Votes and regional economic growth: evidence from Turkey[1]

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Abstract

In countries where governments' disproportionate power over the bureaucracy is coupled with a strong political polarisation, can votes for the national incumbent party "buy" preferential policy treatment and faster regional economic growth? The article tests such question on Turkey's 81 provinces over 2004-2012. Results uncover a link between votes and faster regional growth, as well as a small influence of preferential allocations in explaining it. Yet, after addressing potential endogeneity, economic performance is almost entirely explained by standard drivers, primarily human capital endowment. Results suggest that the impact of electorally motivated distributive politics on regions' economic performance is extremely limited.

Key words: *Distributive politics; votes; political cleavages; regional economic growth; Middle-East; Turkey*

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Votes and regional economic growth. Evidence from Turkey

1. Introduction

The importance of political institutions in ensuring the efficient functioning of markets and consequently fostering economic performance has become central in much of the literature dealing with economic growth and development. A growing consensus in particular agrees on how one of the key prerequisites for sustained economic growth is the existence of *inclusive institutions* preventing narrow political groups to monopolise public resources and economic power (Acemoglu & Robinson, 2012). In spite of such burgeoning interest on the politics of economic growth, the research specifically exploring the impact of political articulations on *regional* economic development has been significantly scarcer. Recently, the work by Bugra & Savaskan (2012, 2014) on the links between politics, religion and business has provided evidence suggesting that in polities lacking inclusive political institutions and where businesses are more reliant on state intervention – i.e. many emerging countries around the world –, governments may influence sub-national economic performance via the privileged provision of State goods to constituencies with the right political affiliation, at the expenses of opponents. Yet, such hypothesis has not received extensive empirical attention. The existence of such gap in the literature is particularly puzzling considering the literal 'explosion' of research exploring distributive politics (Golden & Min, 2013), i.e. how politicians selectively targets constituencies with more or less governmental monies and goods to reinforce their electoral advantage. While distributive politics have been explored on an increasing number of countries and governmental goods, almost no studies have so far explored their final economic implications.

The current article aims at filling this gap by defining a political economy model of regional growth and testing it to Turkey's 81 provinces over 2004-2012. Turkey's case is informative because the country has traditionally suffered from social and political polarisation and considerable subordination of the bureaucracy to incumbent politicians. First of all, the results can inform the burgeoning literature on distributive politics by providing a preliminary assessment of whether such 'allocative' games' have any economic consequences. The research can also contribute to the academic debate about the link between institutions and regional economic growth (Farole, Storper, & Rodríguez-Pose, 2011) by assessing whether, and to what extent, votes and partisan articulations may influence subnational economic performance. Last but not least, if in the last fifteen years Turkey has undergone a significant number of institutional reforms aimed at strengthening the public governance, recent literature (Bugra & Savaskan, 2014; Meyersson & Rodrik, 2014) has underlined – once again – the strong links between politics and economic development in the country. Assessing to what extent political cleavages between opponents and supporters of the central Government influence sub-national economies can therefore shed further light on the form of such links.

Baseline results, obtained with a Fixed Effect estimator, confirm the existence of a reduced-form relationship between votes for the central Government and regional economic growth. The electoral support provided by each province to the incumbent party is correlated to faster rates of regional economic growth, particularly in provinces where the electoral race is closer. The preferential allocation of developmental Government goods to provinces – namely public investment and public investment incentives to the private sector – partly explains such relationship. Yet, the overall effect of electoral politics on economic growth is very modest. Besides, once the potential endogeneity between the dependent variable and the regressors is accounted for with an Instrumental Variable strategy, regional economic

performance appears as almost entirely explained by standard socio-economic factors, primarily human capital endowment. Results are robust to the inclusion of standard variables which may drive regional economic growth, as well as to the inclusion of factors specifically able to control for the structural change that Turkey's emerging economy is undergoing.

The remainder of the paper is organized as follows: section two provides a review of the literature on the link between political representation and regional economic growth, offers an overview of Turkey's political cleavages and regional economic performance, and sets the research hypotheses. Section three defines a political-economy model of regional growth, and discusses the empirical variables used to estimate the model, the data, as well as the identification strategy. Section four presents, and then discusses, the results. Section five eventually draws the discussion to a conclusion.

2. Exploring the link between votes and regional economic growth

2.1. Votes and economic growth

The impact of political parties, elections and national political institutions on macroeconomic performance has been increasingly explored by scholars in the last twenty years (Boix, 1998; Persson & Tabellini, 2003; Rajan & Zingales, 2006; Sen, 2013). In parallel to such political economy literature carried out at the national level, a considerable amount of research has been conducted at the sub-national level. This second corpus of work has frequently stressed the role of local political coalitions and local political entrepreneurialism in shaping governance structures conducive to economic growth (Apaydin, 2012; Bayirbag, 2011; Wood & Valler, 2004; Wood, 2008). In spite of those two separate bodies of research, very little research has been carried out to cross cut them and specifically explore how votes and partisan articulations may influence local and regional

economic development via their role in the construction of societal cleavages and the distribution of state goods.

The existence of such gap in the literature is particularly puzzling considering the vast amount of literature on distributive politics, i.e. on how self-interested politicians may lead to heterogeneously distribute public spending and other state goods to specific groups at the expenses of others to gain electoral advantage (Golden & Min, 2013). A growing body of research linking economics and political science has indeed explored how public resources are frequently distributed on the basis of 'purely political' considerations (Persson, 1998). Such literature has explored the distribution of goods as various as regional grants and federal spending (Case, 2001; Larcinese et al., 2012; Tekeli & Kaplan, 2008), trade and industrial policy (McGillivray, 2004), infrastructure investments (Cadot et al., 2006; Castells & Solé-Ollé, 2005; Golden & Picci, 2008; Kemmerling & Stephan, 2008), investment incentives schemes (Yavan, 2012), poverty reduction programmes (Diaz-Cayeros, Estévez, & Magaloni, 2012; Fried, 2012; Kroth, Larcinese, & Wehner, 2014), international aid (Briggs, 2014), and the EU cohesion policy (Bouvet & Dall'Erba, 2010; Kemmerling & Bodestein, 2006).[1] Yet, in spite of a literal 'explosion' of research on distributive politics, very little research has so far explored the final economic impacts which such preferential allocations may determine. Levitt & Poterba (1999) provide a seminal attempt to explore a research hypothesis similar to ours. They explore the link between congressional representation and state economic performance in the US. While they uncover a positive correlation between sub-national economic growth and the seniority of Democratic congressmen representing States at the federal level, they are unable to find any causal explanation for it. Given the sizeable effect that electoral politics may have on the design and implementation of developmental policies, there is yet reason to expect that votes and partisan articulations may influence not only the allocative policy outputs, but also their final outcomes, namely economic performance.

This may be particularly true in the emerging markets (Cadot et al., 2006), where public capital and state support to the business environment are likely to play a key role – bigger than in rich economies – in triggering the private capital accumulation process.[2] Besides, in such environments lower levels of bureaucratic capacity and stronger informal consensus building practices (Özcan, 2000, 2006) frequently reduce the incentives/capacity to prevent the political use of public monies (Evans, 1995). Recently exploring the political economy of state-business relations in the emerging world, Bugra & Savaskan (2012) put exactly forward empirical evidence suggesting that tense partisan relations between the subnational and the central governments may influence local and regional economic performance via the Government's preferential treatment of its partisan supporters. The evidence collected by the two authors suggests that the national Government may 'punish' political opponents via channels such as: (1) the provision of particular incentives to neighbouring aligned regions so as to stimulate private investments' relocations; (2) the restrainment of public investments for the development of key, necessary infrastructures; (3) and, last but not least, the mobilization of legislative and administrative mechanisms aimed at a favourable treatment of only aligned business groups.

A key assumption behind such hypotheses concerns the importance of political cleavages as catalyst for the formation of economic ones. Since the seminal work by Lipset and Rokkan (1967), social scientists have extensively studies the link between social cleavages and party systems. According to the two authors' theoretical framework, party systems reflect, to a greater or lesser degree, the social cleavage structure existing in a specific society. The number of cleavages is hence considered a key predictor of the number of parties. Furthermore, the intensity of such social cleavages is also assumed as a determinant of the intensity of partisan polarisation, an important dimension that distinguishes moderate and highly polarised party-systems.

2.2. Political cleavages, state support, and economic performance in Turkey

Turkey is described in the literature as a polity where incumbents have frequently provided privileged treatment to people and constituencies with the right political affiliation and punished opponents (Acemoglu & Robinson, 2013b; Heper & Keyman, 2006). Political polarisation has been one of the most serious and persistent maladies of Turkish political system, with pro- and anti-government groups frequently opposing each other (Ozbudun, 2013).[3] In spite of periods such as the 1990s during which fragmentation and volatility weakened the role and coherence of the party system, throughout Turkey's republican history Turkish political parties have in general displayed a high degree of saliency in the political arena (De Leon, Desai, & Tugal, 2009). Sharing similarities with other Southern European countries such as Italy and Greece (Lanza, Lavdas, 2000), interest politics and party politics have frequently showed strong links.

Furthermore, in line with the experience of other late-industrialising countries around the world, the Turkish state has traditionally played a key role in fostering the process of private capital accumulation and economic development (Eraydin & Armatli-Köroglu, 2005). The role of central government policies and state manufacturing firms behind the emergence of industrial districts in previously economically marginal areas is for example well documented (Eraydin, 2001). Bayırbağ (2010, 2011)'s research on the complex rescaling interlinks between Gaziantep's local economic coalitions and the central level indirectly provides evidence on the importance of the central state in shaping local and regional economic development trajectories. Qualitative evidence collected by Bugra and Savaskan (2012) for recent years suggests that business groups with strong links to the government experienced better economic performance than ones opposed to it, thanks to preferential

treatment in the allocation and management of public resources and other goods such as public tenders. Preliminary evidence collected by the two authors leads to suggest that such concerns may apply not only to individual business groups but also to entire constituencies. They in particular uncover the fear of local and regional actors about feeling penalized by the government for systematically voting for the main opposition party (*Cumhuriet Halk Partisi*, Republican People's Party, CHP, as opposed to the *Adalet ve Kalkima Partisi*, Justice and Development Party, AKP) in both local and national elections.[4]

Although the weight of the Turkish State's direct intervention in the economy has shrunk since the 1980s (Aricanli & Rodrik, 1990), an abundant amount of literature has provided theoretical and empirical evidence showing how the role of the state in influencing the economic and business environment has not diminished. The evidence include qualitative and case-study investigations on the State-business relations (Acemoglu & Robinson, 2013b; Bugra & Savaskan, 2014), as well as econometric analyses on the impact of public capital on regional productivity (Deliktas, Önder, & Karadag, 2008; Karadag, Deliktas, & Önder, 2004). Furthermore, the country still remains one of the most centralised public finance systems among OECD countries (Blöchliger & Rabesona, 2009). Many of the final decisions affecting regional development are still largely in the hands of Turkey's central Government, which may hence use such power to implement vote buying strategies.

