

Investing in long-run partisan loyalty: Empirical evidence from post-dictatorial Greece

Pantelis Kammas^a, Maria Poulima^b and Vassilis Sarantides^c

^a *Athens University of Economics and Business, Patission 76, Athens 10434, Greece.*

kammas@aueb.gr

^b *Department of Economics, University of Ioannina, P.O. Box 1186, 45110 Ioannina, Greece*

m.poulima@gmail.com

^c *Department of Economics, University of Sheffield, 9 Mappin Str, Sheffield S1 4DT, UK.*

v.sarantides@sheffield.ac.uk

July 7, 2019

Abstract: This paper examines the role of political incentives in the geographical allocation of public investment in 52 NUTS3-level regions in Greece during the period 1975-1989. Using a novel dataset of decomposed total public investment in nine subcategories (e.g., health), our analysis indicates that both conservative (1975-1981) and socialist governments (1982-1989) followed vote-maximising strategies. To mitigate endogeneity concerns in our estimates, we provide this evidence based on a difference-in-difference framework that exploits the regime change that occurred in 1981 as a source of exogenous variation in the distribution of political support within the Greek territory. We argue that the main driving of the observed political distortions is *long-run partisan loyalty*. To put it more simply, parties that dominated in the post-dictatorial period channelled resources in regions that their ancestor pre-coup parties obtained a higher victory margin. We further argue that loyalty establishes strong personalistic networks at the regional level that in turn affect the spatial allocation of public capital. To this end, we show that loyal prefectures are more likely to have strong MP's with deep family roots in the parliament and/or MP's with ministerial positions that in both cases can be proven powerful weapons in resource allocation.

Keywords: public investment, partisan loyalty, swing voters.

Acknowledgments: We have benefited from comments and suggestions by Nikos Benos, Thanasis Stavrakoudis, Spyros Symeonides, Dimitris Xeferis and the conference participants at 8th International Ioannina Meeting on Applied Economics and Finance (IMAEF). Any remaining errors are ours.

1. Introduction

In recent years, there has been a surge in scholarly contributions investigating how political and partisan motives of the central government can distort the geographical allocation of public capital - for a review of this literature see Kemmerling and Stephan (2015) - even if the latter can be proven detrimental to economic growth and efficiency (for a review on the literature on the productivity of public capital, see Aschauer, 1989; Bom and Ligthart, 2014).¹ According to Cox and McCubbins (1986) risk-averse vote maximizing politicians will direct relatively more local public goods in regions inhabited by their core supporters.² On the contrary, Lindbeck and Weibull (1987) and Dixit and Londregan (1998) suggest that incumbents have incentive to target mostly voters that are ideologically indifferent between the two parties (i.e., the “swing voters”), and therefore more likely to be responsive to distributive policies that benefit them. Contradictory theoretical predictions were followed by a large number of empirical studies -undertaken mostly within single countries- providing conflicting findings concerning the behavior of central government in different countries.³

A more recent strand of the literature places the spotlight on political institutions - and especially on the electoral system - in an effort to bridge the above mentioned conflicting findings (see e.g. McGillivray, 2004; Kemmerling and Stephan, 2015). Building on the pioneer studies of Lizzeri and Persico (2001) and Milesi-Ferretti et al. (2002), this literature contend that under majoritarian or plurality (MAV) electoral systems politicians prefer to distribute benefits through geographically targetable public goods directed to marginal districts.⁴ This is because legislative seats require plurality of votes in each district, and therefore votes in contested districts matter more to politicians than votes in safe districts. As a result, politicians face incentives to behave along the predictions of “swing voter” hypothesis. In contrast, in proportional (PR) electoral systems where every vote contributes to the allocation of legislative seats among parties, risk-averse politicians are expected to direct resources to their parties’ strongholds in order to hold their core supporters.⁵

¹ For many years research into pork-barrel politics was confined almost exclusively to the United States (for a review see e.g. Golden and Min, 2013). However, in the past two decades, the increasing availability of relevant data allowed well established studies for other countries, like Albania (Case 2001), Australia (Worthington and Dollery 1998), Brazil (Ames, 1995), Canada (Joanis, 2011), Germany (Stratmann and Baur, 2002), India (Arulamplam et al., 2009), Italy (Golden and Picci, 2008), Japan (Yamano and Okhawara, 2000), Mexico (Costa-i-Font et al., 2003); Norway (Hellald and Sorensen, 2009) Spain (Solé-Ollé and Sorribas-Navarro, 2008; Solé-Ollé, 2013) and Sweden (Dahlberg and Johansson 2002). A large number of these studies focus exclusively on the geographical allocation of public capital (see e.g. Golden and Picci, 2008; Arulamplam et al., 2009; Joanis, 2011 among others).

² Most public infrastructures are best described as centrally provided local public goods (i.e., public goods that generate localized benefits) or geographically targetable private goods. See Knight (2004) for more details on this.

³ More precisely, a large number of empirical studies supports the “swing voter” hypothesis (see, e.g., Arulamplam et al., 2009; Hellald and Sorensen, 2009), whereas others provide evidence in favour of incumbency bias towards party’s strongholds (see e.g. Golden and Picci, 2008; Joanis, 2011).

⁴ According to these studies, large-scale transfers (such as pensions) are goods that benefit large classes of citizens regardless of their geographical location, whereas goods that benefit small, specific regions (such as bridges, highways and other public capital) are characterized as local public goods (“pork”) or geographically targetable private goods.

⁵ To be more precise, the relevant literature suggests that under PR systems politicians tend to distribute benefits to the voters via large-scale transfers rather than pork-barrel spending (see e.g. Lizzeri and Persico, 2002). However, when the issue under examination is how

In addition to the importance of the electoral system, one significant dimension of the political system can be the so-called “long-run partisan loyalty” - i.e., regional deep-rooted relationship between the party and voters that evolve remarkably slowly over time (see Case, 2001; Larcinese et al., 2006; Joanis, 2011). The existence of loyal regions, which vote repeatedly for a given party over long periods, ensures an intertemporal electoral advantage that inevitably influences the decision of the incumbent to reward this region (see e.g. Joanis, 2011).⁶ Related to loyalty, the degree of personalism in electoral contests can be a major characteristic of the political system (see, e.g., McGillivray, 2004; Golden and Picci, 2008). Practically, party strength can be thought as the degree of central party control over candidate selection. McGillivray (2004) contends that in a context of MAV electoral systems, parties are weak and not in position to discipline effectively their legislators. In that context, legislators with greater seniority and greater influence in their party are typically more successful in directing resources to their home districts even when the latter are not marginal districts as suggested by the literature (see, Lizzeri and Persico, 2001; Milesi-Ferretti et al., 2002). Interestingly, the same result can hold even under PR electoral setting when the latter is characterized by weak parties – i.e., where the candidates are elected with open list and therefore their selection is not under central party control (see, Golden and Picci, 2008).

The paper at hand seeks to investigate potential political economy incentives in the geographical allocation of total and decomposed public investment in 52 NUTS3 Greek regions (i.e., prefectures) during the period 1975-1989 using a unique dataset. This period in Greece is interesting for two reasons. First, Greece was a newly established democracy. After a brief military junta (1967-1974) a national unity government was appointed that led the country to free elections in November 1974. Starting from Linz and Stepan (1996) a large strand of the literature on “new democracies” highlights the vulnerability of the political regime during the first years after the democratic transition, and the possibility of politically motivated distributive policies in an attempt to mitigate the risk of the democratic regime’s collapse (see, e.g., Brender and Drazen, 2007; Kammass and Sarantides, 2016).⁷ Second, after the election of 1981 the first socialist government in the history of Greece is formed, leading to a debt spiral as the government borrowed heavily between 1981-1989 to finance its

politicians in PR systems allocate a specific amount of spending on local public goods, the literature concludes that they prefer to direct these resources to their party strongholds rather than to marginal districts (see e.g. McGillivray, 2004; Golden and Picci, 2008).

⁶ It must be noted that long-run partisan loyalty should not be confused to the notion of core supporters that usually refers to voting in favour of a party in the previous election. More precisely, long-run partisan loyalty captures the stylized fact that in many countries there are districts/ voters that repeatedly vote for a given party. These long run political relationships have been cemented in the past as results of specific historical events which are not necessarily related to favouring policies or to pork-barrel politics. For more details about its measurement see e.g. Case, (2001); Larcinese et al., (2006); Joanis, (2011). The important characteristic of long-run partisan loyalty is that the electoral advantage of the favoring party persists over time and it is not immediately affected by the spending decisions of the incumbents.

⁷ More precisely, Linz and Stepan (1996), summarizing the experience of the democratic transitions in southern Europe, contend that the consolidation of democracy appears to be secure only when ordinary citizens have been convinced that democracy is superior to any other form of governance. Before that point, the pro-democratic feelings of citizenry cannot be taken for granted.

programme of state spending (see Figure 1). This period initiated a vicious cycle of similar practises by all subsequent governments, causing the country to entangle in its current malaise. During 1981-1989, the increase in total spending and debt was accompanied by an inflation of the public investment programme. Although public capital can promote growth, efficiency and convergence among regions (see, Aschauer, 1989; Bom and Ligthart, 2014), distortions that affect its spatial allocation can weaken and negate these effects. So, our aim is to explore the possibility of political distortions between 1975-1989, and especially the second half of this period that public capital was funded to a great extent with borrowed funds.

Insert Figure 1 here

A more general reason that we focus in Greece is the relative weakness of parties over legislators that come as a result of the PR system with open list (see e.g. Ames, 1995; Golden and Picci, 2008), and the existence of strong personalistic networks of political patronage with deep historical roots (see e.g. Petropoulos, 1968; Mavrogordatos, 1983a; Papakostas, 2001).⁸ These highly interpersonal patron-client linkages form pyramids with powerful legislators at their peak, local party bosses in the middle and individual voters at the base. Noticeably, these extensive long-lasting clientelistic linkages benefit individual politicians and only indirectly their parties.⁹ These networks ensure an amazingly high degree of long-run partisan loyalty in most Greek regions, and at the same time a very high degree of personalism on the electoral contests, where powerful legislators with strong patronage networks cannot be disciplined effectively by their party. Therefore, the institutional and political context of Greece appears to be an ideal textbook case concerning the potential political motives behind the geographical allocation of public investment.

The case of pork-barrel politics in Greece has been of interest to the literature, but only recently. In particular, Rodriguez-Pose et al. (2016a, 2016b) show political motivations in the spatial allocation of total public investment in Greece between 1974-2009. In comparison to these significant contributions our study has the following merits: (i) we do not explore only the effect on total public investment, we attempt to explore potential political distortions on nine investment subcategories (e.g., education or health); (ii) we focus on a narrower time period in attempt to increase the homogeneity

⁸ For two excellent historical reviews on the formation of clientelistic networks in Greece, see Petropoulos, (1968) and Mavrogordatos, (1983a). For an even more radical analysis that explains Greek politics solely through the lane of clientelistic practices and the ethos that those practices tended to produce, see Legg (1969).

⁹ In order to understand the clientelistic relationships that we observe in Greek politics, a key conceptual distinction between: *traditional clientelism* and *machine politics* is required (for more details on this see Weingrod, 1968). *Traditional clientelism* refers to interpersonal patron-client relations. Its typical structure is the patron-client dyad linking two individuals (or, at most, the two nuclear families that they represent) and the network is then constructed out of many such blocks with powerful individual politicians at their apex. When the role of either the client or the patron (or both) is no longer occupied by individuals but instead by groups or political parties these linkages can be better described as *machine politics*. In that case, the clientelistic linkages are impersonal and the political loyalty benefit the party rather than the individual politicians.

of our sample (e.g., electoral laws) (iii) using the regime change in 1981 as a source of exogenous variation in the distribution of political support within the Greek territory, we employ a difference-in-differences (DD) specification with region fixed effects in an attempt to mitigate endogeneity concerns; (iv) we propose an innovative way to capture long-run partisan loyalty, linking parties that dominated the political landscape in the post-dictatorship period with their ancestor's parties during the Post-War period and before the military junta (v) following the relevant literature we construct measures of personalistic networks at the regional level that we expect to be related with loyalty and in turn affect the spatial allocation of resources in the Greek territory.

