## THE POLITICAL ECONOMY OF THE COHESION POLICY

A Perspective from the Second Generation Theory of Fiscal Federalism

Master Thesis by

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## Abstract

The purpose of this paper is to analyze the political economic aspects of the Cohesion Policy, in a systematic way, using the findings of the Second Generation Theory of Fiscal Federalism (SGTFF) on the nature of intergovernmental transfers. This study delineates three theoretical models, offshoots of the SGTFF literature, pork-barrel distribution, the principal-agent problem, and the flypaper effect, to explore three types of distortions that afflict the allocation and the implementation of the Cohesion Policy (CP). The first two theoretical models complement existing empirical studies on the CP, while the occurrence of a flypaper effect has not yet been tested by the pertaining literature, a gap which this study aims to address. Using an error-correction model with panel data from the EU-25 for the period 1993-2014, it asserts that the implementation of the CP instigates a disproportionate increase of government expenditure both in the short and in the long-term.

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## List of Abbreviations

CEO $\rightarrow$ Chief Executive Officer	$IV \rightarrow$ Independent Variable		
$CF \rightarrow Cohesion Fund$	MFF $\rightarrow$ Multiannual Financial Framework		
COM $\rightarrow$ European Commission	MLG $\rightarrow$ Multi-Level Governance		
$CP \rightarrow Cohesion Policy$	MS $\rightarrow$ Member States		
$CR \rightarrow Council Regulation$	NUTS $\rightarrow$ Nomenclature of territorial units		
DV $\rightarrow$ Dependent Variable	for statistics (Nomenclature des Unités		
EMU $\rightarrow$ Economic and Monetary Union	Territoriales Statistiques)		
EPDE -> European Regional Development	$OLS \rightarrow Ordinary Least Squares$		
Fund	P-A $\rightarrow$ Principal-Agent		
ESF $\rightarrow$ European Social Fund	P-B → Pork- Barrel		
ESIF $\rightarrow$ European Structural and	$PA \rightarrow Partnership Agreements$		
Investment Funds	PCSE $\rightarrow$ Panel-Corrected Standard Errors		
EU $\rightarrow$ European Union	R&D → Research & Development		
FF $\rightarrow$ Fiscal Federalism	SF $\rightarrow$ Structural Funds		
FGTFF $\rightarrow$ First Generation Theory of	SGP $\rightarrow$ Stability and Growth Pact		
Fiscal Federalism	SGTFF $\rightarrow$ Second Generation Theory of		
$GDP \rightarrow Gross Domestic Product$	Fiscal Federalism		
IG $\rightarrow$ Inter-Governmentalism	SME $\rightarrow$ Small and Medium Enterprises		

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## Introduction

The Cohesion Policy (CP)<sup>1</sup> of the European Union (EU) has employed, every year since 1994, approximately one-third of the EU budget to assist the regional economic growth and the reduction of economic disparities between the Union's regions. While the reduction of interregional inequalities has been acknowledged as a primary goal since the Treaty of Rome, it took almost three decades for the institutionalization of the CP (Bachtler, Mendez, & Wishlade, 2013). The existing academic literature on the matter has covered diligently political (Hooghe & Marks, 2001) and economic (Ederveen, Groot, & Nahuis, 2002) questions, yet the political economy studies in this field are still at the inceptive phase. While economists and political scientists ask, respectively, "Is the CP efficient?" and "Who governs the implementation of the CP?", political economists analyze the political incentives that might distort the efficient implementation of this policy and the allocation of the respective funds. Although the questions raised by economists and political scientists are related to those of who study political economy, they are not in any case identical.

Among others, Blom-Hansen (2005) and Bodenstein & Kemmerling (2012) have analyzed confined aspects of the political economy of the CP, but to the best of my knowledge, a systematic study on the topic has yet to be written. This paper uses the findings of the Second Generation Theory of Fiscal Federalism (SGTFF) on the nature of intergovernmental transfers to provide a thorough analysis on the political economy of the CP. It will delineate three theoretical frameworks, corollaries of the SGTFF, which cover three different ways in which decision-makers may advance their interests, instead of maximizing economic efficiency, in

<sup>&</sup>lt;sup>1</sup> CP is formally referred to nowadays as the Regional Policy, but since most (to not say all of the studies) address to it with its former name, to avoid confusion, I will also use the first label.

the allocation and the implementation of the CP's funds: pork-barrel distribution, principalagent problem, and flypaper effect.

These frameworks supply answers to questions like, "What electoral factors affect the regional allocation of the CP's funds?"; "Why and how do the member states (MS) violate the principles that guide the allocation of these grants?"; and "Do the CP transfers induce a disproportional increase in government spending?" The first two questions have already been empirically assessed, but these empirical studies lack cohesive theoretical models, while the third question has yet to be explored. This Master thesis aims to fill these three lacunae, by suggesting that the first two empirical questions can be, respectively, theoretically characterized by the porkbarrel and the principal-agent models, and by designing the first empirical analysis regarding the presence of the flypaper effect in the implementation of the CP. This paper uses the MS as units of analysis and takes a variable-oriented approach, i.e. it focuses on the distortions at the EU level and does not explore how these inefficiencies are affected by the specific conditions and institutions in each MS.

The body of this thesis is structured in the following way. In the next chapter, it briefly encapsulates the design of the Cohesion Policy and its pertaining economic and political literature. This literature review is necessary to explicate the choice of the unit of analysis. Chapter 3 offers a summary of the treatment of the intergovernmental grants from a fiscal federalism perspective and sheds light on the way that this treatment can be used to study the political economy of the CP. The argument is treated more extensively in the following sections, where three theoretical frameworks from the literature of the SGTFF are discussed: pork-barrel distribution, principal-agent problem, and flypaper effect. The first two can be used, respectively, to complement existing empirical studies on the politically motivated regional allocation and on the substitution effect of the CP's funds. On the other hand, the occurrence of the flypaper effect in the administration of the CP grants has not yet been tested

empirically, a gap which is addressed in chapter 4. The fourth chapter introduces an errorcorrection model, which affirms the hypothesis that the CP's funds induce a disproportionate increase in government spending both in the short and in the long-term. Chapter 5 summarizes and proposes avenues for further research.

## **Chapter 1: Cohesion Policy**

The Cohesion Policy (CP) is "one of the most ambitious, complex and misunderstood areas of EU decision-making" (Peterson & Bomberg, 1999, p. 146). Before assessing the political economic aspects of the second most-funded European policy, it is vital to offer a short tour of the CP's design and mechanisms.

Figure 1: The EU's Multiannual Financial Framework for the Period 2014-2020.



#### 1.1. The Design of the Cohesion Policy

The complexity of the CP lies primarily in the systematic modifications that it undergoes — the regulations on the allocation and the implementation of the funds are subject to change every time a new multiannual financial framework (MFF)<sup>2</sup> is approved. Since its

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<sup>&</sup>lt;sup>2</sup> The multiannual budget of the EU, which is usually planned for periods 6-8 years.

institutionalization in 1988,<sup>3</sup> there have been five "cycles" (the fifth, ongoing, covers the period 2014-2020), with different regulations and allocations of the funds. The examination of the CP in full details requires whole books — in fact, for an excellent analysis of the CP, check Bachtler et al. (2013) — thus this chapter focuses only on those policy's features that are relevant to this study, i.e. the regulation, the funding scheme, the driving principles, and the allocation of the funds.

Article 130d of the Maastricht Treaty provides that "[The] Council, acting unanimously on a proposal from the Commission and after obtaining the assent of the European Parliament . . . shall define the tasks, priority objectives and the organization of the Structural Funds . . .". The decision on the overall size of the CP's funds also demands the same Inter-Institutional Agreement (IIA)<sup>4</sup> in accordance with Article 312/2 of the Treaty on the Functioning of the European Union. The required unanimity of all the MS, the Commission, and the Parliament begets long and tortuous negotiations, which are prone to political and economic consideration that can hardly be anticipated by assessing the official principles or the distributive formulas stipulated by the COM regarding the CP's funds allocation. Bachtler et al. (2013) advance this idea adroitly, as they claim that, "the negotiation of financial and policy 'packages' [of the CP] are akin to the task of completing a jigsaw, where the ultimate size, shape, and picture are not known in advance" (p. 59).

The CP's funds are matching grants,<sup>5</sup> allocated to regions and countries through three funding schemes: the European Regional Development Fund (ERDF), the European Social Fund (ESF),

<sup>&</sup>lt;sup>3</sup> The Reform of the Structural Funds (1988). Structural Funds (SF) are the same as the CP funds, but the first do not include the Cohesion Fund, which was introduced as part of the CP in 1993. This is an important point, because many studies, which we will discuss later, work with the SF, instead of the CP funds. Other studies may use European Structural and Investment Funds (ESIF), which include all three CP funds, plus the European Agricultural Fund for Rural Development and European Maritime and Fisheries Fund. Since all ESIF are regulated together, the differences are almost irrelevant.

<sup>&</sup>lt;sup>4</sup> Between the Commission, the Council, and the Parliament.

<sup>&</sup>lt;sup>5</sup> Matching grants are those type of transfers where the grantor co-finances together with the recipient a chosen program or project.

and the Cohesion Fund (CF). The ERDF's targets are mainly small and medium enterprises (SME), research and development (R&D), and infrastructure, in other words, those programs that focus on economic growth. The ESF finances programs that promote employment, social inclusion and education, while the CF hones in environmental and trans-European transport networks programs in countries with a Gross Domestic Product (GDP) below 90% of the EU's average.



Figure 2: The funding scheme of the Cohesion Policy

The implementation of this policy is carried accordingly to four official principles:<sup>6</sup> concentration, programming, partnership, and additionality. The principle of concentration can refer to effort, spending, or resources. The concentration of effort forces the CP's funds to be allocated in certain key areas, which for 2014-20, are R&D, Information Technology, SME, and Low Carbon Economy. The concentration of spending allows two years for the spending of the funds after their allocation.

<sup>&</sup>lt;sup>6</sup> In addition to these four, there are the general working principles of the EU, like subsidiarity or proportionality.

