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Socioeconomic disadvantage and politics in the geographical allocation of public resources: Evidence from Turkey's fixed capital investments

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Socioeconomic disadvantage and politics in the geographical allocation of public resources: Evidence from Turkey's fixed capital investments

DRAFT VERSION for ERSA 2013 ANNUAL CONFERENCE

Abstract:

Following the political economics literature documenting how public resources are likely to be geographically distributed along equity and efficiency as well as political considerations, this article is aimed at exploring to what extent, and through which channels, politics play a role in regional development policymaking. The article first contributes to the literature by providing a general political economic theoretical framework. We then test it empirically by measuring via Fixed-Effects and GMM techniques the extent to which socioeconomic criteria, as opposed to political factors, drove over 2004-2012 the allocation of public central fixed-capital investments in Turkey's 81 provinces. In spite of its low coverage in international literature, contemporary Turkey offers a unique set of economic and political dynamics providing enough variation to test our question. Results show that after controlling for political manipulations, socioeconomic measures remain the most relevant predictors of investments. In contrast to official regional development policy principles, the State tends to favour areas with a higher level of development over the ones with the most critical 'socioeconomic need'. Nonetheless, political factors do also amount for a relevant share of allocations. Contrasting earlier works, outcomes in particular suggest that politics-related distortions statistically reflect more party rather than individual politicians' interests.

Keywords: Regional development policies; distributive politics; public investments; partisan politics; Turkey. **JEL Classification:** H76; O12; O53; R12; R58

1. Introduction

Many governments have long been pursuing strategies aimed at reducing economic and social regional disparities via public investments programmes. In contrast to conventional approaches which have seen public interventions as purely driven by socioeconomic considerations, however, a new body of theoretical contributions and empirical studies at the border between economics and political science has started exploring whether, to what extent and through which channels the spatial distribution of public resources and government programmes is driven not only by efficiency and equity, but also by political considerations. Advances in data availability in the last decades have allowed the extension of this line of research to many countries (Golden & Min, 2013). The results overall suggest that public investments, as well as other policy tools aimed at regional development such as geographically targeted grants and investment incentives, have very frequently had a whiff of pork-barrel around them (Milligan & Smart, 2005).

In spite of such a steep increase in the interest paid by political scientists and economists to how politics affects the territorial allocation of public funds – what is generally referred to as *distributive politics* (Golden & Min, 2013) or *special interest politics* (Grossman & Helpman, 2001; Persson & Tabellini, 2000) –, less attention has been paid to these issues in the literature on regional and local development.¹ Indeed, the amount of information gathered has

¹ The literature provides examples on the politics of local and regional development (e.g.: Wood & Valler, 2004; Wood, 2008). Nonetheless such research, being generally conducted on a case-study approach, lacks a broader framework and is more centered around the political circumstances behind the emergence of new spaces of growth rather than on the political aspects of public policy.

only marginally been exploited for the explicit purpose of assessing the implementation of regional development policies and for the identification of potential rooms for improvement in such policy efforts. This article is aimed at filling this gap by explicitly hypothesising a causal link between the (partial) ineffectiveness of public regional development efforts and (potential) political manipulations behind the allocation of resources. Following earlier pieces of research (Crescenzi, 2009; Dewar, 1998), we posit that the understanding of regional development policies should emerge from the analysis of not only the economics of such programmes, but also their political economy. Concretely, this article hypothesises that a potential reason why regional development policies do not deliver the expected results may be related not (only) to the use of inadequate tools to target territorial imbalances and socioeconomic disadvantage but, also, to the fact of not addressing those targets because of politically-distorted allocations. Following Golden & Min (2013), we understand distributive policies as the ones involving decisions about the allocations of government goods and services to identifiable localities (or groups within localities).

We test our hypothesis to Turkey. In spite of its very low coverage in the literature, the case of Turkey is characterised by a rich set of political and economic dynamics which provide enough variation to assess our research hypothesis. As early as 1963, the country established an ad-hoc institution and a specific policy agenda aimed at curbing the high regional disparities which, however, still persist. Earlier literature stressed how the poor performances of development policies in Turkey can be reconnected to a range of factors stretching from weak programming to poor implementation. By contrast, this article aims to measure the extent to which public monies have been diverted from targeting socioeconomic criteria to serve political objectives. To our best knowledge – and in spite of a few earlier

related pieces of work (Tekeli & Kaplan, 2008; Yavan, 2012) – this study will be the first to explore the allocation of public investments executed by the central government in Turkey.

Trying to identify a general theoretical framework, we draw from the literature on distributive politics to suggest that the geographical patterns of resources distribution are likely to differ among countries depending on some key variables: the type of politico-electoral system – in turn composed of majoritarian versus open/closed-list proportional-representation voting rule, strength of parties and size of constituencies – and the strength of formal overall political institutions. Limited research, up to now, has been conducted on closed-list proportional representation (PR) settings characterised by an unstable partisan system and widely spread informal, personalised consensus building practices, such as Turkey and many emerging countries, for which distributive predictions remain unclear.² Besides, following Yeung (2001)'s call for social scientists to pay more attention to 'neglected regions' of the world, our analysis allows shedding more light on the political economy of a country whose coverage in the international literature is rather low, in spite of its status of EU-candidate country, as well as its fast-increasing role as a key Mediterranean and Eurasian power.

Empirically, the goals of this paper are:

² As a reference, out of the 40 democratic countries using Proportional Representation systems analysed by Chang & Golden (2006), 28 were adopting closed-list rules and 18 had a Corruption Perception Index – as a proxy, although rough, for the strength of informal political practices – close to or higher than 4 (out of a scale of 10). Such count includes emerging countries but also rich economies such as Italy and Spain.

- 1) To measure the extent to which socioeconomic criteria and developmental ‘need’ are significant predictors of the spatial allocation of central fixed capital investments in Turkey;
- 2) To assess the extent to which politics may be a factor in generating a disconnect between allocations and ‘need’. The fact that investments should be guided, according to Development Plans’ official rationales, by economic principles allows us to determine an allocative baseline from which to measure the extent of political distortions, a point frequently overlooked in the literature on distributive politics and political accountability (Golden & Min, 2013);
- 3) To examine whether any politics related distortions reflect party or individual politicians’ interests.

Our estimation strategy is based on the adoption of both Fixed-Effects and Generalized Method of Moments (Arellano & Bover, 1995; Blundell & Bond, 1998) estimators and the exploitation of a dataset for Turkey’s 81 provinces over 2004-2012.

The results of the analysis uncover that political factors matter less than socioeconomic rationales. After controlling for political manipulations, socioeconomic disadvantage measures remain the most relevant predictors of investments. Nonetheless, political factors do also amount for a significant share of allocations.

The outline of the paper is as follows: section 2 provides an overview of the literature on the political economy of regional development policies as well as on alternative models of distributive politics, and sets the research hypotheses. Section 3 introduces Turkey’s institutional background. Section 4 discusses the data and the empirical variables, while

section 5 the estimation strategy and the results. Section 6 will then draw the discussion to a conclusion.

2. The political economy of regional development policies

2.1. Regional development policies as a tool for distributive politics

For many decades, regional development policies have been designed by scholars and practitioners with the aim of responding to economic efficiency considerations and/or addressing economic and social welfare failures associated with agglomeration economies and capital markets. Regional development initiatives can be in fact considered as a type of *grand/programmatic* public intervention (Dixit & Londregan, 1996) aimed at steering economic processes and reflecting prevailing ideologies on equity, efficiency and the role that governments should play in the economy.

Nonetheless, a growing body of research at the border between economics and political science has recently started exploring how in the real world public grants and investment programmes are also distributed on the basis of ‘purely political’ considerations (Persson, 1998). Indeed, such studies demonstrate that, in parallel to grand redistribution, a second type of redistribution is constantly taking place, a form of ‘politically-driven’ *tactical redistribution* (Dixit & Londregan, 1996), which is likely to be carried on endlessly even when the same general development policy framework remains constant. Under this perspective equity and efficiency – the two key drivers which, independently from the existence or not of a trade-off between reducing regional disparities and stimulating the overall national growth (Martin, 2008; Osberg, 1995), motivate the first form of redistribution

– are germane only if they are tools for strengthening special interest groups and/or increasing the probability of politicians' re-election.

The specific geographical targeting of public resources as a mean of political tactics and/or as an answer to pressures by special interest groups has recently been reported by numerous studies. Such literature, focused on the political economy of public good distribution, has been exploring factors as various as regional grants (Alperovich, 1984; Case, 2001; Grossman, 1994; Tekeli & Kaplan, 2008), trade and industrial policy (McGillivray, 2004), infrastructure investments (Cadena, 2010; Cadot, Röller, & Stephan, 2006; Castells & Solé-Ollé, 2005; Crain & Oakley, 1995; Golden & Picci, 2008; Kemmerling & Stephan, 2008; Milligan & Smart, 2005), investment incentives schemes (Yavan, 2012) and the EU cohesion policy (Bouvet & Dall'Erba, 2010; Crescenzi, 2009; Kemmerling & Bodestein, 2006).