Consistent with Rodriguez-Pose et al. (2016a), our analysis reveals politically-induced allocation of public investment by the conservative and the socialist Greek governments between 1975-1989. On top of that, we provide evidence that the socialist party preferred to distort the allocation of *regional* investment during its administration, whereas the conservative party *education* and *health* investment.¹⁰ Subsequently, we attempt to test the long-run partisan loyalty hypothesis to find that the post-dictatorship allocation of investment is also associated with the electoral influence of the ancestor pre-coup parties - e.g., the conservative party channelled more investment flows in the post-dictatorship period in areas that the pre-coup conservative party had higher political influence. Taken together, these results indicate that parties distorted the allocation of investment funds in favour strongholds that depict long-run loyalty. We further argue that the latter establish strong personalistic networks that in turn can affect the spatial allocation of resources. To this end we provide evidence that loyal prefectures are more likely to elect strong MP's with deep family roots in the parliament and/or MP's that obtain ministerial positions that can be proven powerful weapons in resource allocation.

The rest of the paper is organised as follows. Section 2 discusses the Greek political landscape and presents descriptive evidence on party strength and the evolution of investment flows. Section 3 describes the empirical strategy and the main econometric results. Finally, Section 4 offers some concluding remarks.

2. Data description and preliminary evidence

2.1 The Greek political landscape: Ancestors, descendants, and electoral outcomes

In this section we describe the political system in Greece and the electoral influence of the main political parties at the NUTS-3 level (i.e., 52 prefectures, see Figure A1 in the Appendix) in 6 electoral campaigns (1961, 1964, 1974, 1977, 1981 and 1985). The election of 1964 was the last before a brief

¹⁰ *Regional* investment includes devolved public funds to regions and prefectures for investment purposes. In Section 2.2 and Table A2 in the Appendix we provide further information of all nine subcategories of investment spending.

military junta, referred to as the “Regime of the Colonels” (1967-1974) that turned in 1974 the government to Konstantinos Karamanlis - a towering figure of Greek politics prior to the interlude of the autocratic regime (see Nicolakopoulos, 2001). Karamanlis formed a government of national unity that prepared the country for free elections that were finally held in November 1974. Most of the parties that took part in this electoral campaign were newly founded but -at the same time- they had deep historical roots based on the traditional clientelistic networks of the parties that were dominating during the pre-dictatorship period. For instance, *New Democracy (ND - Nea Dimokratia)* the right-wing party founded by Konstantinos Karamanlis a few days before the announcement of the 1974 election, it was the obvious political successor of the pre-coup party of *National Radical Union (ERE - Ethniki Rizospastiki Enosis)* purged of its ultra-right-wing elements (see, e.g., Clogg, 1987). Similarly, the traditional centre was represented by the alliance of *Centre Union - New Forces (EKND - Enosi Kentrou-Nees Dynameis)* headed by Georgios Mavros and it was clearly the political descendent of the pre-dictatorship moderate liberal party *Centre Union (EK- Enosis Kentrou)*. A new element in the political scene of that period was the Panhellenic Socialist Movement (*PASOK- Panellinio Socialistiko Kinima*) founded by Andreas Papandreou a couple of days before the announcement of the election. Andreas Papandreou was elected deputy with the pre-dictatorship *EK* and he was also son of Georgios Papandreou - the leader of *EK* before the military junta.

In the parliamentary elections of November 1974, *ND* won a landslide victory with 54.37 percent of the valid votes cast. The *EKND* under Georgios Mavros achieved 20.42 percent, whereas *PASOK* obtained 13.58 percent. The open-list reinforced proportional representation system in the election of 1974 guaranteed absolute dominance for *ND* with 220 seats in the 300-seat parliament. Section A1 in the Appendix describes the electoral system.¹¹ In 1977 Prime Minister Konstantinos Karamanlis called for early elections, and *ND* retained its majority with 41.47 percent (171 seats). The big surprise was the success of *PASOK* that almost doubled its electoral strength (25.3 percent), making Andreas Papandreou a prominent figure in Greek politics (see Nicolakopoulos, 2005).¹² In 1981 the party in power changes after the triumphant dominance of *PASOK* with 48.1 percent (172 seats) - against the 35.9 percent of *ND* - allowing Andreas Papandreou to form the first socialist government in the history of Greece. In 1985 *PASOK* won its second four-year period in government with 45.8 percent (161 seats), despite the relative rise of *ND* (40.8 percent). Table A1 provides more details about the electoral outcomes over this period, and the laws under which these electoral campaigns took place.

¹¹ It should be noted that similar electoral systems ensured control of the parliament for all subsequent one-party governments between 1975-1989. In contrast, the electoral law of proportional representation passed by *PASOK* before the elections of 1989 prevented *ND* to form a government despite its 5 percent lead in the popular vote against *PASOK* (see, Verney, 1990).

¹² Because of *PASOK*'s success, the vote share obtained by George Mavros' centrist party slumped to 11.95 percent, leading within a few years to its gradual disintegration from the political system (Mavrogordatos, 1984).

Using the electoral outcomes of 1974, 1977, 1981 and 1985 we construct three ‘political support’ variables for the period 1975-1989.¹³ First, the share of votes received by the incumbent party (*incumbent share*); second, the share of votes received by the two leading opposition parties between 1975-1981 (i.e., *EKND* and *PASOK*), or the leading opposition party between 1982-1989 (i.e., *ND*) (*opposition share*)¹⁴; third, the difference between *incumbent share* and *opposition share* (*victory margin*). We calculate these shares relative to the entire voting-eligible population.¹⁵ Figure 2 maps the *voting margin* of *ND* and *PASOK* after their first electoral wins in the elections of 1974 and 1981, respectively. As can be seen in Panel A, areas in Northern Greece - like Serres the place of origin of Constantine Karamanlis - and Peloponnese (e.g., Lakonia) voted strongly in favour of *ND*. In contrast, it is apparent in Panel B that prefectures in the Crete Island in the southern part of the Aegean Sea (e.g., Rethymno), Achaia - the place of origin of Andreas Papandreou - and prefectures in Central Greece (e.g., Euboea and Boeotia) are political strongholds of *PASOK*. Explicit definitions, descriptive statistics and sources of the variables employed are provided in Table A2 in the Appendix.

Insert Figure 2 here

To provide some evidence for the *long-run partisan loyalty* in Greek prefectures, Figure 3 plots the victory margin of *ERE* (*EK*) after its last electoral victory in the pre-dictatorial period in 1961 (1964) against the victory margin of *ND* (*PASOK*) in its first post-dictatorial victory in 1974 (1981). The correlation of electoral influence between the two right-wing parties in the upper part of Figure 3 is 80.65 percent leaving no doubt that *ND* is the political successor of the pre-coup party *ERE*. Regarding the relationship between *PASOK* and *EK*, a number of scholars contend that *PASOK* cannot be considered the lineal descendant of the pre-coup centrist party, mostly because of its more radical political agenda and the extensive renewal of ideas and practices that it brought to the Greek political arena (see Elefantis, 1981; Lyrantzis, 1984). Others have placed the political origins of *PASOK* firmly in the traditional centre (see e.g. Mavrogordatos, 1983b) a view that is also in line with more recent studies suggesting that the political power of *PASOK* was basically based on the pre-dictatorship

¹³ Specifically, we forward prefecture level electoral results up to (and including) the year of the next general election (see, e.g., Jablonski, 2014). For instance, we forward the election results of 1974 up to (and including) the next election year of 1977. In addition, we restrict our dataset after 1975 because this the first year that the incumbent party of *ND* had discretion over fiscal policy after its victory in the election held in November 1974.

¹⁴ The reason for this differentiation is that during 1982-1989 we have a dominant opposition party (*ND*), while between 1975-1981 the centrist party *EKND* and *PASOK* alter in the second and third place with the summation of their strength close to 35 percent. More importantly, as explained below, *PASOK* absorbed the majority of *EKND* supporters in the transition of its growing influence.

¹⁵ We opt for this measurement since it allows us to better account for endogenous turnout (see Spenkuch and Tillmann, 2018). However, in the Appendix that we use voting shares relative to valid votes cast results remain unaffected.

interpersonal patronage networks of the *EK* (see e.g. Pappas, 2009a; 2009b).¹⁶ As a result, the majority of the centrist supporters turned to *PASOK* in the transition period of its growing influence, whereas eventually the centrist party was absorbed by *PASOK* in the election of 1985 (see Mavrogordatos, 1984; Nicolakopoulos, 2005). The correlation of 81.39 percent between the victory margins of the centrist pre-dictatorship party *EK* and the left-wing post-dictatorship party *PASOK* strongly supports the latter approach. In Figure A2 in the Appendix we replace *victory margin* with the *vote share* of parties and the picture remains unaffected. Taking into account this evidence, our aim is to investigate if there exists some sort of a political bias in the allocation of public investment related to the deep historical roots of *PASOK* and *ND* in the Greek territory.

Insert Figure 3 here

2.2. Public investment data

To investigate whether public investment policies by *ND* and *PASOK* governments served solely developmental needs or they were also influenced by pork-barrel politics we construct the following variables - all expressed in per capita Drachmas at 1980 prices. First, our main dependent variable which is total public investment disbursements (*total*) - under the Greek Public Investment Programme (PIP) - across all sectors of the economy that are regionally identified at the NUTS-3 level.¹⁷ Figure 4 shows the spatial distribution of *total* investment for the sub-periods 1975-1981 and 1982-1989 -in percentage of the country and sub-period average- that *ND* and *PASOK* were in office, respectively. Both figures below indicate a significant change in the distribution of investment projects between the terms of *ND* and *PASOK*. For instance, Northern Greece where *ND* is more powerful absorbs less funds on average during *PASOK*'s administration. Serres a stronghold of *ND* in this region receives investment flows 86 percent above Greece's average between 1975-1981, which drops 43 percent below Greece's average during *PASOK*'s term in office. On the contrary, we observe that strongholds of *PASOK* in the Crete Island (e.g., Rethymno) experience remarkable increases in investment funds

¹⁶ Pappas (2009a; 2009b) contends that the deputies elected with *PASOK* in both 1974 and 1977 elections had not only political origins but also extensive electoral clienteles from pre-dictatorship *EK*. More precisely, he provides evidence that nine of the fifteen *PASOK* deputies in 1974 had sought elections under the banner of pre-dictatorship *EK* (e.g., Papandreou, Alevras, Koutsoheras, Papadimitriou, Charalambopoulos). Another two (Akrita and Vgenopoulos) were family relatives of former *EK* parliamentarians from whom they inherited large electoral clienteles. The remaining four of the 1974 deputies (Kaklamanis, Koutsogiorgas, Skoularikis, Psarakis) had also been members of the *EK* but had not run as party candidates in elections before 1974.

¹⁷ The PIP includes information that distinguishes the policy purpose of the investment (e.g., education) and the amount of investment committed to a specific geographical location. Total public investment fluctuated around the value of 4 percent of GDP during *ND*'s term in office, whereas this figure increased (on average) by one percent when *PASOK* came in power. We can identify each fiscal year around 60 percent of this budget that is targeted to a specific NUTS-3 region. The remaining 40 percent concerns more general funds 'targeted' at the NUTS-2 level and above (see also Monastiriotes and Psycharis, 2011).

between 1982-1989. Overall, this is a first indication that the distribution of investment projects can be affected by political motivations.