The concentration of resources means that the majority of the funds must be allocated to the poorer regions. EU (for the ongoing cycle of the CP, around 70% of the funds are earmarked for the less-developed regions, or Nomenclature of territorial units for statistics (NUTS) II areas with a GDP below 75% of the EU's average).<sup>7</sup>

The principle of programming asserts that the CP's funds only Operational Programs (OP), not individual projects. The principle of partnership states that each OP is designed, implemented and evaluated by a collective process involving authorities at the European, the national and the local level. Last, the principle of additionality refers to the fact that EU funds are to serve as complements not as substitutes for the national regional funds, i.e. the member states (MS) should not use the CP's funds in place of their domestic funds earmarked for regional structural investments. In this light, programs are co-financed by the CP and the national, and sometimes the regional, governments. The rate of co-finance, or the proportion paid by the EU, depends on the region and the type of program.<sup>8</sup>

<sup>&</sup>lt;sup>7</sup> The ERDF and the ESF are regionally allocated. The EU uses its own territorial division, which carves the territories of the MS in a hierarchical system of NUTS: NUTS 1, 2, and 3. The level of the pertaining NUTS is determined by the population: NUTS 3 regions have between 150.000 and 800.000 residents, NUTS 2 regions are the agglomeration of several bordering NUTS 3 and must have between 800.000 and 3.000.000 inhabitants, while NUTS 1 regions bring together several abutting NUTS 2 regions and must have a population between 3.000.000 and 7.000.000 people. As for the CP, most of the regional allocation takes place at the NUTS 2 level, where the regions are classified as Less-Developed Regions (LDR), where GDP per capita is less than 75% of the EU's average, Transition Regions (TR), where GDP per capita is between 75% and 90% of the EU's average, and More-Developed Regions (MDR), where GDP per capita is over 90% of the EU's average. For a detailed breakdown of the EU at the NUTS 2 level, see Figure 2.

<sup>&</sup>lt;sup>8</sup> See Article 120 of the CR 1303/2013. In addition, the co-finance rates have changed in each cycle.

Figure 3: The NUTS 2 map of the EU



#### **1.2.** Cohesion Policy Literature Review

The existing academic literature on the Cohesion Policy (CP) has investigated in details two issues, one of importance to economists and the other to political scientists. The economic dispute revolves around the idea whether the CP has been effective in achieving its goals, i.e. regional growth and most importantly economic convergence within the EU. This query is approached either through macroeconomic model simulations or econometrics analyses (Ederveen et al., 2002). Economists, like Marzinotto (2012), who take the first approach usually employ "counterfactual historic models" to assess what would have happened in the absence of the CP. On the other hand, the econometric method is more limited in its scope, but less complex<sup>9</sup> — see for instance (Boldrin & Canova, 2001; Dall'erba & Le Gallo, 2008). The conclusions are heterogeneous, with some studies underlining the failure of the CP to achieve its goals — (Boldrin & Canova, 2001; Marzinotto, 2012; Rodriguez-Pose & Fratesi, 2004) —

<sup>&</sup>lt;sup>9</sup> Not in the sense of being easier to employ, but rather that it makes less assumptions.

some claiming the opposite — (Beugelsdijk & Eijffinger, 2005; Dall'erba & Le Gallo, 2008) — and others emphasizing the importance of the institutions regarding the outcome — (Ederveen et al., 2002; Percoco, 2005).<sup>10</sup>

On the other hand, the cynosure of the political scientists is directed toward the key actors that decide the allocation and the implementation of CP's funds. The academic disagreement over CP's governance mirrors the old and the overarching dispute regarding the actors that control decision-making at the EU level. The discussion is dominated by two principal theoretical frameworks, inter-governmentalism (IG), or state-centrism, and multi-level governance (MLG).

The IG model was first elaborated by Hoffmann (1966) and later amended by the so-called liberal IG scholars, mainly represented by the writings of Milward, Brennan, & Romero (2000) and Moravcsik (1991, 1995). While there are some divergences between these two generations regarding the nature of the states' interaction, they both agree that the member states (MS) are the sole authorities at the national level, while the decision-making at the European level is the upshot of bargaining between the respective government leaders. For IG scholars, the subnational governments do not play any substantial role either in the domestic or in the European governance, while the supranational institutions, like the European Commission (COM), serve only to reduce the transaction costs of the MS' interactions, by providing information and enforcing rules. Although the MS' leaders do not engage in every step of the decision-making, they are in charge of setting the primary agenda of integration. The IG advances the idea that the MS do not cooperate beyond their desires, in that sensitive decisions regarding further integration require unanimity in the Council, or that the MS can use the veto against decisions that hurt their interests, accordingly with the Luxembourg Compromise.

<sup>&</sup>lt;sup>10</sup> Ederveen et al. (2002) claim that the CP may even hamper the economic growth in countries with high corruption and weak institutions.

The other theoretical model, that of the MLG, has been developed around the writings of Liesbet Hooghe and Gary Marks (Hooghe, 1996; Hooghe & Marks, 2001; Marks, 1992; Marks, Hooghe, & Blank, 1996). The MLG model alleges that European integration has diluted the powers of the MS both in the domestic and in the European arena. According to this stream, central governments share their authority with supranational and subnational actors. From a geometric perspective, the IG's advocates see the European governance as a layered cube, with the central government on top, while the MLG supporters see a sphere, where national, supranational and subnational actors interact with each other.<sup>11</sup>

Regarding the CP, the IG scholars emphasize the role played by the central governments in the distribution of the funds. Bachtler et al. (2013) assert that the policy itself was begotten partly due to the threats of the British and Irish to block the creation of the Economic and Monetary Union (EMU), as they demanded some form of regional compensation given their small agricultural benefits. The unanimity required in the Council for the allocation of the funds often leads to the use of the CP's funds as side payments to recalcitrant members (Behrens & Smyrl, 1999), or to MS demanding for the CP's funds to be treated as such (Bailey & Propris, 2002).<sup>12</sup> De La Fuente & Domenech (2001) have appraised empirically that countries with similar levels of income, despite the principle of concentration of resources, receive different amounts of funds per capita. The MS can even use as leverage other developments in the Union, e.g. Spain and Ireland agreed to ratify the Maastricht Treaty only in exchange for more remunerative allocations (Bachtler et al., 2013).

While accepting the fact that the allocation of the funds is state-centric, Marks (1992) claims that the reformation and the administration of the CP include various supranational and

<sup>&</sup>lt;sup>11</sup> This is a very brief and oversimplified synthesis on the differences between the IG and the MLG models. Caporaso & Keeler (1993) and Marks et al. (1996) have written excellent reviews on this issue.
<sup>12</sup> United Kingdom during Thatcher's government is the epitome of such behavior.

subnational actors. In addition, Hooghe & Marks (2001) and Marks et al. (1996) insist that the implementation of CP is not merely a symptom of, but also a factor for, the empowerment of non-national actors, and that this policy stands on the edge of a new political order, in which the MS share the authority over decision-making. The shift of power toward supranational institutions is embodied by the inclusion of the CP's funds under the label of noncompulsory spending, which gives to the European Parliament a voice in assigning the total budget of the policy, and the introduction of the programming principle, which means that the MS must present to the COM explicit spending programs that the latter must approve.<sup>13</sup>

As for the shift of power toward subnational actors, the MLG scholars point at the importance of the partnership principle. This principle, introduced by Article 4/1 of the Council Regulation (CR) 2052/88, provides that, "[Community operations] shall be established through close consultations between the COM, the MS and the competent authorities designated by the latter at national, regional, local or other level . . . [and] referred to as "partnership" . . . [and] shall cover the preparation, financing, monitoring, and assessment of operations." Tömmel (1998) put forward the idea that the empowerment of the regional actors was a by-product of the COM's strategy to strengthen its weak position vis-à-vis the MS regarding decision-making at the European level and the most important available instrument for the task was the partnership principle.

This paper's focus is on the political economic aspects of the CP, i.e. on the political factors and incentives that alter the allocation of the funds and the implementation of the policy. This issue is strongly related to the questions that were treated in this section. The nexus with the first, that on economic efficiency, is that the existence of political incentives that might encourage the administration of the funds outside the predictions of the formal guidelines could

<sup>&</sup>lt;sup>13</sup> Before 1988, the regional funds were provided to the MS through national quotas, and the Commission was almost powerless, at least formally, in affecting the regional or thematic distribution of the funds.

also prove a cause of economic inefficiency. The study of this relation is outside the scope of this paper — check Ederveen, Gorter, de Mooij, & Nahuis (2003), as a tentative approach on the matter. As for the second question, i.e. the one on the locus of decision-making, before asserting the ways in which the politicians may use the CP to advance their interests, we have to know the identity of these decision makers. The pertaining unit of analysis in this study are the MS, or their central governments, for two reasons.

First, while the MLG and the IG scholars disagree on the role that the MS have in decisionmaking, they do not posit polar opposite, but rather logical opposite, theses, i.e. the IG theory asserts that the central governments are the only important actors, while the MLG framework claims that subnational and supranational players also have a role in decision making. However, the MLG scholars recognize that "state executives and state arenas are important, or that these remain the most important pieces of the European puzzle" (Marks et al., 1996, p. 346).

Furthermore, the partnership principle, while formally recognizing the importance of the subnational actors, specifies that the respective competent authorities must be "designated by the MS" — see above, Article 4/1 of the CR 2052/88. The wording of the partnership principle was not altered even under the later regulations — Article 8 of the CR 1260/1999, Article 11 of the CR 1083/2006, and Article 5 of the CR 1303/2013. Blom-Hansen (2005) and Hooghe & Marks (2001) assert that the partnership principle has not yielded the expected results in stimulating a shift of governance toward subnational governments. Thus, there is a general consensus in the political science literature that the MS remain (the most) important actors regarding the execution of the CP.

Second, the three theoretical frameworks, which are introduces below, can be used, *mutatis mutandis*, in the same way, to explain the political incentives that the subnational governments

face. Hence, using the MS as units of analysis is not only justified by the literature but also irrelevant to a certain extent — and is primarily a convenience choice, given that the data this study uses in the empirical analysis are available only at the national level.<sup>14</sup>

<sup>&</sup>lt;sup>14</sup> In addition, this study takes a variable-oriented approach, meaning that it analyzes the occurrences only at the EU level, disregarding the specific circumstances in single MS. Albeit aware of the explanatory power of the latter, this thesis has to set some boundaries for the sake of simplicity and length.

# **Chapter 2: Cohesion Policy from the Perspective of Fiscal Federalist Studies on Intergovernmental Grants**

Fiscal federalism (FF) studies that have used the EU as a case-study have mostly been focused on the question whether the EU is a fiscal union. There is a broad consensus among these studies on the negative answer, given that the EU's budget —1% of the EU's GDP — is minute compared to other federalist states, like the US — e.g. (Padoa-Schioppa, 1995; Von Hagen, 1993). However, the transfers within the EU, including the Cohesion Policy (CP) funds, can safely be treated as intergovernmental transfers, given that the EU is formally recognized as a higher-level of governance, compared to its MS. In addition, the transfers from the EU to its members are not that inferior in size to other federal states like the US (Qian & Weingast, 1997). The federal government of the US has a larger budget, due to competencies that are not present at the EU level, like defense or foreign affairs, not because it redistributes more between its states.

This chapter argues that the allocation of the CP grants is in line with the suggestions offered by the First Generation Theory of Fiscal Federalism (FGTFF) on intergovernmental transfers, but fails to consider properly those moved by the Second Generation Theory of Fiscal Federalism (SGTFF). To assert this point, this chapter first provides a very brief and simplified synthesis of the two generations of FF, and their respective views on intergovernmental transfers — Garzarelli (2004) and Oates (2005) provide excellent reviews of the differences between these two branches.