As the political science literature on democratic accountability suggests, the reason behind the influence of politics on the allocation of funds is that, even within democratic institutions – which are supposedly designed to serve the majority –, politicians are likely to give preference to their own *political survival*, meaning that they lobby in order to deliver more to those electors who can keep them in power. As McGillivray (2004) argues, in fact, redistribution is the essence of politics. Works carried out under theories of government responsiveness, similarly, show that this form of distributive politics seems ubiquitous in any societies, dictatorship or democracies, due to the intrinsic effects of special interest groups on policy making, i.e. the fact that small, special interest groups – whose particularistic interests differ from the ones of the general public – are more effective in influencing policy-makers than the median voter (Grossman & Helpman, 2001; Lohmann, 2003; Olson, 1971).

2.2. The links between politico-institutional systems and distributive politics

While political bargaining is a basic part of the allocation process, we argue that the design of measures able to reduce the discretionary use of funds and to increase the overall efficiency of public resources is a *condicio sine qua non* for public policy (Crescenzi, 2009). The relevance of an efficient management of public resources is even more important at times of public austerity, which reduces the scope for governments' interventions. To this end, the understanding of the mechanisms at work behind distributive politics is a central precondition. A review of the political economy literature suggests that careful interpretation should be applied to each single country case, since the political objective functions are likely to be dependent on each political and electoral system (Kemmerling & Stephan, 2008). It is therefore necessary to pay a stronger attention to the specific modalities through which politics and (regional development) policy-making are linked in different institutional settings. In particular, this article suggests that the allocation of development funds is likely to be influenced by two main types of factors: the politic-electoral system – which in turn includes the type of electoral rules, the strength of parties and the size of electoral districts – and the strength of formal societal, political institutions.

Starting from the literature on the links between politico-electoral systems and the geographical targeting of public resources, a 'classic' debate has flourished on whether distributive politics is carried out to cement or to buy votes. According to Cox & McCubbins (1986)'s first explanation, the districts most likely to be favoured in the distribution of public resources will be the strongholds of the central governing party – the main opposition parties being the ones disfavoured – because risk-averse politicians will prefer strengthening their core electorates' loyalties rather than embarking in politically-risky electoral investments. By contrast, Dixit & Londregan (1996) foresee a model where utility-maximising politicians will first favour groups – or, as Golden & Min (2013) underline, districts – with the highest

electoral productivity, i.e. those most willing to switch their votes following economic favours, namely swing and low-income voters. Such dichotomy has not remained uncontested. McGillivray (2004), in particular, suggests that the most relevant hypothesis behind distributive predictions will vary according to the political system³ and, namely, the interaction of two key dimensions: the type of electoral system in place and the strength of political parties, i.e. their level of control over the selection of candidates and the policy initiative. Extending McGillivray (2004)'s framework, Golden & Picci (2008) put forward the model described in table 1. Moving along the parties' strength dimension, and for example assuming strongly formalised partisan settings, they posit that the overall expectations are that politicians will be more likely to target goods to marginal districts under majoritarian systems and to party strongholds under proportional representation ones.

Table 1 – Predictions, under different political systems, of which districts are likely to receive most resources

Strength of Governing party			
		Strong	Weak
Electoral system	Majoritarian	Marginal districts	Safe districts
	Proportional representation (PR)	Party strongholds	Party leaders bailiwicks (often hometowns)

Source: Golden & Picci, 2008

³ Such fact is evidently supporting the voices in favour of place-based – rather than spatially-blind – policy interventions able to tackle context-dependent problems with specific, tailored policy answers (Garcilazo, Martins, & Thompson, 2011) and to take into account one of the key factors that differentiates over space: institutional features (Rodríguez-Pose, 2010).

Even within each electoral system, however, we can expect different distributive scenarios. Under PR systems – most of the world’s democratic countries (Chang & Golden, 2006) – individual legislators (i.e. Members of Parliament: MPs) will likely seek re-election by nurturing votes in their bailiwicks, e.g. their home towns, as opposed to parties which will pay specific care towards core support districts. Which of the two forces will prevail is thus a consequence of the strength of parties over individual legislators. Such assumption is tested by Golden & Picci (2008) in their analysis of total public investments allocation in 1953-1994 Italy. In line with the expectations for an open-list PR system – i.e. where the control of parties over the selection of candidates is not strong, since the candidates’ order in the party list is decided by the voters’ preferences at the ballot box – they found that parties do not seem to have had any particular influence. By contrast, evidence suggests that informal consensus-building practices and personal vote-seeking behaviours induced, especially in Southern Italy, powerful legislators to allocate significantly higher investments towards their bailiwicks.

Nonetheless, distributive predictions remain uncertain in PR systems characterised by informal, patronal consensus building practices such as in Southern Italy but also by unclear evidence on the formal strength of parties – such as in the closed-list PR Turkish system. In fact according to the theory, parties should hold a strong control power over individual legislators. However, as documented for the case of Turkey, individual legislators develop practices to overcome such control, e.g. by shifting among parties in the mid of a legislature (Turan, Iba, & Zarakol, 2005; Turan, 2003). In other words, it is unclear whether in such contexts parties or individual legislators will exercise the strongest influence on pork-barrelling. For example, in a qualitative and in-depth study of the recent development of Gaziantep, an industrial town in South-Eastern Turkey, Bayirbag (2011, 2010) suggests that

the key variable explaining why recent industrial growth has taken place in Gaziantep rather than in other similar Turkish cities is not related to any specific comparative advantage but, *ceteris paribus*, to the success of the local bourgeoisie in mobilising politically. In a context of unstable partisan clashes, however, such mobilisation occurred through channels outside of partisanship. In contrast to Carey & Shugart (1995) and Golden & Picci (2008)'s predictions for closed-list PR systems, Bayirbag (2011) therefore argues that the local business bourgeoisie managed to attract the needed public resources by actively avoiding any direct involvement with (national) party politics. Partly contrasting evidence, however, is provided by Yavan (2012), whose quantitative results for 2001-2008 show that the geographical allocation of public incentives to private investors was positively correlated to the percentage of votes given in each province to the central governing party. In view of this we need to conclude that the literature provides inconclusive evidence on how politics and the distribution of regional development tools are linked in a country such as Turkey.

The third element related to the political system factors is electoral district magnitude and its interaction with the electoral rule. As Carey & Shugart (1995) predict, the effect of the number of seats in the constituency on the spread of personal vote-seeking will depend on whether there is intraparty competition among candidates, i.e. whether candidates are selected by the central party or they rather have to gain visibility among their constituencies. As opposed to open-list PR settings, in closed-list PR systems personal vote-seeking behaviours are likely to play a smaller role with the increase in the constituency's number of seats. That is to say that the personal appeal of contenders will be more important than party popularity in small and rural constituencies (Hazama, 2005; Turan et al., 2005). Extending such reasoning, it is possible to expect that after controlling for cost differentials among more dispersed and more concentrated settlements, where economies of scale in the provision of public services

are expected – in closed-list PR settings per-capita investments will rise with the decrease of districts' magnitude, i.e. in parallel to the need of obtaining personal votes. Such claim, clearly, contrasts to the 'political voice' effect suggested by Kemmerling & Stephan (2008) and Cadena (2010), for which richer and more powerful areas will generally attract higher transfers in light of their stronger lobbying powers.

While, as discussed above, the influence of politics in shaping (non-optimal) economic policy can be seen as a universal aspect of policy-making, this 'political market bias' has been defined as even more relevant in developing economies (Richardson & Townroe, 1986) and in all that contexts where the legitimacy of the state as well as a strong civil society and formal institutions are not fully developed, leaving more room for stronger informal, patronal consensus building practices (Özcan, 2000) and idiosyncratically controlled group loyalties (Özcan, 2006). It is commonly accepted that wealth correlates relatively strongly with corruption and institutional performances (Golden, 2005), a conclusion which would lead us to expect a stronger impact of corrupted distributive politics and patronage in emerging countries rather than in rich economies.

Moreover, in emerging and developing countries distributive politics has particularly been analysed by exploring the existence of favouritism networks pivoting around personal, ethnic or religious cleavages rather than organised groups. As Golden and Min (2013) argue, in many studies of countries in Africa tribal affiliation or ethnicity is an important determinant of allocations. Similar conclusions are uncovered by Banerjee & Somanathan (2007), whose work on India suggests that, compared to less-represented social groups, parties basing their political appeal on castes and managing to increase their national political representation are able to extract higher public resources in favour of their supporters.

2.3. Research question and hypotheses

Drawing from the above discussed literature and, specifically, on Golden & Picci (2008), this article puts forward a model of resource allocation including socio-economic disadvantage criteria, partisan politics and legislators' personal influence (as a proxy for personal vote-seeking). We model investments as driven by:

$$I = f(\textit{Socio-economic factors}, \textit{Party politics}, \textit{Personalised politics}) \quad (1)$$

Our main research question is to understand to what extent, and through which channels distributive politics plays a role in the central allocation of public investments aimed at the economic development of Turkey's provinces. As discussed in the introduction, the overall hypothesis is in fact that the allocation of regional funds may be distorted by politics.

Our first hypothesis is informed by the conventional socioeconomic considerations:

Hypothesis 1: according to redistribution criteria, the central government should first target capital investments to regions where disadvantage is higher, i.e. where developmental needs are most urgent.