[Figure I about here]

The map presented in Figure I shows how the patterns of regional economic growth during the last decade have been consistently heterogeneous. The group of regions which experienced the highest average annual growth rates of per capita GVA during 2004-2012 include both some of the poorest NUTS II regions such as Mardin (8 percent per annum), Erzurum (4.5 percent per year) and Ağrı (4.3 percent per year), as well as middle income

regions such as Manisa (4.9 percent per year), Balıkesir (4.5 percent per year), Malatya (4.1 percent), and Kırıkkale (4.1 percent).

Figure I also shows the average percentage of votes cast for the AKP in national elections between 2002, 2007 and 2011. 2002 elections are interpreted as a turning point in Turkish politics as they witnessed a dramatic turnover among the political class and the substantial rise of the newly formed AK Party, which has kept increasing its power thereafter. Since then, the political scene has been mostly dominated by such party. The distribution in Figure I shows the marked spatial heterogeneity of the electoral support to the AKP, with average results across the three electoral tournaments ranging from 10 percent to more than 63percent.

The consolidation of Turkey's political spectrum following 2002 has in particular marked the crystallisation of a pre-existing fault line, running in parallel to the contraposition between the pro-Islamic constituencies and the secular, Kemalist supporters. Compared to the European countries studied by Lipset & Rokkan (1967) Turkey's social system has maintained its relatively lower number of cleavages (Ozbudun, 2013). Such division of Turkey's society dates back to the late Ottoman period and the early republican years, and is at the core of the 'preferential treatment' hypothesis being tested in the analysis. One of the most established metaphors used to depict such cleavage describes Turkey as a country divided between a political centre – constituted by the State bureaucracy, the military, and the historical urban elites – and a large periphery – including the lower classes and rural environments, frequently with more conservative and Islamic traditions (Mardin, 1973). The strongly non-confessional State building project started by the founder of the Republic M.K. Atatürk, and subsequently advocated by the CHP had traditionally been one carried out by the centre. Since the 1980s, two socio-economic changes started rearranging the power

balance and composition of such cleavage. First, a massive wave of internal migration towards the main urban areas transformed the spatial equilibrium between the centre and the periphery. Since centre and periphery are not spatially differentiated any more, authors have recently renamed the societal cleavage as one between "White Turks", representing the former group, and "Black Turks", representing the less-educated, lower-class with frequently peasant roots and stronger links to religion (Acemoglu & Robinson, 2013a). Second, and most important, the economic rise of provincial Anatolian towns – the so-called Anatolian Tigers – led by a new capitalist class with rural origins and which identify themselves as pious capitalists – or "Islamic Calvinists" (ESI, 2005) – started altering the distribution of economic power between the two groups. Importantly for our analysis, the AK Party's political success eventually marked the electoral victory of the latters over the formers.

2.3. Research hypothesis

Following the literature discussed in the previous sections, the main hypothesis tested by this article states

H.1: Constituencies voting for the incumbent party grow faster than others, thanks to a preferential treatment received in the management of governmental public and private goods.

In spite of hypothesis H.1, other research conducted on the impact of political and social factors in influencing local economic performance may suggest that partisan politics *in general* is not relevant to explain regional economic growth. According to Rodríguez-pose (1998)'s results, regional growth in Western Europe is largely accounted for by "standard" factors such as physical and human capital, innovative capacities, and socio-demographic regional characteristics, rather than by electoral politics. The alternative hypothesis thus puts socio-economic factors at the heart of regional economic performance. It states

H.A: Electoral politics does not drive regional economic performance, which is instead explained by standard socio-economic factors of growth.

3. Empirical analysis

3.1. A political-economy model of regional economic performance

The aim of this section is to briefly describe a theoretically-driven, political-economy model of regional economic growth. Drawing from earlier political economy research (Besley et al., 2010), follows this growth model:

$$\Delta Y_{i,t} = \beta_0 Y_{i,t-1} + \beta_1 P_{i,t-1} + \beta_2 P^2_{i,t-1} + \beta_3 G_{i,t-1} + \beta_4 X_{i,t-1} + \alpha_i + n_t + \varepsilon_{i,t} \quad (1)$$

Where:

$\Delta Y_{i,t}$ is the rate of per-capita economic growth, expressed in logarithmic terms, of province i at time t and $Y_{i,t-1}$ is the yearly lagged provincial per-capita GVA (gross value added),[5] included to test for Solow-style convergence of per-capita income, with $\beta < 0$ indicating convergence.

$P_{i,t-1}$ is the key variables of the model and is aimed at measuring the votes casted in each province for the incumbent governing party. In particular, we want to test whether $\beta_1 > 0$, i.e. whether higher votes for the central government drives higher growth rate of provincial personal income.

Within the literature on the link between partisan votes and distributive politics literature a classic debate has flourished on whether Governments target goods to partisan strongholds (Cox & McCubbins, 1986) or, by contrast, to swing constituencies (Dixit & Londregan, 1996). Recent research on Turkey's public investment provides evidence in

favour of the first hypothesis (Luca & Rodríguez-Pose, 2014). The inclusion of $P_{i,t-1}$ exactly captures such relationship. Yet, even within core-supporters models, utility-maximising politicians may decide to reduce their support to core constituencies above and below a certain votes' threshold. In other words, combining Cox & McCubbins (1986) Dixit & Londregan (1996)'s models, the relationship between the amount of goods distributed and partisan support may be non-linear and inverse-U shaped, as found in the case of the European regional structural funds allocations (Bouvet & Dall'Erba, 2010). Such non-linearity implies that the preferential treatment tends to increase where political competition is higher. Anecdotal evidence supporting such argument in the Turkish context is offered, for example, by a Parliamentary speech delivered in 2012 by a legislator from the province of Kütahya. In such occasion, the Member of Parliament complained how the province had been "forgotten" in the distribution of State resources and had been left behind in terms of development (Işık, 2012), in spite of its exceptionally strong electoral support given to the governing party – which exceeded 60 percent in both 2007 and 2011 elections. Hence, $P^2_{i,t-1}$ is included to control for possible non-linearity in the relationship between P and ΔY. The literature also argues in favour of a positive link between greater local political competition and higher growth rates (Besley et al., 2010), driven by the positive effects of competition on the quality of policies implemented. In the final part of the paper we will hence test the robustness of our results to the replacement of P^2 with a more traditional measure of provincial electoral competition, namely how close the electoral race is.

$G_{i,t-1}$ is included to control for the heterogeneous allocation of governmental goods across provinces. Concretely, G accounts for total public investment and investment incentives to the private sector, two key policy tools adopted by the Turkish Government to foster regional economies. The first part of section 4 will provide empirical evidence to show that Government supporters receive a preferential treatment in the allocation of key public

resources necessary for development. The inclusion of *G* in the model will then help testing whether any links between electoral results and economic growth is indeed driven by distributive politics. If this was true, adding *G* into the equation should lead to a decrease in the magnitude of the electoral variable's coefficients, since their effect would now be picked up by the former.

$X_{i,t-1,}$ consists in a vector of socioeconomic controls which, according to the literature, may also play a role in influencing the dynamics of economic growth, such as private, public and human capital investments. While much of growth theory ignores the existence of productivity gaps between existing activities in the economy, in developing countries growth traditionally takes place through the movement of labour from low-productivity to high-productivity sectors. In the last decades, Turkey has indeed experienced significant trends of structural economic transformation (Altug et al., 2007), with a significant shift of work-force from traditional sectors such as agriculture to manufacturing and, more recently, services. Such process has played a consistent role in the increase of total productivity. Turkey's average productivity in manufacturing, for example, currently exceeds the one in agriculture almost by a factor of three (Rodrik, 2010). Structural change, in particular, has been responsible for 45percent of the labour productivity growth in Turkey between 1990 and 2005 (Rodrik, 2010). To control for such trends, the vector $X_{i,t-1}$ will also include four key variables able to account for such structural socio-economic change, namely the share of manufacturing in the regional economy, the level of regional entrepreneurship, the level of rural population and the total provincial population.

α_i and n_t respectively consist in province fixed- and time-effects, and $\varepsilon_{i,t}$ is the error term.

3.2. Empirical variables

The variables selected for the empirical estimation of equation (1) are described in the following paragraphs. The dependent variable is the annual growth rate of provincial per-capita GVA, expressed in per capita Turkish Lira at 2012 prices and in logarithmic terms. The selection of absolute growth rates provides a methodology which allows an easy and straightforward interpretation of results. Robustness tests will further explore whether results hold when regional growth is measured in relative terms to the country mean.[6]

A one-year lag between left- and right-hand side variables is included to account for the time necessary for political variables to potentially influence economic outcomes. This means that the length of the panel decreases from 9 to 8 years. Among the regressors, lagged output $Y_{i,t-1}$ is followed by the model's political variable

Votes: the variable measures the share of votes casted for the governing AK Party in national elections. The decision not to focus on results from local elections is motivated by the fact that administrative elections are frequently based on local political issues, while national elections provide a better picture of the overall partisan closeness of a province to the central Government. Following the conceptual discussion in section 2.2, the squared variable is also included to account for the non-linear relationship we expect to find between votes and regional economic growth.

The third group of variables is included to control for the hypothesised preferential allocation of governmental goods to aligned constituencies. It includes

Public capital investment: total amount of public fixed-capital investment to each province.[7] Values are expressed in per capita Turkish Lira (TL) at 2012 prices and in logarithmic terms.

Investment incentives to the private sector: total number of investment incentive certificates annually distributed by the State to private businesses, per 1000 inhabitants. Values are expressed in logarithmic terms.