The origins of the FGTFF can be traced to Oates (1972), albeit the latter attributes the merits to Arrow, Musgrave, and Samuelson works on public finance (Oates, 2005). The FGTFF is concerned with the efficient allocation of the public goods, which are prone to market failures,

given their non-rivalrous and non-excludable nature. The FGTFF assumes that the decisionmakers act as benevolent social welfare maximizer and the focus is on assigning the appropriate level of government that should engage with the distribution of the public goods. The Decentralization Theorem of Oates (1999, p. 1122) states that ". . . in the absence of costsavings from the centralized provision of a [local public] good and of inter-jurisdictional externalities, the level of welfare will always be at least as high (and typically higher) if Paretoefficient levels of consumption are provided in each jurisdiction than if any single, uniform level of consumption is maintained across all jurisdictions."

According to the FGTFF, even if the local public goods are prone to inter-jurisdictional externalities, they could still be provided more efficiently at the lowest level, as long as the central government provided to the respective jurisdiction matching grants "that would internalize the benefits" (Oates, 2005, p. 351). The FGTFF also supports unconditional grants from the richer to the poorer regions for equity and efficiency reasons, i.e. to prevent inter-jurisdictional mass migration (Oates, 1999). Both the matching and the unconditional grants are enforced by the central government and are referred to as intergovernmental transfers in the literature of the FF.

The distribution of the CP's funds is harmonious to the suggestions provided from the FGTFF on intergovernmental grants. The programs financed by these funds have high spillovers effects, e.g. R&D financed by the European Regional Development Fund (ERDF), environmental and trans-European transport networks programs by the Cohesion Fund (CF) and so on (Del Bo, Florio, Sirtori, & Vignetti, 2016). Moreover, the principle of the concentration of the resources, which forces the majority of the funds in the poorer regions, can be thought as equivalent to the concept of unconditional grants for equity and efficiency reasons. Marks (1992, p. 204) states that, "the Structural Funds were a response to new conceptions of fairness and equality . . .", but also acknowledges that these normative

considerations were bolstered by practical ones, e.g. fear of mass migration toward the richer MS.

The only apparent discordance is the fact that the CP is allocated only through matching grants, while the regional redistribution, according to the FGTFF, ought to be accomplished through unconditional grants. However, the co-finance rates depend not only on the type of the financed program but also on the region where the program is implemented, e.g. the same program may be financed by the CP from 50% up to 85%, depending inversely on the region's wealth. On the other hand, according to the FGTGG, the size of the matching grants should "reflect only the extent of the spillovers" (Oates, 1999, p. 1127). Since we are dealing with potentially the same programs, with the same extent of spillovers, the difference in co-finance rates can be considered as an equalizing mechanism.<sup>15</sup>

The SGTFF, alternatively, draws on the literatures of public choice, political economy and organizational economics (Garzarelli, 2004). The term was first coined by Qian & Weingast (1997), who rejected the classical assumption of the FGTFF, that of decision-makers acting as benevolent maximizers of social utility. Instead, government officials were assumed as actors who seek to maximize their own utility, usually assumed as the reelection prospects.<sup>16</sup> The political and the fiscal incentives of the decision-makers became crucial in assessing the best way to structure the public sector. According to SGTFF, fiscal decentralization is useful not so much in providing Pareto superior outcomes in the allocation of the local public goods, but rather in creating inter jurisdictional competition, which "serves as a disciplinary device to punish inappropriate market intervention by lower government officials" (Qian & Weingast, 1997, p. 88). Thus, while the locus of FGTFF was on market failures, that of SGTFF was on

<sup>&</sup>lt;sup>15</sup> The co-finance rate can increase even to 100%, for MS with temporary budgetary difficulties — see Article 24 of the CR 1303/ 2013.

<sup>&</sup>lt;sup>16</sup> The formal modelling of government officials as non-benevolent social planner is, probably, attributable to the writings of Brennan & Buchanan (1980) and Buchanan & Tullock (1962).

government failures. Weingast (2014, p. 22) claims that, "SGTFF explores how various institutions align . . . the incentives of political officials with those of citizens."

It is obvious that the intergovernmental transfers are seen very differently from the SGTFF, especially the equalizing transfers. In their initial work, Qian & Weingast (1997) deemed these transfers, not only as unnecessary but rather as harmful in promoting regional convergence. According to them, the latter could be the outcome only of interregional competition, which could be distorted by the intergovernmental transfers, as these grants would be allocated (partly) according to the political preferences of the central decision-makers.<sup>17</sup> The upper-level government is not an inert structure that redistributes to the lower-level bodies, according (only) to some welfare maximizing scheme or equity concerns. The politicians in charge of the distribution will seek to advance their own agenda, which is focused on the prospect of reelection.

The political incentives that distort the efficient allocation of the intergovernmental grants can also be found in the recipient size. The officials at the lower levels can be assumed to have the same political incentives as their counterparts. For this reason, in a later work, Weingast (2009) suggested that in case the equalizing transfers were necessary (for whatever political or moral reason), the grants had to be structured in a way that rewarded regions with high economic growth. Thus, politicians incentivized to spend the transfers inefficiently, if such spending would increase their reelection prospects, would have a countervailing interest to spend the money efficiently, in order to get more transfers. The CP allocation does not follow such logic, as the MS or the regions with better economic performances are not rewarded. In fact, the latter are "punished" by the EU, as getting economically better means receiving fewer funds in the next cycle.

<sup>&</sup>lt;sup>17</sup> The same argument was also raised by McKinnon (1997) and Usher (1995).

This structure of low-powered incentives provides opportunities for inefficient behavior in the allocation and the implementation of the CP's funds. This paper turns to three theoretical models, spin-offs of the SGTFF,<sup>18</sup> pork-barrel distribution, the principal-agent problem, and the flypaper effect, which conceptualize various distortions of the intergovernmental transfers. The CP's transfers are different from traditional ones, in that the former are not between only two tiers of governments, but rather between three or four, in cases of federal MS (Commission - MS - subnational governments - local governments). The unit of analysis is the MS, which in relation to the transfers is treated both as the upper-tier government (in the case of porkbarrel) and as the lower-tier (in the case of the principal-agent problem and the flypaper effect).

#### 2.1. Pork-Barrel Distribution

This section analyzes the electoral incentives of the MS that influence the allocation of the CP's funds, under the pork-barrel framework. The first sub-section will provide a summary of the pork-barrel literature, and the second will synthesize the existing empirical work on the electoral incentives behind the distribution of the CP. The section will finish with a discussion on the viable mechanisms that the MS can use to allocate the funds according to their political preferences.

#### 2.1.1. Pork-Barrel Literature Review

<sup>&</sup>lt;sup>18</sup> See Garzarelli (2004) and Oates (2005).

The academic (or quasi) origins of the concept of pork-barrel (P-B) can be traced at least as early as the 1920s (Maxey, 1919). The earliest conceptualization of this phenomenon, which in general terms persist even today, was that of an inefficient allocation of government funds in certain regions for political gains. Pork allocations affect in particular distributive policies. A distributive policy "allows the concentration of benefits and the collectivization of the costs, and certain of these programs, commonly referred to as pork barrel programs, are believed to have social costs that exceed their social benefit" (Baron, 1991, p. 57). Local investments in infrastructure, e.g. intra-regional highways or urban renewal plans, paid by the general taxation are the perfect embodiments of such policies. The Cohesion Policy is a redistributive policy, given that it funds regional programs and projects, through a centralized budget.<sup>19</sup>

The pioneering theoretical models on P-B allocation (Baron, 1991; Shepsle & Weingast, 1981; Weingast, Shepsle, & Johnsen, 1981) attempted to explain why decision-makers would engage in inefficient economic allocation. Weingast et al. (1981) claimed that certain political institutions replace economic costs and benefits with political ones. Among these institutions, they listed the reelection, the districting and the financing mechanisms.<sup>20</sup>

This section analyzes the political factors that affect the distribution of the CP's funds from the MS to the regions, and the model of P-B allocation can easily be adopted for such task. In fact, the literature that studies the electoral incentives behind intergovernmental transfers is quite developed. Two alternative viewpoints prevail over this literature. The first is represented by the rational choice theoretical models which claim that the swing states or regions will be the main beneficiaries of the intergovernmental grants, given the goal of the politicians to

<sup>&</sup>lt;sup>19</sup> The CP funds are allocated from the EU budget, which in turn is funded primarily (to the amount of 98%) from the MS.

<sup>&</sup>lt;sup>20</sup> The reelection mechanism denotes that politicians maximize their chances to get reelected not economic activity, the districting that in a majoritarian system it would pay to focus the pork on swing states, and the financing that local policies are paid by the general budget, i.e. distributive policies.

maximize the share of the votes at districts that can make a difference— for more on this issue check Dixit & Londregan (1996, 1998) and Lindbeck & Weibull (1987).

On the other hand, Cox & McCubbins (1986) predict that transfers will be focused on electoral strongholds rather than swing districts, in that most of the politicians are risk-averse and would focus on preserving their existing electorates rather than on gaining additional support. Solé-Ollé & Sorribas-Navarro (2008) support the same claim because they are sceptic on the possibility that a politician could capitalize on electoral support by supporting a region with a different political color, given that people could not be able to distinguish between the central grantor and the local government.<sup>21</sup> Although the electoral incentives on intergovernmental transfer are more compelling in countries with majoritarian electoral systems (Kemmerling & Stephan, 2008), states with proportional systems are not exempt from such occurrences (McGillivray, 2004).

#### 2.1.2. Empirical Studies on the Pork-Barrel Distribution of the CP's funds

The electoral incentives that affect the distribution of the CP's funds have been empirically assessed for interactions between various levels of governments: EU (represented by the COM) and the regional governments, MS and their respective subnational governments, or subnational governments and their corresponding localities.<sup>22</sup> The cynosure of this paper is on the pork-barrel behavior of the MS, but it will also briefly list the existing literature on the other

<sup>&</sup>lt;sup>21</sup> This model assumes that politician understand their maximizing problem in the same way as Solé-Ollé & Sorribas-Navarro (2008).

<sup>&</sup>lt;sup>22</sup> The political factors that influence the allocation among the various MS have also been studied diligently (Bailey & Propris, 2002; Behrens & Smyrl, 1999; Boldrin & Canova, 2001; De La Fuente & Domenech, 2001), and the paper covered this part in details, in the second chapter. The reason why this interplay, between the COM and the MS, was not included in the P-B framework, is that intergovernmentalist scholars neglect the role of the COM in the allocation of the funds, so it would make little sense to put it in the position of distributing pork.

levels as well. The value of the latter exercise rests as much as in giving a review of the existing research on the matter as on providing an example that the focus on the MS is not a necessary condition for this study, and m*utatis mutandis* the pork-barrel distribution framework can be applied even if the multi-level governance approach was taken for granted.