Insert Figure 4 here

Second, our dataset decomposes *total* investment to nine broad subcategories: (i) *regional* investment that includes devolved public funds to regions and prefectures for investment purposes; (ii) *transportation* investment; (iii) *education* investment; (iv) *primary sector* investment; (v) *industrial* investment; (vi) *housing and sanitation* investment; (vii) *health and public welfare* investment; (viii) *culture and administration* investment; (ix) *other* investment not elsewhere classified.¹⁸ Figure 5 shows the evolution of these investment categories expressed in real per capita terms. The figures presented with a blue (green) line indicate higher level during ND's (PASOK's) administration between 1975-1981 (1982-1989), whereas the grey line no significant change before and after 1981. *Regional* investment seems to be the main driving force of the increase in total investment during PASOK's term. This category includes funds that complement main investment flows in various sector of the economy like health, education or agriculture. The reason we observe this significant inflation after 1982 is that prefecture authorities (appointed by the central government) were given higher discretion in fund management and more responsibilities within sectors. In that way PASOK established a powerful "decentralized" network of local "bosses" that could identify more easily the demands of the local society that to a great extent are aligned with the interests of the party. Other categories that seem to increase between 1982-1989, though at a more moderate level, include *industrial* and *health and public welfare* investments. The latter is driven by the creation of a national health service in 1983, an ambitious social reform of the PASOK government. This allowed the mass recruitment of doctors, and initiated a programme of building hospitals and health centres (see e.g., Gullen and Matsaganis, 2000). It should be noted that big projects of this expansion (e.g., hospitals) were covered by *health* investment, whereas more localised goods by *regional* investment. When ND is in office, *educational*, *primary sector* and *housing and sanitation* investments appear higher, especially during its first term. *Educational* investment was the most prominent category during ND's term accompanied by a significant reform in 1976 aiming at the expansion of the educational system (Kazamias, 1978). The total reformation of the educational system was seen by the political system as a priority that could promote the re-introduction of parliamentary legitimacy with the consent of the lower classes (see Frangoudakis, 1981).

¹⁸ Observations for investment flows by type (e.g., regional) are fewer since the regional fiscal account of 1979 was missing from the collection of the Ministry of Economy and Development.

Insert Figure 5 here

It should be noted that the geographical allocation of public investment in Greece during this period is not based on any particular formula, making funds vulnerable to political manipulation (see Rodriguez-Pose et al., 2016a). Overall, the evidence so far seems to verify this hypothesis, as the two political parties show different priorities in the spatial distribution of investment funds, as well as distinct preferences with respect to the policy purpose of these funds. We argue that deep rooted long-run relationships between parties and voters that ensure an intertemporal electoral advantage is a major determinant of the politically-induced geographical allocation of public capital (see Case, 2001; Larcinese et al., 2006; Joanis, 2011).

3. Empirical Analysis

3.1 Fixed effects regressions

To estimate the association between political support and public investment, we begin by estimating a prefecture-level fixed-effects model for the total flows that are allocated within the Greek territory:

$$total_{it} = \alpha_0 + \alpha_1 political\ support_{it-1} + \beta X_{it} + \delta_i + \gamma_t + \varepsilon_{it} \quad (1)$$

where $total_{it}$ denotes the natural logarithm of real per capita total public investment in prefecture i at time t ; $political\ support_{it-1}$ is the main variable of interest measured by the variables *incumbent share*, *opposition share* and *victory margin* prefecture i in the last election; X_{it} is a vector of control variables that includes *population density*; the share of households with access to electricity (*electricity access*); and the share of individuals employed in the agricultural sector (*agricultural share*). These variables are intended to capture the effect of urbanisation, prosperity and development that are expected to affect the allocation of public investment (see Joanis, 2011; Solé-Ollé, 2013). The model also includes prefecture, δ_i , and year fixed effects, γ_t , to control for time-invariant prefecture characteristics and shocks common to all prefectures. Finally, ε_{it} is the error term clustered at the prefecture i level. To assess if regions with stronger support for the incumbent party receive more investment flows than regions with stronger support for the opposition, the coefficient on *incumbent share* (*opposition share*) must have a positive (negative) sign, which, in turn, will result in a positive coefficient on *victory margin*. Of course, the above empirical specification gives rise to well-known endogeneity problems as it involves regressing policy variables on electoral outcomes. We alleviate

this issue, as our political support variables are calculated based on the outcomes of the previous election.

Table 1 displays our first empirical results. We can notice that the coefficient on *incumbent share* (*opposition share*) has the expected positive (negative) sign, and is statistically significant at the 5% (10%) confidence level. These coefficients produce, in turn, a positive and highly significant impact of victory margin on the allocation of public investment. Qualitatively, the estimates in column (3) suggest that prefectures with the highest value of *victory margin* receive, on average, 27 percent more public investment funds compared to prefectures with the lowest value. In column (4) we add the squared term of *victory margin* to test for the nonlinearity of this effect. Greek governments may have opted to divert projects towards prefectures with weak support (i.e., swing prefectures) if they believe that voters in their strongholds are voting for them unconditionally. In that case, a positive coefficient on *victory margin* and a negative coefficient on its squared term are to be expected. However, the coefficient on the polynomial term is positive and significant, implying that public investment is even higher among the most supportive prefectures of the incumbent. In the Appendix we re-estimate these models adding the lag dependent variable in the set of controls, using political support variables as shares of valid votes cast, and testing for outlier observations. As can be seen in Tables A3-A5, the relationship between political support and total public investment remains intact.

Insert Table 1 here

3.2 Difference-in-differences estimates

3.2.1 Empirical specification

Next, we exploit the regime change that occurred in 1981 as a source of exogenous variation in the distribution of political support within the Greek territory, employing a DD specification that allows us to move closer to a causal interpretation. To get as much information as possible, we add in the estimations public investment by type (e.g., education). The DD specification that we can explore whether there are *ND* or *PASOK* specific interactions driving the allocation of public investment takes the following form (see, e.g., Joanis, 2011; Jablonski, 2014):

$$investment_{it} = \alpha_0 + \alpha_1 party_t * victory\ margin_i + \beta X_{it} + \delta_i + \gamma_t + \varepsilon_{it} \quad (2)$$

where $investment_{it}$ is the natural logarithm of total, or by-type, real per-capita investment in prefecture i at time t .¹⁹ The variable $party_t$ is an indicator variable that takes the value of one in years greater than or equal to 1982, and 0 otherwise (when PASOK is power - $PASOK_t$), whereas its values are reversed when we estimate the effect of the ND regime (ND_t). In addition, when $PASOK_t$ (ND_t) is interacted with $victory\ margin_i$, the latter takes values of the victory margin of PASOK (ND) in the election of 1981 (1974) - $victory\ margin_{1981}$ ($victory\ margin_{1974}$). This method builds on the idea that PASOK's (ND's) political support should only affect investment distribution during 1982-1989 (1975-1981) that the party is in power. Thus, by subtracting the effect of victory margin during the PASOK (ND) regime from their effect during the ND (PASOK) regime, α_1 provides a reasonable estimate of the extent to which each party shaped Greece's investment portfolio within the Greek territory. We prefer fixed measures to estimate the effect of the two parties - 1981 (1974) victory margin of PASOK (ND) - since it is less likely to be endogenous to investment trends than a voting share that changes over time (see e.g., Carruthers and Wanamaker, 2015). Of course, even fixed voting shares across prefectures are not exogenously assigned and can be correlated with potential confounders. To mitigate this issue, as in the previous section, our estimations include prefecture (δ_i) and year fixed effects (γ_t). Moreover, covariates in vector X_{it} , as discussed above, are employed to control for important time-variant factors that could still confound these estimates. Finally, ε_{it} is the error term clustered at the prefecture i level.

3.2.2 Results

We start our DD analysis focusing on the effect of the PASOK administration. This is our priority in this section since we can explore the possibility of political motivation as one the driving forces behind the inflated PIP (see Figure 1). As can be seen in Panel A of Table 2, the DD coefficient ($PASOK*victory\ margin_{1981}$) is positive and statistically significant in columns (2) and (10) when related to the variables *regional* and *other* investment, respectively. Related to the evidence provided in Figure 4, *regional* investment is the main investment category that drives the increase of total public investment between 1982-1989, which in turn according to the DD analysis seems to be directed more intensively in areas that the victory margin of PASOK is higher. As already discussed, after 1982 prefecture authorities were given full autonomy to demand investment funds from the central government. Also, within this context they were vested with more sectoral responsibilities, allowing local appointed “bosses” to identify and channel more resources according to the demands of the society that to a great extent can be aligned with the priorities of the party. The coefficient in column

¹⁹ To avoid taking the log of zero for most investment by type variables, we added the value of 1 before taking logarithms.

(1) in the specification of *total* public investment is very close to that of column (2) for *regional* investment, but more noise and marginally insignificant. In Section A2 of the Appendix and Table A6 we present three modification of the above empirical specification by splitting the DD coefficient in two sub-periods (1975-1977 and 1978-1981), by restricting the sample between 1978-1985, and testing for the parallel trend hypothesis. Overall, evidence seems to verify that *regional* investment was a significant instrument of PASOK administration to approach its political supporters.

Insert Table 2 here

Next, in Panel B of Table 2 we estimate equation (2) for the ND regime. As can be seen, the DD coefficient $ND * victory\ margin_{1974}$ is positive and statistically significant in column (1) when related to *total* public investment. Interestingly, this change seems to be driven by increases in *education* and *housing and sanitation* investments that according to Figure 4 are two of the most prevalent investment categories during the first term of ND in power (i.e., 1975-1977). In Table A7 in the Appendix we provide two additional tests of these results by splitting this effect in two sub-periods (1975-1977 and 1978-1981), and by restricting the sample between 1978-1985 - as is Panels A and B of Table A6.²⁰ These results indicate significant bias especially during the first term of ND in power. Someone could argue that the increased investment flows during this period may have served the purpose of consolidating the vulnerable newly established democratic regime. Specifically, according to Brender and Drazen (2007) the attitude of the citizenry towards democracy is important in preventing democratic collapse, and fiscal manipulation can act as an instrument to convince them that "democracy works". The fact that investment flows are also positively associated with the victory margin of ND indicates one extra motivation that determined their allocation.

3.2.3 Long-run partisan loyalty

So far we have provided empirical evidence that the spatial distribution of investment projects within the Greek territory is shaped by political motivations. Our next step is to assess our main hypothesis that the main political driving force that distorts the geographical allocation of public investment is *long-run partisan loyalty* - i.e., incumbents direct resources to the most loyal prefectures. To this end, in Panel A of Table 3 we re-estimate equation (2) by replacing the victory margin of PASOK ($victory\ margin_{1981}$) with the victory margin of its political ancestor *EK* after its last electoral victory in the pre-

²⁰ We do not test the hypothesis of pre-existing trends in the case of ND (as in Panel C of Table A7) since its terms are ahead of PASOK's administration.

dictatorial period in 1964 (*victory margin₁₉₆₄*). Following the same rationale, in Panel B of Table 3 the victory margin of ND (i.e., *victory margin₁₉₇₄*) is replaced with the victory margin of *ERE* after its last electoral victory in the pre-dictatorial period in 1961 (i.e., *victory margin₁₉₆₁*).

As can be seen in Panel A, the DD coefficient *PASOK*victory margin₁₉₆₄* in column (2) is positive and statistically significant at the 5% level when related to the variable *regional* investment. Taken together with our results in Table 2 this indicates that PASOK administration directs *regional* investment funds to strongholds that at the same time depict long-run loyalty to the centre-left political spectrum. In Panel B, as can be seen in column (1), the DD coefficient *ND*victory margin₁₉₆₁* is positive and statistically significant at the 5% level when related to the variable *total* public investment. Therefore, *total* public investment seems to be channelled in the most loyal prefectures for the right-wing party. Overall, this is some first evidence that long-run partisan loyalty matters when political parties in Greece make strategic decisions on their political survival.

