are influenced by their neighboring countries. To a certain extent, they share elements of similar cultures, histories, mentalities, and bureaucratic organization. Therefore, they respond to new directives similarly, causing their transposition deficit to converge and rise and fall in tandem. We divide the European Union into four regions: North, South, East, and Central, compute the average transposition deficit excluding the country in question for each year, and call it the country’s transposition wave index, which is taken as the instrumental variable<sup>18</sup> Precisely, the wave index of country  $i$  year  $t$  and region  $r$  is computed as follows:

$$Wave_{it} = \frac{\sum_{j \in r, j \neq i}^n TD_{jt}}{N_r - 1} \quad (3)$$

where  $r$  designates the four regions and  $N_r$  is the number of countries in region  $r$ .<sup>19</sup> The wave index is taken as the instrumental variable to correct the potential endogenously determined transposition deficit. The exclusion restriction is that the average transposition deficit environment of a region has no direct impact on the Commission’s decisions of a country’s government support applications, except through its influence on the country’s transposition deficit.<sup>20</sup> Results are shown in Table 4, where the lower panel reports the first stage estimation. The first column employs IV-OLS estimation. The transposition deficit remains a significant factor, while the  $F$ -test for excluded instruments is 36.6. Column 2 is IV-Probit estimation and we find consistent results. The magnitude is larger than the comparable result in Column 1 of Table 3. Column 3 of Table 4 mirrors Column 5 of Table 3. The transposition deficit remains significant with the correct sign. Note that the interaction term is also endogenously determined, which is in addition instrumented by the interaction of the wave index and the Scheme binary indicator. The transposition deficit becomes less significant but the coefficient rests stably around  $-0.2$ .

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<sup>18</sup>The North includes Denmark, Estonia, Finland, Latvia, Lithuania and Sweden. The South includes Cyprus, France, Greece, Italy, Malta, Portugal and Spain. The East includes Czech Republic, Bulgaria, Hungary, Poland, Romania, Slovakia and Slovenia. The Central includes Austria, Belgium, Germany, Ireland, Luxembourg, Netherlands, and the UK.

<sup>19</sup>Since the Member States’ transposition deficits for 2017 have not yet published at the time of this analysis, we take those of 2016 as the expected values for 2017.

<sup>20</sup>Since cases usually do not take very long to be judged (the average length between notification and decision is 0.876 year) and we do not have a long panel, we do not use the lagged wave index as the instrumental variable as [Acemoglu et al. \(2014\)](#) do.

### 5.3 Empirical results from the second stage: The Court of Justice of the European Union

The previous section has shown that the Commission seems to make decisions according to the transposition deficit, or more plausibly what it proxies: The extent of the Member State’s resistance to European integration. However, it does not establish that the correlation is actually a bias. If the bias exists and the Court is to correct any bias, an opposite sign on the transposition deficit would help establish the claim. We again employ a Probit model but this time to estimate the correlation between favorable judgments about the state aid programs after the Court review, and country-specific variables. The sample size shrinks to 238, of which 62 cases were initiated by either national or local governments. The other appeals are initiated by the private sector. In this latter case, there are two types of appeal: the first type—labeled as “beneficiary” in our data—means that the state aid program was denied and the potential beneficiary filed the lawsuit; the second type—qualified as “competitor”—refers to cases in which a competitor of the beneficiary of an approved government support filed a lawsuit. All cases presented by governments are “beneficiary” cases, while 53 of cases filed by the private sector are “competitor” cases. Note that we exclude a small number of cases initiated by individuals and non-profit associations as their success rate (all of them were potential beneficiaries) is comparatively low.

Table 5 reports the results. Column 1 shows the Probit regression result with explanatory variables including economic indicators, a linear time trend, the length of EU membership (all measured in the ending year of the case), a binary variable indicating competitor case, and country fixed effects. The length of EU membership is positive and significant, suggesting an exposure effect. More experienced countries tend to receive favorable decisions. This correlation persists even if we limit the sample to only companies, as shown in Column 5.

As the Commission is assumed to have investigated the “quality” of the government support program and accepted or rejected it accordingly, state aid programs in competitor cases are, in general, of higher quality and hence the programs are expected to post a higher probability of favorable judgment after the judicial review.<sup>21</sup> The positive and significant correlation is thus well expected.

Next, we include the transposition deficit of the ending year. We do not find a significant correlation, as shown in Column 2. However, we should not measure the deficit in the judgment year because what we want to check is whether the Court corrects the bias made by the Commission at the time the Commission made the decision. Instead, we include in the regression the transposition deficit measured in the starting year of the lawsuit—the same year in which the Commission ruled (with a few exceptions) since undertakings have only three months to appeal the Commission’s

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<sup>21</sup>By “quality” we refer to how well the application fits the exemptions listed in the legislation.

decisions to the Court—as in Column 3. The transposition deficit is positive and significant. This result is, however, not sufficient for us to conclude that the Court corrected the bias induced by the Commission because of the different nature of the two types of cases. If the Commission is actually biased against countries with a high transposition deficit, some of the beneficiary cases coming from those countries might have been approved in the absence of bias. If the court were to correct the bias, the correlation of the transposition deficit for beneficiary cases should be positive. However, the same logic does not apply to competitor cases. Those cases were approved by the Commission, despite of the existence of the bias, and a favorable judgment by the Court is equivalent to maintaining the decision by the Commission.