Standard approaches to regional development policies have been concentrated on income differentials, defending such choice by arguing that wealth measures such as GDP per-capita are a good, comprehensive indicator of poverty and deprivation. However, there seems to be a marked, increasing concern about the distance between standard economic measures such as GDP and broader measures of societal well-being (Stiglitz et al., 2010). Wealth variables, in fact, measure the absence of resources at a particular moment without neither questioning the reasons behind poverty, nor the possible ways to get away from it (Cadena, 2010). In line with such views, numerous contributions have proposed an approach more attentive to socio-structural conditions (Perrons, 2011) and the idea that regional development policies should tackle not only the levels of disparities expressed in GDP per-capita – i.e. the *contextual*

indicators of disadvantage – but also the *structural* socioeconomic long-term causes which prevent individuals from overcoming such inequalities. Our focus will be precisely on the overall level of socioeconomic development as well as on drivers of structural disadvantage such as growth-retarding socio-demographic characteristics (Rodríguez-Pose; 1999), namely: labour force structure, educational attainment and health conditions.

The second research hypothesis, by contrast, is aimed at assessing the impact of politics on the territorial distribution:

Hypothesis 2: Political considerations prevail over socioeconomic criteria in the allocation of investments.

As explained earlier, we will consider two alternative sub-hypotheses:

Hypothesis 2.A: according to the first sub-hypothesis, pork-barrelling is mostly driven by the government and the central parties.

Hypothesis 2.B: according to the second one, distributive politics is not directly driven by partisan logics. Rather, party politics has an impact only if mediated by individual Members of Parliament (MPs) and Ministers.

Alternatively, Bayraktar & Massicard (2009) provocatively suggest that far from reducing regional disparities, public interventions seem to have deliberately contributed to increase it. As a matter of fact the observation of developing countries' experiences seems to suggest that, under the constraint of scarce resources, governments may prefer to target core regions and the primate city first since, contrary to already developed countries, growth and spatial distribution goals are much more difficult to combine (Richardson & Townroe, 1986; World Bank, 2009). Indeed, this was the strategy officially pursued by the state during the first

decades of the Turkish Republic (see next paragraphs). According to some scholars, however, the start of regional development interventions did not alter substantially such logic (Danielson & Keles, 1985; Gezici & Hewings, 2004)⁴. The alternative hypothesis therefore states

Alternative hypothesis: investments are indeed allocated according to socio-economic factors. The sign of the relationship, however, may be opposite to what expected from hypothesis 1, i.e. higher levels of development being positively, rather than negatively, correlated to investments.

3. Regional development and politics in Turkey: the institutional background

Turkey offers an interesting study setting for different reasons. First, in spite of a long history of regional development policies, the limited effectiveness of interventions – a fact strongly stressed by the European Commission since the start of Turkey’s EU-accession negotiations (Luca, 2011) and also acknowledged by the State bureaucracy (Devlet Planma Teskilati, 2003a) – offers an ideal setting in order to test how much politics have been driving the allocation of public resources out of equity/efficiency criteria. While in part similar to the experience of the special intervention by the Italian State in the *Mezzogiorno*, the case of Turkey has received almost no attention in the academic literature. Besides, evidence on the inefficiency caused by the pervasiveness of patronage (Özcan, 2000), poor regulatory quality

⁴ Interestingly, within 1980-2000 Turkey Deliktas et al. (2008) found that public capital investments had positive effects on private output as well as crowding in effects for private capital in the manufacturing industry of the 2 richest macro-regions (out of 7). Although not analysing distribution patterns, the authors hence show that public capital brought about positive economic outcomes but at the expenses of increasing interregional economic disparities.

and wide-spread corruption contrasts with the country's very centralised and bureaucratic state apparatus, which some consider a warranty for efficient and impartial policy making (Prud'homme, 1995). Turkish Proportional Representation (PR) political system, characterised, on the one hand by unclear evidence about parties' strength and on the other by pervasive personalised networks of power (Hazama, 2005) and idiosyncratically controlled group loyalties (Özcan, 2006), is a good setting to test whether the predictions for closed-list PR systems resulting from our adopted theoretical macro-framework hold in emerging countries such as Turkey⁵, where the strength of democratic institutions has been questioned numerous times (Sayari, 2002).

Second, the strong dependence of investments allocation on central institutions allows identifying tactical redistribution more easily than in countries where multiple institutional levels are important political arena and play a role in the spatial distribution of resources. In such contexts, a key question is: which exact level(s) of government will be rewarded/punished by tactical redistribution (Leon, 2010)? By contrast, in centralised settings the identification of a causal link between politics and its effects is more straightforward.

Third, as Posner & Kramon (2011) empirically show, governments are likely to favour constituencies via targeting multiple goods at the same time. If such allocations are done to accommodate more than just one special interest group, i.e. if distributive patterns are not constant across types of goods, the results will likely become dependent on which good –

⁵ If we are aware of the risks to fall into a sort of Rostovian view of the world – of which we are sceptical –, it is undeniable that Turkey's indicators about rule of law, control of corruption and regulatory quality are significantly low: for example, below many other Southern European Countries such as Spain, Portugal, Italy and Greece (Gönenç et al., 2005).

among the rose of pork types used by the government – researchers are focusing on. If preliminary research has already been conducted on the distribution of public incentives to foster private investments – one of the two main regional development policy tools adopted by the Turkish government – by Yavan (2012), to our best knowledge no works have yet concentrated on public fixed capital investments – the other key tool.

Last but not least, investigating the causes that hinder from reducing Turkey's significant regional economic disparities is relevant in the context of EU accession negotiations. In fact, considering the size of the country and its extremely high developmental disparities between the Western and the Eastern regions, if ever accepted into the European Union, the country may become the biggest recipient of Structural Funds.

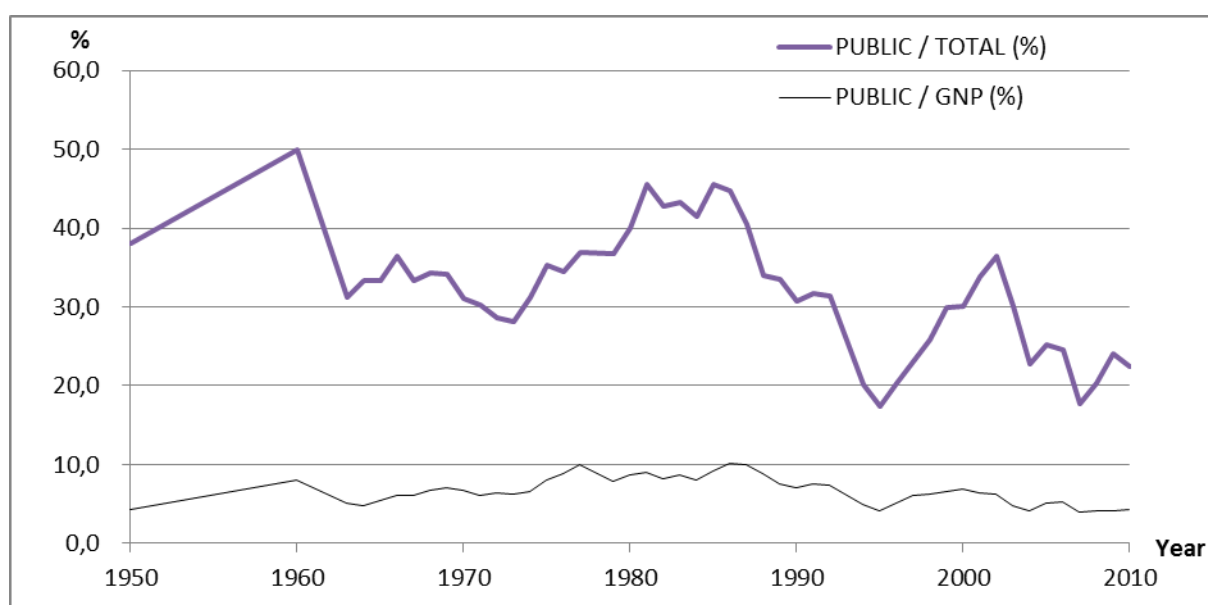
3.1. Regional development policies in Turkey

Following the four first republican decades (1923-1962) in which the priority of the state was officially indicated in the concentration of investments in major urban areas with the aim of fostering the overall national growth (Eraydin, 2000), as early as 1963 the country set up an ad-hoc institution in charge of multi-annual planning – the State Planning Organisation (Devlet Planma Teşkilatı, DPT), recently transformed into the Ministry of Development – and a specific agenda aimed at reducing regional disparities. The starting of the planning era was induced by the National Unity Committee following the 1960 military coup.⁶ Since then, the Ministry of Development (former DPT) has been in charge of preparing multiannual

⁶ As Ozbudun & Ulasan (1980) stress, the military rulers were rather sympathetic to the concept of planning and the idea of an organism aimed not merely at the physical growth of the nation but also at a peaceful transformation of the existing systems.

development plans highlighting the priorities and strategies of all Ministries and other public agencies. Plans, whose length was recently extended from 5 to 7 years to harmonise with EU pre-accession measures, are then implemented through annual programmes detailing out the budgetary allocation of public investments. These annual programmes are prepared by the development body according to the project proposals received by each Ministry, assessed by the High Council of Planning, voted by the Parliament and eventually approved by the Council of Ministers. While programmes are therefore prepared by the technic bureaucracy, their final approval is prerogative of political forces.