Chalmers (2013), Dellmuth (2011), Kemmerling & Bodenstein (2006), and Schraff (2014) evaluate the political factors that induce the COM to certain patterns of SF regional allocation, outside the official criteria and principles. While the COM does not have a traditional political color, it can still try to advance its own political agenda, like amassing public support for further European integration (Chalmers & Dellmuth, 2015; Osterloh, 2011) and increasing its prestige and power base (Majone, 2001). Thus, the COM is expected to remunerate more handsomely, respectively, the Eurosceptic regions (Kemmerling & Bodenstein, 2006) and the regions with a better track of funds' absorption (Dellmuth, 2011).

The effects of political motives on the allocation of the CP's funds have also been analyzed for the lower levels of governments, i.e. between regional governments and localities. The findings are mixed, and they seem dependent on the political clout of the regions in Brussels and in the national arena. Dellmuth & Stoffel (2012) find that the electoral incentives were an important factor in the distribution of the structural funds from the German Länder governments to the localities during 2000-06. The same results were replicated in the study of Schraff (2014), who added that this effect was stronger in the localities with high electoral turnout. However, Milio's (2007) research on Italian localities does not support this thesis. These discrepancies may result from the fact sub-national governments in federalized systems have more political clout than their likes in unitary states (Kemmerling & Stephan, 2008; Tömmel, 1998).

Regarding the studies on the political economy of the allocation of the CP's funds from the MS to their regional governments, there have been three types of approaches: case study,<sup>23</sup> comparative,<sup>24</sup> and aggregate on the EU level. This chapter concentrates on the third approach because case-study and comparative studies deal with particular institutional designs in each MS, which are outside the scope of this thesis. To date, there have been only two studies with this approach (Bodenstein & Kemmerling, 2012; Bouvet & Dall'erba, 2010).

Bouvet and Dall'erba (2010) use a Tobit model with 120 Nomenclature of territorial units for statistics (NUTS) II regions from the EU-12 for the period 1989-99. Their findings support the thesis that central governments, ceteris paribus, allocate more funds to the regional governments with the same political color, especially in those regions with a precarious political position, i.e. regions where in the last election, the party in power won with smaller margins. Still, this study lacks a cohesive theoretical framework in supporting the empirical part.

This gap was filled by Bodenstein & Kemmerling (2012), who cover assiduously the literature on the political economy of the intergovernmental transfers, and precisely the P-B model. They test a series of hypotheses regarding the political and economic factors that might influence the regional distribution of the SF, among whom, the electoral incentives of the MS. Their study uses a Heckman model for a two-stage bargaining process,<sup>25</sup> for 137 regions, EU-wide, for the period 2000-2006. Their political data are operationalized through the results of the elections for the European Parliament. The findings suggest that central governments were more

<sup>&</sup>lt;sup>23</sup> There are have been only two, and both analyze the distribution of the SF in Hungary (Kalman, 2011; Muraközy & Telegdy, 2016).

<sup>&</sup>lt;sup>24</sup> (Bloom & Petrova, 2013) analyze the similarities and differences between Latvia and Bulgaria; (Dotti, 2013) compares France, Germany, Italy, Spain and the UK; (Dellmuth, Schraff, & Stoffel, 2017) work with France and Italy; (Medve-Balint, 2017) compares Hungary with Poland.

<sup>&</sup>lt;sup>25</sup> The idea is that the allocation of the funds is done in two stages, first among the MS, and then the latter distribute them to their regions.

"generous" with the SF to the swing regions. Yet, this effect was observable only for Objective 2 regions, not Objective 1.<sup>26</sup>

#### 2.1.3. A Complete Pork-Barrel Model for the Allocation of the CP

As noted, Bodenstein & Kemmerling (2012) have already complemented the empirical studies on the matter with an elegant and detailed theoretical framework. The only missing aspect of this literature is a list of viable mechanisms, through which the MS can alter the allocation of the CP's funds, to advance their political interests. This part will compile a 6-items list, aggregating instruments that have already been treated in the existing literature, and others which have not.

First, during the negotiations of the budget allocations among countries, the MS always ask and usually succeed in getting special remunerations, outside the financial envelope provided by the formal guidelines. In the last two cycles of the CP, 2007-2013 and 2014-2020, every MS was rewarded with "something extra" (Bachtler, Mendez, & Wishlade, 2007; Mendez, Wishlade, & Bachtler, 2013). This process has usually been assessed as independent from that of regional allocation, e.g. Bodenstein & Kemmerling (2012) assume that the SF are allocated in a two-stage bargaining process, first among the countries and the COM, and then between the MS and their respective regions. However, according to the official guidelines, the bargaining process must always revolve around specific regions, i.e. the COM allocates a certain level of funds to the MS, given the socio-economic conditions country-wide and of the

<sup>&</sup>lt;sup>26</sup> According to Articles 3 and 4 of the Council Regulation 1260/1999, NUTS II regions with a GDP per capita below the 75% level of the Community's average were part of the Objective 1 regions for the cycle 2000-2006. On the other hand, all NUTS II regions facing adverse socio-economic changes, with a GDP per capita above the 75% level of the Community's average were classified as Objective 2 regions for 2000-2006.

respective regions. In this light, the MS usually do not ask for more funds in general, but for specific regions. This leaves open the possibility that the central governments can demand more funds for certain regions, according to their political interests.

Second, the principle of additionality gives to the MS a certain discretion in deciding what projects and regions they want to support. The CP's funds are matching grants, which need to be complemented by domestic funds, which the respective government can decide to allocate or not in a region. This mechanism can be especially effective in the new MS, given that, "local governments, which held little or no autonomy under communism, are less institutionalized than their peers in the EU-15 and often lack independent sources of revenue . . . few local governments have independent means to pay for co-financing" (Bloom and Petrova, 2013, p. 1603). Third, the application for CP's funds is complex and requires a certain level of bureaucratic expertise (Medve-Balint, 2017). For the same reason as before, the regions in the new MS are more vulnerable to P-B distribution, given the lack of institutionalization of the local governments (Kalman, 2011).

Fourth, the governments have de-jure, full discretion in the allocation of the CP's funds in more developed regions (MDR).<sup>27</sup> During the 2007-2013 cycle, the COM attempted to influence the allocation of the funds in these regions, but some MS, like Netherlands, refuted vehemently the intervention of the COM outside its legal mandate (Bachtler et al., 2007).

Fifth, while the allocation of the funds in non-MDR regions is determined by the official criteria,<sup>28</sup> the MS can use the territorial division of their regions by the CP regulation to circumvent the formal guidelines in their interest. As was noted in the second chapter, the

<sup>&</sup>lt;sup>27</sup> NUTS 2 regions with a GDP per capita above 90% of the EU's average. During the previous cycle, these regions were known as Regional Competitiveness and Employment (RCE) regions, albeit the two groups are slightly different in the required conditions.

<sup>&</sup>lt;sup>28</sup> For 2000-2006 through the Berlin formula, and in the following cycles through modifications of the latter.

regional allocation of the CP's funds is based on the classification of the NUTS 2 regions,<sup>29</sup> i.e. MDR, Transition Regions, and Less Developed Regions. A NUTS 2 region must have a population between 800.000 and 3.000.000. The division of the NUTS regions attempts to emulate the domestic administrative divisions, but if it not possible, according to Article 3 of the Regulation 1059/2003 of the European Parliament and of the Council, the pertaining NUTS will be formed by the aggregation of smaller existent bordering administrative units. The geographical discrepancy between the NUTS 2 division and regional governments allows the MS to allocate funds in the preferred locality within a NUTS 2 region. Think of the situation where a NUTS 2 region contains two administrative unit, one being a stronghold for the party in power, and one a stronghold for the opposing party. The official criteria determine the level of funds for the whole NUTS 2 but are silent regarding the distribution within the NUTS. Using this loophole, the central government can allocate funds according to its electoral interests.

Last, all the aforementioned empirical studies on P-B distribution of the EU funds do not account for the Cohesion Fund (CF), so they analyze the distribution of the SF instead of the CP's funds — check the second chapter. I believe that the CF can easily be prone to P-B allocations for two reasons. It benefits the countries (not the regions) with a GDP per capita below 90% of the EU average, so its spatial allocation is determined exclusively by the MS. Second, the CF thematic focus is on infrastructure projects, which are especially adept in amassing public support, given their high visibility (Castells & Solé-Ollé, 2005; Golden & Picci, 2007).

#### 2.2. The Principal-Agent Problem

<sup>&</sup>lt;sup>29</sup> Beside the Cohesion Fund, which is allocated at country level.

This section uses the agency theory framework to explain another problematic corollary of the implementation of the Cohesion Policy (CP), the substitution effect. The additionality principle urges the member states (MS) to use the CP's funds as complementary, not as substitutes, to their domestic regional investment. However, empirical studies suggest that the MS violate this requirement. This paper suggests that this infringement is the result of the interests' divergence between the MS and the Commission (COM), and the inability of the latter to control adequately the former. A detailed agency model is delineated to explicate this occurrence.

#### 2.2.1. The Principal-Agent Literature Review

The agency theory development is one of the many offshoots of the 1970s burgeoning literature on organizational economics (Ross, 1973; Spence & Zeckhauser, 1971), which is principally an elaborated critique of the neoclassical theory. The latter approached the firm as a black-box, or a simple production function, and did not pay attention to its organizational features. On the other hand, the organizational economics highlighted how the firms are made up of living individuals, employers and employees, with potentially different interests, skills and available information.<sup>30</sup>

The agency theory, known also as the agency problem, or the principal-agent (P-A) problem, is, in non-technical terms, the issue that arises when employees (e.g. CEO) have different interests from those of employers (shareholders). In such cases, the employees (referred to in the literature as agents) can disregard the employers' (known as principals) interests and

<sup>&</sup>lt;sup>30</sup> The similarity of this argument with that on the origins of the SGTFF is not a coincidence. The latter was heavily influenced by the ideas of organizational economics. (Qian & Weingast, 1997) use the divergences between the neoclassical view and that of organizational economics as an analogy to explain the difference between their ideas with those of the advocates of FGTFF.

guidelines (such behavior is formally recognized as agency drift).<sup>31</sup> Scholars in this field propose and evaluate various control techniques that can eliminate, or more realistically allay, the agency problem.

The P-A problem is not limited to the scope of the firm relations but is rather universalistic in nature (Ross, 1973). In the field of political science, Calvert, McCubbins, & Weingast (1989) claim that this model can be used to assess the problems that individuals (principals) have to control their unelected (or indirectly elected) executive bureaucrats (agents). In fact, the implicit use of the P-A problem in the political theory can be traced far before the development of organizational economics, since the works of Hobbes, Locke, and Rousseau on the "social contract". The agency theory also uses the concept of the "contract", metaphorically, in a similar way as these philosophers do (Eisenhardt, 1989).