Insert Table 3 here

3.3 Mechanisms

We argue that long-run loyalty establishes strong personalistic networks at the regional level that in turn affect the spatial allocation of resources in the Greek territory. The intermediating factors we investigate in this section are *family legacy* and *ministers and deputy ministers*. The former takes the value of one if the voters in prefecture *i* and election *t* (i.e., 1974, 1977, 1981, 1985), elected a governmental MP that is son or daughter of an MP elected in the pre-dictatorial period, and 0 otherwise. The latter takes the value of one if an appointed Minister or deputy Minister of the government in year *t* (1975-1989) is elected in prefecture *i*, and 0 otherwise. We suggest that prefectures with long-run partisan loyalty are more likely to have strong MP's with deep family roots in the parliament and/or MP's with ministerial positions that in both cases can be proven powerful weapons in resource allocation (see, e.g., Golden and Picci, 2008). In the analysis that follows, we estimate the following equation:

$$personalistic\ networks_{it} = \alpha_0 + \alpha_1 political\ support_{it-1} + \beta X_{it} + \varepsilon_{it} \quad (3)$$

This equation is very similar to our main linear regression equation, (1), except that the left-hand side variable *personalistic networks_{it}* is measured by the variables *family legacy_{it}* and *ministers and deputy ministers_{it}* described above. As both dependent variables are binary, except from the standard OLS estimator, we apply in addition the non-linear estimator Logit. It should be noted that we abstain from using the conditional logit estimator (i.e., Logit fixed-effects-like approach) (Chamberlain, 1980),

because our dependent variables in many cases show no variation within prefectures dropping a significant number of our observations.

Even (odd) columns in Table 4 report simple OLS (Logit) estimates. In columns (1) and (2) of Panel A, we start by associating the historical *victory margin* of ERE in 1961 and EK in 1964 with our measure of strong MP's in the first post-dictatorial electoral wins of their descendant parties in the elections of 1974 and 1981, respectively. Next in columns (3) and (4) we replace historical with contemporary *victory margin*, whereas in columns (5) and (6) we use the contemporary victory margin for all four post-dictatorial elections of our sample. Moving in Panel B, we follow a similar strategy though we follow *ministers and deputy ministers* during the term of the governmental party. For instance, for the election of 1974 we observe the allocation of ministerial positions in the Greek territory between 1975 and 1977, for the election of 1977 between 1978-1981 and so on. As can be seen in Panels A and B of Table 4, in all cases political support is positively related to the probability of having a strong MP in the prefecture. Interestingly, in Table A8 in the appendix that we decompose between Ministers and deputy Ministers, our results seem to be driven by the latter. Overall, we take this as suggesting long-run partisan loyalty establishes strong MP's in the governing party that in turn can allocate more resources in their home prefecture. Of course, we cannot conclusively exclude other important mechanisms, though we suggest that these are prime candidates for the channels through which loyalty causes pork-barrel politics in Greece.

4. Conclusions

The paper at hand seeks to investigate the role of political incentives in the geographical allocation of total and decomposed public investment in 52 NUTS3-level regions in Greece during the period 1975-1989. Using a newly constructed dataset our analysis reveals politically-induced allocation of public investment by both the conservative (1975-1981) and the socialist (1982-1989) Greek governments of that period. In particular, we exploit the regime change that occurred in 1981 as a source of exogenous variation in the distribution of political support within the Greek territory, employing a DD specification to provide the following evidence: (i) the socialist party preferred to distort the allocation of *regional* investment during its administration; (ii) the conservative party shaped *total* public investment, but also *education* and *health* flows. We argue that deep rooted long-run relationships between parties and voters that ensure an intertemporal electoral advantage is a major determinant of these political distortions. In particular, we show that the post-dictatorship allocation of investment is also associated with the electoral influence of the ancestor pre-coup parties. Taken together, these results indicate that parties distorted the allocation of investment funds in favour strongholds that depict long-run loyalty. The latter establish strong personalistic networks at the regional level that in

turn affect the spatial allocation of public capital. To this end, we show that loyal prefectures are more likely to have strong MP's with deep family roots in the parliament and/or MP's with ministerial positions that in both cases can be proven powerful weapons in resource allocation.

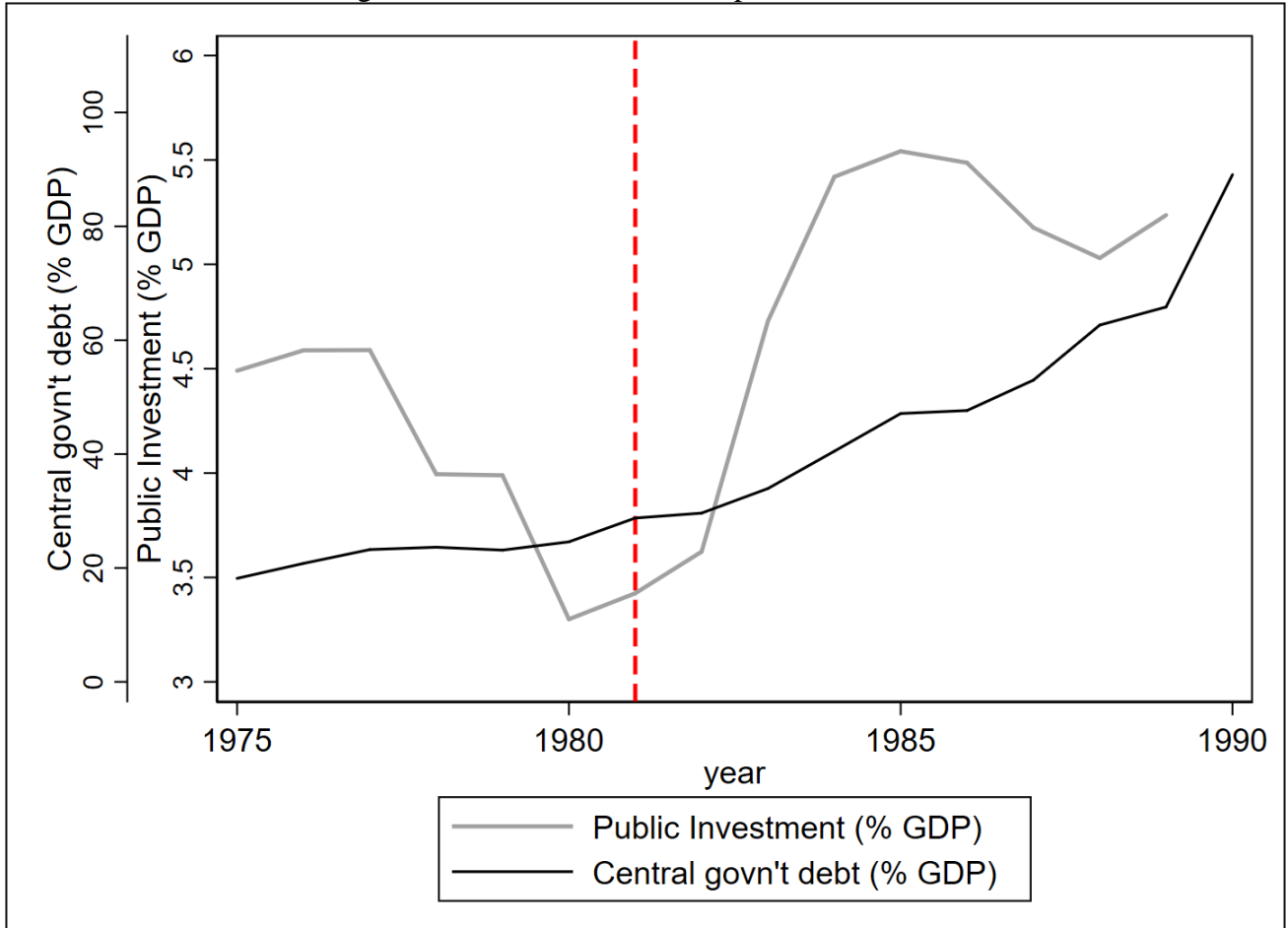
References

- Ames, B. (1995). Electoral strategy under open-list proportional representation. *American Journal of Political Science*, 39(2), 406-33.
- Arulampalam, W., Dasgupta, S., Dhillon, A., and Dutta, B. (2009). Electoral goals and center-state transfers: A theoretical model and empirical evidence from India. *Journal of Development Economics*, 88(1), 103-119.
- Aschauer, D. (1989). Is public expenditure productive? *Journal of Monetary Economics* 23(2), 177-200.
- Bom, P., and Ligthart, J. (2014). What have we learned from three decades of research on the productivity of public capital? *Journal of Economic Surveys*, 28(5), 889-916.
- Brender, A., and Drazen, A. (2007). Why is economic policy different in new democracies? Affecting attitudes. *NBER Working Paper No. 13457*
- Carruthers, C., and Wanamaker, M. (2015). Municipal housekeeping: The impact of women's suffrage on public education. *Journal of Human Resources*, 50(4), 837-872.
- Case, A. (2001). Election goals and income redistribution: Recent evidence from Albania. *European Economic Review*, 45(3), 405-23.
- Chamberlain, G. (1980). Analysis of Covariance with Qualitative Data, *Review of Economic Studies*, 47 (1), 225-238.
- Clogg, R. (1987). *Parties and elections in Greece: The search for legitimacy*, Duke University Press, Durham, NC.
- Costa-i-Font, J., Rodriguez-Oreggia, E., and Lunapla, D. (2003). Political competition and pork-barrel politics in the allocation of public investment in Mexico. *Public Choice* 116 (1-2), 185-203.
- Cox, G., and McCubbins, M. (1986). Electoral politics as a redistributive game. *Journal of Politics*, 48 (2), 370-389.
- Dahlberg, M., and Johansson E. (2002). On the vote-purchasing behavior of incumbent governments. *American Political Science Review*, 96(1): 27-40.
- Dixit, A., and Londregan, J. (1998). Fiscal federalism and redistributive politics. *Journal of Public Economics*, 68(2), 153-180.
- Elephantis, A., (1981). *PASOK and the elections of 1977: The rise of the populist movement*, in Penniman H. (eds.) *Greece at the polls: The national elections of 1974 and 1977*, Washington, DC: American Enterprise Institute for Public Policy.
- Frangoudakis, A. (1981). The impasse of educational reform in Greece: An introduction. *Journal of the Hellenic Diaspora*, 8, 7-18.
- Golden, M, and Min, B. (2013). Distributive politics around the World. *Annual Review of Political Science*, 16, 73–99.
- Golden M, and Picci L. (2008). Pork barrel politics in postwar Italy, 1953–1994. *American Journal of Political Science*, 52(2):268-89.
- Guillén A. and Matsaganis M. (2000). Testing the social dumping hypothesis in Southern Europe: Welfare policies in Spain and Greece during the last 20 years. *Journal of European Social Policy*, 10 (2), 120-145.
- Jablonski, R. (2014). How aid targets votes: The impact of electoral incentives on foreign aid distribution. *World Politics*, 66(2), 1-39.
- Joanis, M. (2011). The road to power: Partisan loyalty and the centralized provision of local infrastructure, *Public Choice*, 146, (1-2), 117-143.
- Kammas, P., and Sarantides, V. (2016). Fiscal redistribution around elections when democracy is not “the only game in town”. *Public Choice*, 168(3), 279-311.
- Kazamias, A. (1978). The politics of educational reform in Greece: Law 309/1976. *Comparative Education Review*, 22(1), 21-45.
- Kemmerling, A., and Stephan, A. (2015). Comparative political economy of regional transport infrastructure in Europe. *Journal of Comparative Economics*, 43(1), 227–239.