Chart 2 – Shares of public gross fixed investments on total gross fixed investments and on gross national product, 1950-2010



Source: own elaboration on data from the Ministry of Development's database

If following the 1980s and particularly during the last decade a progressive increase in decentralisation measures has taken place (Dulupcu, 2005; Özcan & Turunç, 2008), Turkey still shows a significantly unified administrative governance and one of the most centralised public finance system among OECD countries (Blöchliger & Rabesona, 2009). In particular,

in spite of very recent reforms induced by the pro-Islamic government led by R.T. Erdoğan, centralism has continued to play a key role because of its intertwinement with the strongly unitary ideology at the base of Turkey's modern Kemalist state (Dulupcu, Gul, & Okcu, 2004).

Chart 2 shows the share of public gross fixed capital investments on the Turkish economy. In spite of the reduction in such weight occurred in parallel to the last decades' neo-liberal global wave, public investments still account for around 5 % of the total GNP, i.e. higher than in other OECD countries such as Germany, Italy, Portugal, United Kingdom, etc. (Gönenç, Leibfritz, & Yilmaz, 2005). They also make up a highly significant percentage of the total Turkish fixed capital investing capacity.

Despite the spread of wealth to some new regions during the last decades – particularly to areas neighbouring the traditional cores –, however, Turkey continues to have a highly unequal spatial distribution of economic activities and, most importantly, of many social developmental indicators⁷. In 2003, for example, the GDP per capita in the richest NUTS II region (TR10, Istanbul) was 1.43 times the national average while in the poorest region (TRB2, Bitlis, Hakkari, Muş, Van) it represented only 0.35 times the national medium value

⁷ In 2010, the country's Human Development Index was ranked 83rd in the world, behind any other EU, Eastern European and Balkan country. In the same year Turkey's Gender Gap Index ranked 126th, well behind several Asian, African and Arab states (Bardak & Majcher-Teleon, 2011). All these low rankings closely reflect the spatially uneven human and economic development in the country. As a matter of fact, all the five poorest NUTS II regions correspond to the East and the South-East of the country, i.e. the area with the highest concentration of ethnic Kurdish people.

(Turkstat, 2006)⁸. Moreover, the majority of recent studies – all analysing the period up to the early 2000s – do not find evidence of inter-regional convergence (Karaman & Dogruel, 2011) neither in terms of per-capita GDP (Gezici & Hewings 2004, 2007; Karaca 2004), nor new firms creation (Gaygısız & Koksall, 2003) or unemployment rates (Filiztekin, 2009). Gezici & Hewings (2007)’s results, in particular, indicate how a contrasting trend of reduction in intra-regional disparities has been accompanied by an increase in inter-regional ones. Our analysis, based on the population-weighted coefficient of variation for regional gross value added and the use of more recent data (see chart 1), confirms the lack of clear reductions in inter-regional disparities among provinces. In fact, the only decline in disparities, occurred between 1997 and 2000, was driven by 1998 economic crisis and 1999 Marmara region’s earthquake, which both strongly affected Turkey’s wealthiest provinces.

As a matter of fact, the weak effectiveness of regional development policies carried out since 1963 has strongly been emphasised by the European Commission from the beginning of Turkey’s EU-accession talks and, since then, throughout many of the annual accession Progress Reports (Luca, 2011). The Ministry of Development itself acknowledged this partial failure admitting that “despite the policies developed and means employed to eliminate interregional development disparities, the desired objectives could not be attained and interregional disparities have continued to exist” (Devlet Planma Teskilati 2003b, p. 125).

Chart 1 – Change in regional disparities: population-weighted coefficient of variation of NUTS 2 regions’ per-capita Gross Value Added

⁸ An international comparison shows that among developing and emerging countries such disparities are not an isolate phenomenon, particularly when the opening to international trade is considered (Rodríguez-Pose & Gill, 2006).



Source: own elaboration on data from OECD's regional database

3.2. Turkey's elections and political institutions

According to Sayari & Esmer (2002), in spite of a history of more than 16 multiparty elections and parliamentary rules, the country has had a difficult time being accepted as a democratic regime by international political and academic circles, due to frequent military coups, internal armed conflicts and continuous examples of human rights abuses. Nonetheless, in its current form, the Turkish Republic is a closed-list proportional-representation electoral system democracy, with the D'Hondt formula and a national threshold of 10% used to translate votes into parliament seats. As such, electors vote only for a political party, with the party itself controlling over which candidates are seated in parliament. Electoral districts coincide with provinces, which also constitute the only administrative level between municipalities and the central government. Without discussing further the changes occurred in the districts geography over the years or details on the subdivision of populous provinces into electoral sub-districts, by 2011 national elections the

number of MPs elected from each province ranged between 1 (Bayburt) and 85 (Istanbul), with a mean value of 6,8.

Following 1980's military coup, and particularly during the 1990s, Turkish political scene saw a rise in political fragmentation (Massicard, 2007), increased electoral volatility (Hazama, 2003) and the party system "in a state of flux" (Sayari, 2002, p. 17) as well as turned into a rather weak political channel of representation (Bayirbag, 2011). Such weakness of parties along with the personalization of politics have been particularly pronounced in the eastern and southeastern provinces (Çarkoğlu & Avcı, 2002). A decade ago Hazama (2005) carried out an analysis on the importance of constituency services in MPs' professional life. From his results it appears that, among parliamentarians' accomplishments, constituency services are more central than activities such as working on new legislation and – interestingly – that the members of parliament were more responsive to demands such as job-creating and infrastructural investments in the constituency than to issues related to constituents' personal problems, complaints to the government and legislative activities⁹. Such findings thus seem to support the fact that the political interface between legislators and representatives does indeed orbit around non formalised groups and personal links. As Kalayicioglu argues, patronage relations "built around lineage (*akrabalık*), tribalism (*aşiret*), regional solidarity (*hemşehrilik*), and religious brotherhood (*tarikât*), still dominate the relations between the deputies of the TGNA [Turkey's Parliament] and the voters. Indeed,

⁹ But it must be said that, even if not emphasized by the author, the assembly studied by Hazama was elected in 1991 while the electoral rules included a sort of preference mechanism. This may bias his results in favor of a stronger link between the MPs and their electorate, as shown in other preference-vote (open-list) PR systems (Golden & Picci, 2008).

many deputies who are elected from the metropolitan cities still serve their ‘hemşehri’ from other and remote parts of the country unrelated to their constituency. [...] In practice, the deputies of the TGNA are intensely involved in personal relations with the voters, in a way that constitutes what is referred in the US as ‘casework’” (Kalayicioglu, 2010, p. 136).

In contrast to such tenets, however, different analyses suggest that parties are still important to understand Turkish politics (Dorronsoro & Massicard, 2005; Massicard, 2007), as well as the distribution of public resources through patronage networks (Turan, Iba, & Zarakol, 2005, § 22). Besides, parties’ strength is likely to have increased (again) during the last decade characterised by a neater and more stable political panorama compared to that of the 1990s. In fact 2002 elections can be considered as a case of ‘critical election’, i.e. a real turning point in Turkish politics (Işık & Pınarcıoğlu, 2010; Zeyneloglu, 2006) as they witnessed a dramatic turnover and the substantial rise of a newly formed party – Justice and Development Party (Adalet ve Kalkınma Partisi, AKP) – which has kept increasing its power thereafter.

Similarly to contemporaneous changes in many other countries, the last two decades also witnessed a decrease in the Turkish political polarisation based on left/right ideologies. Many analysts then suggest that the country’s recent developments saw an increase in the cleavages built around two main social dimensions: religiosity versus laicism and Turkish versus ethnic Kurdish nationalisms (Çarkoğlu & Hinich, 2006; Gunes-Ayata & Ayata, 2002; Onis, 1997)¹⁰. The first social fault line is likely to be captured by the contraposition between the pro-

¹⁰ Contemporary Turkey’s most populous minority consists in ethnic Kurds, who depending on different estimates constitute between 12 and 20 % of the country population (Gunes-Ayata & Ayata, 2002; Mutlu, 1996). Exact counts are not available since 1965.

Islamic ruling party and the main, laic opposition one; the second, instead, will need to be controlled for in the empirical analysis.

4. Empirical analysis

4.1. Empirical model and variables

In order to test our hypotheses, the overall per capita commitments to each province will be regressed on their potential socioeconomic and political determinants. In fact, as pointed out by Golden & Picci (2008), public works monies – fixed capital investments in the specific case – are classic instances of geographically targetable and divisible goods. At the same time, and in line with our main focus, they also constitute an important tool used to support regional development. This work will focus on the provincial NUTS III partition because this is: the specific level coinciding with central electoral districts; the sub-national level at which investments allocations are recorded; the most meaningful administrative partitioning between local Municipalities and the central State, being NUTS II regions almost only statistical artefacts.

Drawing from the analysis, follows this policy model:

$$Y_{i,t} = \beta_2 X_{i,t-1} + \beta_3 P_{i,t-1} + \beta_4 S_{i,t-1} + \alpha_i + n_t + \varepsilon_{i,t} \quad (2)$$

Where (i and t denote provinces and years respectively)

$Y_{i,t}$ is the total amount of per capita national fixed-capital investments allocated to each province;

$X_{i,t-1}$, $P_{i,t-1}$ and $S_{i,t-1}$ consist respectively in vectors of socioeconomic factors, partisan politics and personalised politics as described in equation (1)¹¹.