Regarding the adoption of the P-A framework in the EU studies, the bulk of these researches have been focused on the delegation of power from the MS to the European institutions, such as the COM, the European Parliament, the European Court of Justice, or the European Central Bank (Elgie, 2002; Hix, Raunio, & Scully, 1999; Pollack, 1997). The MS are classified as multiple principals and the EU bodies as their respective agents. This section takes an antipodal approach, with the COM, envisaged as the upper-tier government (principal), and the MS as the lower-tier governments (agents).<sup>32</sup>

This view is inspired by the study of Blom-Hansen (2005), who uses the P-A approach to study the implementation of the CP. According to him, the control mechanisms of the EU are weak and present opportunities for agency drift. Drawing from the existing literature on the P-A

<sup>&</sup>lt;sup>31</sup> For an excellent review paper on agency theory, see Eisenhardt (1989).

<sup>&</sup>lt;sup>32</sup> The view of using P-A theory to understand the relationship between the different levels of governments is known in the SGTFF as "administrative federalism" Oates (2005, p. 358). The SGTFF uses the P-A problem to study two different phenomena. The first is that of administrative federalism, the second analyzes the relation between the citizens (principals) and the governors (agents). According to the SGTFF, fiscal decentralization could help citizens better control their agents.

problem, he considers carefully various ways in which the *ex-ante* and *ex-post* control mechanisms fail to align the behavior of the MS accordingly to the official criteria set at the EU level and enforced by the COM.

The agency scholars assert that choosing an appropriate agent is the first *ex-ante* control mechanism for agency drifts. In the case of the CP, the COM cannot choose its agents, which according to Blom-Hansen (2005), can be only the MS.<sup>33</sup> Another traditional *ex-ante* control mechanism is the inclusion of suitable legal incentives in the contract, through which the principal can align the agent's interests to her own. Even in this case, the COM is almost powerless. The COM can offer only general guidelines for the allocation and the implementation of the CP's funds. However, these directions are often vague and can be fleshed out at the discretion of the MS, so the mandate of the countries for the implementation of the CP remains extensive.

In addition to *ex-ante* mechanisms, the principal can also employ *ex-post* controlling mechanisms, like monitoring and sanctioning. The monitoring of the agent is usually done in two ways, "public patrol oversight" — which refers to systematic and thorough monitoring by the principal — and "fire alarm oversight" — which relies less on the systematic involvement of the principal and more on the reporting from third parties, like interest groups. The EU draws on both types of monitoring regarding the CP. The COM demands the MS to set up monitoring committees, which include subnational authorities and interest groups and control systematically the implementation of the policy. In addition, the MS must present to the COM annual and final reports on the implementation of the funds. Regarding the "fire alarm oversight", Blom-Hansen (2005) emphasizes the role of the European Court of Auditors, which has often conducted special investigations in relation to the implementation of the Structural

<sup>&</sup>lt;sup>33</sup> Blom-Hansen refuses the multi-level governance approach, claiming that multi-level involvement does not imply multi-level governance.

Funds (SF).<sup>34</sup> Hence, there are multiple ways through which the COM monitors *ex-post* the actions of the MS.

However, monitoring per se is not sufficient to prevent the undesired behavior, unless negative sanctions are applied to those MS that are appraised to transgress the official rules regarding the administration of the funds. Blom-Hansen (2005) notes that the COM can apply sanctions only in cases of criminal agency-drift, e.g. fraudulent conduct by one of the MS. In such cases, the COM can address the matter to the European Court of Justice. As for non-criminal violations, the COM does not possess any instruments to sanction the MS. Given the failures of both *ex-ante* and *ex-post* mechanisms to control the implementation of the CP, (Blom-Hansen (2005) asserts that the MS are in full control of the administration of the policy, and consequently decide on the substance of the programs (what goals to follow), on the added value of the projects (the COM specifies that the projects must be innovative), and on respecting or not the additionality principle.

The first two problems can be assessed only through case-studies, so taking into account the scope of this paper, the focus is on the third. The additionality principle aims to compel the MS to use the CP's funds as complementary to the domestic funds earmarked for public investment, not as substitutes for the latter. The governments of the MS may be inclined to do the opposite, thus use the CP's funds to substitute their public investment, and either increase public spending or reduce the level of taxation, which can prove more beneficial to the goal of reelection, given that the effect of the public investment on economic growth is perceivable only in the long-term (Del Bo & Sirtori, 2016).<sup>35</sup> What answer do the empirical studies give?

<sup>&</sup>lt;sup>34</sup> Recall that the SF are all the CP funds with the exemption of the Cohesion Fund.

<sup>&</sup>lt;sup>35</sup> All the areas targeted by the EU CP, infrastructure (including transport, telecommunications, health and so on), human resources (including education, training, R&D), and productive environment can all be classified under the field of public investment given their long-lasting benefits. On the other hand, the public spending refers to government expenditure with little to none long term benefits, e.g. organizing a public concert with a famous singer.

#### 2.2.2. Empirical Studies on the Substitution Effect of the CP's funds

As far as I know, the only empirical papers that have assessed the principle of additionality on the EU level are those of Ederveen et al. (2003) and Alegre (2012).<sup>36</sup> These authors often use the term "crowding out" to refer to the substitution effect. The EU funds can induce the MS to reduce their own structural spending in those regions already covered by the CP policy, or can "crowd-out" the structural investments in those areas.<sup>37</sup>

Ederveen et al. (2003) undertake a Chow breakpoint test for 80 NUTS II regions during the period 1989-93 to answer whether the CP's funds substitute or complement the domestic regional funds. They use the regions classified under Objective 1,<sup>38</sup> which had received the bulk of the CP's funds, as the treatment group, and the non-Objective 1 regions, as the control group. According to Ederveen et al. (2003), if the regions classified under Objective 1, receive less domestic funds than those in the control group, there is evidence for crowding out effect at the EU level. The authors found that the effect was present and for an additional euro of CP, the regions lost on average 17 cents of domestic budget.

The theoretical focus of Ederveen et al. (2003) is the nexus between public investment and economic growth, i.e. to show that the lack of efficiency of the CP is caused by the nonenforcement of the additionality principle. However, the authors do not provide a precise theoretical framework on how the principle of additionality may be violated. Furthermore, their empirical approach is not airtight. The differences in the regional allocation of national public

<sup>&</sup>lt;sup>36</sup> Janský, Křehlík, & Skuhrovec (2016) and Del Bo & Sirtori (2016) have also evaluated empirically the principle of additionality for single countries, respectively Czech Republic and Italy.

<sup>&</sup>lt;sup>37</sup> It is important to not confuse this concept with that used traditionally by the macroeconomists, who employ the term "crowding-out" to address the effect that government borrowing has on private investment.

<sup>&</sup>lt;sup>38</sup> During that period, all NUTS II regions with a GDP below 75% were classified as Objective 1 regions.

spending can be the cause of a multitude of reasons, one of whom was extensively explored in the pork-barrel section. Hence the presence of such differences does not necessarily imply the violation of the additionality principle.

Alegre (2012) takes a more compelling approach. He modifies the neoclassical AK model of economic growth to evaluate how the MS perceive the CP's funds. If the latter are identified by the recipient as matching grants, the MS would increase their public investment at least by the same size of the received funds, i.e. the principle of additionality would be respected. The reason is that the CP's funds are designated to complement the national public investments, so if the MS would use them in the earmarked field in addition to their expenses, the increase of the public investments would be at least as large as the size of the received funds. However, if the MS perceive the CP grants as unconditional transfers, they could use all of the received funds to substitute their domestic spending on public investment, and spend more on public consumption or tax relief, for the aforementioned reasons.<sup>39</sup>

Using panel data from the old 15 EU countries for the period 1993-2005, Alegre (2012) found that public investment increased by 60% of the amount of the SF. In other words, 1 additional euro of the SF was converted to 60 cents of public investment. This implies that the MS see the CP's funds partly as matching, and partly as unconditional grants. However, Alegre (2012) does not provide either a convincing theoretical model or the precise causal mechanisms that lead to this dislocation. His only explanation is that the COM is not fully independent from the European Council in the allocation of the funds (because the allocation of the funds demands an Inter-Institutional Agreement), and thus the MS perceive some part of the funds as given,

<sup>&</sup>lt;sup>39</sup> In fact, the AK model predicts that the lump-sum transfers will have a negative effect on public investment. The explanation for this requires advanced economic knowledge, check (Barro & Sala-I-Martin, 1992). For the discussion here, assuming that effect to be zero does not make a difference.

or as lump-sum transfers. Yet, this argument leaves open the question on why the MS do not perceive the whole funds as given.

#### 2.2.3. A Complete Agency Model for the Substitution Effect

The agency theory provides suitable theoretical background for these empirical studies. The COM (principal) requires the MS (agents) to honor their commitment to using the CP's funds as additional to their domestic investment, not as substitutes. However, the domestic governments' interests<sup>40</sup> do not align with those of the COM, and the latter's control mechanisms are weak. Thus, the model of Blom-Hansen (2005), with some minor adaptions, can offer a satisfying theoretical explanation on the occurrence of the substitution effect.

Blom-Hansen (2005) is partially accurate in pointing out that the COM can hire as agents only the MS because even though the COM has attempted to curtail the discretionary power of the central governments through the partnership principle, the MS could still designate their own regional partners. Nonetheless, this exclusive position of the MS could be challenged in the near future, given the changes in the regulation of the CP, introduced through the Council Regulation (CR) 1303/ 2013. For the cycle 2014-2020, the MS have to present formal Partnership Agreements (PA) with regional and local actors (Article 5), prepared in accordance with the Commission guidelines (Article 14 and 16), and with a pre-defined content (Article 15). The Commission has also provided MS with draft templates and guidelines on the PA content. Nonetheless, the CR 1303/ 2013 still leaves as a prerogative to the respective MS to

<sup>&</sup>lt;sup>40</sup> As explained above, the interest is to get reelected, and the increase of public consumption can be more helpful than the increase of public investment. Thus the CP grants can be used partly to substitute the domestic funds public investment, which will be earmarked for public consumption or tax relief.

choose their partners. Whether these changes in the partnership principle can force the MS to cede their role as the sole agents regarding the implementation of the CP remains to be seen.

As for the *ex-post* mechanisms, Blom-Hansen (2005) notes that the CP's monitoring is adequate, but the COM lacks the means to punish agency drift in non-criminal cases. This picture does not represent 100% correctly the present state of affairs. It is true that the COM adopts a rigorous verification procedure for all the MS that receive CP's funds, through *ex-ante*, mid-term, and *ex-post* controls. However, the verification procedure targets only least developed regions (LDR),<sup>41</sup> and it remains problematic given the heterogeneity of the information provided by the different MS<sup>42</sup> or the challenges in assessing the reliability of the presented data (European Commission, 2009). The monitoring mechanism is rigorous but incomplete and often imprecise.