- Knight, B. (2004). Parochial interests and the centralized provision of local public goods: Evidence from congressional voting on transportation projects. *Journal of Public Economics*, 88, 845–866.
- Larcinese, V., Rizzo, L., and Testa, C. (2006). Allocating the U.S. federal budget to the states: The impact of the President. *Journal of Politics*, 68(2), 447–456.
- Legg, K. (1969). *Politics in modern Greece*. Stanford University Press.
- Lindbeck, A., and Weibull, J. (1987). Balanced-budget redistribution as the outcome of political competition. *Public Choice*, 52(3), 273–297.
- Linz, J., and Stepan, A. (1996). *Problems of democratic transition and consolidation: southern Europe, South America, and post-communist Europe*. Baltimore: Johns Hopkins University Press.
- Lizzeri, A., and Persico, N. (2001). The provision of public goods under alternative electoral incentives. *American Economic Review*, 91(1), 225-45.
- Lyrantzis, C. (1984). Political parties in post-junta Greece: A case of “bureaucratic clientelism? *West European Politics*, 7(2), 99-118.
- Mavrogordatos, G. (1983a). *Stillborn republic: Social coalitions and party strategies in Greece, 1922–1936*. Berkeley, CA: University of California Press.
- Mavrogordatos, G. (1983b). *The rise of the green sun: The Greek election of 1981*. London: King’s College, Centre for Contemporary Greek Studies.
- Mavrogordatos, G. (1984). The Greek party system: a case of limited but polarized pluralism?, *West European Politics*, 7(4), 156-169.
- McGillivray, F. (2004). *Privileging industry: The comparative politics of trade and industrial policy*. Princeton University Press, Princeton.
- Milesi-Ferretti, G., Perotti, R., and Rostagno, M. (2002). Electoral systems and the composition of public spending. *Quarterly Journal of Economics*, 117 (2), 609-657.
- Monastiriotis, V., and Psycharis, Y. (2011). Without purpose and strategy? A spatio-functional analysis of the regional allocation of public investment in Greece. GreeSE, 49. Hellenic Observatory, London, UK.
- Nicolakopoulos, E. (2001). *The Weak Democracy. Parties and Elections, 1946-1967*. Athens: Patakis Publishers (in Greek).
- Nicolakopoulos, E. (2005). Elections and voters, 1974-2004: Old cleavages and new issues. *West European Politics*, 28(2), 260-278.
- Papakostas, A. (2001). *Why is there no clientelism in Scandinavia? A comparison of the Swedish and Greek sequences of development*, in Piattoni S. (eds.) *Clientelism interests and democratic representation: the European experience in historical and comparative perspective*, Cambridge: Cambridge University Press
- Pappas, T. (2009a). Patrons against partisans. The politics of patronage in mass ideological parties. *Party Politics*, 15(3), 315-334.
- Pappas, T. (2009b). *The charismatic party*. Patakis, Athens (in Greek)
- Petropoulos, J. (1968). *Politics and statecraft in the Kingdom of Greece, 1833–1843*. Princeton, NJ: Princeton University Press.
- Reinhart, C., and Rogoff, K. (2011). From financial crash to debt crisis, *American Economic Review*, 101(5), 1676-1706.
- Rodriguez-Pose, A., Psycharis, Y., and Tselios, V. (2016a). Politics and investment: Examining the territorial allocation of public investment in Greece. *Regional Studies*, 50(7), 1097-1112.
- Rodriguez-Pose, A., Psycharis, Y., and Tselios, V. (2016b). Liberals, socialists, and pork-barrel politics in Greece. *Environment and Planning A: Economy and Space*, 48(8), 1473-1492.
- Solé-Ollé, A. (2013). Inter-regional redistribution through infrastructure investment: tactical or programmatic? *Public Choice*, 156(1-2), 229-252.

- Solé-Ollé, A., and Sorribas-Navarro, P. (2008). The effects of partisan alignment on the allocation of intergovernmental transfers. Difference-in differences estimates for Spain. *Journal of Public Economics*, 92, 625–671.
- Spenkuch, J., and Tillmann, P. (2018). Elite influence? Religion and the electoral success of the Nazis, *American Journal of Political Science*, 62(1), 19-36.
- Stratmann, T., and Baur, M. (2002). Plurality rule, proportional representation, and the German Bundestag: How incentives to pork-barrel differ across electoral systems. *American Journal of Political Science*, 46(3), 506-14.
- Verney, S. (1990). Between coalition and one-party government: the Greek elections of November 1989 and April 1990, *West European Politics*, 13 (4), 131-138.
- Weingrod, A. (1968). Patrons, patronage and political parties. *Comparative Studies in Society and History*, 10(4), 377-400.
- Worthington, A., and Dollery, B. (1998). The political determination of intergovernmental grants in Australia. *Public Choice*, 94 (3-4), 299-315.
- Yamano, N., and Ohkawara, T. (2000). The regional allocation of public investment: Efficiency or equity? *Journal of Regional Science*, 40 (2), 205-229.

Figure 1. Government debt and public investment



Notes: The red dashed line indicates the year that the socialist party PASOK came in power after the election of 1981. Government debt data are obtained by Reinhart and Rogoff (2011). For public investment data see Table A2 in the Appendix.