Testing for the importance of socioeconomic variables is relatively straightforward. Answering our main research question (hypothesis number two) is however much more difficult since, while for central partisan politics it is also easy to find relevant variables, the same does not apply to capturing the personalised nature of politics. We will try to capture such aspect by taking advantage of the way in which votes are translated into parliamentary seats and by looking at the origins of Ministers. In particular, since the electoral formula adopted in Turkey (see paragraph 3.2) does not produce pure proportionality, we exploit the differences between the percentage of votes achieved and the effective number of seats obtained by each party in each province to test whether allocations are more sensitive to vote casts or to the number of individual parliamentarians elected in each province¹². Although a rough indicator, in absence of more detailed ways to capture the personalised nature of distributive politics we will try to exploit the two alternative indicators of partisanship to test whether allocations are more responsive to the government – i.e. to the percentage of votes –

¹¹ Investments projects are very likely to stretch over many years so allocations, as well, may be correlated over time. While this fact may support the inclusion of the dependent variable's lagged value $Y_{i,t-1}$ among the regressors, we reject such choice because of the bias that affects FE estimators of dynamic models in the order of $1/T$, i.e. a level too high for our short time span. Although not presented here, tests available on request anyway confirm that the inclusion of lagged investments do not alter the political economy results.

¹² The national coefficients of pairwise correlation between the percentage of votes casts and the share of MPs achieved by each party in the provinces over our period of study are respectively (at 5% significance level): AKP – 0,59; CHP – 0,73; MHP – 0,67; Kurds – 0,73.

or to individual legislators – i.e. the number of MPs. In the second case, we would interpret the results as a proof that partisan politics does not have a direct effect on allocation but only mediated by individual legislators.

The dependent and the explanatory variables, summarised in table 2, are conceived as described in the followings.

Dependent variable

Per capita fixed public investments: total values to each province include investments in agriculture, manufacturing, transport, housing, education, health and other public services, while investments in mining and energy are not included on the basis that those are more likely to be allocated according to first nature geographical characteristics and to national priorities respectively. A more detailed analysis adopting each single sectorial axis – instead of the total investments – as dependent variable cannot be performed because of the limitations of the data available.¹³ Aware of such limits and in absence of alternatives, we argue that a strategy based on the total amount of public monies allocated to each province is nonetheless a good proxy to test for our research hypotheses. In doing so we also follow earlier pieces of literature (Celebioglu & Dall’erba, 2010; Deliktas, Önder, & Karadag, 2008; Karadag, Deliktas, & Önder, 2004). All the values are expressed in 1000 Turkish

¹³ A large proportion of investments is registered as multi-provincial, so it is not possible to match it with any specific province. Over 2004-2012, trans-provincial projects accounted on average for 45.67% of the total public investment portfolio, with an annual standard deviation from the period’s overall mean of 5.10. Our analysis will only concentrate on the investments which can be matched with single provinces. Aware of the possible lack of precision in the estimates, we defend our strategy arguing that such data noise is not uncommon in applied research.

Lira (TL) at 2012 prices and in logarithmic terms in order to control for non-linear relations.

Table 2 – Variables: review of main hypotheses and their operationalization

Variable	Variable description	Expected sign
<i>H.1 Socio-economic rationales</i>		
Socioeconomic development	Provincial Development Index	-
Wealth	Private cars per 10.000 inhabitants	-
Manufacturing employment	% employment in manufacturing	-
Rural population	% of rural population	+
Education attainments	% high education students	-
Health conditions	‰ hospital beds	-
<i>H.2 Distributive politics</i>		
<i>H.2.A Partisan factors</i>		
Governing party's strongholds	% of votes for AKP	+
Main opposition party's strongholds	% votes for CHP	-
Third opposition party's strongholds	% votes for MHP	+/-
Kurdish nationalism	% votes to Kurdish nationalist parties	-
Electoral district magnitude	Total parliamentary seats per province	-
<i>H.2.B Legislators' personal influence</i>		
MPs personal influence	N° of MPs from each party*	+
Ministers' hometown loyalty	d=1 if at least 1 minister born from the province	+

* This hypothesis is worked out through two different regressions: one that uses as main political variable the number of MPs per district, the other the % of party votes per district.

Socioeconomic independent variables

Due to changes in early 2000s in data collection by Turkstat, provincial data on GDP for the whole period of analysis does not exist¹⁴. We then try to control for the contextual socio-economic disadvantage via two alternative variables.

Socioeconomic development: the first variable is the Provincial Development Index (PDI), a composite indicator developed by the Ministry of Development through principal component analysis. It takes into account economic as well as social factors, so we adopt it as a main indicator for the contextual level of wealth and development.

Wealth: alternatively, to check for the robustness of our results, we also include the total number of private cars per 10.000 heads, as a proxy for economic wealth.

Besides, we include four other variables to specifically control for socioeconomic structural conditions.

Manufacturing employment: we concentrate on the % of employment in manufacturing on total employment because of the central role that industrialisation plays in Turkey's developing economy.

Health conditions: total number of private and public hospital beds per 10.000 inhabitants.

Education attainments: % of high education students (vocational and bachelors) on total population, as a proxy for the level of education in each province.

¹⁴ In fact, provincial data on GDP is not available after 2001. Turkstat started to collect data on wealth – Gross Value Added – again after 2004 (with data being available up to 2008), this time, however, at NUTS II instead of NUTS III level.

Rural population: in a country such as Turkey characterised by late development and a rapid, recent urbanisation, the regional developmental inequalities are likely to be correlated with the urban/rural divide, which we proxy by the % of population living in rural areas.

Partisan independent variables

Party vote shares: party percentage vote shares at national elections are the first, most immediate variables able to capture the political clout of provinces. By including both the incumbent party as well as the main opposition ones, we can also test whether political allocations are done to reward aligned constituencies or in retaliation to opposed ones. While MPs are likely to be an important component in redistributive networks, they may be less or as well as powerful as other political actors. Various levels of institutions operate in fact not only contemporaneously but reflexively (Solé-Ollé & Sorribas-Navarro, 2008). This is particularly the case of the majors of metropolitan municipalities (Dorronsoro & Massicard, 2005). Nonetheless, in this paper we exclusively focus on the central political level, defending this decision by observing that much of the political powers, as well as the main regional development decisions are still strongly in the grip of Ankara's powers.

Electoral district magnitude: it consists in the total number of parliamentary seats allocated to each province.

Kurdish nationalism: due to data lacks in the dispersion of ethnic Kurds as well as other variables able to capture the Turkish/Kurdish cleavage, we proxy it through the % of votes

received by the pro-Kurdish parties¹⁵. While the literature based on European countries suggests that regions with strong left or separatist parties are likely to receive more resources (Kemmerling & Stephan, 2008), our expectation in the Kurdish case will be opposite due earlier hints from the Turkish literature (Danielson & Keles, 1985) as well as to the constant armed tensions occurred since the 1980s in Kurds-inhabited areas, which were followed by harsh counter terrorism measures enacted by the Turkish state (Yegen, 1999).

Personal politics' independent variables

MPs' personal influence: In line with the strategy outlined in the opening of the current paragraph, we will compute two separate regressions: one including as political explanatory variable each party's percentage vote share and the other the party's number of parliamentarians elected in each province.

Ministers' hometown loyalty: it consists in a dummy equal to one if at least one minister was born in province *i*. In fact, cases such as Turkey show that, even where parties may not play a key role on redistributive politics, they are leader-dominated organisations: governments then retain strong power over the parliamentary groups (Turan, 2003). We thus posit that electoral districts from which at least one minister was born may be advantaged in the redistribution.

¹⁵ Under the allegation of supporting the PKK, the main Kurdish parties have been repeatedly banned over the years. We therefore consider, at each election, the party in place at that moment. Since running as independent candidates and then agglomerating into a single group after elections has been a strategy to circumvent the seat allocation minimum national thresholds, we jointly consider Kurdish and independent votes. Total Kurdish votes are divided by the votes given to the Saadet Partisi to control for the conspicuous share of religious Kurds which are likely to support the party of the national incumbent, pro-islamic government.

4.2. Sample and data

The analysis employs a panel data set covering 81 Turkish provinces over the period 2004-2012. Basic data on national public investments per province was derived from the Ministry of Development¹⁶.

Electoral data for 2002 and 2007 elections was obtained from Belgenet while data on 2011 elections from the Electoral High Committee. We annualised political variables by extending electoral results over each legislature's single year. Electoral wards within metropolitan provinces are not taken into account and therefore national elections' data is collected for provinces, which constitute the power bases of political parties and one of the most important units of political representation (Guvenc & Kirmanoglu, 2009). Information on MPs was collected from the Presidency of Ministers' website.

Population information was obtained interpolating/extrapolating Turkstat's 2001 general census and Turkstat regional database's 2007-2011 figures. Data on the Provincial Development Index was obtained interpolating the values from DPT (1996), DPT (2003) and Baday-Yildiz, Sivri, & Berber (2010)¹⁷. Other socio-economic data was obtained from Turkstat's regional database and interpolated in case of missing years.

Summary statistics for each variable are provided in appendix I.

5. Estimation

¹⁶ Former State Planning Organisation: <http://www2.dpt.gov.tr/kamuyat/index.html>.

¹⁷ The index was not calculated before 2010 for the 5 newest provinces, to which we thus assigned the value corresponding to each old province from which the new one was detached.