Regarding the enforceability of the monitoring, the CR 1083/2006 has recognized the COM's right to implement financial corrections on the MS that violate the additionality principle. The COM applies a general rule regarding the level of expenditure for all the MS, which demands that the level of structural expenditures in the LDR should be at least as large as the average annual level of the previous cycle of the CP (Del Bo & Sirtori, 2016). Nonetheless, the COM has often agreed to relax this constraint in the cases of extraordinary spending in the previous cycle, e.g. Greece in 2007-2013 because of the 2004 Olympic Games (Del Bo et al., 2016). In the end, the sanctioning mechanisms are not non-existent as claimed by Blom-Hansen (2005) but rather afflicted by the inevitable trade-off between flexibility and rigorousness.

The substitution effect and the pork-barrel distribution are similar phenomena since both describe distortive uses of the CP's funds according to the politicians' self-interest. Yet, there are three differences, which invoked the need for different theoretical frameworks. First, in the

<sup>&</sup>lt;sup>41</sup> Or Convergence regions for the period 2007-2013, or Objective 1 regions before 2007.

<sup>&</sup>lt;sup>42</sup> MS use different statistical techniques or base year deflators to report their spending.

pork-barrel distribution, the MS were studied in the role of the grantor, while in the P-A, in the role of the recipient. Second, in this section, the focus was on the allocation of the funds from one public sector to another, while in the former on the spatial allocation. Third, and most important, when using the CP's funds for pork-barrel distribution, the MS do not violate any official rules set at the EU level, as they do when they do not implement correctly the additionality principle. When politicians serve their interests through a certain spatial allocation of the funds, they do not violate the metaphorical contract with the COM, as in the case of the tsubstitution effect. Thus, the former distortion cannot be covered by the agency framework.

#### 2.3. The Flypaper Effect

This section explains how the CP's funds can encourage disproportionate increases in government expenditure — a phenomenon known as the flypaper effect— given that the decision-makers have less political costs in using the intergovernmental transfers rather than taxation to fund additional spending. The next part summarizes the literature on the flypaper effect, while the second sub-section delineates the nexus between this effect and the CP. To the best of my knowledge, there are not any empirical studies that evaluate this occurrence, a gap, which this paper addresses in the fourth chapter.

#### **2.3.1.** The Flypaper Effect Literature Review

The academic discussion on government expenditure in the 1960s was dominated by the rational-choice model of the median voter. The parties in power fixed government spending

according to their electoral interests, which meant maximizing the utility of a representative median voter. Intergovernmental transfers were seen as identical to equal increases in the level of local income, i.e. the budget constraint of the local government increased, but the ratio of the prices (median voter's opportunity cost of public versus private spending) remained the same. Thus, this rational-choice model predicted that a transfer would increase public spending as much as an equal increase in the level of local income.

Gramlich (1969) was the first to refute this thesis empirically. His analysis specified that an extra dollar of local income was associated with an increase in public expenditure between 2 to 5 cents, while an extra dollar from intergovernmental transfers spurred government expenditure from 30 cents to a full dollar. "When Gramlich first presented his results, his colleague Arthur Okun called this larger effect of lump-sum aid on government spending a 'flypaper effect' noting that money seems to stick where it hits" (Inman, 2008, p. 1). The existence of the flypaper effect has been empirically corroborated by a multitude of other studies (Bowman, 1974; Case, Rosen, & Hines, 1993; Inman, 1971; Weicher, 1972).

The flypaper effect presented an anomaly for the median voter model and was addressed by two different streams.<sup>43</sup> The first stream maintained the assumptions of fully rational and informed voters and argued that the flypaper effect was the result of bargaining between different government tiers (Chernick, 1979; Knight, 2002). I do not intend to go into these models' details, but the logic is quite similar with the one delineated in the pork-barrel chapter. The allocation of the funds by the central governments is done in a way to maximize their reelection possibilities, and in this light, they support sub-national governments that provide a higher level of local goods to the respective constituents.

<sup>&</sup>lt;sup>43</sup> In fact, there are four different streams, but the omitted two do not accept the existence of the flypaper effect, as they consider the empirical evidences either as the outcome of scarce data's reliability or econometrics models' misspecifications. For a review on the matter see Inman (2008).

Other scholars drop the assumption of fully informed and rational voters and rationalize on the lines that the grant programs can be too complex for the voters to understand (Courant, Gramlich, & Rubinfeld, 1979; Hines & Thaler, 1995; Romer, Rosenthal, & Munley, 1992). From an economic perspective, the voters confuse the income effect with an average price effect, i.e. they perceive a drop in the price of the public goods, and as a consequence demand more. From a political viewpoint, voters are less inclined and less able to control the way the grants are spent, compared to their taxes. Consequently, recipient governments have less political costs in expanding their expenditures from transfers, than they would have had if the extra expenditures were collected from the taxpayers' extra income.

#### 2.3.2. The Flypaper Effect and the Cohesion Policy

The second explanation can be adapted quite successfully to hypothesize the occurrence of a flypaper effect in the administration of the CP's funds. The structure of the EU governance is complex, and the mechanisms behind the implementation of the CP can prove overwhelming for the average voter (Bachtler et al., 2013). In addition, Dellmuth & Stoffel (2012) assert that, "[i]n the context of EU regional policy . . . governments should be less concerned about how EU expenditure affects their budgets than in the case of domestic expenditure. Citizens are less likely to pressure . . . because they perceive these funds as other people's money" (p. 417). Nonetheless, assuming that the voters may be irrational and not fully informed does not preclude that the COM may also have interests to support indirectly this behavior. Dellmuth,

(2011) claims that the COM prefers to allocate funds to regions (and thus countries) with better tracks of absorption to enhance its reputation.<sup>44</sup>

Having established the reasons that might lead the allocation of the CP's funds to induce a disproportional increase in government expenditure, this paper turns to discuss whether such phenomenon "deserves" to be labeled as distortive. Scholars who might be afraid that the Single Market is breeding "a race to the bottom" between the MS in terms of economic intervention, might even applaud such development (Bohle, 2009; Kvist, 2004). This is not a normative study and does not attempt to rank between efficiency, stability, and solidarity. There are three reasons why this paper classifies flypaper effect as a potential problem to the efficient implementation of the funds alongside the pork-barrel allocation and the substitution effect. First, the CP does not aim to increase the general expenditures of the MS. Second, an additional euro from the CP's funds might imply 40 cents of inefficient public consumption (Alegre, 2012). Third, since 2000, the CP goals have been planned to be complementary to the EU's decadal economic strategies, e.g. Lisbon 2010 or Europe 2020 (Mendez et al., 2013). These strategies emphasize the importance of improving EU's economic competitiveness, which might be hampered by the flypaper effect.

There are two ways in which the CP's funds can trigger a disproportionate increase in government spending. The first is a short-term effect, which is caused by the governments' drive to absorb as much of the allocated CP's funds as possible,<sup>45</sup> even at the cost of inefficiency and disproportionate increases in government expenditure.<sup>46</sup> Rodden (2003)

<sup>&</sup>lt;sup>44</sup> Countries with better tracks of absorption, ceteris paribus, spend more, given that they have to co-finance the projects.

<sup>&</sup>lt;sup>45</sup> The amount of the CP funds theoretically allocated to the MS (budgetary commitment) and the amount used (actual cash flow) do not have to be equal. The ratio of the second to the first is the absorption rate.

<sup>&</sup>lt;sup>46</sup> The reason why the governments would get involved in this inefficient behavior is the same as in the other sections, re-election prospects. The central government would spend as long as the political benefits from extra spending outweigh the political costs, which are significantly reduced due to voters' inability and indifference to control the administration of the grants.

explains that, "mere expenditure decentralization might turn the public sector's resources into a common pool that competing local governments will attempt to overfish" (p. 697). The CP grants do not seem to prove an exemption of this "overfishing" desire. Ion (2014) analyzed the implementation of the CP in Romania and concluded that the authorities were more interested in maximizing the amount of the absorbed funds, than in optimizing the benefits of the funded projects. She quotes a Romanian executive, who affirmed, "If we do not use these funds we just end up putting it back in the pockets of the EU" (Ion, 2014, p. 184).

The allocation of the CP's funds can also instigate a long-term flypaper effect, which can be to a certain extent, inescapable. There is an old saying in finance that goes: *"Spending induces more spending."* This is true not only for private consumers but also for governments. Brennan & Buchanan (1980) assert that governments are similar to the biblical Leviathan, which survives by getting larger. According to them, the only aim of a government is to increase its size, and thus the larger they get, the more dangerous they are to get even larger. Yet, even without such a pessimistic view on the nature of the government, a temporary increase in the absorption of the CP's funds can still signify a disproportionate increase in the government spending in the long-term.

First, to absorb more of the CP's money, the governments must present additional projects, whose designing and implementation requires qualified labor or additional civil servants. The latter cannot be terminated as soon as the government decides to cut spending, given that the employment contracts, especially those of the civil servants, usually have long durations. In addition, the CP grants are allocated to projects with high maintenance costs, e.g. infrastructure projects (Frangopol & Liu, 2007), e.g. a government does not have to pay only for the construction of a highway, but also for its periodic maintenance. To summarize, the CP's funds can encourage disproportionate short-term government spending through the over-absorption of the funds and long-term spending through the unavoidable bureaucracy and maintenance

costs. The effects are related, given that increasing the short-term absorption would automatically imply an increase in the long-term spending. For this reason, the empirical part will use an error-correction model, which can discern between the different empirical effects.

The last point to consider is that while the flypaper effect has usually been assessed for lumpsum grants, the CP's funds are matching grants.<sup>47</sup> However, the suggested mechanisms that instigate the flypaper effect do not have to be limited to the case of unconditional transfers. The MS will have incentives to overfish in the European pool of resources, whether the latter are unconditional or matching.<sup>48</sup> In fact, the long-term effects must be more consequential in the case of matching grants, given that lump-sum transfers, which according to neoclassical literature fund exclusively public consumption,<sup>49</sup> do not generate projects with high maintenance costs. On the other hand, one can rightfully claim that the nature of the matching grants induces *a-priori* a flypaper effect, given that the grantor demands them to be fully spent by the recipient government. In order to circumvent this issue, the empirical model will subtract from the dependent variable, i.e. government spending, the amount of the CP's funds allocated to that country. In this way, it is possible to distinguish disproportionate increases in government expenses.

 $^{48}$  It has to be said that these incentives have to be stronger in the case of unconditional transfers, as they allow the recipient to spend in whatever area they choose, and do not have to be co-financed.

<sup>49</sup> See Alegre (2012).

<sup>&</sup>lt;sup>47</sup> Although, as aforementioned, Alegre (2012) asserted that the MS perceive the CP funds partly as lump-sum transfers.