The interaction between the transposition deficit and the competitor binary variable is included in the specification of Columns 4–5. To be precise, we consider the following model:

$$\pi_i = \Phi(\alpha + \beta X_i + TD_{tc} + Comp_i + TD_{tc}Comp_i + \tau t + \gamma_c) \quad (4)$$

where  $TD_{tc}$  is the transposition deficit for year  $t$  for country  $c$ ,  $Comp_i$  is the binary indicator for Competitor case.

As shown in Column 4, the interaction term is negative and significant while the transposition deficit and length of time remain significant. Column 5 includes only companies and we find similar results. For easier understanding, we plot the predictive margins of the two types of cases against the transposition deficit in Figure 2. The point estimate is the predicted probability of an endorsement of a state aid program for the type of the case at a given level of the transposition deficit. When the transposition deficit is low, beneficiary cases are associated with a lower predicted probability compared with competitor case. Remind that they were rejected by the Commission and thus were very likely poor quality applications. When the transposition deficit increases, beneficiary cases have a better chance of receiving a favorable ruling from the Court. Comparing with the results in Table 2, we find that the coefficient of the transposition deficit is reversed. The explanation we put forward is that the Court actually “corrects” the bias induced by the Commission. The Court judges the substance of the case; hence the subsequent correction.

What remains to be explained is that the predicted probability of a favorable decision for cases initiated by competitors declines with the transposition deficit. Note that the decline (the slope) is not always significantly different from zero, and the confidence intervals at high values of the transposition deficit are large. Following the same logic of over-rejection, one may expect over-acceptance of applications when the transposition deficit is low. But if that is true, we should see an upward sloping curve because the Court should repeal some unduly approved cases when the deficit is low. One explanation for the pattern is that the original decisions were not made on the basis of a detailed and neutral analysis of the specificities of the case (but rather on the basis of its “political context”) when the cases were from high transposition deficit countries, and therefore

the Court was more likely to reverse the decisions or ask for another review. To reconcile all the results, we propose the following: The Commission was biased when deciding on cases originating from high transposition deficit Member States and likely to limit the number of approvals, but not to the point of approving ineligible applications from low deficit countries.

Table 6 presents some robustness checks. First, we try OLS and logit regression in Columns 1–2. The signs are correct, though the transposition deficit is less significant. In Column 3, we bootstrap the standard errors (46 successes) and obtain similar results. Again, we check if the significant correlation is due to the omission of a measure of the governance of the Member States. We interact the Competitor binary variable with Voice and Accountability, Rule of Law, and Control of Corruption and include them one by one in the regressions, as shown in Columns 4–6. The newly introduced interaction terms are significant, while the governance indicators alone are not. All three are negatively correlated with the expected favorable decision. In other words, for cases initiated by competitors, the better the governance, the lower the expected probability of benefiting from a favorable answer: Approved cases originating from countries characterized by better governance are more likely to be reversed. Since this is not our focus, we prefer not to infer too much. In any case, the transposition deficit and its interaction term with the competitor binary variable are significant in all three specifications. Finally, we divide cases into Scheme and Non-Scheme (Ad-hoc) cases in Column 7. Figure 3 shows the predictive margins of Scheme and Non-Scheme cases given that they are initiated by potential beneficiaries. The predicted probability of a favorable decision of Non-Scheme cases lies above that of Scheme cases, and both of them are increasing in transposition deficit. The marginal increase in probability (the slope) of Non-Scheme cases is slightly larger than that of Scheme cases. As these are all beneficiary cases, the result suggests that a Non-Scheme case, which has been rejected by the Commission, is more likely to be given a favorable decision than a Scheme case, and even more likely if transposition deficit is high. The difference between the two predicted probabilities is statistically significant when transposition deficit ranges from 1 to 3 percent. This result seems surprising, because, as we discussed in the previous section, Non-Scheme cases are more likely to be rejected by the Commission. However, if we accept the hypothesis that the Commission is biased against high transposition deficit countries and the bias is larger concerning Non-Scheme cases, the seemingly surprising result is actually the consequence of the correction of the bias by the Court. Non-Scheme cases somehow receive fairer treatment by the Court, and the correction is stronger when the bias by the Commission is more pronounced.

## 6 Discussion

### 6.1 Is the Court influenced by the private sector?

The previous section investigated whether the Court corrects any bias introduced by the Commission's preferences, but does not lead us to the conclusion that the Court is, in fact, independent

and solid. It may bow to the financial influence of the applicants. In this section, we modify our regression. First, the dependent variable is now a binary variable equal to one if applicants obtain a favorable decision by the Court, and zero otherwise. For instance, a favorable decision by the Court refers to a rejection or partial rejection of state aid program. We consider only the final decision by the Court as some cases are appealed to the second instance. Second, we change the observation’s country from where the state aid would have been implemented to where the applicants belong. It is not uncommon for competitors from one country to complain about a state aid program in another country. Therefore, all country-year specific variables refer to the parameters of the applicants’ countries. Third, we expand the dataset to the case-applicant level but due to the lack of some applicant-specific information the sample shrinks to at most 192 observations.