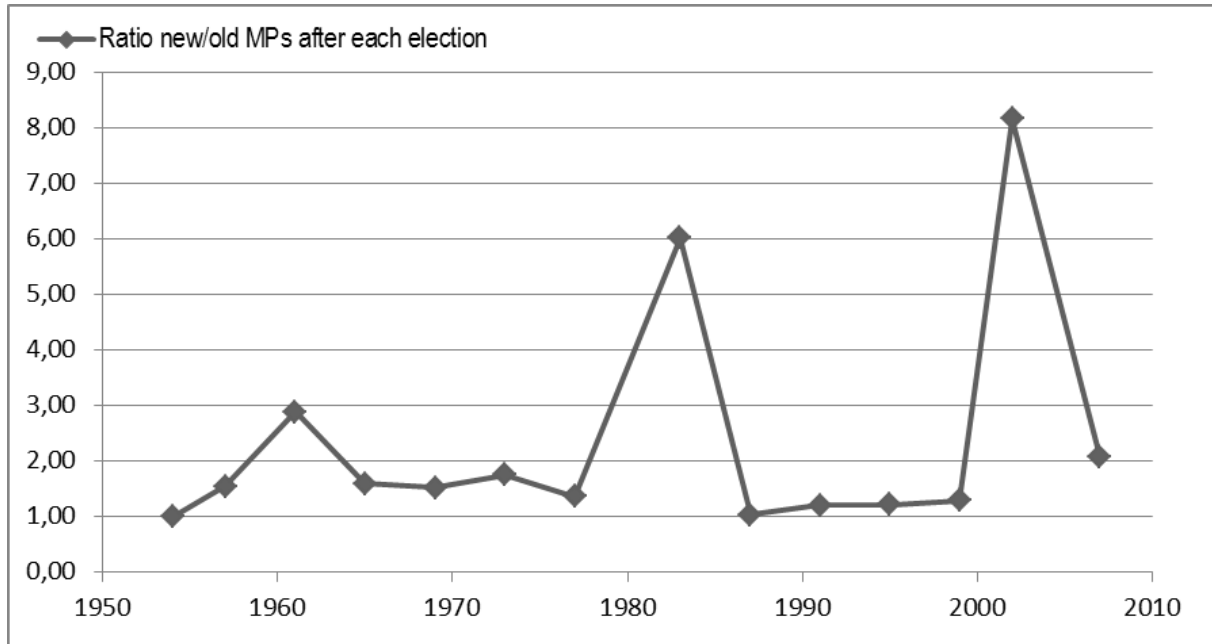
5.1. Identification strategy

Our research hypotheses aim to test to what extent, and through which channels, political factors can be treated as determinants of the allocation of investments. Our strategy to explore such questions requires the use of two different estimators, both of which exploit the panel data variation between three different electoral tournaments rather than the cross-sectional information. In fact, unable to control for factors such as the fixed capital stock at the beginning of the period, first nature geography and other physical characteristics, we cast doubts on the validity of estimators only exploiting the cross-sectional dimension of data (as done, for example, by Grossman, 1994, and Tekeli & Kaplan, 2008). First we adopt a fixed-effects (FE) OLS heteroscedasticity and autocorrelation robust estimator, which has the advantage of controlling for all the possible omitted variables that are idiosyncratic to provinces while also providing consistent standard errors in presence of serial and spatial correlation. The inclusion of both province and yearly time effects allows controlling for both time-constant unobserved factors and cross-sectional common shocks¹⁸. Considering that plans for time t are prepared in advance and then approved by fall/winter of time $t-1$, we include a 1-year lag between right and left-side variables, which will also help minimise the endogeneity between dependent and explanatory variables¹⁹.

¹⁸ Cadot et al. (2006) also use year dummies to check for the presence of any political cycle effect. In our case, however, year dummy variables do not seem to identify any specific time pattern. Although available on request, such results are not presented here since discussions of ‘political business cycles’ are out of this article’s scope.

¹⁹ This means that the length of our panels reduces from 9 to 8 years.

Chart 3 – The turnover of parliamentarians after each election: ratio between new/confirmed MPs (the peaks correspond to post-1960 and post-1980 military coups and 2002 elections)



Source: own elaboration

Although grounded in an ample body of works, our first estimation strategy may suffer from potential reverse causality, since higher/lower investments by the central government at election t may increase/decrease the votes given to the governing party at subsequent polls. 2002 electoral results can be considered exogenous due to the deep changes occurred in the political scene. For example, the parliamentarians' turnover – i.e. the ratio between old, reconfirmed MPs and newly elected ones – following 2002 elections peaked a level which is even higher than after 1960's and 1980's military coups (see chart 3). 2007 and 2011 electoral results, however, risk suffering from endogeneity. To control for it, our solution is to transform equation (2) in first difference

$$\Delta Y_{i,t} = \Delta \beta_2 X_{i,t-1} + \Delta \beta_3 P_{i,t-1} + \Delta \beta_4 S_{i,t-1} + \alpha_i + n_t + \varepsilon_{i,t} \quad (3)$$

and then using Arellano & Bover (1995) and Blundell & Bond (1998)'s Generalised Method of Moments robust system estimator, which instruments differences – equation (3) – with past levels, and levels – equation (2) – with past differences. The adoption of GMM-system rather than GMM-difference (Arellano & Bond 1991) is motivated by the latter's severe constraints in presence of time series persistence, since lagged variable levels are extremely weak instruments for subsequent first-differences (Bond et al. 2001). Indeed, the issue of low within-unit variance is particularly relevant in case of political, electoral and institutional factors, by nature rather persistent over time (Plumper & Troeger, 2007)²⁰. Robust, cluster and small options are adopted to obtain heteroscedasticity and autocorrelation robust standard errors as well as small-sample corrections to the covariance matrix estimate (Roodman, 2009a).

System-GMM is an attractive technique to handle regressors' potential endogeneity. Nonetheless, internal instrumenting is also known for suffering from a series of limitations among which, first of all, the risks of accepting results that are invalid because of weak instruments but nonetheless appear valid because of instrument proliferation – in turn responsible for weakening the test of over identifying restrictions (Roodman, 2009b). In order to minimise such risks, the analysis restrict the range of lags to 2 and 5,²¹ while also collapsing the instrument matrix as proposed by Roodman (2009b).

²⁰ We also considered the use of a Fixed-Effect Vector Decomposition estimator (Plumper & Troeger, 2007), eventually discarded for the inconsistency risks underlined by Breusch, Ward, Nguyen, & Kompas (2011).

²¹ As a further check, we have also tried different instrument solutions, such as adopting lags 2 to 6, lags to 2 to 4 or only lags 2 and 3. In spite of such changes both estimates and significance levels were overall constant.

5.2. Results

Quantitative estimations are rather sensitive to model specifications and to the quality of statistical data, relatively poor in countries such as Turkey. An intrinsic difficulty to operationalize informal institutional and political variables (particularly the ones through which to control for non-partisan and non-organised channels of representation) challenges any exact measurement exercise. Estimate results should therefore be interpreted more for the overall understanding of the underlying phenomena and the magnitudes involved than for the precise count of any effects.

Table 3 presents results obtained with the linear FE estimator. Column 1 shows the estimates corresponding to the socioeconomic drivers of investments, while columns 2 and 3 the estimates for the two alternative political economic sub-hypotheses. As discussed in the followings, the second model is our preferred, being the one with the highest number of significant predictors.

Starting from the first research hypothesis about whether investments are used as a tool to address development needs, results show contrasting evidence. Only three out of six indicators adopted to control for socioeconomic disadvantage are statistically significant, namely one related to contextual and two related to structural disadvantage, i.e. the composite indicator of development, the education attainments and the rate of rural population respectively. By contrast, the level of wealth and the health conditions, although with the expected sign, do not result statistically significant. Even within the three significant variables, the estimates seem to suggest that two contrasting trends are occurring. While the ratio of rural population is positively correlated to investments and the level of education negatively – thus confirming the progressive role of the development policy – the provincial development index (PDI) is strongly and positively, rather than negatively, correlated to the

amount of allocations. As a matter of fact, the PDI's coefficient is by far the highest among the whole model (also after taking into account the different scales at which variables are expressed): holding other variables constant, a one point increase in the index is correlated to an increase (model 2) of 141.62% of per-capita investments. Such fact, in particular, seems to support who suggest that investments are indeed allocated according to socioeconomic criteria but, rather than with the aim of reducing regional disparities, with the objective to concentrate resources in already (at least partially) developed areas. In this respect, the results support our alternative hypothesis, as well as earlier works by Danielson & Keles (1985) and Gezici & Hewings (2004). An important difference from such earlier studies however exists: on the one hand, the progressive character of investments is blurred into a strategy based on privileging areas with (at least) a minimum level of development. On the other hand, however, the Ministry of development now seems to be addressing, at least in part, investments towards area with higher levels of socioeconomic structural disadvantage, i.e. characterised by a lower level of education and a higher degree of rural population. A one point increase in the percentage of rural population, for example, is correlated to an increase (model 2) of 8% in per-capita investments. An explanation of this apparent contradiction may lie in the role that Anatolian, middle cities have been playing in recent years' development and, therefore, may suggest that the government has been favouring the better off among the most in need. Such result is indeed coherent with the 'growth centres' strategy put in place in recent years (particularly in the 9th National Development Plan covering the period 2007-2013), according to which specific growth poles have to be selected for the concentration of public investments in underdeveloped areas.