Finally, the socio-economic control variables accounted for in the analysis are

Entrepreneurship: Acemoglu & Robinson (2013b) suggest that the beginning of the AKP government in 2002 may have witnessed an opening of economic opportunities to Anatolian entrepreneurs and would-be entrepreneurs, often with conservative and religious backgrounds, previously disfavoured by the strongly non-confessional bureaucracy. According to such hypothesis, the beginning of the AKP government may thus have 'levelled the economic playing field' by broadening the geographical and social basis of entrepreneurship (Acemoglu & Robinson, 2013b). The inclusion of entrepreneurship into the equation should help controlling for such trends and for any spurious correlation between political variables and economic performance not related to the partisan preferential treatment hypothesis. In the absence of any other viable indicators, the variable is proxied by the annual variation in the total number of economic units per 1000 inhabitants.

Human capital stock: this variable is proxied by the percentage level of education in the labour force. While analyses conducted in more technologically-advanced countries customarily account for ISCED 5-6 levels, our analysis focuses on ISCED 3-4 levels. First, the overall levels of education attainment in Turkey are still comparatively low. The average level of schooling for the workforce, for example, was in 2005 at 5.3 years, i.e. 2/3 years less than many other countries at a similar level of economic development (Altug et al., 2007). Furthermore, considering that a key driver of economic growth has been manufacturing in industries characterised by low/medium technological skills, ISCED 5-6 levels are not likely to capture the potential impact that human capital may play in economic development.

Manufacturing employment share: manufacturing employment shares will capture one of the core sectors contributing to the transformation of Turkey's economy. The importance of manufacturing in the economic development of Turkey's regions has particularly increased since the 1980s, as many new industrial centres emerged in Anatolia.

Rural population: this indicator is aimed at capturing the structural transformation of the Turkish socio-economic system is the percent of provincial population living in rural districts. 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.

Private capital investment: gross regional investment in tangible goods is aimed at controlling for the role private capital accumulation may play in economic growth. Values are expressed in per capita Turkish Lira (TL) at 2012 prices.

Total provincial population: last but not least, provincial population is aimed at controlling for potential indirect effects on economic performance.

A final note should be devoted to social capital. A large body of regional growth literature has shown the role played by social capital and associability in economic development (cf. Iyer, Kitson, & Toh, 2005; Putnam, 1993; Woolcock, 1998). Unfortunately, regionalised data on measures of social capital is not available for the period of study. Somehow reassuringly for the research, commenters have argued that the role of civil society organisations in Turkey has been traditionally modest. Kalayicioglu for example suggests: "A tolerant, trusting, active public, vigorously seeking greater influence over political authorities through conventional political participation, still seems a long-term goal in Turkish politics. […] In short, the overall record indicates that associability is still a relatively scarce

commodity in the Turkish culture" (Kalaycioğlu, 2001, pp. 60, 62). While we have reasons to believe that, particularly in the last two decades, civic activism may have increased, we unfortunately have no data to control for. Interestingly, data on the total number of civil society organisations recorded by the Civil Society Development Centre's database (www.stgm.org.tr, accessed on April, 15, 2015) as of 2015, the only available year, shows a significantly high correlation to provincial population: the pairwise correlation coefficient between number of civil society organisations and provincial population is above 91 percent (significant at the 0.01 confidence level).

3.3. Data

The analysis employs a panel data set covering 81 Turkish provinces over the period 2004-2012. We will focus on changes in NUTS II regions income, rather than provinces (NUTS III level) income, thus assigning to each province the value of its corresponding NUTS II region. Alas, even if NUTS II regions do not correspond to any administrative tier, in 2001 the Turkish Statistical Institute ceased reporting economic data for provinces and started instead reporting values at NUTS II level. In absence of any other viable solution, such strategy follows earlier literature. Levitt & Poterba (1999) points to the fact that the use of economic outcome data at an administrative layer higher than the political variables' one may be good for capturing economic spill-overs from potentially powerful legislators that accrue to residents outside their strict electoral constituencies.

Political variables are collected at the provincial level. We focus on provinces because they constitute the power bases of political parties, one of the most important tiers of political representation in Turkey (Guvenc & Kirmanoglu, 2009), and the only administrative tier between municipalities (and metropolitan municipalities) and the central State. Electoral data for 2002, 2007 and 2011 elections was gathered from the European Election Database. We

annualise 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 only collected for provinces.

All the other socio-economic controls are collected at provincial level when available or at NUTS II level otherwise. A detailed description of variables, their key summary statistics, and pairwise correlation coefficients are respectively provided in Appendixes I, II and III.

3.4. Identification strategy

Our baseline empirical strategy to explore the link between votes and regional development is to estimate equation (1) adopting a heteroscendasticity and autocorrelation robust estimator with province and annual fixed effects. Such strategy should attenuate the risk of spurious correlations between left- and right-hand side variables caused by unobserved characteristics – such as the local economic structure or the level of cohesiveness/conflicts among the local business community, as well as any other shocks that may affect both the electoral results and the economic performance.[8]

To control for potential serial and spatial correlation, estimations adopt robust standard errors adjusted for clustering at the provincial level (NUTS III level, 81 clusters). Errors are clustered at NUTS III, rather than NUTS II level, not only because we believe the former is a more important tier, but also because the latter only includes 26 units and such low number may not guarantee consistent results.

While the within-estimator should help controlling for potential omitted factors, a second and more important cause of concern in the estimation of equation (1) is the endogeneity of the political variables. We consider 2002 electoral results as exogenous. After

almost a decade of rampant corruption, poor economic performance and infighting under coalition governments, 2002 elections are considered as a real turning point in Turkish politics (Işık & Pınarcıoğlu, 2010; Zeyneloglu, 2006) . The combined share of votes for the five main parties in 1999 elections was 81 percent, while it dropped to a mere 24 percent in 2002 (Akarca & Baslevent, 2011). Figure II shows the turnover rate of MPs after each election. The rate, which is constructed dividing the number of newly elected MPs by reconfirmed ones, shows how 2002 rate has been the highest in Turkey's democratic history.[9]

[Figure II about here]

The literature on distributive politics underline that voters may reward or punish politicians on the basis of their past allocations of the budget – retrospective voting models – or on the basis of their promises about the future – prospective voting models (Larcinese et al., 2012). If the latter were true for Turkey, then also 2002 results would suffer from endogeneity since voters' *expectations* in 2002 would be correlated to the future preferential treatment by the central Government. In a politically very unstable environment where politicians frequently did not keep their pledges (as it was likely after the 1990s), we argue that the risk of endogeneity due to prospective voting is low.

Yet, in the case of subsequent results endogeneity is a serious issue, since electoral outcomes at time $_t$ are likely to be influenced by economic performance at time $_t$ and time $_{t-1}$. Our solution to identify the genuine causality between votes and economic performance is to adopt an instrumental variable approach. To this aim we design a shift-share instrument drawing from the seminal strategy proposed by Bartik (1991) and since then increasingly used to identify sources of exogenous shocks in spatial economics literature (e.g.: Moretti, 2010). The theory behind the instrument is that national vote pattern changes that are party-specific but external to an individual province reflect exogenous political shocks for that

province. Concretely we construct the instrument by weighting n_{ib}, which represents the initial electoral result for each province $_i$ in the base year $_b$ (2002), for the national variation between time $_t$ and the base year $_b$:

$$POL_{IV\,it} = n_{ib} * \left(1 + \frac{N_t - N_b}{N_b}\right)$$

The inclusion of the endogenous political term in quadratic form in equation (1) poses a further challenge. Since adding any linear variable as second instrument would lead to a poorly identified model, our solution is to instrument the quadratic term of the endogenous variable with the quadratic term of the main instrument, as suggested by Woodridge (2010).

4. Results

We present the results in two main steps. First, in Section 4.1 we briefly provide evidence on the link between votes for the incumbent party and the heterogeneous allocation of governmental goods. Second, we extend the analysis from policy outputs to outcomes, to investigate whether the preferential treatment of the Government's supporters influence regional economic performance. Section 4.2 presents the baseline FE results, while section 4.3 shows the outputs obtained with the IV specification. Sections 4.4 provide further robustness tests, while finally section 4.5 discusses the overall results.

4.1. Votes and development policy

Extensive evidence on the distributive politics of Turkey has already been provided by earlier pieces of literature. Luca and Rodríguez-Pose (2014) in particular explore the drivers of public investment across Turkey's provinces for the same period considered in this article. While they stress how politics does not topple socioeconomic factors in the allocation of public investment, they show how political criteria have nonetheless played an important role

in influencing investment allocations at the advantage of the Government's supporters, and at the expenses of opponents. Following their methodology, we estimate the link between partisan articulations – proxied by votes in national elections – and the geographical distribution of public investment and investment incentives to the private sector. The equation we estimate takes the following form

$$G_{i,t} = \beta_1 P_{i,t-1} + \beta_2 X_{i,t-1} + \alpha_i + n_t + \varepsilon_{i,t} \quad (2)$$

Where *G* is the amount of goods distributed by the central Government; *P* is the electoral support given to the main parties, as well as a measure of electoral competitiveness; *X* is the vector of socio-economic controls discussed in section 2.2; α and *n* respectively consist in province fixed- and time-effects, and ε is the error term. Again, we include a one-year lag between left- and right-hand side variables. Our aim is to provide exploratory evidence. Table I shows the empirical results. Columns (1) and (2) refer to public investment, while columns (3) and (4) refer to investment incentives to the private sector. As already stressed earlier, these are two of the key components behind Turkey's regional development policy, as well as the preferential treatment hypothesis.

[Table I about here]

As expected, the amount of public investment and investment incentives to the private sector allocated to each province is positively and statistically significantly correlated to the electoral support for the national incumbent Government. Such evidence is robust against the inclusion of the socio-economic controls.

4.2. Robust Fixed Effects estimates

The aim of this section is to answer the core question of the analysis and explore whether the effect of partisan articulations on policy choices extends to regional economic performance.

[Table II about here]

Table II presents the results. Province and year effects, as well as the lagged dependent variable, are included across all models. The overall fit of the models is good, with a 'within' adjusted R^2 reaching 68.4 percent in the full specification.

In line with the main hypothesis, column one shows a positive and significant correlation between the percentage of support given to the governing party, the AKP, and the rate of per capita regional economic growth. As expected, the inclusion of the quadratic electoral term in column 2 determines a neat increase in the statistical significance of the correlation between the percentage of votes casted for the AKP and the rate of per-capita GVA annual growth rate. This finding confirms that such correlation is significantly inverse-U shaped rather than linear.