Table 7 reports the regression results. All reported regressions include a binary variable to identify competitor cases, a linear time trend and country fixed effects. In Column 1, we test whether financially more powerful applicants are likely to win the lawsuits. But the log of total assets and the log of the number of employees do not explain the success rate. In Column 2, we capture any size and experience effects by including in the regression the number of total applicants participating in the case and the number of prior cases they have participated in. Again we do not find a significant correlation. In Column 3, we further include a categorical variable that indicates either a negative, neutral or positive position taken by a Member State. No significant result is found. In Column 4, a binary variable that indicates whether the applicant is registered in the Transparency Register of the EU is included in the regression, which is also insignificant. In Column 5, we include nine sectoral fixed effects, and now we find that the number of total applicants is positively and significantly correlated with the success rate.<sup>22</sup> In short, we find evidence showing that cases with more applicants are more likely to win, but the inclusion of many fixed effects casts doubt on the robustness of the correlation.

## 6.2 Selection bias

A frequent, and very reasonable, challenge to the empirical finding is selection bias. After the Commission has made its decision, the stakeholders may or may not appeal the decision in the Court. Who are they? We test the equalities of variables in the two samples, as shown in Table 1. Although many variables show significant differences between two samples, some of them are as expected. Increases in the decision year and in the length of EU membership are logical because cases must first be presented to the Commission. Besides, a slight increase in the transposition deficit (only significant at  $\alpha = 0.1$ ) is consistent with the finding that cases originating from high transposition deficit countries are more likely to be denied by the Commission. It is intuitive to assume that those who believe they would win the lawsuits would be more eager to move on to the second stage, but the incentive to sue and the transposition deficit are hardly related. A simple

<sup>22</sup>We follow the NACE definitions of sectors.

reason we can postulate for our finding is as follows: They feel unfairly treated by the Commission and thus hold the belief that they are more likely to win, which is correlated with the hidden bias against more resistant countries.

### **6.3 Does information availability matter?**

Another challenge is that the Commission may not have sufficient information to judge and thus rejects a state aid program. However, as information becomes available over time, the Court is able to make a better and fairer decision. If the transposition deficit is positively correlated with the incentive or ability to provide accurate and sufficient information in the beginning of the process, we will find a negative correlation between the approval rate and the transposition deficit. The positive correlation found in the Court stage is thus not a correction of the bias, but simply implies better decisions with more information.

This criticism is, however, not valid. First, national governments are well-motivated to provide all the “favorable” information before the Commission makes any decisions. The nature of the information released over time should, in general, be “less favorable” or “unfavorable” to the state aid application. Furthermore, the Commission often asks for further information and communicates with national governments before making any decisions. Lack of relevant information seems not a plausible explanation.

Some may argue that the national governments or stakeholders may not know what information is favorable at the Commission stage, but somehow learn that along the process and successfully persuade the Court to overturn the decision. This may be true in a one-shot game but is very dubious in a repeated-game setting. To capture this possibility, we have included length of time within the EU as a control variable in the regression and found it positively correlated with favorable decisions. The effect we find on the transposition deficit, therefore, has been isolated from the experience effect.

In addition, we have controlled for governance quality by including World Governance Indicators in the regressions, that capture some effects of poor administration ability and careless applications.

### **6.4 Estimation of the cost of the bias**

Although it is not the main focus of this work, our model generates an estimate of the economic cost of the bias induced by the Commission. Since we do not have the actual amounts of state aids for all cases presented to the Commission, we cannot pin down exactly the economic value of all rejected cases. Moreover, it is not possible to tell which cases were in fact rejected due to bias. A simple way to estimate the cost is to input the country-specific characteristics of Member States into the model to obtain a predicted probability for acceptance of those Member States in a year.

The model we choose is the one in Column 7 of Table 2. Next, we assume that the transposition deficit dimension does not exist and recompute the predicted probability of acceptance using the estimated coefficients for other variables. The predicted values can be interpreted as the expected acceptance probability given no bias, which must be larger than if the transposition deficit is taken into account because the coefficient of the transposition deficit is negative. The difference, together with the amounts of state aids (except aid to railways and agriculture) actually distributed by each Member State each year allows us to estimate the economic cost of bias by the following formula:

$$\text{Bias} = \text{Actual state aids Distributed} \times \left( 1 - \frac{\text{Expected Probability of Success without Bias}}{\text{Expected Probability of Success with Bias}} \right).^{23}$$

Total state aids without railways and agriculture of 24 Member States from 2009 to 2015 and the estimated bias are shown in Tables 8 and 9, respectively.<sup>24</sup>

Take France as an example. The average bias is €136 million per year and is roughly 1 percent of the total state aids distributed. However, we cannot tell if it is inefficient because state aid programs could be inefficient and also distortionary. Over-rejection may or may not be suboptimal from social welfare point of view.

## 6.5 Policy implications

During the whole research process, we identified a lack of transparency in the Commission's decision-making. The private sector is very often put aside in the decision-making process. However, companies are responsible for initiating the majority of legal proceedings against the Commission, implying that the private sector plays an essential role in the oversight of the distribution of state aids. The discussion between the EC and the Member States concerning state aids is mostly behind closed doors. The private sector is not officially involved in the process unless the Commission calls for a formal investigation. Would it be a more accountable system if the private sector was invited to discuss at the first stage? For those 11 percent of cases that were open to formal investigation, and hence involved the private sector, a quarter of them were subject to judicial review. This clearly shows the power of information. During a formal investigation, individuals and firms are more informed of the details of the scheme, of the logic behind the decision, and of their rights. A more transparent environment would allow the Commission to render more informed decisions, and all stakeholders to anticipate potential decisions by the Court in case of

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<sup>24</sup>Although we can retrieve all applications for state aids over the years, we do not know the value of state aid of each application. Some of them were tax rebates or allowances, making it impossible to estimate the amount. What we have is actual state aids for a year. But we only know roughly the components of the total amounts and do not have the information of the approval year for each aid. Some approved programs may last for years. The estimation is thus based on a strong assumption that the total approved amount of state aid applications of a Member State in a year is equal to the total amount of state aids distributed.

appeal, resulting in a lower degree of uncertainty for all. Public scrutiny would, on the one hand, weaken the Commission's ability to "punish" high transposition deficit countries, but would, on the other hand, decrease the likelihood of decisions being reversed by the Court. This latter effect should improve the credibility of the Commission.