A comparison with earlier studies (Danielson & Keles 1985) also suggests that the geography of public investments allocation has partly changed over the decades and, now,

mostly Kurds-inhabited areas do not seem structurally disfavoured in the allocations: the coefficient for Kurdish nationalism is insignificant.

Table 3 – FE, OLS estimation of the empirical model: determinants of the allocation of per-capita public fixed capital investments to Turkish provinces, 2004-2012. The dependent variable is expressed in logarithms. All explanatory variables are lagged by one year

	(1) Socioeconomic	(2) Politics: parties	(3) Politics: personal
Socioeconomic development	0.403*** (0.130)	0.348*** (0.110)	0.476*** (0.136)
Private cars	-1.21e-05 (0.000547)	-0.000382 (0.000538)	-0.000437 (0.000589)
Manufacturing	0.00600 (0.0127)	0.00440 (0.0127)	-0.00383 (0.0123)
Education	-0.00776*** (0.000693)	-0.00732*** (0.000674)	-0.00814*** (0.000662)
Hospital beds	-0.00297 (0.00810)	-0.00489 (0.00737)	-0.00596 (0.00815)
Rural population	0.0816*** (0.0255)	0.0770*** (0.0233)	0.0624** (0.0294)
Governing party – AKP		0.0121* (0.00610)	
Main opposition party – CHP		-0.0179** (0.00738)	
Third party – MHP		0.0149 (0.0131)	
Kurdish nationalism		0.00958 (0.00884)	
District magnitude		-0.0664*** (0.0146)	-0.0421 (0.0842)
Gov. party – AKP: MPs			0.0266 (0.0952)
Main opp. Party – CHP: MPs			-0.0263 (0.108)
Third party – MHP: MPs			-0.171 (0.108)
Kurdish nationalism: MPs			0 (0)
Minister from the province			-0.0485 (0.110)
Constant	1.666 (1.201)	2.209* (1.191)	3.162** (1.352)
Observations	648	648	648
R-squared (within)	0.165	0.182	0.197
Number of id	81	81	81
Province FE	yes	yes	yes
Year FE	yes	yes	yes
F-test	19.47 (0.000)	22.27 (0.000)	30.40 (0.000)

Robust, clustered standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

The coefficients for partisan political factors are shown in column 2. Coefficients for the governing party and the main opposition one are both statistically significant and with the foreseen signs. As expected, holding other variables constant, the national government seems to favour its party strongholds in the allocation, thus confirming that in closed-list PR systems parties try to cement their links with their constituencies. The opposite is true for the main opposition party, whose coefficient is indeed negative and significant, suggesting that the central government also uses public investments to ‘punish’ areas voting for the opposition. The coefficient of the third party – the MHP – is instead not significant, suggesting that the main redistributive politics are played around the two main parties. *Ceteris paribus*, a 1 % increase in the votes given to the governing party (AKP) is for example ‘awarded’ by an increase in per-capita investments of 1.21%. Similarly, a 1% increase in the votes casted to the main opposition party is punished by a decrease in per-capita investments as high as 1.79%. Such results are consistent with the fact that, as discussed earlier (see par. 3.2), the political fault between the ruling party – AKP – and the main opposition one – CHP – may capture not only the political cleavage but also a wider one between religious and laic electorates as well. In the light of the political protests sprung in Turkey at the beginning of the summer of 2013, such outcomes do indeed provide a picture of Turkey as a country with a neat socio-political fracture.

Concerning the impact of district magnitude, i.e. the number of parliamentary seats allocated to each province, once controlling for province specific fixed-effects and for cost differentials between more sparse and more concentrated areas (via the ratio of rural population), investments appear inversely correlated to the provincial political weight. As predicted, this suggests that, in closed-list PR settings, allocations rise with the decrease of district’ magnitude, since the’ marginal ‘political added value’ of investments is higher in

small constituencies where legislators can ‘advertise’ their constituency services more easily than in big electoral districts.

Considering the number of MPs instead of the shares of votes received by each party, i.e. moving from column 2 to column 3, results confirm the hypothesis put forward by McGillivray (2004) on the predominance – in closed-list PR systems – of parties over individual legislators. All the political coefficients still show their expected signs but none of them is now significant.

In a similar way, the geographical origin of ministries does not seem to be a predictor of the amount of investments allocated: the same hometown hypothesis is also rejected.

Testing for the robustness of the FE estimator’s results to possible endogeneity issues, GMM-system outputs are provided in table 4, whose bottom fields include the specification statistics on the validity of instruments. As required, the AR serial correlation tests show that only first-order but not second-order serial correlation is detected. The Hansen J-test also confirms the appropriateness of the instruments, whose count does not overfit the models. As a further check, we have also tried different instrument solutions, such as adopting lags 2 to 6, lags to 2 to 4 or only lags 2 and 3. In spite of such changes both estimates and significance levels were overall constant.

It is worth noting that the GMM-system estimator provides results overall similar to the FE ones, suggesting that endogeneity is not a key issue in our analysis. Interestingly, the most stable coefficients are the ones related to political, rather than socioeconomic variables. By contrast, among the latter the most striking case is education which, from negative and strongly significant, now turns positive – even though significant only in the third model, i.e. our less favored one. Besides, the level of economic wealth, proxied by the number of private

cars per 10.000 inhabitants, now appears with the expected, negative sign and statistically significant in the first and the third model.

Table 4 – GMM-SYS estimation of the empirical model: determinants of the allocation of per-capita public fixed capital investments to Turkish provinces, 2004-2012. The dependent variable is expressed in logarithms. All explanatory variables are lagged by one year

	(1) Socioeconomic	(2) Politics: parties	(3) Politics: personal
Socioeconomic development	0.607*** (0.210)	0.367** (0.179)	0.501*** (0.161)
Private cars	-0.000827* (0.000417)	0.000531 (0.000559)	-0.000563* (0.000288)
Manufacturing	0.0241 (0.0180)	0.0295** (0.0145)	-0.00958 (0.0144)
Education	0.00325 (0.00212)	0.00419 (0.00280)	0.00419* (0.00221)
Hospital beds	0.0230* (0.0121)	0.0101 (0.0135)	0.0127 (0.0101)
Rural population	0.0531*** (0.0179)	0.0485*** (0.0122)	0.0197 (0.0147)
Governing party – AKP		0.0294*** (0.00998)	
Main opposition party – CHP		-0.0209** (0.00922)	
Third party – MHP		-0.00718 (0.0152)	
Kurdish nationalism		0.0241* (0.0127)	
District magnitude		-0.00284 (0.0111)	0.126 (0.0812)
Gov. party – AKP: MPs			-0.127 (0.0969)
Main opp. Party – CHP: MPs			-0.135 (0.0820)
Third party – MHP: MPs			-0.267*** (0.0945)
Kurdish nationalism: MPs			0 (0)
Minister from the province			0.0223 (0.0981)
Constant	3.290*** (1.054)	1.392 (1.517)	5.289*** (0.860)
Observations	648	648	648
Number of id	81	81	81
Year FE	yes	yes	yes
F-test	15.81 (0.000)	11.96 (0.000)	15.56 (0.000)
AR (1)	-5.27 (0.000)	-5.17 (0.000)	-5.38 (0.000)
AR (2)	-0.16 (0.871)	-0.10 (0.917)	-0.15 (0.882)
N. of instruments	38	58	56

Hansen	28.95 (0.222)	40.16 (0.418)	44.84 (0.176)
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Robust, clustered standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Kurdish nationalism – MPs was dropped automatically during the regression because of collinearity

Among the political variables, the three most important ones – related to the governing and the main opposition parties as well as Kurdish nationalism, in column 2 – maintain the same, expected sign, while also experiencing an increase in their coefficients and significance levels. Such results can be seen as a proof of the analysis's robustness.

District magnitude, by contrast, is now insignificant, thus suggesting some caution when drawing conclusions on the links between pork-barrels and constituency size in Turkey. The personal impact of MPs, again, does not appear to be statistically significant, thus confirming that what matters in the allocations is more the decisions of the central governing party rather than the individual legislators. The exception is related to the third party whose MPs seem to be significantly driving down investments. We however suggest paying particular care around this coefficient which is likely to be caused by some outliers (considering in particular the very limited number of provinces where the third party receives a majoritarian support).

In the first pages of the article we hypothesised that the potential ineffectiveness of regional development policies carried out in Turkey may be related not only to the use of wrong tools to target regional disparities, but also to the fact that those tools do not properly address the developmental targets because of politically distorted allocations. The overall results, synthesised in table 5, suggest more nuanced conclusions. First of all, after controlling for political manipulations, socioeconomic measures remain the most relevant predictors of investments. According to the ample body of literature on the links between economic development and the quality of institutions, we would expect an increase of non-formal political manipulations along with the decrease of transparency and quality of institutional

settings. In other words, in countries lacking a strong and formalised institutional setting – i.e. more prone to corruption and patronage, such as Turkey’s public governance indicators seem to suggest (Gönenç et al., 2005) –, we may expect public policy returns to be more likely marred by the prevalence of *non-formal* political manipulations. Our results, however, show a much more nuanced picture: in spite of their relevance as a driver of investments, political factors are indeed less important than socioeconomic ones.