[Figure III about here]

The fitted line shown in Figure III is based on the estimates from column 2 and the observed range of AKP values. It clearly shows how the marginal increase in GVA growth tend to reduce with the increase in the level of support to the central Government, turning negative for values above around 70 percent of votes.

The main research hypothesis argues that the correlation between the electoral variables and the regional growth rate is driven by distributive politics, i.e. the Government's preferential treatment of politically aligned provinces in the allocation of key developmental resources. If that was true, adding public infrastructural investment and the amount of public

investment incentives provided to the private sector – two key State goods behind the preferential treatment hypothesis – into the equation should lead to a decrease in the magnitude of the electoral variable's coefficients, since their effect would now be picked up by the newly added variables. Column 3 of Table II shows that this is partly the case. Among public investment and investment incentives to the private sector only the latter is significant. Their inclusion determines a reduction in the magnitude of the AKP coefficient. At the same time, it is necessary to acknowledge that in absolute terms such reduction is low. Interestingly, a bigger reduction in the AKP coefficient occurs when the control variables are included in column 4.[10]

The socio-economic control variables show the expected sign, as well as a high level of statistical significance: entrepreneurship, human capital, the share of manufacturing employment, the rate of rural population, private investment and total population appear all positively correlated to regional economic growth (although the latter is insignificant). Unexpectedly, the most relevant coefficient across the models is by far human capital, whose magnitude is significantly higher than all the others – even after taking into account differences in the variables' units of measurement.

4.3. Instrumental Variable estimates

The following paragraphs discuss the results obtained with the Instrumental Variable strategy. Table IV shows the models' estimates following the same order as table II, while Table III shows the first stage regression coefficients for the full model of column 4.

[Table III about here]

The relevance condition for the instruments is met: the first stage F-test of excluded instruments is above 10 (i.e. the customary rule-of-thumb value), while the instruments are

strong and statistically significant predictors of the main endogenous variable to be instrumented. Furthermore, all the F-tests of excluded instruments for each of the models shown in Table IV are satisfactorily close to 10.[11]

[Table IV about here]

The estimates presented in Table IV reflect relatively closely the ones shown in Table II. At the same time, the political variables' magnitude and level of statistical significance are now both reduced. This suggests that the Fixed Effects estimates for the political variables are partly influenced by endogeneity. The causal effect of partisan closeness to the central Government in driving faster regional economic performance appears with the expected sign, yet it turns significant only after the non-linearity is accounted for, i.e. when its quadratic term is included in the regression (column 2 of Table IV). Furthermore, the comparison between Figures III and IV clearly shows that after controlling for endogeneity, the causal effect's magnitude appear even smaller, reaching its inverse-U shape's peak at an earlier level of the AKP values' distribution. For electoral result values higher more or less than 55 percent (i.e. less than one standard deviation from the mean), the overall net effect between the linear and quadratic political terms now turns even negative. Such finding is in line with the theoretical predictions discussed in section 3.1, since the Government is more likely to provide stronger favouritism to constituencies where the electoral races are tight compared to provinces either completely lost or secured.

[Figure IV about here]

Similarly to what observed with the FE estimates public investment is positively associated to regional economic growth but is insignificant. By contrast, the level of investment incentives offered by the State to the private sector is both positive and significant as in the FE estimates. Including public infrastructure investment and investment incentives

to private firms – two of the channels through which the impact of electoral variables should influence economic performance – in model 3 of Table IV determines a reduction in the coefficient and significance of AKP. As before, it is also worth noting that a similar reduction in the AKP coefficients also occurs when the controls are included in the full model (column 4). In other terms, the correlation between partisan closeness to the central Government and regional economic growth indeed seems explained, to a very small extent, by the preferential allocation of public investment and incentives. Yet, another significant portion of it is explained by spurious factors.

Most of the other coefficients included in models 4 appear with the same sign and statistical significance as in Table II. Entrepreneurship, human capital, manufacturing employment share and private capital investment are significant drivers of economic growth. The only exception is provincial population, which now turns negative yet retains its insignificance.

4.4. Robustness checks

This last empirical section is aimed at providing some robustness checks on the results discussed above.

As discussed in section 3.1, our main analysis included the square of votes for the incumbent party to test for the effects of higher/lower political competition. A first test checks whether results are robust against the replacement of P^2 with a more traditional measure of provincial electoral competition (Besley et al., 2010). The variable, named *Close race*, is constructed as the negative of the absolute value of the vote difference between the incumbent party and its main challenger in each province. The challenger is the second party where the AKP is the leading one or the first party when the AKP is not the first one. As we

take the negative of the absolute value, we will expect the variable to show a positive value, meaning that regional growth is higher in provinces where the vote difference is lower. The new results, presented in Appendix IV, confirm the prediction and are very similar to our original ones. Tests not included but available on request indeed show that if *Close race* is included along with our original P^2 variable, the latter turns highly insignificant. As a matter of fact, the pairwise correlation between the two variables is close to 74 percent (significant at the 0.01 confidence level).

Second, it is well known that in dynamic models – i.e. equations characterised by the inclusion of the lagged dependent variable among the regressors – FE estimates are potentially biased in the order of 1/T (Nickell, 1981). To rule out any potential concerns, this final section estimates the same models discussed in sections 4.2 and 4.3 but excluding their dynamic components, i.e. including the dependent variable in levels instead of first difference while excluding the lagged convergence term from the regressors. The new equation takes the following form:

$$Y_{i,t} = \beta_1 P_{i,t-1} + \beta_2 P^2_{i,t-1} + \beta_3 G_{i,t-1} + \beta_4 X_{i,t-1} + \alpha_i + n_t + \varepsilon_{i,t} \quad (3)$$

Appendix V shows the results obtained estimating equation (3). The results are overall consistent to the ones from the dynamic model specifications. The socioeconomic controls are mostly uninfluenced from the different specification. Across the FE estimates, the key electoral variables of the model behave similarly as before. Their statistical significance is nonetheless further: after the inclusion of the full list of controls, neither AKP, nor its squared term, are significant at a standard confidence level. The political variable and its square term show the expected sign across the IV estimates, yet they are insignificant. Interestingly the square term turns significant after the inclusion of the controls, but only at the 10 percent level. Considering the dramatic dynamism of Turkey's regional economies during the period

of study we believe that the estimates obtained from the dynamic model and discussed in Sections 4.2 and 4.3 are likely to be more reliable. At the same time, however, the fact that the main hypothesis failed to pass the robustness test further weakens the evidence supporting the picture of Turkey as an economy where partisan factionalism does not play a big role in regional economic performance.

While we considered the 2002 electoral results as exogenous, they may be correlated to previous elections held in the 1990s, in the sense that politicians elected in the mid-1990s from 'old' parties may have switched to the newly founded AKP (while skipping the 1999 legislature).[12] To address such potential concern, a third robustness test excludes the 2002 electoral results from the analysis, hence restricting the panel to the period 2007/2012, for which our instrument allows – by construction – to identify a source of political variation which is exogenous to provinces. Results are presented in Appendix VI. Interestingly, results are overall very similar to the ones from the full panel. All the coefficients show the expected signs, and the shift from the FE to the IV estimator marks as expected a reduction in the explanatory power of the endogenous political variables.

A final test aims at checking the robustness of results against the exclusion of Istanbul, Ankara, and Izmir, Turkey's three biggest cities and economic hubs. The results, presented in Appendix VII, show that coefficients are virtually identical to the ones of the full specification.[13]

4.5. Discussion

Overall, the results suggest the existence of a positive, inverted-U shaped relationship between the provincial votes for the central Government and the rate of per capita GVA growth. They also provide preliminary evidence that such relationship seems – at least partly

– driven by the heterogeneous distribution of State goods across provinces, as put forward in the theoretical section. At the same time, however, the magnitude of such influence is small, not robust in our third specification, and in any case considerably less relevant than the one of the other socio-economic controls. Once the potential endogeneity between votes and regional growth is controlled for, the causal effect of the Government's preferential treatment to electorally aligned constituencies in driving faster regional economic performance is even smaller. Such result is relevant as it shows that, while there are still modest signs of the preferential treatment hypothesis, much of the correlation between votes and regional growth in the baseline specification is actually driven by reverse causality. In other words, the correlation we uncover in the baseline specification is likely to be driven by the electoral support given by fast-growing provinces to the central Government party – a finding which confirms earlier research on the role of positive economic performance in reducing electoral volatility (Akarca & Tansel, 2006) – and only partially by faster growth rates triggered by the Government's preferential treatment of politically aligned constituencies.

The results' implications are threefold. The first concerns the academic and policy debate about distributive politics. While the amount of research asking whether and how political actors use their control over government resources to strengthen their electoral advantage has experienced a literal 'explosion' in recent years (Golden & Min, 2013), almost no studies had so far explored how distributive and 'allocative games' may influence not only policy outputs, but also their final economic outcomes. If earlier studies uncovered clear signs of strategic manipulation over the allocation of Turkey's public investment (Luca & Rodríguez-Pose, 2014), the good news emerging from the current research is that the final impact of votes – via distributive politics – on economic performance is significantly small, and in any case much less relevant than the other socio-economic controls. Such finding is potentially relevant to other countries with high political polarisation and high levels of

electorally-motivated distribution of public goods, and where there are hence concerns that cities and regions opposing the incumbent governments may suffer in long-term economic performance. Confirming earlier attempts to measure the impact of electoral factors on regional development (Rodríguez-pose, 1998), our results are reassuring since they suggest that regional economic growth is largely explained by structural socioeconomic factors, and only very marginally by electoral idiosyncratic determinants.

Second, the most relevant predictor of Turkey's regional per-capita GVA growth is interestingly human capital, whose effect is significantly higher than all other variables. Confirming preliminary findings put forward by Filiztekin (2009), such result is relevant in that it contributes to overcoming the lack of knowledge stressed in the literature about the role played by education and human capital in Turkey's economic performance (Altug et al., 2007). Such results carry relevant implications not only for the academic research but also for policy. Although recent public expenditure on education has increased, Turkey still ranks at the bottom of the OECD members' list both in terms of education attainment as well as public education expenditure (Bardak & Majcher-Teleon, 2011). Under this light, our results suggest that an increase in the public education expenditure would bring not only social (Dinçer, Kaushal, & Grossman, 2014) but also significant economic benefits. The importance of increasing public investment in education is even higher considering that Turkey has not yet achieved full literacy, and education attainments still lags behind many comparator countries. For example, in 2009 the rates of population aged 15-64 with Lower secondary (ISCED 0-2), Upper secondary (ISCED 3-4) and Tertiary (ISCED 5-6) education were respectively 70.8/19.2/10.0 in Turkey while 27.6/53.2/19.2 in Bulgaria, 39.8/40.2/20.0 in Greece and 31.5/46.4/22.1 in the EU-27 average (ibid.).