## 7 Conclusion

While, conflicting objectives of the European Commission and the Member States have often been analyzed, state aid control has not been systematically studied, though it actually occupies the core position of interactions among the Commission, the Court of Justice and the Member States. This work takes the view that European institutions are continuously evolving and striving for both power and legitimacy. The Commission pursues its own political aims through competition policy and state aid control. Meanwhile, the Court checks the Commission's decisions and balances its power to establish its credibility by guaranteeing application of the rule of law. We thus argue that the Commission may bias its decisions on state aid programs to achieve its integration goals, leading the Commission and the Court to go against each other in some cases. In particular, we hypothesize that the Commission tends to reject programs originating from countries who are resistant to EU integration, which is proxied by the transposition deficit. We find that the higher the transposition deficit, the lower the expected approval rate for the state aid program by the Commission, suggesting that the Commission is biased. On the other hand, we find that the expected approval rate is positively correlated with the transposition deficit for those cases presented to the Court. This indicates that the Commission is actually biased against countries with greater resistance to European integration while the Court corrects the bias induced by the Commission. The repeated play of this game results into a self-reinforcing loop over time: since each player successfully acts according to its mandate, their own and mutual legitimacy increase. This ongoing process contributes to achieving more economic and political integration on the basis of a process of establishing a level playing field throughout the European Union and of building a credible system of government.

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Table 1: Basic Summary Statistics of the Two Samples

Variable	Commission		Court of Justics		2-sample t-test
	Mean	Std. Dev.	Mean	Std. Dev.	
ln GDP pc	.0026964	.1991043	.0283299	.1367361	-2.78
Unemployment	-.4881238	4.145106	.9096487	5.198566	-4.10
Inflation	-.0509695	1.022819	-.193337	.753921	2.82
Decision Year	2007.853	4.815866	2010.718	3.73948	-11.46
Length EU	33.11104	17.77373	39.51681	14.21466	-6.75
Transposition Deficit	1.463561	1.030183	1.583193	1.087079	-1.67
Voice	1.237182	.237881	1.219337	.226122	1.19
Rule of Law	1.325107	.5090314	1.223408	.5415493	2.85
Control of Corruption	1.318299	.6997943	1.172147	.7303675	3.03
Sample size	6268		238		

Table 2: Dependent Variable: State-aids approved by the Commission

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
log diff GDP pc	0.381 (0.320)	0.193 (0.312)	0.425 (1.243)	0.340 (1.251)	-0.129 (1.463)	0.857 (1.274)	0.042 (1.359)
diff unemployment	-0.029*** (0.007)	-0.032*** (0.007)	-0.020 (0.021)	-0.024 (0.024)	-0.017 (0.022)	-0.024 (0.020)	-0.028 (0.022)
diff inflation	-0.042 (0.034)	-0.047 (0.032)	-0.006 (0.039)	-0.005 (0.040)	-0.017 (0.040)	-0.004 (0.039)	-0.023 (0.039)
Trend	0.027*** (0.009)	0.006 (0.007)	-0.008 (0.008)	-0.010 (0.007)	-0.007 (0.008)	-0.016* (0.010)	-0.032*** (0.011)
Length EU	-0.013*** (0.004)	-0.011*** (0.003)	0.008*** (0.002)	0.008*** (0.002)	0.012*** (0.002)	0.010*** (0.002)	0.022*** (0.004)
TD		-0.132*** (0.040)	-0.123** (0.059)	-0.122** (0.058)	-0.114** (0.058)	-0.128** (0.059)	-0.116** (0.053)
Voice				-0.233 (0.520)			-0.449 (0.505)
Rule of law					0.540** (0.243)		1.343*** (0.322)
Control of corruption						-0.351 (0.290)	-0.957*** (0.328)
Country FE	No	No	Yes	Yes	Yes	Yes	Yes
<i>N</i>	6455	6430	6268	6268	6268	6268	6268
Pseudo R2	0.027	0.034	0.053	0.053	0.054	0.054	0.059
log likelihood	-1399.882	-1388.869	-1352.697	-1352.460	-1350.444	-1351.342	-1342.968

Standard errors allowing clusters in countries in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Table 3: Dependent Variable: State-aids approved by the Commission