### **Chapter 3: Empirical Analysis**

#### 3.1. Data and Methodology

To evaluate the effect of the Cohesion Policy (CP) grants on government size, this study uses data for the EU-25, during the period 1993-2014. The starting year is chosen to match the time when the Cohesion Fund (CF) was created and the CP's funding scheme was completed. The observations for each MS are collected from the year of its respective accession — if the respective country became part of the Union later than 1993 — e.g. Hungary's observations are compiled from 2004 onwards. Since this model uses OLS with panel corrected standard errors, Romania, Bulgaria, and Croatia are excluded from the analysis, given that the small number of observations in these countries may bias the estimation.<sup>50</sup>

The dependent variable (DV) is the government size, measured as the ratio of the difference between government expenditure and the allocated CP's funds to GDP.<sup>51</sup> The reason why this analysis subtracts the CP allocations from government expenditure was explained in the flypaper section. Since the CP grants are a form of matching grants, they are *a-priori* earmarked as government expenditure, in the form of public investment. The goal of this empirical analysis is to check whether they induce more spending than planned. The independent variable (IV) of main theoretical interest is the size of the CP's grants, which is operationalized as the ratio of the allocated CP's funds to GDP.

Government spending may be affected by a multitude of other economic, political, and demographic factors, which need to be controlled for, if the effect of the size of the CP's funds on government spending is to be asserted correctly. Seven additional IV will be used in this

<sup>&</sup>lt;sup>50</sup> Romania and Bulgaria joined the EU in 2007, while Croatia only in 2013.

<sup>&</sup>lt;sup>51</sup> The data on the size of the CP's allocation are found in the Regional Policy official website. The other data, unless otherwise stated, are part of database of the World Bank (2017).

empirical analysis to control for the changes in government expenditure, outside the influence of the main IV. These variables are chosen to represent economic, political, and demographic factors and are drawn from the existing literature on government spending.

First, the level of income, operationalized as GDP per capita, has been suspected to affect the level of government expenditure since the 19<sup>th</sup> century. Adolph Wagner was the first to explore this idea — Wagner's Law— and to suggest that an ever growing welfare state would be the inescapable outcome of the interaction between a developing market economy and a democratic society, in which people vote for more social services. This idea has been asserted empirically for a large number of countries by Bohl (1996) and Meltzer & Richard (1981). Second, changes in government expenditure are affected by changes in revenue generation, which is measured as the ratio of revenue generation (excluding grants and the CP's funds) to GDP. The logic for choosing this variable is elementary, if you collect more you can spend more, thus every empirical study that uses government expenditure as a DV controls for the level of revenue collection. Third, given that the government spending can be affected negatively by the level of indebtedness,<sup>52</sup> this model will also control the ratio of government debt to GDP.

Next, the model incorporates two political factors, both of them in the form of dummy variables, the ideology of the governing party and the existence or not of bicameralism. Alesina (1989), Blais, Blake, & Dion (1993), and Franzese (2002) have proved empirically that leftist governments, ceteris paribus, spend more than their rightist counterparts. Thus, this analysis uses a dummy variable to specify whether the government is headed by a left party or not — in the case of coalition governments, the ideology of the main party in the government is taken

<sup>&</sup>lt;sup>52</sup> A large debt usually constrains excessive government expenditure, and this constrain could prove stronger in the EU, given that the MS are not allowed to pass a certain level of indebtedness or deficit under the Stability and Growth Pact.

as representative. The fifth controlling variable operationalizes the type of parliament, bicameral or not. Bradbury & Crain (2002) and Solano (1983) have found that the presence of two chambers reduces government expenditure, as there is more control on inefficient spending.

Last, two demographic aspects are considered. The sixth additional IV is the population, given that large countries can benefit from economies of scale (fewer costs), when providing public goods, so one can expect a negative relationship between the population and government expenditure (Alesina & Wacziarg, 1998; Bradbury & Crain, 2002).<sup>53</sup> The last control variable is the ratio of the working age population (aged 15-64) to the total population. Older individuals require a certain amount of expensive public services like health care, while children younger than 15 demand special expenses in the fields of education and special care (Remmer, 2004; Shadbegian, 1999). Hence, a country with a higher rate of population in the working age, ceteris paribus, is expected to have less public expenses.

This section adopts an error-correction model with panel-corrected standard errors, similar to the ones used by Iversen & Cusack (2000) and Remmer (2004). Both these papers have government expenditure as the DV and work with panel data. Remmer's study is especially close to the one conducted here, given that she tests the flypaper effect caused by foreign aid in developing countries. The standard equation of an error-correction model has the following form:

$$\Delta Y_{i,t} = \alpha + \beta_1 \times Y_{i,t-1} + \sum (\beta^j \times X_{i,t-1}^j) + \sum (\beta^j \times \Delta X_{i,t}^j) + \varepsilon_t ,$$

In the equation above, Y is the DV and X is the IV. The subscripts i and t stand, respectively, for the specific country and time period. The subscript t-1 denotes a lagged variable. The superscript j refers to a particular IV, e.g. GDP per capita and so on. The delta operator ( $\Delta$ )

<sup>&</sup>lt;sup>53</sup> For statistical reasons, the model uses the natural logarithm of the population size.

represents the standard symbol of difference. The alpha ( $\alpha$ ) is the y-intercept, and the betas ( $\beta$ ) are the respective slopes.

Thus, the term on the left-hand side of the equation  $(\Delta Y_{i,t})$  is the annual change  $(Y_{i,t} - Y_{i,t-1})$  of the DV (ratio of the difference between government expenditure and the CP's funds to GDP). The second term on the right  $(\beta_1 \times Y_{i,t-1})$  is the DV, lagged one period, multiplied by its respective coefficient. This term is useful as it checks whether the model converges or explodes. For the model to converge, i.e. for the ratio of government expenditure to GDP to move toward a steady-state point or equilibrium,  $\beta_1$  should be between -1 and 0. If it is below -1, the DV would fall to 0 (the model "dies"), while if it is above 0, the DV would jump to infinity (the model "explodes").<sup>54</sup>

The third term on the right  $-\sum (\beta^j \times X_{i,t-1}^j)$  — is the sum of the effects of all lagged IV, while the fourth term  $-\sum (\beta_{\Delta}^j \times \Delta X_{i,t}^j)$  — stands for the sum of the effects of all the annual changes in the IV. The error correction model provides the opportunity to differentiate between transitory and lasting effects of the IV on the DV, which is extremely helpful (and the primary reason for the choice of this model). The relevant transitory effects are captured by the coefficients  $(\beta_{\Delta}^j)$ . Through mathematical manipulations, it is possible to use the coefficients of the lagged IV to find the long-term effect of one IV on the DV, which corresponds to the ratio of the coefficient for the lagged IV to the negative coefficient for the lagged DV  $(\frac{\beta^j}{-\beta_1})$ , as long as  $\beta_1$  is between -1 and 0.

This model represents a moving equilibrium, where the DV is affected in the short-run by the IV, through the transitory coefficient, and in the long-run, by the ratio of the effect of the lagged

<sup>&</sup>lt;sup>54</sup> The requirement for  $\beta_1$  to be below 0 follows from the fact that our DV is a ratio and cannot grow indefinitely. If the model had operationalized the DV as an absolute number, there would not be an upper boundary for this coefficient.

IV to the negative effect of the lagged DV. Since this analysis deals with panel data, the standard errors in a simple OLS regression could be prone to problems of serial correlation and heteroscedasticity. The first issue is addressed by the introduction of the lagging variables. In addition, this model uses OLS with PCSE, to offset, or ameliorate, the issue of heteroscedasticity.<sup>55</sup> The results of the regression, together with robustness and sensitivity analysis, are discussed below.

#### **3.2. Model Results**

The results of the main model are listed in Table 1. The label "net government expenditure" is used to supersede the phrase "difference between government expenditure and the CP's funds allocated to that MS" to avoid long and confusing terms in the respective tables. The coefficient in the first row, that of lagged DV, represents  $\beta_1$ . Its value (between -1 and 0) assures that the model converges to a steady-state equilibrium.<sup>56</sup>

<sup>&</sup>lt;sup>55</sup> For more on this issue, check Beck & Katz (1995).

<sup>&</sup>lt;sup>56</sup> The equation of the full model with its estimated parameters is: Δ (Net government expenditure/GDP) = 0.36 - 0.13 \* (Net Gov't Expenditure/GDP)  $_{t-1}$  + 0.09 \* Δ (CP funds/GDP) + 1.53 \* Δ GDP per capita + 0.67 \* Δ (Gov't Revenues/GDP) - 0.07 \* Δ (Gov't Debt/GDP) + 0.05 \* Δ Left Gov't - 0.45 \* Δ Bicameralism - 7.98 \* ln (Δ Population) - 0.64 \* Δ (Working age pop./Total pop.) + 0.15 \* (CP funds/GDP)  $_{t-1}$  + 0.002 \* GDP per capita  $_{t-1}$  + 0.03 \* (Gov't Revenues/GDP)  $_{t-1}$  + 0.5 \* (Gov't Debt/GDP)  $_{t-1}$  + 0.09 \* Left Gov't  $_{t-1}$  + 0.15 \* Bicameralism  $_{t-1}$  - 0.21 \* ln (Population)  $_{t-1}$  - 0.09 \* (Working age pop./Total pop)  $_{t-1}$ .

Lagged Dependent Variable	Net Gov't Expenditure/GDP t-1	-0.13 (-2.71) ***
Main Independent Variable	$\Delta$ (CP's funds/GDP)	0.09 (2.33) **
	(CP's funds/GDP) <sub>t-1</sub>	0.15 (2.42) **
Economic Control Variables	Δ GDP per capita	1.53 (1.82) *
	GDP per capita t-1	0.002 (1.19)
	$\Delta$ (Gov't Revenues/GDP)	0.67 (1.7) *
	(Gov't Revenues/GDP) <sub>t-1</sub>	0.03 (0.96)
	$\Delta$ (Gov't Debt/GDP)	-0.07 (-0.53)
	Gov't Debt/GDP t-1	0.5 (1.36)
Politics Control Variables	Δ Left Gov't	0.05 (1.26)
	Left Gov't t-1	0.09 (0.43)
	Δ Bicameralism	-0.45 (-2.11) **
	Bicameralism t-1	0.15 (0.78)
Demographic Control Variables	$\Delta$ Population (ln)	-7.98 (-1.43)
	Population (ln) t-1	-0.21 (-0.98)
	$\Delta$ (Working age pop./Total pop.)	-0.64 (-3.11) ***
	Working age pop./Total pop. t-1	-0.09 (-1.68) *
	Y-intercept	0.36 (2.42) **
	Wald $\chi^2$	256.38 ***
	Adj. R <sup>2</sup>	0.37
	Ν	409

Table 1:Regression Results for Net Government Spending (First Model)

 $rac{p \leq .1; **p \leq .05; ***p \leq .01}{rac{p \leq .01}}$ 

The second and the third rows represent respectively the transitory and the lagged effect of the main IV, the ratio of the CP's funds to GDP. Both are statistically significant at the 5% level, and both the coefficients' signs fall in line with the predictions in the flypaper chapter. The number 0.09 ( $\beta_{\Delta}^{j}$  for the main IV) implies that an increase of the ratio of the CP's funds to GDP by 1 is associated with an average increase of almost 0.1 of the ratio of the net government expenditure to GDP. The slope of the IV, when both the latter and the DV are ratios, can be tricky to interpret, but the fact that both the IV and the DV have the same denominator simplifies the problem. It is correct to say that an additional euro of CP's funds is associated on average with an increase of 9 cents in net government expenditure, as long as the GDP remains constant. In addition, if this model had operationalized the DV as the ratio of government expenditures over GDP (thus not assuming an *a-priori* flypaper effect), the increase in "gross" government expenditure would be 1.09 euro for every additional euro from CP.