Last but not least, the results speak to the debate on the extent to which Turkey is progressing towards the achievement of more democratic and inclusive institutions. Throughout its republican history Turkey has traditionally suffered from fragmented politics and factionalism. Following the economic crisis of 2001, as well as the start of Accession Negotiations to the EU, the country started a series of public reforms inspired by good governance principles and democratic accountability. The policy path followed by Erdoğan's AK Party succeeding its electoral victory in 2002 has been largely depicted by international media as a commitment to such democratisation process. Yet, the concrete extent of such process is debated. While criticising Erdoğan's recent autocratic stance, Acemoglu (2014) shows optimism about Turkey's long-term democratic prospects. In the economic realm, Acemoglu & Robinson (2013b) go further by hypothesising that the beginning of the AKP government in 2002 may have witnessed an opening of economic opportunities to Anatolian entrepreneurs with conservative and religious backgrounds, thus broadening the geographical and social basis of entrepreneurship (Acemoglu & Robinson, 2013b) and providing new scope for Turkey's economic growth. Although in a preliminary way – given the scope for misspecification in a simple political economic regional growth model –, our findings may indeed support Acemoglu & Robinson (2013b)'s claims. Unfortunately the available data does not allow us to carry out the analysis for the most recent years, during which tensions between the supporters and the opponents of the government have escalated and the autocratic and confrontational tone of former Prime Minister and current President Erdoğan have increased dramatically. If drawing strong conclusions from our limited evidence is probably incorrect, it is at least fair to say that our results provide a picture of Turkey's economy during the 2000s where partisan factionalism had modest effects and did not topple standard drivers of regional growth.

While the analysis provides a relatively positive picture about the impact of political cleavages on Turkey's economy, such picture should not however be confounded with optimistic narratives about Turkey's overall institutional dynamics. First, quantitative analyses carried out at regional level can capture aggregate territorial effects but falls short in uncovering informal channels through which state-economy relations may manifest. As underlined by Piattoni (2001), interest politics should not be seen in monolithic terms but, rather, as a ladder that climbs upward according to the level at which particular interests are aggregated: at the lowest possible level, determining *clientelism* and *cronyism* networks pivoting around individuals; and at higher levels determining, among others, *pork-barrelling* practices based on constituencies and local communities, and *consociationism* based on religious or ethnic groups. Our analysis only captures the last two. An alternative hypothesis is that the effects of the government's preferential treatment may have influenced individual people and business groups, rather than entire territories. For example, what may really dependent on political favouritism may not be the allocation of monies across provinces but, rather, the award of favours to specific, individual business groups. Bugra & Savaskan (2014) and Ozcan & Gunduz (forthcoming) provide for example evidence in this direction. Second, some commenters have recently argued that optimistic narratives about Turkish socioeconomic change fail to uncover a *de-facto* institutional deterioration (Meyersson & Rodrik, 2014). In other words, a possibility is that positive performance in the economic realm has been coupled with a deterioration of political and democratic liberties. Under such light positive economic performance may indeed explain why the constant increase in Erdogan's autocratic stance has not led to a decrease in his electoral success. Yet, the strongly confrontational and autocratic stance adopted by Erdoğan in recent years (Arbatli, 2014; Meyersson & Rodrik, 2014) may mark a lost opportunity to capitalize any positive societal achievements in the long term.

Two further caveats are in point. First, the analysis has focused its attention on party politics, grounding such decision in the significant amount of research stressing the role of parties in capturing the key Turkish political cleavages likely to influence the economic environment. Political parties in Turkey have traditionally stood "out as the penultimate political institution of populist patronage" (Kalaycioğlu, 2001, p. 63). Yet, we cannot rule out the possibility that there may be other political dimensions as much as relevant as partisan articulations. Buğra (1998) and Buğra & Savaşkan (2014) have for example pointed to the role of business associations as key societal fault-line markers. While they acknowledge how "the impact of these two types of actors [parties and business organizations] on the economic environment is not exercised through separate channels, but appears the outcome of strategies that mutually support each other" (Bugra & Savaskan, 2014, p. 31), further quantitative research on business associations would ideally complement our analysis on partisanship.[14] Last but not least, our theoretical model and empirical strategy explore the link between votes and regional economic growth under a single-party government, so we don't have evidence to assess what results could be expected under a coalition government. Drawing from the distributive politics literature, our speculation is that the link between votes, allocation of state goods and regional growth would be more complex. Analyzing the distribution of Turkey's investment incentives during the 1990s – a period marked by coalitions among very heterogeneous political parties – Kemahlioglu (2008) for example shows that allocative patterns were not aimed at favoring core constituencies, but rather at punishing coalition partners with the goal of preventing them from claiming credit of the benefits allocated. We would hence expect that such complexity may be mirrored in the final link between votes and regional economic growth.

5. Conclusion

The analysis of institutions in ensuring the efficient functioning of markets and in consequently fostering economic development has become a key topic in the literature on economic growth and development (cf. Rodríguez-Pose, 2013). In spite of such burgeoning interest, the research specifically exploring the impact of political institutions on regional economic development has been significantly scarcer. In particular, almost no studies have so far explored how votes and partisan cleavages may impact on local and regional economic development. To bridge such gap the article tested whether, in countries where governments' disproportionate power to influence the bureaucracy is coupled with strong political polarisation, the economic performance of regions and constituencies politically close to the incumbent governments may benefit from a preferential treatment in the management of state resources, and may thus experience faster economic growth. The analysis first assessed the link between votes for the incumbent national party and the amount of public developmental resources channelled to provinces, uncovering a clear pattern of preferential distribution of resources to core constituencies. Second, it defined a political economy model of regional growth and tested it to Turkey's 81 provinces over 2004-2012. The empirical strategy is first based on a Fixed Effect estimator. To rule out the potential risk of reverse causality and omitted variable bias, we then adopt a shift-share Instrumental Variable strategy inspired by the work of Bartik (1991).

The results of the analysis lead to both good news and bad news. The bad news is the fact that pork-barrelling and the partisan closeness to the central Government seem effectively to influence sub-national economic growth. Compared for example to the case of France studied by Cadot et al. (2006), who did not found *any* effect of pork-barrelling on the final economic performance of French regions, our results partly confirm the concerns put forward in Turkey by Bugra & Savaskan (2012) and Heper & Keyman (2006). The good news emerging from the research is that the impact of votes on regional economic

performance is significantly small and in any case considerably less relevant than the one of other more 'standard' socio-economic drivers of growth. Furthermore, after controlling for the potential reverse causality between dependent and explanatory variables, the causal effect of electoral politics on regional economic performance appear even smaller. In other words, the correlation we uncover in the baseline specification between votes for the Governing party and regional growth is likely to be driven by the electoral support given by fast-growing provinces to the central Government, and only partially by the Government's preferential treatment of politically aligned constituencies. Considering the concerns of cities and provinces not voting for the national incumbent party of being penalised in long-term economic opportunities, results are reassuring.

While the analysis provides a relatively positive picture about the impact of political cleavages on Turkey's economy, such picture should not be confounded with optimistic narratives about the country's overall institutional dynamics. Commenters have increasingly documented the autocratic and authoritarian stance adopted by Turkey's former Prime Minister and current President Erdoğan in recent years (Arbatli, 2014; Meyersson & Rodrik, 2014). Under such light, the positive economic performance experienced in many provinces may indeed explain why the constant increase in Erdogan's autocratic stance has not led to a decrease in his electoral success. In line with the pre-AKP period (Akarca & Tansel, 2006), results seem to confirm the importance of economic growth as one of the factors explaining the constant electoral success of the AKP since 2002. Yet, in the long term, the strongly confrontational and autocratic stance adopted by the former Prime Minister/new President in recent years may mark a lost opportunity to capitalize any positive societal achievements from the first years in power.

Interestingly, the research also uncovered that across the socioeconomic variables human capital – measured as percentage of the workforce with upper secondary education – appears as the most relevant predictor of per-capita Gross Value Added growth. Although recent public expenditure on education has increased, Turkey still lags behind and ranks at the bottom of the OECD members' list both in terms of education attainment as well as public education expenditure (Bardak & Majcher-Teleon, 2011). A stronger focus on human capital accumulation as a strategy for regional development may hence bring not only social but also significant economic benefits. Besides, given the role of the central state in providing education at the sub-national level, this is perhaps one further area of enquiry into the political economy of development in Turkey and elsewhere.

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[1] In their extensive analysis of the literature Golden & Min (2013) have found more than 150 articles on the topic. Our review of the literature even increases such count.

[2] Scholars such as Evans (1995) and Kohli (2004) provided exhaustive theoretical frameworks and empirical evidence for understanding the salience of active developmental state intervention in emerging and late-industrialising economies.

[3] The start of armed clashes between the Turkish State and the outlawed PKK (*Partiya Karkeren Kurdistan*, Kurdistan Workers' Party) has produced another main transversal cleavage opposing Turkish nationalists to supporters of the Kurdish movement (Çarkoğlu & Hinich, 2006). The current article focuses exclusively on the first one.

[4] The other main parties since the early 2000s have been the nationalistic National Action Party (*Milli Hareket Partisi*, MHP), and the pro-Kurdish Peace and Democracy Party (*Barış ve Demokrasi Partisi*, BDP), which succeeded to the Democratic Society Party (*Demokrat Toplum Partisi*, DTP) outlawed in 2008.

[5] GVA may not be the best variable to measure regional economic growth, in that it does not capture the effect of state taxes and transfers on final income. Aware of such shortcoming, we are left with no other option due to data availability. Data limitation is – alas – one of the biggest problems in empirical research, particularly in emerging countries. Section 3.3 provides specific details on why GDP data at sub-national level is not available in Turkey for the last 15 years' period.

[6] We thank one anonymous referee for raising such suggestion.