	(1)	(2)	(3)	(4)	(5)
	Probit	OLS	Logit	Probit	Probit
TD	-0.113*	-0.015*	-0.221*	-0.113***	-0.141**
	(0.059)	(0.008)	(0.124)	(0.034)	(0.064)
diff ln GDPpc	-0.335	-0.058	-0.694	-0.335	-0.854
	(1.424)	(0.137)	(3.017)	(1.101)	(1.340)
diff unemployment	-0.020	-0.003	-0.046	-0.020*	-0.019
	(0.021)	(0.003)	(0.043)	(0.011)	(0.021)
diff inflation	-0.021	-0.003	-0.053	-0.021	-0.026
	(0.040)	(0.003)	(0.086)	(0.032)	(0.043)
Trend	-0.011	-0.001	-0.026	-0.011	-0.003
	(0.008)	(0.001)	(0.018)	(0.014)	(0.008)
Length EU	0.012***	0.001***	0.028***	0.012	0.013***
	(0.002)	(0.000)	(0.005)	(0.012)	(0.002)
Rule of law	0.533**	0.051*	1.114**	0.533*	0.539**
	(0.251)	(0.027)	(0.554)	(0.279)	(0.240)
Scheme					0.367***
					(0.086)
TDxScheme					0.087**
					(0.038)
Country FE	YES	YES	YES	YES	YES
Bootstrapped	NA	NA	NA	278	NA
<i>N</i>	5923	6074	5923	5923	5923
R2/Pseudo R2	0.053	0.026	0.053	0.053	0.085
log likelihood	-1330.979	89.356	-1331.420	-1330.979	-1286.797

Standard errors clustered in countries in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Table 4: Dependent Variable: State-aids approved by the Commission

	(1)	(2)	(3)
	IV-OLS	IV-Probit	IV-Probit
Second Stage: Approval			
TD	-0.026** (0.013)	-0.204* (0.106)	-0.215* (0.115)
diff ln GDP pc	-0.039 (0.144)	-0.340 (1.428)	-0.831 (1.347)
diff unemployment	-0.003 (0.002)	-0.022 (0.021)	-0.021 (0.020)
diff inflation	-0.002 (0.003)	-0.013 (0.039)	-0.018 (0.042)
Trend	-0.002 (0.002)	-0.021 (0.014)	-0.014 (0.014)
Length EU	0.000 (0.000)	0.010*** (0.003)	0.011*** (0.003)
Rule of law	0.045* (0.027)	0.484* (0.259)	0.476** (0.242)
TDxScheme			0.050 (0.083)
Scheme			0.415*** (0.130)
Country FE	Yes	Yes	Yes
<i>N</i>	6068	5923	5923
R-squared	0.025		
log likelihood		-6639.158	-8601.804
First-Stage: Transposition Deficit			
diff ln GDP pc	3.725 (3.120)	4.173 (3.489)	4.163 (3.467)
diff unemployment	0.005 (0.040)	0.008 (0.043)	0.008 (0.043)
diff inflationrate	0.040 (0.040)	0.054 (0.050)	0.053 (0.050)
Trend	-0.006 (0.013)	-0.007 (0.014)	-0.007 (0.014)
Length EU	-0.033*** (0.004)	-0.033*** (0.004)	-0.033*** (0.004)
Rule of law	-1.184* (0.608)	-1.221** (0.595)	-1.209** (0.591)
Wave Index	0.691*** (0.114)	0.682*** (0.112)	0.727*** (0.099)
Scheme			0.036 (0.096)
IVxScheme			-0.064 (0.062)
Country FE	Yes	Yes	Yes
F-test of Excluded	36.6	36.9	27.5
Partial R-squared	0.322	0.319	0.379
R-squared	0.675	0.677	0.678

Standard errors clustered in countries in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Table 5: Probit Regression: ECJ Stage

	Dep. Variable: State-aids favorable				
	(1)	(2)	(3)	(4)	(5)
log diff GDP pc	13.026*	13.301*	10.420	10.894	14.530
	(7.571)	(7.711)	(7.949)	(7.993)	(11.124)
diff unemployment	0.116*	0.117*	0.079	0.086	0.090
	(0.063)	(0.064)	(0.072)	(0.065)	(0.083)
diff inflation	0.185	0.209	0.115	0.132	-0.051
	(0.158)	(0.153)	(0.159)	(0.146)	(0.182)
Trend	-0.061**	-0.077***	-0.025	-0.050*	-0.049
	(0.030)	(0.030)	(0.032)	(0.029)	(0.035)
Length EU	0.063***	0.067***	0.072***	0.094***	0.086***
	(0.022)	(0.023)	(0.021)	(0.025)	(0.020)
Competitor	1.817***	1.820***	1.835***	2.841***	3.121***
	(0.286)	(0.297)	(0.273)	(0.568)	(0.657)
TD (ending)		-0.171			
		(0.162)			
TD (starting)			0.251**	0.339**	0.459**
			(0.122)	(0.158)	(0.222)
CompXTD				-0.566*	-0.692**
				(0.291)	(0.322)
Country FE	YES	YES	YES	YES	YES
Sample	All	All	All	All	Companies
<i>N</i>	238	238	238	238	176
Pseudo R2	0.268	0.270	0.279	0.295	0.328
log likelihood	-117.983	-117.675	-116.328	-113.727	-81.738