Figure 2. Electoral power of ND and PASOK

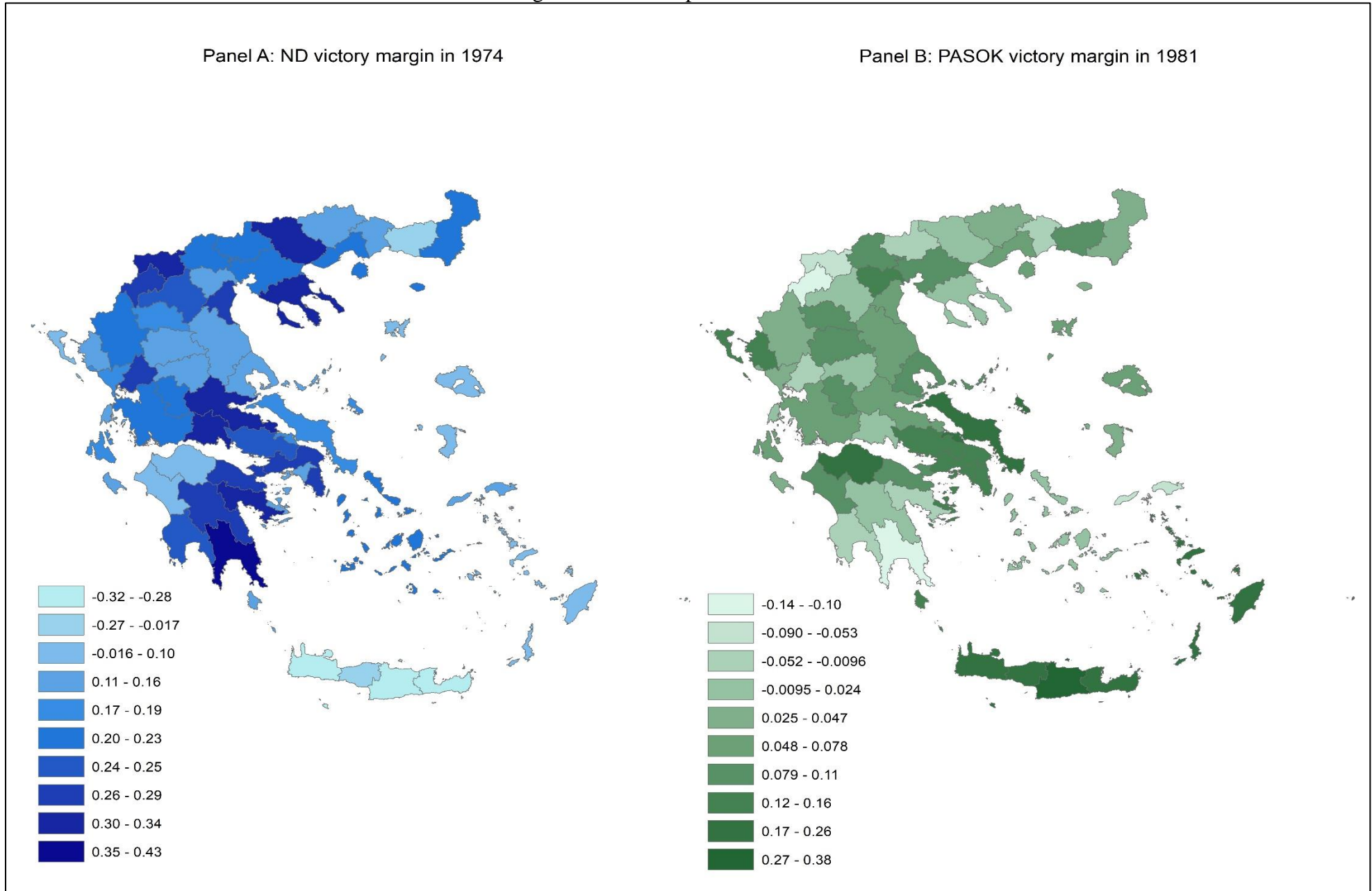


Figure 3. Long-run partisan loyalty in Greek prefectures

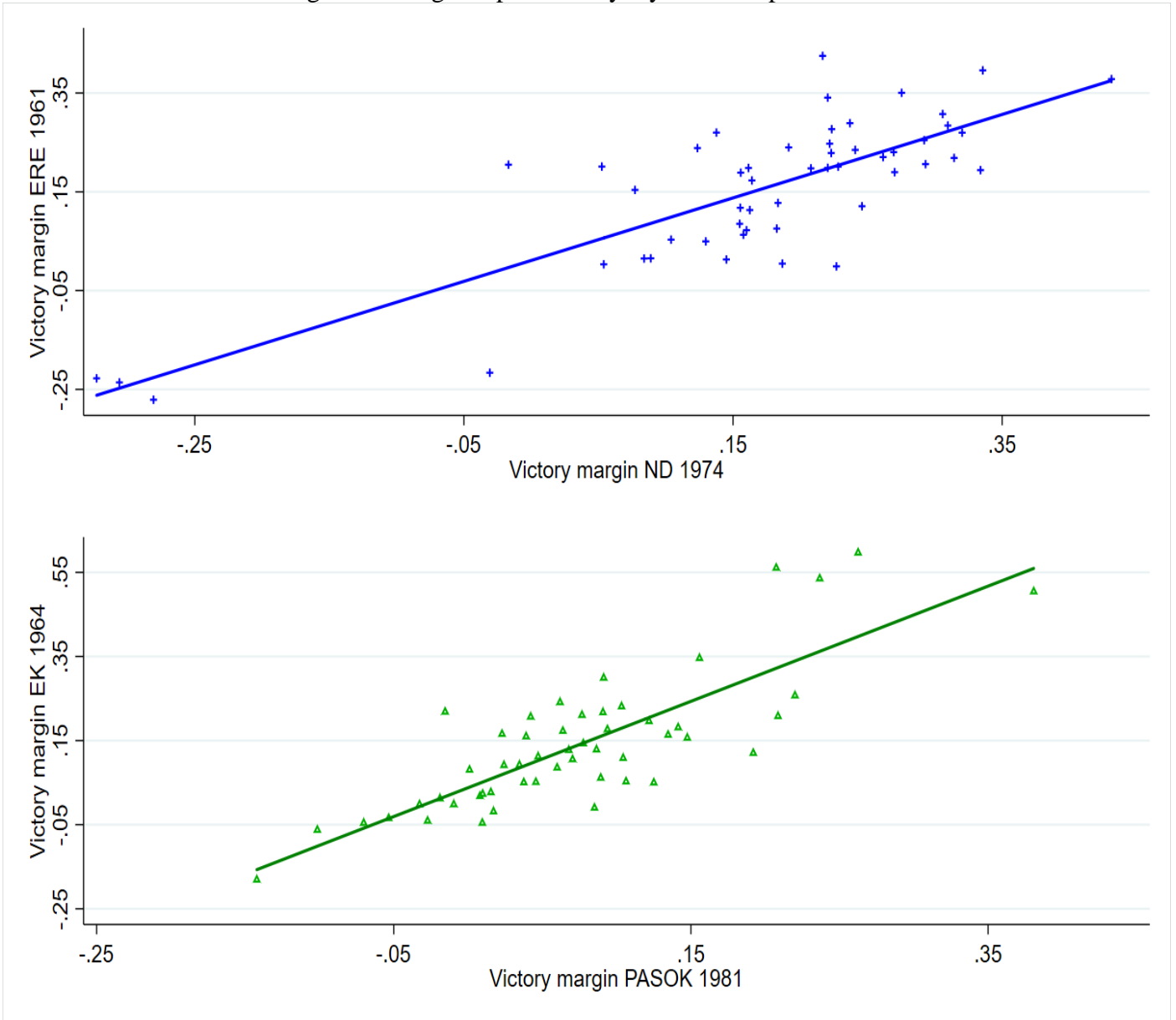


Figure 4. Public investment per capita

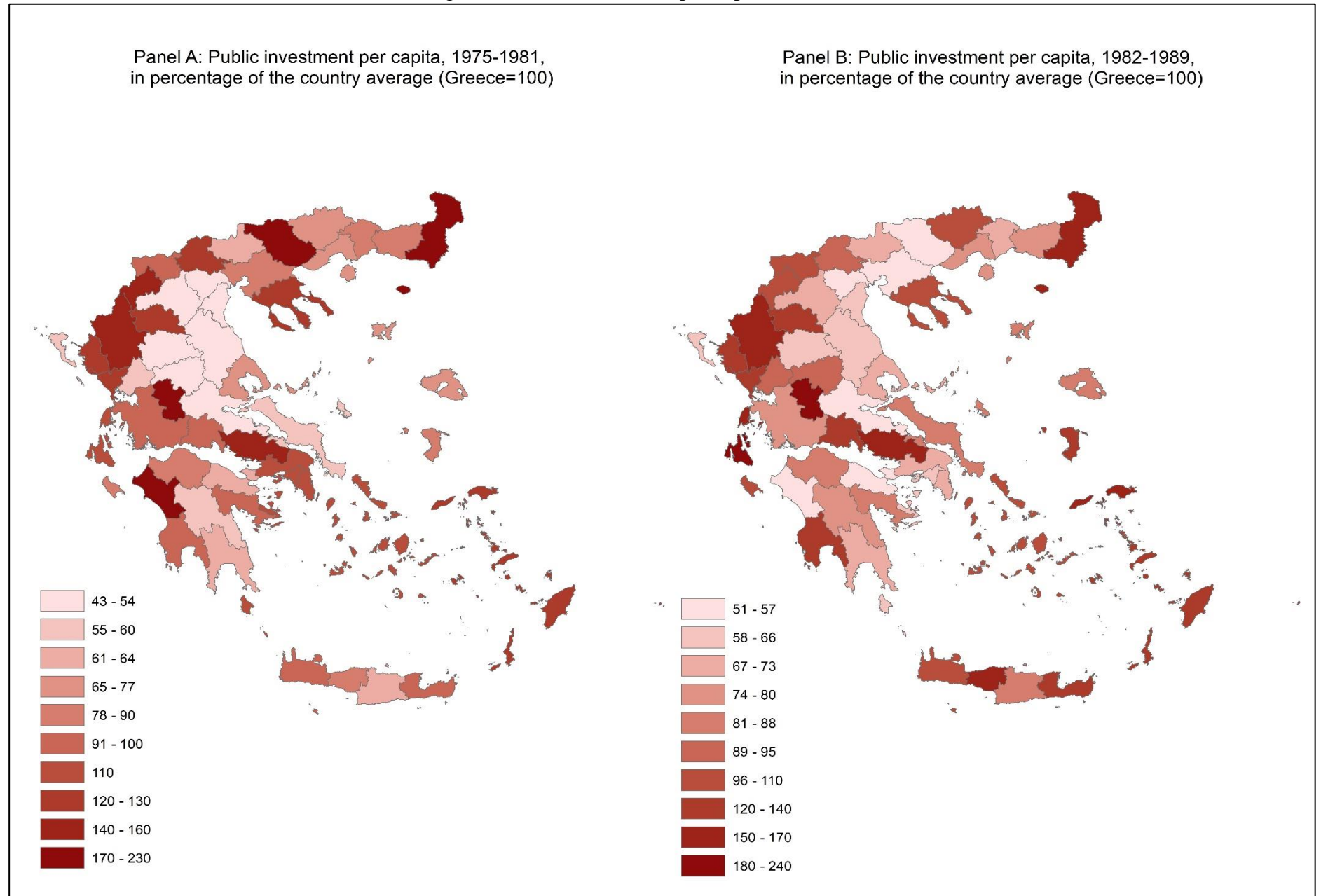
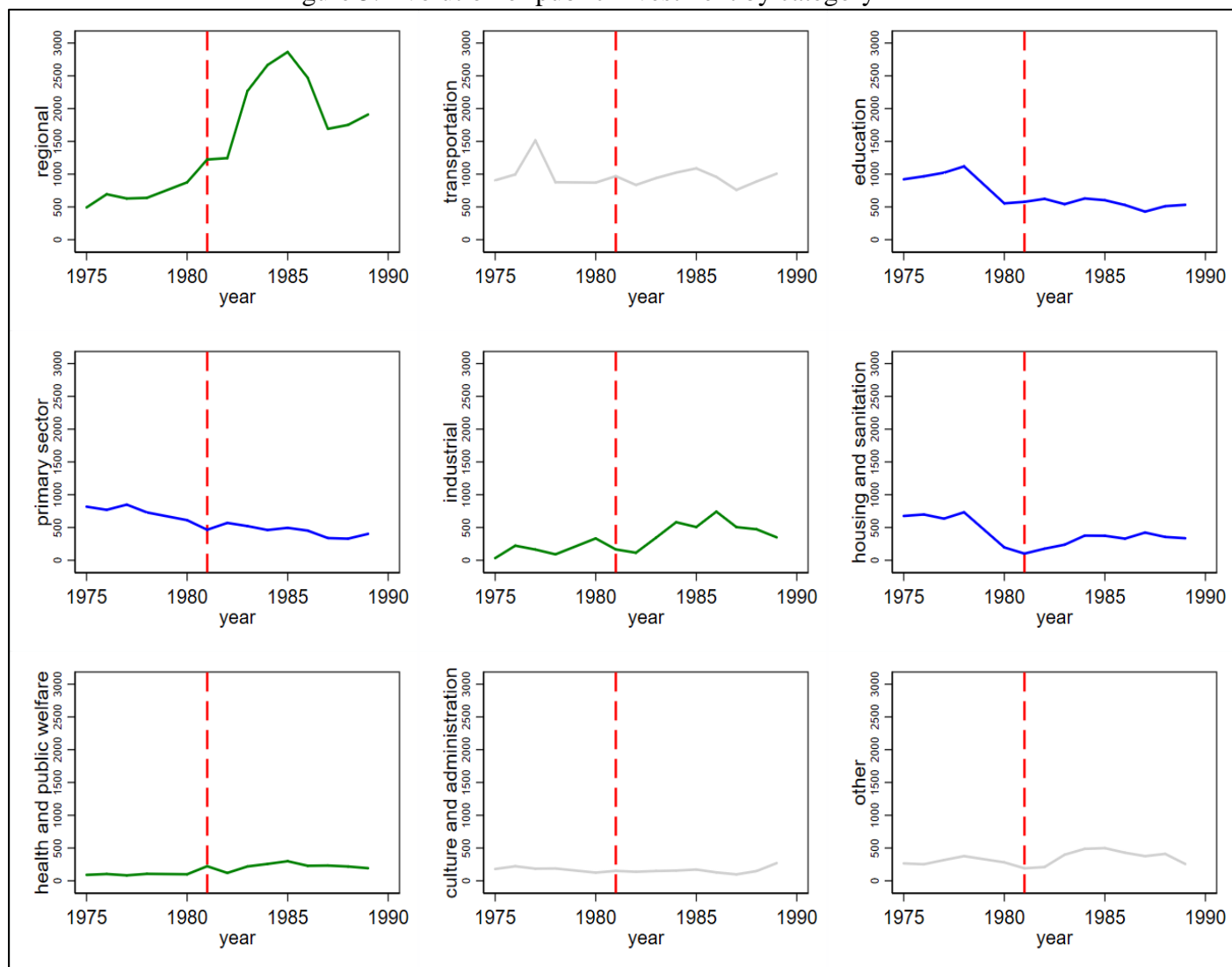


Figure 5. Evolution of public investment by category



Notes: The red dashed line indicates the year that PASOK came in power after the election of 1981. The blue (green) line indicates a significant increase in investment spending during the term of ND (PASOK). All public investment variables are expressed in real per capita terms.

Table 1. Political support and the allocation of public investment

	(1)	(2)	(3)	(4)
<i>incumbent share</i>	0.717** (0.326)			
<i>opposition share</i>		-0.609* (0.342)		
<i>victory margin</i>			0.369** (0.178)	0.115 (0.134)
<i>victory margin</i> ²				2.564* (1.436)
Observations	780	780	780	780
R ²	0.512	0.513	0.510	0.510

Notes: The table reports OLS estimates of equation (1). Prefecture and year fixed effects are included. The dependent variable is the natural logarithm of the real per capita total investment (*total*) in each prefecture. All models control for the *population density*, *electricity access* and the *agricultural rate*, but these coefficients are not reported to save space. Robust standard errors, clustered by prefecture are reported in parentheses. *, **, *** denote statistical significance at the 10%, 5%, 1% level respectively.

Table 2. Difference-in-differences estimates, PASOK and ND victory margin

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	total	regional	transportation	education	primary sector	industrial	housing and sanitation	health and public welfare	culture and administration	other
Panel A: PASOK administration										
<i>PASOK*victory margin₁₉₈₁</i>	0.480 (0.340)	0.562** (0.246)	-0.322 (2.305)	2.470 (2.826)	2.639 (1.664)	-2.064 (1.723)	2.345 (2.800)	-1.265 (2.709)	0.470 (2.448)	6.048* (3.068)
Observations	780	728	728	728	728	728	728	728	728	728
R ²	0.507	0.869	0.117	0.470	0.064	0.224	0.254	0.235	0.064	0.449
Panel B: ND administration										
<i>ND*victory margin₁₉₇₄</i>	0.466** (0.220)	0.115 (0.187)	1.299 (1.166)	3.380* (1.871)	0.307 (0.824)	-1.618* (0.964)	2.646** (1.288)	-1.934 (1.449)	-0.876 (1.214)	0.985 (1.791)
Observations	780	728	728	728	728	728	728	728	728	728
R ²	0.511	0.868	0.120	0.482	0.057	0.226	0.260	0.239	0.066	0.434

Notes: The table reports DD coefficient estimates of equation (2). Prefecture and year fixed effects are included. All estimates control for the *population density*, *electricity access* and the *agricultural rate*, but these coefficients are not reported to save space. Robust standard errors, clustered by prefecture are reported in parentheses. *, **, *** denote statistical significance at the 10%, 5%, 1% level respectively.

Table 3. Difference-in-differences estimates, EK and ERE victory margin: Long-run partisan loyalty

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	total	regional	transportation	education	primary sector	industrial	housing and sanitation	health and public welfare	culture and administration	other
Panel A: PASOK administration										
<i>PASOK*victory margin of EK 1964</i>	0.345 (0.282)	0.346** (0.157)	-0.047 (1.705)	1.448 (1.809)	0.579 (0.848)	-1.182 (0.902)	0.878 (1.562)	0.916 (1.368)	-0.267 (1.253)	3.793** (1.648)
Observations	780	728	728	728	728	728	728	728	728	728
R ²	0.508	0.870	0.117	0.470	0.058	0.224	0.252	0.235	0.064	0.451
Panel B: ND administration										
<i>ND*victory margin of ERE 1961</i>	0.609** (0.254)	0.204 (0.178)	1.211 (1.579)	1.640 (1.825)	1.545** (0.739)	-1.939** (0.898)	1.688 (1.530)	-0.133 (1.500)	0.305 (1.175)	4.953*** (1.678)
Observations	780	728	728	728	728	728	728	728	728	728
R ²	0.516	0.868	0.120	0.471	0.064	0.229	0.255	0.234	0.064	0.462

Notes: See Table 2.