[7] 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, multi-provincial projects accounted on average for 45.67percent of the total public investment portfolio, with an annual standard deviation from the period's overall mean of 5.10. In absence of any viable solution to mitigate such data flaw, we follow earlier pieces of literature (Celebioglu & Dall'erba, 2010; Deliktas et al., 2008; Karadag et al., 2004) and only concentrate on the investments which can be matched with single provinces.

[8] To further control against omitted variable biases we have also tried including the interaction between time and fixed effects. Estimates not presented in the paper but available on request show that results do not change.

[9] 2002 AKP electoral results may nonetheless be correlated to electoral results in the mid-1990s. We thank one anonymous referee for raising such important point. Robustness checks will hence test whether the exclusion of 2002 elections from our panel influences the empirical results.

[10] Results not presented here but available on request shows that the reduction in the AKP coefficient is in particular driven by the inclusion, among the controls, of rural population.

[11] The F-tests here reported refer to the endogenous variable's quadratic term.

[12] We thank one anonymous referee for bringing such point to the fore.

[13] Further tests not presented in the article but available on request show that results are equally stable if we further exclude the other second-tier economic centres of Turkey, namely Adana, Antalya, Kocaeli and Bursa.

[14] One key, empirical issue preventing from carrying out such an analysis is – alas – the lack of extensive data on business associations.

Tables and Figures

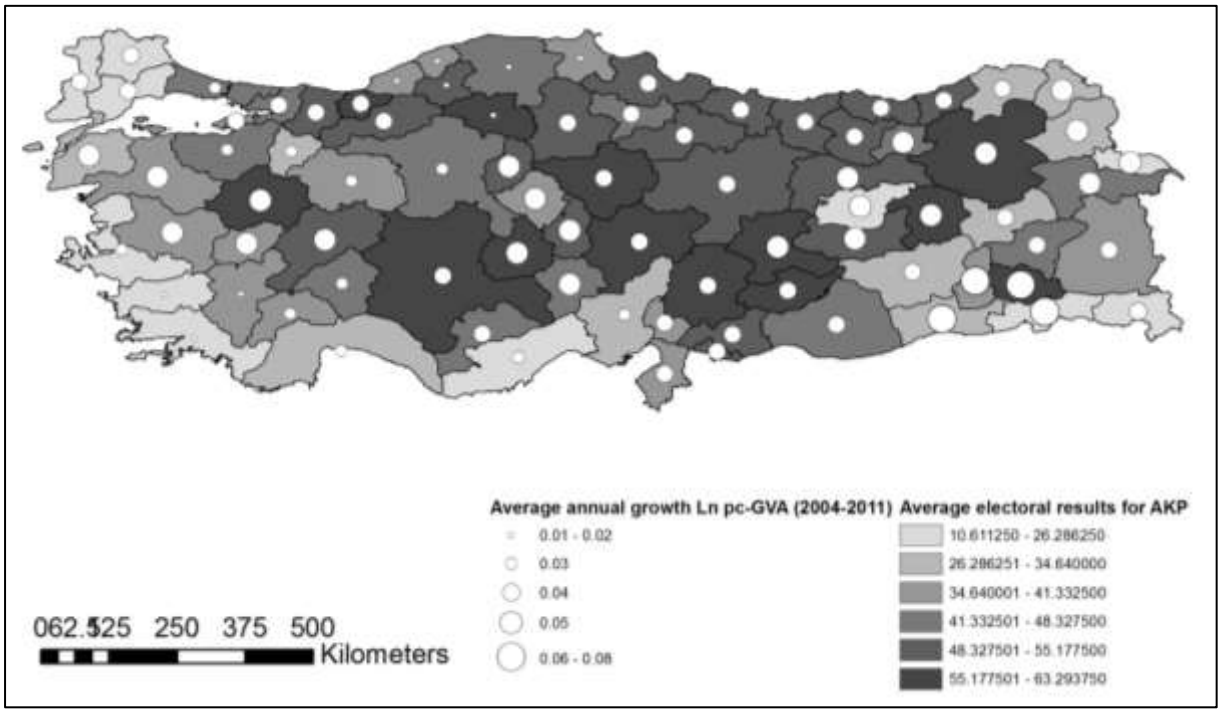

Figure I. Average AKP results and annual growth rates of GVA (2004-2012). Source: own elaboration

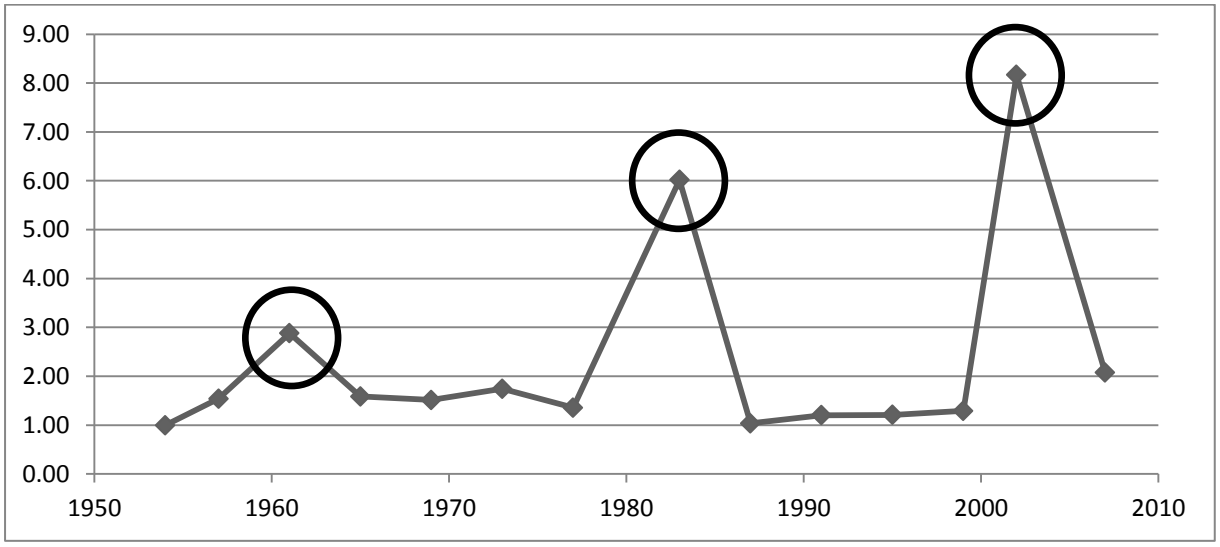

Figure II. Parliamentarians' turnover rate (newly elected/reconfirmed MPs) at each election. Circled are post-1960 and post-1980 military coups, 2002 elections. Source: own elaboration.

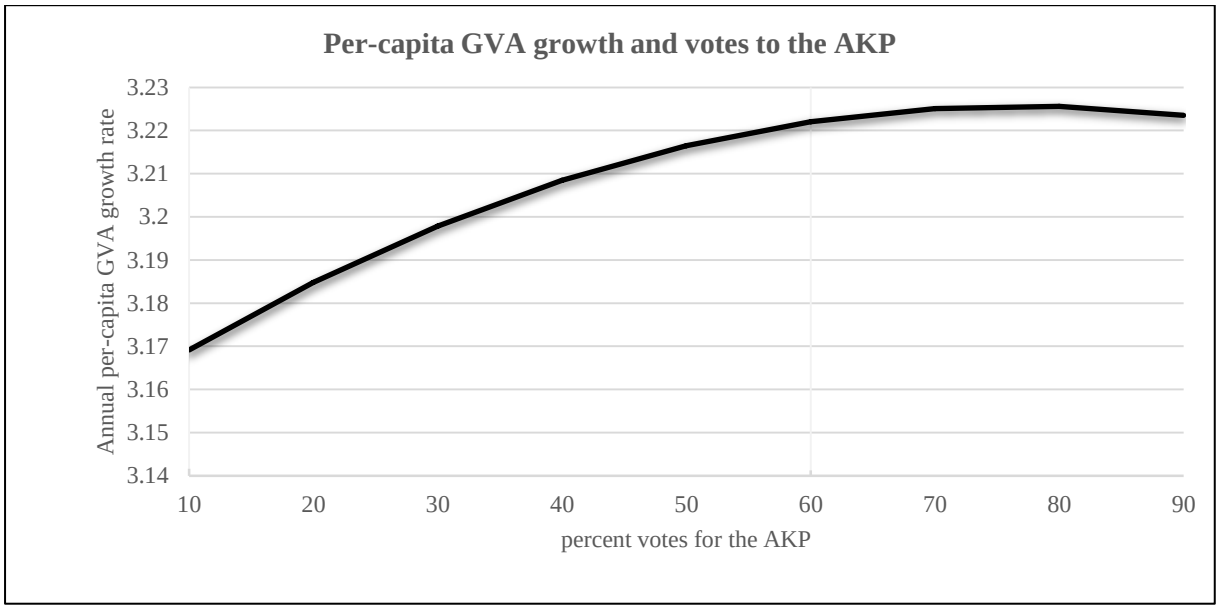

Figure III. Fitted line of the relationship between percent of votes for the AKP and the annual regional per-capita GVA growth rate (2004-2012): robust FE estimates from column 2 of Table II. Source: own elaboration.

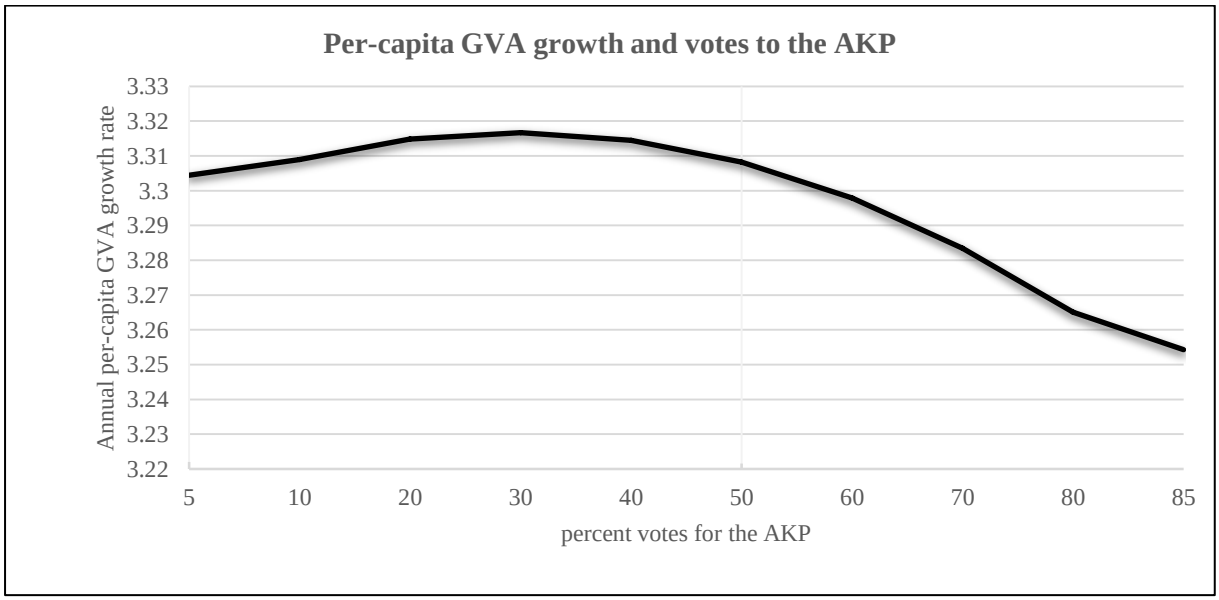

Figure IV. Fitted line of the relationship between percent of votes for the AKP and the annual regional per-capita GVA growth rate (2004-2012): IV estimates from column 2 of Table IV. Source: own elaboration.