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Table 6: Robustness Checks

	Dep. Variable: State-aids approved						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	OLS	Logit	Probit	Probit	Probit	Probit	Probit
diff ln GDP pc	2.889 (2.091)	17.107 (14.195)	10.894* (6.382)	10.259 (7.936)	9.391 (8.404)	9.613 (8.304)	15.480* (8.896)
diff unemployment	0.026 (0.019)	0.132 (0.113)	0.086 (0.064)	0.100 (0.066)	0.075 (0.070)	0.077 (0.066)	0.101 (0.067)
diff inflation	0.047 (0.044)	0.198 (0.248)	0.132 (0.203)	0.092 (0.122)	0.067 (0.130)	0.092 (0.142)	-0.003 (0.178)
Trend	-0.007 (0.008)	-0.089* (0.053)	-0.050 (0.063)	-0.050 (0.036)	-0.073* (0.038)	-0.063 (0.044)	-0.076* (0.040)
Length EU	0.020*** (0.002)	0.166*** (0.046)	0.094 (0.062)	0.104*** (0.030)	0.125*** (0.037)	0.118*** (0.034)	0.143*** (0.037)
Competitor	0.722*** (0.129)	4.801*** (0.970)	2.841*** (0.891)	6.806*** (2.082)	5.253*** (0.644)	4.490*** (0.672)	4.126*** (0.927)
TD	0.101* (0.050)	0.588** (0.275)	0.339** (0.169)	0.316* (0.178)	0.392** (0.162)	0.382** (0.165)	0.468*** (0.156)
CompXTD	-0.131 (0.082)	-0.967* (0.501)	-0.566 (0.361)	-0.546** (0.243)	-0.706*** (0.217)	-0.641*** (0.243)	-1.009*** (0.339)
VA				2.091 (1.615)			
CompXVA				-3.103* (1.677)			
Rule of law					0.709 (1.114)		
CompXRL					-1.509*** (0.351)		
Control of corruption						0.467 (0.891)	
CompXCC						-1.062*** (0.276)	
Scheme							-0.443 (0.565)
TDxScheme							-0.209 (0.190)
ComxScheme							-1.371 (1.120)
TDxComxScheme							0.561 (0.417)
<i>N</i>	255	238	238	238	238	238	238
R2/Pseudo R2	0.366	0.293	0.295	0.310	0.310	0.309	0.341
log likelihood	-120.971	-114.022	-113.727	-111.325	-111.197	-111.492	-106.284
Bootstraps			46				

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Table 7: Is ECJ sufficiently independent?

	Dep. Var.: The Applicant obtains favorable decision				
	(1)	(2)	(3)	(4)	(5)
ln Asset	0.024 (0.059)	0.036 (0.060)	0.031 (0.060)	0.025 (0.063)	0.057 (0.083)
ln Employee	0.009 (0.063)	0.018 (0.063)	0.023 (0.064)	0.022 (0.064)	-0.023 (0.080)
Competitor	-0.647** (0.262)	-0.716** (0.278)	-0.606* (0.348)	-0.511 (0.352)	-0.388 (0.385)
Trend	-0.092*** (0.032)	-0.095*** (0.034)	-0.089*** (0.034)	-0.094*** (0.034)	-0.119*** (0.041)
Total Applicants		0.118 (0.105)	0.118 (0.265)	0.127 (0.105)	0.336** (0.136)
Cases before		-0.057 (0.053)	-0.057 (0.287)	-0.060 (0.054)	-0.075 (0.065)
Support.neutral			0.333 (0.365)	0.333 (0.368)	0.385 (0.425)
Support.positive			0.158 (0.420)	0.400 (0.417)	0.676 (0.487)
Register				0.119 (0.320)	0.330 (0.374)
Country FE	YES	YES	YES	YES	YES
Industry FE	NO	NO	NO	NO	YES
<i>N</i>	192	192	192	192	173
Pseudo R2	0.132	0.143	0.143	0.148	0.246
log likelihood	-103.546	-102.174	-101.623	-101.653	-83.708

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Table 8: Total state aids in a year without railways and agriculture (in million of euro)

	2009	2010	2011	2012	2013	2014	2015	Average
Austria	2613.38	1772.03	1508.74	1682.94	1680.03	1301.35	1994.09	1793.22
Belgium	2399.60	2368.03	1768.72	1589.86	1596.52	1760.14	1961.02	1920.55
Bulgaria	29.09	18.89	22.92	31.17	46.48	158.97	240.42	78.28
Cyprus	69.72	94.94	140.93	107.10	130.05	119.23	125.26	112.46
Czech Republic	844.55	1000.71	1259.92	1431.42	1606.36	1598.66	1938.89	1382.93
Denmark	2159.36	2089.34	2260.24	2542.62	2545.65	2498.77	3311.69	2486.81
Estonia	11.49	14.79	19	31.41	84.77	155.31	193.86	72.95
Finland	988.92	946.84	1743.67	1269.12	1469.9	1625.36	1543.04	1369.55
France	13489.12	13930.70	12567.25	14015.27	12417.05	14421.58	13381.17	13460.31
Germany	17722.90	15402.50	12642.01	12480.41	12814.50	36980.84	36520.65	20651.97
Greece	2173.12	1739.38	2230.27	1707.67	2675.59	1677.58	2205.22	2058.41
Hungary	1291.30	2019.19	959.14	925.23	1219.27	1495.44	1335.33	1320.70
Ireland	785.90	953.38	674.94	554.04	905.00	691.64	444.90	715.69
Italy	4895.90	3250.02	2924.60	3560.90	2782.91	3194.93	3981.40	3512.95
Luxembourg	95.90	77.24	84.29	73.90	129.71	134.16	147.32	106.08
Malta	101.3	78.51	97.78	126.83	187.13	96.62	131.61	117.11
Netherlands	1984.14	2221.46	2331.55	2107.32	1998.79	2074.48	1998.89	2102.37
Poland	2574.80	2894.30	2211.22	2347.13	2218.84	4874.00	3192.86	2901.88
Portugal	1631.66	1528.05	1539.60	876.32	461.37	737.90	773.05	1078.28
Romania	195.74	199.06	387.65	619.13	886.43	1046.52	1224.21	651.25
Slovakia	271.67	253.86	160.85	136.83	181.54	298.8	403.11	243.81
Slovenia	306.46	301.47	430.83	392.30	419.51	411.92	422.57	383.58
Spain	5076.77	4494.39	3924.43	3308.99	2694.48	2903.39	2052.16	3493.51
Sweden	2712.03	3054.93	3211.34	3387.65	3507.05	3415.09	3320.17	3229.75
UK	4177.75	4923.55	4536.55	5636.87	6039.16	8154.43	8731.18	6028.50