Table 4. Past and contemporary electoral power and personalistic networks

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	Logit	OLS	Logit	OLS	Logit
victory margin:	Historical	Historical	Contemporary	Contemporary	Contemporary	Contemporary
Panel A: electoral power and family legacy						
Years of family legacy variable	1974,1981	1974,1981	1974,1981	1974,1981	1974, 1977, 1981, 1985	1974, 1977, 1981, 1985
<i>victory margin</i>	0.494*	2.447*	0.848**	4.759*	0.618**	3.043*
	(0.290)	(1.517)	(0.392)	(2.567)	(0.295)	(1.580)
Observations	104	104	104	104	208	208
R ²	0.082	0.078	0.112	0.107	0.077	0.070
Panel B: electoral power and the allocation of (deputy) ministerial positions						
Years of ministers and deputy ministers variable	1975-77 & 1982-85	1975-77 & 1982-85	1975-77 & 1982-85	1975-77 & 1982-85	1975-1989	1975-1989
<i>victory margin</i>	0.338**	1.453**	0.725***	3.557***	0.594***	2.727***
	(0.154)	(0.722)	(0.162)	(0.924)	(0.140)	(0.706)
Observations	364	364	364	364	780	780
R ²	0.086	0.098	0.110	0.118	0.078	0.078

Notes: Logit estimates in columns (2), (4) and (6) report marginal probability effects computed at sample means. All models control for the *population density*, *electricity access* and the *agricultural rate*, but these coefficients are not reported to save space. Robust standard errors, are reported in parentheses. *, **, *** denote statistical significance at the 10%, 5%, 1% level respectively.

APPENDIX

A1. 1974 electoral law of reinforced proportionality

The parliamentary elections of November 1974 were held under the electoral system of reinforced proportionality established by the Legislative Decree No 650/1974 (LD 65/1974). The system employed was based on a Hagenbach-Bischoff system and appeared to be similar to that in force during the pre-dictatorial elections of 1961, 1963 and 1964 (see e.g. Clogg, 1987). More precisely, the number of deputies in parliament has been fixed at 300, of whom 12 are “state” deputies. The country was divided into 56 electoral districts which were based on 52 different prefectures.²¹ The allocation of deputies to each electoral district is determined by dividing the number of the eligible voters countrywide by the number of seats in the parliament. This gives a quota of electors per seat (i.e. the number of votes that are required in order to gain a seat in the parliament). In turn, the number of eligible voters in each electoral district is divided by this quota of electors per seat in order to give the number of seats in each electoral district. Then, in order to allocate the seats between the parties, the electoral law LD 65/1974 was establishing a system of three sequent distributions. In the first distribution the number of seats allocated to each party in that district was given by dividing the number of votes of each party -in the different electoral districts- with the electoral quota (i.e. electors per seat) of the relevant district. Then, the seats that were not allocated in the first distribution were held over to the second distribution in which they had right to participate only the parties that received a least 17% of the vote countrywide. Finally, the seats that had still not been allocated –during the second distribution- were distributed in the third distribution (see Clogg, 1987 for more details on this).

²¹ Because of the concentration of population in the two major urban centres Athens and Thessaloniki, the prefecture of Athens was divided into four electoral constituencies (i.e., Athens-A, Athens-B, Piraeus-A and Piraeus-B), whereas the prefecture of Thessaloniki was divided into two electoral constituencies (i.e., Thessaloniki-A and Thessaloniki-B).

A2. Robustness Checks

In Tables A6 and A7 below, we present three modification of equation (2) in order to check the consistency and reliability of results provided in Panel A of Table 2. First, we turn to the question of whether the estimated effects are consistent between the two terms that PASOK stayed in power during 1982-1989. To explore this possibility, we allow the effect of PASOK administration to vary over two horizons, 1982-1985 and 1986-1989, as follows:

$$investment_{it} = \alpha_0 + \alpha_1 PASOK_{1982-1985} * victory\ margin_{1981} + \alpha_2 PASOK_{1986-1989} * victory\ margin_{1981} + \beta X_{it} + \delta_i + \gamma_t + \varepsilon_{it} \quad (1)$$

As can be seen in Panel A of Table A6, the effect of *regional* investment seems stronger in the second term of PASOK, whereas the effect on *other* investment is constant over time. We do not obtain a significant effect for any other category of investment. The effect on *total* investment is close to conventional levels of statistical significance only in the second term, thus once more appears closely related with *regional* investment. A possible explanation is that in the second term of PASOK that the government faced budget constraints because of an unpopular stabilization program put in place to curb inflation and reduce deficits (1985-1987), the targeting of the available resources became more important.

A primary concern in our analysis is that we rely on a voting share from a point in time that increases measurement error in other years. To alleviate this issue we opt to reduce our sample between 1978-1985, the last term of ND and the first term of PASOK. As can be seen in Panel B of Table A6, the effect on *regional* and *other* investment persists, whereas other coefficients are statistically insignificant. The effect on *total* investment becomes significantly weaker, indicating that in the first term of PASOK that we observe this significant rise on investment flows, their composition mattered more in terms of political allocation rather than its level. This is consistent with the evidence in Panel A, according to which the targeting of total flows was more important in the second term that the state faced significant budget constraints.

It remains possible that heterogeneous trends are present and induced changes in investment flows in prefectures that voted more intensively for PASOK, even before 1982 that the socialist party came in power. To examine this possibility, we restrict our sample prior to 1982 and assess the importance of our key independent variable in determining trends in investment flows. Specifically, we modify equation (2) to estimate the following for fiscal years 1975-1981:

$$investment_{it} = \alpha_0 + \alpha_1 trend + \alpha_2 trend * victory\ margin_{1981} + \beta X_{it} + \delta_i + \gamma_t + \varepsilon_{it} \quad (2)$$

The main aim is to test whether high *victory margin*₁₉₈₁ prefectures had different trends before 1982 (i.e., $\alpha_2 \neq 0$). The results reported in Panel C show an upward trend in *regional investment*, but more importantly no evidence of a differential trend related to the size of *victory margin*₁₉₈₁. Moreover, all other coefficients are statistically insignificant. Finally, in Table A7 we perform two tests of the results provided in Panel B of Table 2 – when ND was in power. In particular, in Panel we split the effect of ND administration in two sub-periods (1975-1977 and 1978-1981), and also we restrict the sample between 1978-1985 - as is Panels A and B of Table A6. We do not test the hypothesis of pre-existing trends in the case of ND (as in Panel C of Table A7) since its terms are ahead of PASOK's administration. As discussed in the main text Section 3.2.2, our results indicate significant bias especially during the first term of ND in power.

Table A1. Elections, votes' shares and number of seats of the parties that elected deputies

<i>Party</i>	<i>Vote's share</i>	<i>Seats</i>	<i>Party leader</i>
<i>Elections of 17 November, 1974 [Electoral Law: 65/1974, Reinforced Proportionality, 300 seats]</i>			
New Democracy [ND]	54.37%	220	Konstantinos Karamanlis
Centre Union and New Forces [EKND]	20.42%	60	Georgios Mavros
Panhellenic Socialistic Movement [PASOK]	13.58%	12	Andreas Papandreou
United Left [UL]	9.47%	8	Ilias Iliou
<i>Elections of 20 November, 1977 [Electoral Law: 626/ 1977, Reinforced Proportionality, 300 seats]</i>			
New Democracy [ND]	41.47%	171	Konstantinos Karamanlis
Panhellenic Socialistic Movement [PASOK]	25.34%	93	Andreas Papandreou
Union of the Democratic Centre [EDIK]	11.95%	15	Georgios Mavros
Communist Party of Greece [KKE]	9.36%	11	Charilaos Florakis
National Alignment [EP]	6.82%	5	Stephanos Stephanopoulos
Progress and Left Forces Alliance	2.72%	2	Ilias Iliou
Party of New Liberals	1.08	2	Konstantinos Mitsotakis
<i>Elections of 18 October, 1981 [Electoral Law: 1180/ 1981, Reinforced Proportionality, 300 seats]</i>			
Panhellenic Socialistic Movement [PASOK]	48.07%	172	Andreas Papandreou
New Democracy [ND]	35.87%	115	Georgios Rallis
Communist Party of Greece [KKE]	10.93%	13	Charilaos Florakis
<i>Elections of 2 June, 1985 [Electoral Law: 1516/1985, Reinforced Proportionality, 300 seats]</i>			
Panhellenic Socialistic Movement [PASOK]	45.82%	161	Andreas Papandreou
New Democracy [ND]	40.84%	126	Konstantinos Mitsotakis
Communist Party of Greece [KKE]	9.89%	12	Charilaos Florakis
Communist Party of Greece (Interior)	1.84%	1	Leonidas Kyrkos

All vote shares are expressed as percentages of valid votes cast. Source: Ministry of Interior, Directorate of Elections

Table A2. Definition of variables, data sources and descriptive statistics.

Variable name	Description	Obs.	Mean	SD	Min	Max	Sources
<i>incumbent share</i>	Valid votes for the incumbent party as a share of the voting-eligible population.	780	0.370	0.077	0.115	0.585	
<i>opposition share</i>	Valid votes for the opposition party (parties) as a share of the voting-eligible population. Between 1975-1981 the opposition is composed by vote shares received by the two leading opposition parties (i.e., <i>EKND</i> and <i>PASOK</i>), whereas between 1982-1989 by the leading opposition party <i>ND</i> .	780	0.299	0.063	0.154	0.533	
<i>victory margin (contemporary)</i>	The difference between <i>incumbent share</i> and <i>opposition share</i> .	780	0.070	0.119	-0.323	0.431	
<i>victory margin (historical)</i>	The difference between the incumbent share and opposition share from the elections of 1961 and 1964.	780	0.144	0.156	-0.271	0.597	Ministry of Interior, Directorate of Elections
<i>PASOK</i>	=1 in years greater than or equal to 1982, when <i>PASOK</i> was in power, and 0 otherwise	780	0.533	0.499	0.000	1.000	
<i>victory margin₁₉₈₁</i>	Valid votes that <i>PASOK</i> received in the election of 1981 as a share of voting-eligible population.	780	0.072	0.093	-0.142	0.381	
<i>victory margin₁₉₆₄</i>	Valid votes that <i>EK</i> received in the election of 1964 as a share of voting-eligible population.	780	0.136	0.157	-0.181	0.596	
<i>ND</i>	=1 in years 1975-1981, when <i>ND</i> was in power, and 0 otherwise	780	0.467	0.499	0.000	1.000	
<i>victory margin₁₉₇₄</i>	Valid votes that <i>ND</i> received in the election of 1974 as a share of voting-eligible population.	780	0.169	0.147	-0.323	0.431	
<i>victory margin₁₉₆₁</i>	Valid votes that <i>ERE</i> received in the election of 1961 as a share of voting-eligible population.	780	0.153	0.153	-0.271	0.425	
<i>family legacy</i>	=1 if the elected MP of the government in the prefecture is son or daughter of an MP elected in the pre-dictatorial period, and 0 otherwise.	208	0.327	0.470	0.000	1.000	
<i>ministers and deputy ministers</i>	=1 if a Minister or deputy minister of the government is elected in the prefecture, and 0 otherwise	780	0.365	0.482	0.000	1.000	
<i>total</i>	Total public investment, expressed in real per capital terms.	780	5478.433	3153.861	1136.534	26272.926	
<i>regional</i>	Investment that includes devolved public funds to regions and prefectures for investment purposes, expressed in real per capital terms.	728	3009.993	2421.185	12.997	16078.124	
<i>transportation</i>	Investment flows for transport infrastructures (e.g., bridges, railroads, highways), expressed in real per capital terms.	728	557.396	1135.729	0.000	21803.765	
<i>education</i>	Investment flows on education, expressed in real per capital terms.	728	492.820	525.765	0.000	4164.265	
<i>primary sector</i>	Investment that includes funds for agriculture, forestry, fishing and mining, expressed in real per capital terms.	728	631.164	1241.206	0.000	10105.980	Ministry of Economy and Development, Directorate of Public Investment
<i>industrial</i>	Investment funds for the industry, energy, handicraft and technical cooperation and research, expressed in real per capital terms.	728	171.198	972.844	0.000	16062.191	
<i>housing and sanitation</i>	Investment funds for housing and environment, water supply and sewage facilities, expressed in real per capital terms.	728	182.587	361.148	0.000	2465.908	
<i>health and public welfare</i>	Investment for health and public welfare purposes, expressed in real per capital terms.	728	176.552	439.285	0.000	5589.237	
<i>culture and administration</i>	Investment flows for tourism, modern culture and public administration, expressed in real per capital terms.	728	113.742	196.378	0.000	1925.296	
<i>other</i>	Other investment not elsewhere classified, expressed in real per capital terms.	728	3.902	2.445	0.000	8.328	
<i>population density</i>	Individuals per square km of land area (prefecture level)	780	95.996	307.709	13.218	2343.346	
<i>electricity access</i>	The share of households with access to electricity	780	0.941	0.059	0.505	0.999	Digital library of the Hellenic Statistical Authority (ELSTAT)
<i>agricultural rate</i>	The share of individuals employed in the agricultural sector	780	0.413	0.152	0.007	0.734	