Table I. The link between central public infrastructure investment/investment incentives to the private sector and votes for the national incumbent party: robust Fixed Effects estimates (2004-2012). All explanatory variables are lagged by one year.

	(1)	(2)	(3)	(4)
	Public investment		Investment incentives	
AKP	0.0207**	0.0123*	0.0220***	0.0159**
	(0.00846)	(0.00721)	(0.00733)	(0.00670)
CHP	-0.0176**	-0.0160**	0.00382	0.00439
	(0.00745)	(0.00725)	(0.00650)	(0.00658)
MHP	0.0126	0.0172	-0.0327***	-0.0314***
	(0.0138)	(0.0137)	(0.0109)	(0.0104)
Kurdish party	0.0150	0.0112	0.00739	0.00467
	(0.00930)	(0.00823)	(0.00643)	(0.00608)
Close race	0.000209	-0.00262	0.00275	0.000854
	(0.00326)	(0.00320)	(0.00293)	(0.00252)
Constant	4.314***	-5.631	-3.667***	-1.522
	(0.397)	(5.233)	(0.377)	(5.222)
Observations	648	648	648	648
R-squared	0.159	0.191	0.409	0.436
Number of id	81	81	81	81
Prov FE	yes	yes	yes	yes
Year FE	yes	yes	yes	yes
Controls	no	yes	no	yes

Robust, clustered standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1. Controls include: Regional per-capita GVA, entrepreneurship, human capital, manufacturing employment, rurality, private investment and population.

Table II. Multivariate regressions of the regional per-capita Gross Value Added growth rate: robust Fixed Effects estimates (2004-2012). All explanatory variables are lagged by one year.

	(1)	(2)	(3)	(4)
Lagged GVA	-0.336***	-0.340***	-0.365***	-0.467***
	(0.0256)	(0.0248)	(0.0271)	(0.0246)
AKP	0.000810*	0.00194***	0.00184***	0.00107*
	(0.000465)	(0.000494)	(0.000489)	(0.000563)
AKP^2		-1.26e-05*	-1.30e-05*	-8.22e-06
		(7.08e-06)	(6.75e-06)	(6.56e-06)
Public inv.			0.00309	0.00243
			(0.00230)	(0.00228)
Inv. incentives			0.00753***	0.00641**
			(0.00284)	(0.00278)
Entrepreneurship				0.00260***
				(0.000677)
Human capital				0.266***
				(0.0881)
Manufacturing				0.00227***
				(0.000804)
Rurality				0.00219*
				(0.00111)
Private inv.				0.00148***
				(0.000293)
Population				3.28e-06
				(5.67e-06)
Constant	3.130***	3.151***	3.390***	4.160***
	(0.229)	(0.225)	(0.248)	(0.227)
Observations	648	648	648	648
Adjusted R^2	0.629	0.632	0.637	0.675
Number of id	81	81	81	81
Province FE	yes	yes	yes	yes
Year FE	yes	yes	yes	yes

Robust, clustered standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0

Table III. First stage regression of the endogenous political variable: AKP's electoral results (2004-2012). Estimates are presented for both the original (column 1) and quadratic term (column 2).

	(1) AKP	(2) AKP^2
GVA	-2.619	-235.2
	(6.770)	(625.3)
Public investment	-0.0176	12.70
	(0.355)	(33.51)
Investment incentives	1.240**	109.4**
	(0.577)	(44.82)
Private investment	-0.0161	-4.938
	(0.0661)	(6.612)
Human capital	-0.623	-463.7
	(16.17)	(1,537)
Entrepreneurship	0.272**	23.90**
	(0.106)	(9.459)
Manufacturing	0.00569	6.367
	(0.110)	(9.992)
Rurality	0.771***	65.81**
	(0.274)	(26.25)
Population	-0.00454***	-0.535**
	(0.00172)	(0.204)
AKP_IV	1.547***	347.4***
	(0.485)	(56.25)
AKP_IV^2	-0.0138***	-2.180***
	(0.00288)	(0.378)
Constant	0.152	-7,243
	(62.55)	(5,859)
Observations	648	648
Number of id	81	81
Adjusted R^2	0.808	0.750
F-test	51.57	32.58
Province FE	yes	yes
Year FE	yes	yes

Robust, clustered standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0

Table IV. Multivariate regressions of the regional per-capita Gross Value Added growth rate: Instrumental Variable estimates (2004-2012). All explanatory variables are lagged by one year.

	(1)	(2)	(3)	(4)
Lagged GVA	-0.337***	-0.353***	-0.384***	-0.491***
	(0.0278)	(0.0287)	(0.0297)	(0.0337)
AKP	0.000541	0.00120*	0.00113*	0.000225
	(0.000485)	(0.000647)	(0.000641)	(0.000673)
AKP^2		-2.03e-05***	-2.06e-05***	-1.28e-05**
		(6.41e-06)	(6.36e-06)	(6.34e-06)
Public inv.			0.00329	0.00241
			(0.00205)	(0.00197)
Inv. incentives			0.0109***	0.00880***
			(0.00292)	(0.00279)
Entrepreneurship				0.00281***
				(0.000709)
Human capital				0.297***
				(0.0684)
Manufacturing				0.00217***
				(0.000668)
Rurality				0.00320***
				(0.00112)
Private inv.				0.00170***
				(0.000445)
Population				-1.69e-07
				(1.07e-05)
Constant	3.155***	3.299***	3.615***	4.374***
	(0.257)	(0.265)	(0.276)	(0.301)
Observations	648	648	648	648
Number of id	81	81	81	81
First stage F	13.81	9.38	9.82	10.28
Province FE	yes	yes	yes	yes
Year FE	yes	yes	yes	yes

Robust, clustered standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0

Appendixes

Appendix I. Variables: review of main hypotheses and their operationalization

Variable	Description	Unit	Source
Gross Value Added	Per capita gross value added (GVA) at 2012 prices.	Ln, TL at 2012 prices	TURKSTAT Regional Database
AKP	Percentage of votes to the central governing party (AKP) in national elections (2002, 2007, 2011)	Percent points	European Election Database
Close race	Negative absolute value of the vote difference between the incumbent party and its main challenger in each province	Percent points	Own calculation
Public investment	Per-capita fixed capital investments in transport and infrastructural networks allocated to each province	Ln, TL at 2012 prices	Own calculation on data from the Ministry of Development
Investment incentives	Number of investment incentive certificates annually awarded to private firms per 1000 inhabitants	Ln count	Own calculation on data from the Ministry of Economy
Entrepreneurship	Net annual variation in regional economic units per 1000 inhabitants	Count	Own calculation on data from TURKSTAT Regional Database
Human capital	Percentage of economically active population (Labour force) aged 15 years old and over with upper secondary education (ISCED 3-4)	Percent points	TURKSTAT Regional Database
Manufacturing	Percentage of workforce aged 15 years and over employed in manufacturing (NACE Rev. 1)	Percent points	TURKSTAT Regional Database
Rurality	Percentage of population living in rural district within each province	Percent points	TURKSTAT Regional Database
Private investment	Annual variation in per-capita total private investment in tangible goods	1000 TL at 2012 prices	Own calculations on data from TURKSTAT Regional Database
Population	Total provincial population	1000 people	TURKSTAT Regional Database, OECD

Appendix II. Summary statistics

Variable	Mean	Std. dev.	Min	Max
GVA growth	0.04	0.05	-0.10	0.16
GVA	9.36	0.39	8.55	10.14
AKP	45.04	14.81	6.50	84.82
Close race	-25.40	15.16	-70.4	-0.10
Public investment	3.03	1.42	0.00	9.21
Investment incentives	-3.17	0.63	-6.91	-1.70
Entrepreneurship	1.01	2.56	-6.28	6.87
Human capital	0.20	0.04	0.10	0.31
Manufacturing	20.96	9.44	4.70	46.30
Rurality	37.85	13.68	1.01	70.08
Private investment	728.11	3006.66	-20214.25	17152.98
Population	891.44	1497.70	65.13	13624.24