The coefficient of the lagged main IV is 0.15, which if divided by the negative coefficient of the lagged DV  $(\frac{\beta^{j}}{-\beta_{1}})$ , yields 1.15. Hence an additional euro from the CP induces on average 1.15 more euros of government expenditure in the long-term (assuming that GDP does not change).<sup>57</sup>

The coefficients for the other IV, both the transitory and the lagged, are mostly in line with the predictions of the existing literature, albeit most of them are statistically insignificant. The only exceptions, i.e. coefficients at odds with the theory's predictions, are the estimators of lagged government debt and lagged bicameralism, both statistically insignificant. The only significant coefficients at the 10% level are those of the annual change in GDP per capita, the annual change in government revenue and lagged working age population, at 5% level only the annual

<sup>&</sup>lt;sup>57</sup> 2.15 euros for gross government expenditure.

change in bicameralism, and at 1% level the annual change in the rate of working age population.

Lagged Dependent Variable	Net Gov't Expenditures/GDP t-1	-0.19 (-2.58) **
Main Independent Variable	$\Delta$ (CP's funds/Exports)	0.11 (2.39) **
	(CP's funds/Exports) <sub>t-1</sub>	0.14 (2.27) **
Economic Control Variables	$\Delta$ GDP per capita	1.79 (2.07) **
	GDP per capita t-1	-0.008 (1.44)
	$\Delta$ (Gov't Revenues/GDP)	0.55 (1.59) *
	(Gov't Revenues/GDP) <sub>t-1</sub>	0.08 (0.99)
	$\Delta$ (Gov't Debt/GDP)	0.06 (0.41)
	(Gov't Debt/GDP) t-1	0.63 (1.46)
Politics Control Variables	$\Delta$ Left Gov't	0.13 (1.51)
	Left Gov't t-1	0.03 (0.28)
	Δ Bicameralism	-0.47 (-2.18) **
	Bicameralism t-1	0.09 (0.63)
Demographic Control Variables	$\Delta$ Population (ln)	-8.16 (-1.56)
	Population (ln) t-1	-0.57 (-1.66)
	$\Delta$ (Working age pop./Total pop.)	-0.42 (-2.48) **
	Working age pop./Total pop. t-1	0.03 (1.12)
	Y-intercept	0.29 (2.37) **
	Wald $\chi^2$	259.66 ***
	Adj. R <sup>2</sup>	0.41
	Ν	401

 Table 2: Regression Results for Net Government Spending (Second Model)

\* $p \le .1$ ; \*\* $p \le .05$ ; \*\*\* $p \le .01$ 

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How robust are these findings? First, to test the sensitivity of the estimators, the second model operationalizes differently the principal IV, to assess whether the results are biased by its arbitrary measurement. The size of the grants' allocation from the CP, which was operationalized as the ratio of the CP's funds to GDP, is substituted by the ratio of the CP's funds to exports. The coefficient of correlation (r) between the two indicators is 0.74. The results for the second model are summarized in Table 2. The differences are minimal, so the findings are not dependent the way that the main IV was measured.

Table 3: Sensitivity	and Robustness	Results
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Additional Variables	$oldsymbol{eta}^{oldsymbol{j}}_{\Delta}$	$eta^j$	Wald $\chi^2$	Adj. R <sup>2</sup>
		Model 1: CP's funds/GDP		
Base model	0.09**	0.15**	256.38	0.37
New MS dummy	0.08**	0.16**	257.15	0.39
Federalist dummy	0.1**	0.15**	259.5	0.4
2009 dummy	0.13**	0.19**	264.23	0.41
Year dummies	0.08**	0.16**	266.1	0.41
		Model 2: CP's funds/Exports		
Base model	0.11**	0.14**	259.66	0.41
New MS dummy	0.11**	0.15**	260.2	0.41
Federalist dummy	0.09**	0.17**	259.83	0.42
2009 dummy	0.16**	0.23**	268.67	0.44
Year dummies	0.09**	0.14	269.44	0.44
$p \le .1; \ p \le .05; \ p \le .05;$	0≤.01			

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What about the other IV? Does the size of the CP's funds affect government expenditure in the same way, or are the results contingent on the selection of the control variables? Table 3 affirms the first claim. Both models (with different main IV) are tested with a group of other IV, all in the form single or multiple dummy variables, and the level of allocation of the CP's funds remains, in all cases, a significant, both statistically and substantially, factor in explaining short-term and long-term changes in net government expenditure.

The New MS dummy controls for differences (besides those already captured by the existing control variables like GDP per capita and so on) between the old EU-15 and the new EU-10.<sup>58</sup> The Federalist dummy does the same, but discerns between federal and unitary countries. The 2009 dummy bisects the study's timeline into pre-2009 period and post-2009. This date corresponds to the starting year of the recent sovereign debt crisis in the EU, which was followed by stricter monitoring of the MS' budgetary balances by the EU institutions.<sup>59</sup> The last two models were tested with multiple yearly dummies, 21 to be precise, which accounted for exogenous shocks in each year of this empirical analysis. As Table 3 shows, the size of government expenditure was still positively associated with the size of the CP's funds, both in the short and in the long-term.

#### **3.3.** (Non-Technical) Discussion of the Results

The flypaper section predicted that the absorption of the CP's funds would be associated with a disproportionate increase in the short-term government expenditure, due to the voters' partial

<sup>&</sup>lt;sup>58</sup> Recall that Romania, Bulgaria, and Croatia were excluded from the analysis.

<sup>&</sup>lt;sup>59</sup> The introduction of the "Six-pack", the "two-pack" and the European Semester have enhanced exponentially the monitoring from the EU regarding MS' adherence to the fiscal rules stipulated by the Stability and Growth Pact (SGP).

inability and indifference to control the administration of the CP's funds and to the COM's goal to maximize the absorption rates of these funds. Having low domestic political costs and no restrictions from the COM, the MS would be inclined to overfish in the common pool of the CP's resources. In addition, this inefficient intake of funds was hypothesized as more detrimental in the long-term than the traditional flypaper effect, which analyzes the effect of the lump-sum transfers. While the latter are associated with disproportionate increases in the public consumption, which do not usually have enduring costs, the CP funds target projects with high maintenance costs. In metaphorical terms, the MS overfish and then they put the fishes in an inducing environment for overbreeding.

The results of the model confirm this prediction and narrate a disquieting story. Governments attempt to overfish the CP's grants, as 1 additional euro from the latter is associated with an increase of the short-term domestically funded government expenditure of 9 cents. In addition, this overfishing produces a substantial long-term effect, which foments an expansion of the domestically funded government expenditure by more than 100% of the additional CP's funds. The long-term effects are problematic, not only due to their substantial size, but also because they are non-amendable and enduring. If a government decides to over-absorb from its theoretical envelope, it will have to pay these long-term "bills", even if it decides to break this pattern. Furthermore, since politicians tend to focus on the short-term outcomes of their actions,<sup>60</sup> it is plausible that these long-term detrimental effects will be neglected or heavily discounted by the decision-makers.

Last, the flypaper effect combined with the present fiscal situation in the EU could provide incentives for the MS to crowd out other public expenditures, in order to maximize the share of the CP's funds. Since 1997, according to the SGP, all the countries in the EU cannot have

<sup>&</sup>lt;sup>60</sup> Elections usually take place in short timespans.

an annual budget deficit over 3% of their GDP. Nonetheless, before 2009, this mechanism was only de-jure binding, as almost all of the MS infringed on this requirement without suffering any sanctions. After the sovereign debt crisis, the EU enhanced substantially its repertoire of surveillance mechanisms, through the introduction of several legal instruments, such as the European Semester, the "6-pack", and "2-pack", and the SGP became de-facto an emergency brake for fiscal expansion. So, while on the one handm the EU provides incentives for the MS to increase their public investment over the efficiency line in the areas earmarked by the CP, on the other, it substantially limits their opportunities to increase the total amount of government expenditure.<sup>61</sup> This might lead the MS to crowd out<sup>62</sup> public spending at other important areas, e.g. social policies.

<sup>&</sup>lt;sup>61</sup> Unless the expansion of the government spending is associated with an equal increase in taxation.

<sup>&</sup>lt;sup>62</sup> Not to be confused with the crowding out effect that was discussed in the Principal-Agent chapter.

## Conclusion

This Master thesis has, as far as I know, delineated the first systematic treatment of the political economy of the Cohesion Policy (CP). Using the findings of the Second Generation Theory of Fiscal Federalism (SGTFF) on the nature of intergovernmental transfers, it adopted three theoretical frameworks to analyze the political factors that distort the efficient implementation of the CP. Pork-barrel and the principal-agent models were used to complement existing empirical studies, while the flypaper effect model was designed from the scratch. The latter effect was tested with an error-correction model with panel data from the EU-25 for the period 1993-2014. The model signalized that the absorption of the CP's funds instigates a disproportionate increase of government expenditure both in the short and in the long-term.

While this study can serve as a stepping stone for the further advancement of the political economic literature on the Cohesion Policy, it has a series of limitations, the most important emanating from its limited scope. As mentioned more than once, this thesis takes a variable-oriented approach and ignores how the described phenomena are affected by the specific conditions and institutions in each MS (or in groups of MS). Further case-study and comparative analyses could shed more light on the details of those mechanisms that were depicted only at the EU level.

A growing number of studies in the field of political economy are focusing on the detrimental effects that foreign aid, or any type of intergovernmental transfers, can have on the recipient country's institutions and development. This growing literature is formally known under the label of "aid curse" (Djankov, Montalvo, & Reynal-Querol, 2008), and differently, from this study, claims that distortions like pork-barrel or the flypaper effect are the least of problems that emanate from intergovernmental transfers. The latter "decrease the incentives for citizens

to monitor government performance, corruption, waste, and rent-seeking" (Remmer, 2004, p. 80), and can corrode even the democracy level of the recipient country (Djankov et al., 2008). Nonetheless, such studies have analyzed only the developing countries in Africa or Latin America that are highly dependent on aid. Whether the same effect could be replicated in more developed countries, like the EU members, it could prove an interesting question for another paper.

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