Table 9: Estimation of Economic Cost of the Bias (in million of euro)

Country	2009	2010	2011	2012	2013	2014	2015	Average
Austria	-31.49	-35.26	-18.94	-12.72	-27.69	-10.62	-18.51	-22.18
Belgium	-30.86	-27.37	-57.87	-47.35	-28.37	-17.46	-31.61	-34.41
Bulgaria	-0.12	-0.11	-0.13	-0.27	-0.46	-2.02	-2.05	-0.74
Cyprus	-0.75	-1.79	-3.88	-1.22	-2.91	-1.70	-1.24	-1.93
Czech Republic	-4.99	-4.97	-5.75	-3.07	-2.91	-2.97	-5.66	-4.33
Denmark	-8.62	-11.11	-15.04	-13.58	-6.78	-6.57	-13.09	-10.68
Estonia	-0.11	-0.27	-0.24	-0.04	-0.47	-0.42	-1.86	-0.49
Finland	-6.60	-10.07	-30.33	-11.89	-11.79	-4.30	-10.29	-12.18
France	-185.55	-132.59	-174.00	-57.51	-101.41	-117.42	-184.18	-136.10
Germany	-145.27	-211.22	-190.85	-102.39	-105.28	-298.60	-446.58	-214.31
Greece	-44.34	-23.61	-36.75	-11.88	-11.35	-4.77	-23.06	-22.25
Hungary	-7.28	-40.26	-19.10	-6.65	-12.13	-12.42	-7.51	-15.05
Ireland	-10.73	-9.01	-2.72	0.00	-8.52	-3.71	-1.79	-5.21
Italy	-99.92	-98.31	-88.46	-40.36	-60.14	-22.64	-47.38	-65.32
Luxembourg	-2.06	-1.66	-1.93	-0.71	-1.45	-1.63	-3.55	-1.85
Malta	-0.28	-0.11	-0.14	-0.18	-0.55	-0.14	-0.20	-0.23
Netherlands	-13.53	-21.18	-41.71	-11.49	-16.39	-11.11	-16.07	-18.78
Poland	-48.34	-65.90	-52.21	-56.85	-29.45	-45.32	-59.69	-51.11
Portugal	-25.11	-19.28	-38.09	-13.49	-3.20	-6.07	-3.18	-15.49
Romania	-0.81	-1.38	-6.48	-3.37	-13.36	-14.42	-18.89	-8.39
Slovakia	-1.45	-1.69	-1.29	-0.55	-0.97	-0.80	-2.15	-1.27
Slovenia	-2.03	-3.60	-6.28	-4.15	-4.96	-4.47	-5.54	-4.43
Spain	-35.41	-56.96	-55.74	-29.47	-27.20	-28.39	-11.44	-34.94
Sweden	-14.71	-37.43	-26.01	-4.60	-14.25	-9.16	-17.88	-17.72
UK	-29.98	-29.45	-50.87	-50.93	-54.89	-35.69	-57.61	-44.20
Total	-750.33	-844.58	-924.81	-484.75	-546.86	-662.85	-991.01	-743.60