Notes: Investment variables are in levels. In regressions, they are expressed in logarithmic terms. To avoid taking the log of zero, we added a value of 1 before taking logarithms. Observations for investment flows by type (e.g., *regional*) are fewer since the regional fiscal account for fiscal year 1979 was missing from the collection of the Ministry of Economy and Development.

Table A3. Political support and the allocation of public investment: With lag dependent variable

	(1)	(2)	(3)	(4)
<i>incumbent share</i>	0.390** (0.165)			
<i>opposition Share</i>		-0.226 (0.208)		
<i>victory margin</i>			0.174* (0.097)	-0.010 (0.100)
<i>victory margin</i> ²				1.997** (0.814)
Observations	728	728	728	728
R ²	0.701	0.699	0.700	0.703

Notes: The table reports OLS estimates of equation (1) in Section 3.1. Prefecture and year fixed effects are included. The dependent variable is the natural logarithm of the real per capita total investment (total) in each prefecture. All models control for the lag dependent variable, *population density*, *electricity access* and the *agricultural rate*, but these coefficients are not reported to save space. Robust standard errors, clustered by prefecture are reported in parentheses. *, **, *** denote statistical significance at the 10%, 5%, 1% level respectively.

Table A4. Political support and the allocation of public investment: Political support variables as shares of valid votes cast

	(1)	(2)	(3)	(4)
<i>incumbent share</i>	0.573* (0.288)			
<i>opposition Share</i>		-0.478* (0.258)		
<i>victory margin</i>			0.281* (0.142)	0.105 (0.099)
<i>victory margin</i> ²				1.465 (0.944)
Observations	780	780	780	780
R ²	0.513	0.510	0.512	0.517

Notes: The table reports OLS estimates of equation (1) in Section 3.1. Prefecture and year fixed effects are included. The dependent variable is the natural logarithm of the real per capita total investment (total) in each prefecture. All models control for *population density*, *electricity access* and the *agricultural rate*, but these coefficients are not reported to save space. Robust standard errors, clustered by prefecture are reported in parentheses. *, **, *** denote statistical significance at the 10%, 5%, 1% level respectively.

Table A5. Political support and the allocation of public investment: Testing for outliers

	(1)	(2)	(3)	(4)
<i>incumbent share</i>	0.482*** (0.163)			
<i>opposition Share</i>		-0.294 (0.189)		
<i>victory margin</i>			0.212** (0.088)	-0.018 (0.111)
<i>victory margin</i> ²				2.439** (0.999)
Observations	728	726	727	728
R ²	0.712	0.712	0.714	0.717

Notes: The table reports OLS estimates of equation (1) in Section 3.1. Prefecture and year fixed effects are included. In all regressions we remove observations with standardized residuals above 1.96 or below -1.96. The dependent variable is the natural logarithm of the real per capita total investment (total) in each prefecture. All models control for *population density*, *electricity access* and the *agricultural rate*, but these coefficients are not reported to save space. Robust standard errors, clustered by prefecture are reported in parentheses. *, **, *** denote statistical significance at the 10%, 5%, 1% level respectively.

Table A6. Difference-in-differences estimates, PASOK victory margin: Additional results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	total	regional	transportation	education	primary sector	industrial	housing and sanitation	health and public welfare	culture and administration	other
Panel A: Sub-periods										
<i>PASOK</i> ₁₉₈₂₋₁₉₈₅ * <i>victory margin</i> ₁₉₈₁	0.319 (0.332)	0.416 (0.279)	-0.336 (2.431)	0.737 (2.587)	2.632 (1.872)	-2.171 (1.527)	3.023 (3.162)	0.179 (2.813)	-0.364 (2.680)	6.069* (3.055)
<i>PASOK</i> ₁₉₈₆₋₁₉₈₉ * <i>victory margin</i> ₁₉₈₁	0.646 (0.398)	0.711** (0.291)	-0.309 (2.453)	4.248 (3.519)	2.646 (1.898)	-1.953 (2.207)	1.648 (2.756)	-2.747 (3.184)	1.326 (2.828)	6.026* (3.267)
Observations	780	728	728	728	728	728	728	728	728	728
R ²	0.508	0.870	0.117	0.474	0.064	0.224	0.255	0.237	0.066	0.449
Panel B: Restricted sample										
<i>PASOK</i> * <i>victory margin</i> ₁₉₈₁	0.189 (0.344)	0.461** (0.181)	-1.425 (2.830)	0.617 (2.411)	1.693 (1.466)	-1.165 (1.680)	3.129 (2.848)	-0.931 (2.538)	-0.917 (2.471)	5.916** (2.733)
Observations	416	364	364	364	364	364	364	364	364	364
R ²	0.658	0.929	0.141	0.466	0.044	0.093	0.087	0.107	0.083	0.552
Panel C: Parallel trend										
<i>trend</i>	-0.008 (0.049)	0.140*** (0.041)	-0.144 (0.366)	-0.075 (0.067)	-0.109 (0.154)	-0.100 (0.234)	0.371 (0.333)	-0.027 (0.287)	0.126 (0.170)	0.264 (0.224)
<i>victory margin</i> ₁₉₈₁ * <i>trend</i>	0.114 (0.150)	0.018 (0.115)	1.040 (0.766)	-0.029 (0.165)	0.252 (0.388)	-0.661 (0.661)	0.061 (0.875)	0.434 (0.579)	0.172 (0.463)	0.176 (0.414)
Observations	364	312	312	312	312	312	312	312	312	312
R ²	0.035	0.596	0.031	0.114	0.014	0.230	0.091	0.007	0.021	0.154

Notes: Panel A list the DD coefficients estimates of equation (1) in Section A.2. Panel B list the DD coefficient of equation (2) in Section 3.2.1 after restricting the sample between 1978-1985. Panel C list selected results from equation (2) of Section A2, a pre-1982 model of investment flows and PASOK voting strength. Prefecture and year fixed effects are included in Panels A and B, whereas Panel C includes prefecture fixed effects. All estimates control for the *population density*, *electricity access* and the *agricultural rate*, but these coefficients are not reported to save space. Robust standard errors, clustered by prefecture are reported in parentheses. *, **, *** denote statistical significance at the 10%, 5%, 1% level respectively.

Table A7. Difference-in-differences estimates, ND victory margin: Additional results

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	total	regional	transportation	education	primary sector	industrial	housing and sanitation	health and public welfare	culture and administration	other
Panel A: Sub-periods										
<i>ND</i> ₁₉₇₅₋₁₉₇₇ * <i>victory margin</i> ₁₉₇₄	0.705** (0.303)	0.082 (0.237)	1.605 (1.699)	3.958** (1.846)	0.755 (1.083)	-1.412 (1.355)	2.823 (2.149)	-2.163 (1.928)	-1.314 (1.500)	0.270 (2.171)
<i>ND</i> ₁₉₇₈₋₁₉₈₁ * <i>victory margin</i> ₁₉₇₄	0.293 (0.222)	0.147 (0.181)	1.002 (1.073)	2.818 (1.913)	-0.127 (0.719)	-1.818* (0.951)	2.475** (1.117)	-1.712 (1.403)	-0.451 (1.119)	1.680 (1.484)
Observations	780	728	728	728	728	728	728	728	728	728
R ²	0.513	0.868	0.121	0.483	0.058	0.226	0.260	0.239	0.066	0.435
Panel B: Restricted sample										
<i>ND</i> * <i>victory margin</i> ₁₉₇₄	0.277 (0.178)	0.238 (0.153)	0.414 (1.166)	2.040 (1.559)	0.149 (0.644)	-1.770** (0.779)	3.330*** (1.146)	-1.690 (1.788)	-0.684 (1.464)	1.734 (1.426)
Observations	416	364	364	364	364	364	364	364	364	364
R ²	0.660	0.929	0.140	0.472	0.040	0.099	0.100	0.112	0.083	0.541

Notes: Panel A list the DD coefficients estimates of equation (1) in Section A2. Panel B list the DD coefficient of equation (2) in Section 3.2.1 after restricting the sample between 1978-1985. Prefecture and year fixed effects are included. All estimates control for the *population density*, *electricity access* and the *agricultural rate*, but these coefficients are not reported to save space. Robust standard errors, clustered by prefecture are reported in parentheses. *, **, *** denote statistical significance at the 10%, 5%, 1% level respectively.

Table A8. Past and contemporary electoral power and personalistic networks: Ministers vs Deputy Ministers

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	Logit	OLS	Logit	OLS	Logit
victory margin:	Historical	Historical	Contemporary	Contemporary	Contemporary	Contemporary
<i>Panel A: electoral power and the allocation of ministerial positions</i>						
<i>Years of family legacy variable</i>	1974,1981	1974,1981	1974,1981	1974,1981	1974, 1977, 1981, 1985	1974, 1977, 1981, 1985
<i>victory margin</i>	0.110 (0.106)	0.847 (0.869)	0.278** (0.118)	2.388** (1.115)	0.077 (0.116)	0.444 (0.907)
Observations	364	364	364	364	780	780
R ²	0.130	0.127	0.137	0.135	0.106	0.100
<i>Panel B: electoral power and the allocation of deputy ministerial positions</i>						
<i>Years of ministers and deputy ministers variable</i>	1975-77 & 1982-85	1975-77 & 1982-85	1975-77 & 1982-85	1975-77 & 1982-85	1975-1989	1975-1989
<i>victory margin</i>	0.254* (0.146)	1.301* (0.752)	0.634*** (0.156)	3.658*** (0.998)	0.613*** (0.118)	3.705*** (0.759)
Observations	364	364	364	364	780	780
R ²	0.069	0.056	0.092	0.079	0.093	0.081

Notes: Logit estimates in columns (2), (4) and (6) report marginal probability effects computed at sample means All models control for the *population density*, *electricity access* and the *agricultural rate*, but these coefficients are not reported to save space. Robust standard errors, are reported in parentheses. *, **, *** denote statistical significance at the 10%, 5%, 1% level respectively.

Figure A1. Administrative boundaries of prefectures in Greece



Figure A2. Long-run partisan loyalty in Greek prefectures (vote shares)