Table 5 – Confirmation/rejection of main hypotheses (+ positive; - negative; Ns not significant)

Hypothesis	Variable	Expected sign	Results	Confirmation/rejection
<i>H.1 Socio-economic rationales</i>				
	Socioeconomic development	-	+	Rejected
	Wealth	-	Ns/-	Unclear
	Manufacturing employment	-	Ns	Rejected
	Rural population	+	+	Confirmed
	Education attainments	-	-	Confirmed
	Health conditions	-	Ns	Rejected
<i>H.2 Distributive politics</i>				
<i>H.2.A Partisan factors</i>				
	Governing party’s strongholds	+	+	Confirmed
	Main opposition party’s strongholds	-	-	Confirmed
	Third opposition party’s strongholds	+/-	Ns	Rejected
	Kurdish nationalism	-	+	Rejected
	Electoral district magnitude	-	-/Ns	Unclear
<i>H.2.B Legislators’ personal influence</i>				
	MPs personal influence	+	Ns	Rejected
	Ministers’ hometown loyalty	+	Ns	Rejected

Source: own elaboration

So, how can these two contrasting conclusions be reconciled? The first, most straightforward explanation is that such results are a proof of the ‘relative strength’ of the Turkish State. Indeed, compared to other emerging countries, it is possible to argue that Turkey’s bureaucracy seems overall able to implement its policies. To integrate such account, two alternative explanations, related to the characteristics of the research design, can also be put forward.

First, what probably this research design – as well as many similar works from the literature on distributive politics – is mostly able to capture is pork-barrelling. However, as Golden (2003) suggests, pork-barrels and patronage are not the same. While standard pork-barrels and constituency services involve the allocation of a collective good such as building a road, a school or a factory that, in any case, will be likely to encompass a collective benefit, patronage can be interpreted as the individualization and personalization of pork-barrels: “in a patronage system, pork-barrel allocations, which although targeted at specific electoral constituencies nonetheless involve public goods, are transformed into private goods, aimed at specific, named clienteles” (Golden, 2003, p. 200). Recognising such distinction, it is possible to argue that what is really more likely to increase with the increase of corruption and bad institutional settings are not pork-barrels but the forms of patronage networks, which, for their nature, are difficult to be captured by macro-level statistical analyses conducted on electoral districts.

Second, political economic studies conducted at electoral levels – such as this article – are for their nature badly equipped with tools to offer answers to the question of *who*, within a given district, is able to extract rents out of public projects and goods, even when these are allocated to areas most in need of them. Consequently, personalised political manipulations and corruption may happen not in the allocation of investments across provinces but at much

smaller scale, e.g. in the local management of resources. Moreover, for reasons of simplicity our study has only focused on the national election politics and neglected local politics. The cases of local economic development initiatives studied by Özcan (2006) in the new industrial Anatolian town of Kayseri, however, show that the politicisation of development initiatives happens not only among regions but also within the same locality – a process difficult to be captured unless adopting a qualitative, in-depth approach.

With reference to the reasons why Turkish regional development policy has hardly achieved concrete results, outcomes suggest that a reason may be a rational decision by the State to favour areas with an (at least) minimum level of development and channels investments to those localities first. As a matter of fact, the most significant predictor of investments is the level of provincial socio-economic development which, however, is positively rather than negatively correlated to investments, suggesting that the progressive character of the policy is respected only partially.

In spite of the prevalence of ‘technical’ criteria, our results also confirm the fact that political manipulations in Turkey are relevant predictors of allocations. The results indicate that it is mainly parties, rather than individual legislators, to manage to influence redistributive games in a statistically significant way. While such conclusion confirms the hypothesis put forward by McGillivray (2004) on the predominance – in closed-list PR systems – of parties over individual legislators, it seems anyway in contrast to Bayirbag (2011)’s results about the ‘non-formal’ channels of politicisation in Turkey’s recent past. The analysis also clearly uncovers a neat political cleavage, occurring between the governing and the main opposition party. In the light of the political protests sprung in Turkey at the beginning of the summer of 2013, such outcomes do indeed provide a picture of Turkey as a country with a neat socio-political fracture.

To conclude the analysis, our results question any ‘linear and mechanical’ interpretation of the link between wealth and institutional performances. As our outcomes suggest, the real world picture is a more nuanced one, where ‘purely political’ goals and policy objective criteria can be complexly interlinked rather than diametrically opposed.

6. Conclusions

The article has first measured the extent to which socioeconomic criteria and developmental needs – i.e. the policy principles officially set out by the State – are central in the allocation of central fixed capital investments to Turkey’s provinces. The estimation strategy is based on the adoption of a Fixed-Effects panel data estimator and a panel dataset for 81 provinces over 2004-2012. Aiming to assess the robustness of our results, we also tested our results against potential endogeneity with a Generalized Method of Moments-system estimator.

Outcomes overall show that although political variables are mostly significant and in line with expectations, the magnitude of pork-barrelling is lower compared to socioeconomic factors. Indeed, after controlling for political variables, socioeconomic measures remain the most relevant predictors of investments. So, with reference to the reasons why Turkish regional development policy has hardly achieved concrete results, outcomes suggest that a reason may be a rational decision by the State to favour areas with an (at least) minimum level of development and channels investments to those areas first. As a matter of fact, the most significant predictor of investments is the level of provincial socio-economic development which, however, is positively rather than negatively correlated to investments, suggesting that the progressive character of the policy is respected only partially.

Since theoretical political economy literature suggests that the effects of special interest politics and interest groups on policy outcomes are overall ubiquitous in any political systems, we have then argued for the importance of better studying the specific channels through which distributive politics occur. To this aim we have developed an extensive theoretical political economy framework, according to which the specific patterns of geographical targeting of public resources is likely to be influenced by two main type of factors: the strength of formal societal, political institutions, and the politic-electoral system – which in turn is defined by the type of electoral rules, the strength of parties and the size of electoral districts.

According to the ample body of literature on the links between economic development and the quality of institutions, we would expect an increase of non-formal political manipulations along with the decrease of transparency and quality of institutional settings. In other words, in countries lacking a strong and formalised institutional setting – i.e. more prone to corruption and patronage, such as Turkey's public governance indicators seem to suggest (Gönenç et al., 2005) –, we may expect public policy returns to be more likely marred by the prevalence of non-formal political manipulations. Our results however show that, in spite of their relevance as a driver of investments, political factors are less important than socioeconomic ones. The analysis' outcomes therefore question any 'mechanical' interpretation of the link between wealth and institutional performances. As our results suggest, the real world picture is a more nuanced one, where 'purely political' goals and policy objective criteria can be interlinked along a complex continuum.

Moving to the politic-electoral settings, we have specifically tested whether, in closed-list proportional representation electoral systems characterised by weak formal political institutions, political pork-barrels mostly benefit formalised political groups such as parties

or, rather, personalised networks of representation and personal vote-seeking. While following the literature, we have also included additional explanatory factors, namely same-hometown loyalties. The results indicate that it is mainly parties, rather than individual legislators, to manage to influence redistributive games in a statistically significant way. While such conclusion confirms the hypothesis put forward by McGillivray (2004) on the predominance – in closed-list PR systems – of parties over individual legislators, it seems anyway in contrast to Bayirbag (2011)’s results about the ‘non-formal’ channels of politicisation in Turkey’s recent past.

The analysis also clearly uncovers a neat political cleavage, occurring between the governing and the main opposition party. In the light of the political protests sprung in Turkey at the beginning of the summer of 2013, such outcomes do indeed provide a picture of Turkey as a country with a neat socio-political fracture.

To conclude, considering the large number of emerging countries with weakly formalised political institutions and adopting electoral systems similar to that of Turkey, our analysis has contributed to widening the spectrum of empirical studies on distributive politics outside of the richest world economies by exploring a key EU-candidate country whose coverage in the international literature is rather low. At the same time, lessons learned here may be helpful in the assessment of regional development policies effectiveness – both within and outside of Turkey – by better understanding the objective functions driving policy-makers in the design of regional development initiatives. While this paper has focused only on the effects on policy outputs, the next step to further advance our understanding of the political economy of regional development policies is to measure their final outcomes, namely the impacts of political factors on economic development, a topic which, unfortunately, is still largely over understood.

Appendix

Appendix I – Summary statistics

<i>Variable</i>	<i>Mean</i>	<i>St. Dev.</i>	<i>Minimum</i>	<i>Maximum</i>
Log Investments	5.191	0.744	1.728	9.542
PDI	-0.001	0.986	-1.659	4.150
Private cars	680.137	372.452	71.542	2017.398
Manufacturing	20.648	9.553	3.8	46.3
Education	4.369	19.046	0.036	254.955
Hospital beds	23.287	9.054	4.145	52.045
Rural population	38.263	13.598	1.010	70.855
Governing party – AKP	42.870	15.216	6.500	84.820
Main opposition party – CHP	17.331	9.016	2.010	52.500
Third party – MHP	12.191	6.900	0	44.9
Kurdish nationalism	9.522	16.158	0	70.8
District magnitude	6,790	8,835	1	85
Gov. party – AKP: MPs	4.262	5.049	0	46
Main opp. Party – CHP: MPs	1.717	3.402	0	29
Third party – MHP: MPs	0.535	1.059	0	7
Kurdish nationalism: MPs	0.276	0.724	0	5
Ministry from the province	0.274	0.446	0	1

Source: own elaboration

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