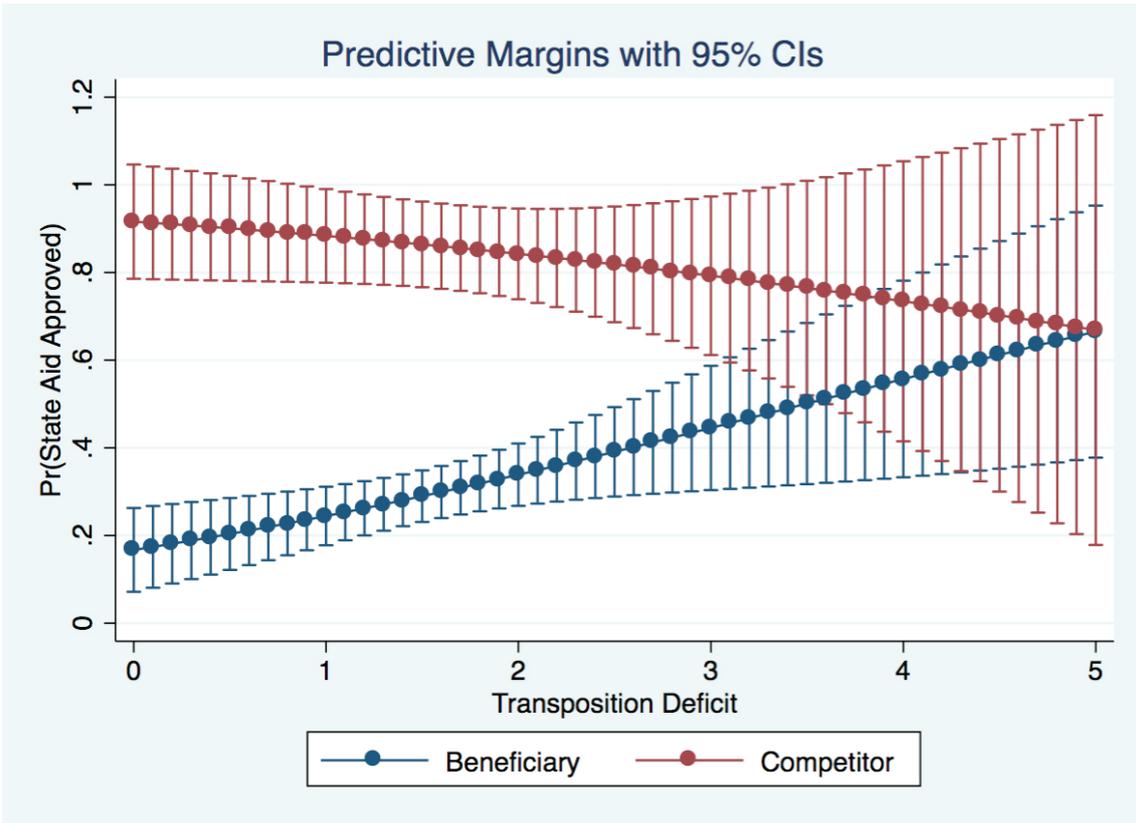


Figure 2: It shows the predicted probability of being a Beneficiary or a Competitor Case at differential levels of Transposition Deficit, using the estimates of Column 4 of Table 5. When transposition deficit is low, competitor cases are associated with higher probability of approval because they were initially accepted by the Commission, implying that the cases are of higher quality. On the other hand, beneficiary cases are of lower quality because they were initially rejected by the Commission. The decision of the court is consistent with what we expect from a roughly fair screening mechanism by the Commission. When the transposition deficit gets higher, the aids of those beneficiary cases get more chances to be approved. It suggest that the court is correcting the bias induced by the Commission.

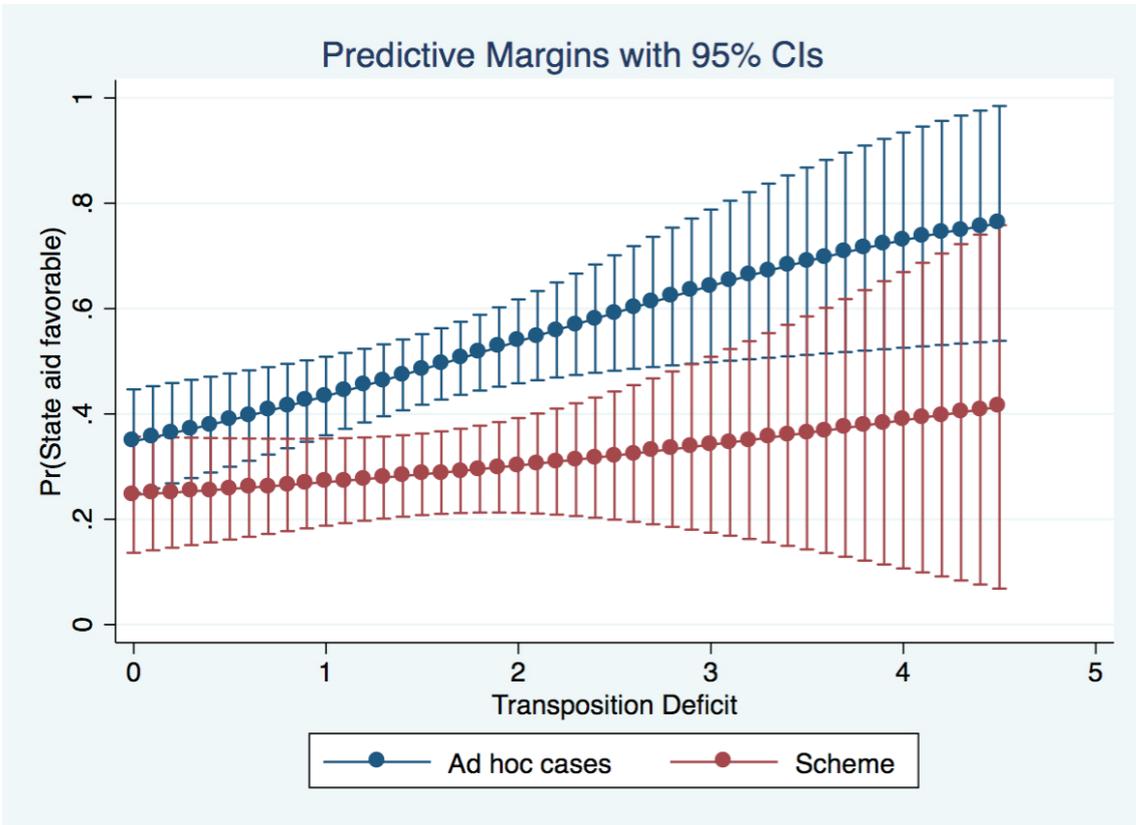


Figure 3: It shows the predicted probability of Scheme and Non-Scheme (Ad-hoc cases) beneficiary cases. We find that, though the difference is not statistically significant, the expected favorable rate of Non-Scheme cases lies above that of Scheme cases. The correction of the bias is stronger in Non-Scheme cases.



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