Appendix III. Pairwise correlations among variables

	GVA growth	GVA	AKP	Close race	Public Inv.	Inv. Inc.	Entrepr.	Human capital	Manuf.	Rurality	Private Inv.	Pop.
GVA growth	1											
	(0.000)											
GVA	-0.093*	1										
	(0.017)	(0.000)										
AKP	-0.078*	0.071	1									
	(0.047)	(0.054)	(0.000)									
Close race	-0.001	0.120*	-0.596*	1								
	(0.991)	(0.001)	(0.000)	(0.000)								
Public inv.	0.016	0.101*	0.205*	-0.098*	1							
	(0.678)	(0.006)	(0.000)	(0.003)	(0.000)							
Inv. incentives	0.221*	0.437*	0.248*	0.002	0.156*	1						
	(0.000)	(0.000)	(0.000)	(0.951)	(0.000)	(0.000)						
Entrepreneurship	0.280*	-0.009	-0.103*	0.057	-0.015	0.019	1					
	(0.000)	(0.816)	(0.009)	(0.146)	(0.701)	(0.625)	(0.000)					
Human capital	0.034	0.599*	-0.051	0.033	0.117*	0.143*	0.022	1				
	(0.389)	(0.000)	(0.173)	(0.375)	(0.002)	(0.000)	(0.577)	(0.000)				
Manufacturing	-0.044	0.659*	0.026	0.056	0.0191	0.303*	-0.050	0.521**	1			
	(0.295)	(0.000)	(0.507)	(0.158)	(0.628)	(0.000)	(0.207)	(0.000)	(0.000)			
Rurality	0.047	-0.437*	-0.137*	0.031	-0.230*	-0.272*	0.032	-0.448*	-0.555*	1		
	(0.269)	(0.000)	(0.000)	(0.378)	(0.000)	(0.000)	(0.414)	(0.000)	(0.000)	(0.000)		
Private inv.	0.256*	0.101*	-0.037	0.047	-0.036	0.124*	0.233*	0.032	0.118*	0.004	1	
	(0.000)	(0.005)	(0.352)	(0.234)	(0.363)	(0.002)	(0.000)	(0.413)	(0.003)	(0.916)	(0.000)	
Population	-0.039	0.293*	-0.002	0.120*	0.080*	0.082*	0.032	0.231*	0.324*	-0.526*	-0.059	1
	(0.314)	(0.000)	(0.956)	(0.000)	(0.006)	(0.011)	(0.423)	(0.000)	(0.000)	(0.000)	(0.136)	(0.000)

Standard errors in parentheses, * $p<0.05$

Appendix IV. Multivariate regressions of the per capita Gross Value Added growth rate: FE and IV estimates adopting an alternative measure of electoral competition (2004-2012). All explanatory variables are lagged by one year.

	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	FE				IV			
Lagged GVA	-0.336***	-0.343***	-0.366***	-0.469***	-0.337***	-0.344***	-0.370***	-0.480***
	(0.0256)	(0.0247)	(0.0269)	(0.0244)	(0.0278)	(0.0277)	(0.0286)	(0.0330)
AKP	0.000810*	0.00105***	0.000918***	0.000502	0.000541	0.000399	0.000324	-0.000247
	(0.000465)	(0.000328)	(0.000324)	(0.000322)	(0.000485)	(0.000432)	(0.000433)	(0.000456)
Close race		0.000421***	0.000411***	0.000282**		0.000281*	0.000287*	0.000111
		(0.000148)	(0.000140)	(0.000129)		(0.000167)	(0.000165)	(0.000169)
Public inv.			0.00318	0.00247			0.00329*	0.00238
			(0.00233)	(0.00227)			(0.00199)	(0.00193)
Inv. incentives			0.00709**	0.00614**			0.00834***	0.00723***
			(0.00282)	(0.00277)			(0.00282)	(0.00272)
Entrepreneurship				0.00256***				0.00272***
				(0.000686)				(0.000697)
Human capital				0.269***				0.278***
				(0.0870)				(0.0667)
Manufacturing				0.00226***				0.00228***
				(0.000792)				(0.000652)
Rurality				0.00226**				0.00314***
				(0.00108)				(0.00112)
Private inv.				0.00145***				0.00158***
				(0.000293)				(0.000437)
Population				4.09e-06				2.95e-06
				(5.63e-06)				(1.04e-05)
Constant	3.130***	3.198***	3.426***	4.183***	3.155***	3.229***	3.485***	4.273***
	(0.229)	(0.224)	(0.246)	(0.226)	(0.257)	(0.256)	(0.266)	(0.294)
Observations	648	648	648	648	648	648	648	648
Number of id	81	81	81	81	81	81	81	81
Adjusted R^2	0.629	0.634	0.639	0.676	//	//	//	//
First stage F	//	//	//	//	13.81	16.62	17.29	18.10
Prov FE	yes	yes	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes	yes	yes

Robust, clustered standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0

Appendix V. Multivariate regressions of the per capita Gross Value Added growth rate: FE and IV estimates including the dependent variable in levels instead of first difference (2004-2012). All explanatory variables are lagged by one year.

	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	FE				IV			
AKP	0.000514	0.00247**	0.00214**	0.000520	-5.77e-05	0.00129	0.00107	-0.000818
	(0.000937)	(0.00114)	(0.00106)	(0.000935)	(0.000689)	(0.000954)	(0.000907)	(0.000829)
AKP^2		-2.18e-05	-2.18e-05	-7.38e-06		-4.09e-05***	-3.85e-05***	-1.35e-05*
		(1.52e-05)	(1.36e-05)	(1.07e-05)		(9.42e-06)	(8.95e-06)	(7.86e-06)
Public inv.			0.0102***	0.00476*			0.0101***	0.00456*
			(0.00311)	(0.00267)			(0.00287)	(0.00243)
Inv. incentives			0.0203***	0.0115***			0.0258***	0.0148***
			(0.00450)	(0.00403)			(0.00401)	(0.00343)
Entrepreneurship				0.00278***				0.00310***
				(0.000866)				(0.000879)
Human capital				0.469***				0.502***
				(0.0969)				(0.0830)
Manufacturing				0.00726***				0.00678***
				(0.00127)				(0.000737)
Rurality				0.00424**				0.00569***
				(0.00197)				(0.00138)
Private inv.				0.00142***				0.00176***
				(0.000425)				(0.000552)
Population				2.37e-06				-2.72e-06
				(9.04e-06)				(1.33e-05)
Constant	9.238***	9.201***	9.236***	8.858***	9.257***	9.266***	9.314***	8.870***
	(0.0302)	(0.0245)	(0.0334)	(0.0756)	(0.0235)	(0.0239)	(0.0319)	(0.0562)
Observations	648	648	648	648	648	648	648	648
Number of id	81	81	81	81	81	81	81	81
Adjusted R^2	0.747	0.750	0.769	0.837	//	//	//	//
First stage F	//	//	//	//	15.13	13.24	13.74	13.92
Prov FE	yes	yes	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes	yes	yes

Robust, clustered standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0

Appendix VI. Multivariate regressions of regional per capita Gross Value Added growth rate: FE and IV estimates limiting the panel to the period 2007-2012. All explanatory variables are lagged by one year.

	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	FE				IV			
Lagged GVA	-0.412***	-0.412***	-0.434***	-0.498***	-0.411***	-0.415***	-0.443***	-0.510***
	(0.0357)	(0.0364)	(0.0405)	(0.0396)	(0.0345)	(0.0349)	(0.0365)	(0.0399)
AKP	0.000685	0.00344***	0.00336***	0.00218***	0.00138*	0.00253***	0.00248***	0.000920
	(0.000661)	(0.000659)	(0.000691)	(0.000722)	(0.000749)	(0.000948)	(0.000945)	(0.000990)
AKP^2		-3.07e-05***	-3.07e-05***	-2.16e-05**		-3.91e-05***	-3.94e-05***	-2.69e-05***
		(9.24e-06)	(9.25e-06)	(9.08e-06)		(9.17e-06)	(9.14e-06)	(9.35e-06)
Public inv.			0.00159	0.00162			0.00185	0.00205
			(0.00229)	(0.00238)			(0.00228)	(0.00225)
Inv. incentives			0.00634*	0.00489			0.00830**	0.00667**
			(0.00343)	(0.00343)			(0.00328)	(0.00321)
Entrepreneurship				0.00297***				0.00353***
				(0.000856)				(0.000866)
Human capital				0.211**				0.256***
				(0.103)				(0.0933)
Manufacturing				0.00155**				0.00122
				(0.000748)				(0.000827)
Rurality				0.00449***				0.00548***
				(0.00168)				(0.00174)
Private inv.				0.000840***				0.00105**
				(0.000313)				(0.000481)
Population				-1.83e-05*				-2.77e-05
				(1.04e-05)				(1.98e-05)
Constant	3.849***	3.802***	4.020***	4.389***	3.815***	3.869***	4.149***	4.523***
	(0.326)	(0.344)	(0.384)	(0.382)	(0.322)	(0.326)	(0.343)	(0.358)
Observations	486	486	486	486	486	486	486	486
Number of id	81	81	81	81	81	81	81	81
Adjusted R^2	0.658	0.672	0.674	0.698	//	//	//	//
First stage F	//	//	//	//	16.66	12.09	12.02	12.03
Prov FE	yes	yes	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes	yes	yes

Robust, clustered standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0

Appendix VII. Multivariate regressions of regional per capita Gross Value Added growth rate: FE and IV estimates excluding Istanbul, Ankara and Izmir. All explanatory variables are lagged by one year.

	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
	FE				IV			
Lagged GVA	-0.336***	-0.341***	-0.365***	-0.466***	-0.338***	-0.354***	-0.384***	-0.488***
	(0.0260)	(0.0255)	(0.0275)	(0.0245)	(0.0284)	(0.0293)	(0.0302)	(0.0342)
AKP	0.000785*	0.00195***	0.00185***	0.00111*	0.000560	0.00123*	0.00115*	0.000296
	(0.000460)	(0.000494)	(0.000491)	(0.000579)	(0.000489)	(0.000658)	(0.000652)	(0.000710)
AKP^2		-1.30e-05*	-1.33e-05*	-8.71e-06		-2.02e-05***	-2.04e-05***	-1.32e-05*
		(6.99e-06)	(6.68e-06)	(6.68e-06)		(6.49e-06)	(6.45e-06)	(6.71e-06)
Public inv.			0.00343	0.00273			0.00360*	0.00267
			(0.00239)	(0.00238)			(0.00212)	(0.00203)
Inv. incentives			0.00757**	0.00664**			0.0107***	0.00893***
			(0.00290)	(0.00277)			(0.00296)	(0.00283)
Entrepreneurship				0.00289***				0.00310***
				(0.000673)				(0.000735)
Human capital				0.264***				0.294***
				(0.0878)				(0.0692)
Manufacturing				0.00225**				0.00214***
				(0.000858)				(0.000690)
Rurality				0.00206*				0.00303***
				(0.00115)				(0.00115)
Private inv.				0.00150***				0.00171***
				(0.000305)				(0.000451)
Population				-3.73e-06				-7.41e-06
				(2.68e-05)				(2.60e-05)
Constant	3.127***	3.154***	3.383***	4.146***	3.150***	3.305***	3.601***	4.349***
	(0.233)	(0.231)	(0.250)	(0.226)	(0.262)	(0.269)	(0.279)	(0.306)
Observations	624	624	624	624	624	624	624	624
Number of id	78	78	78	78	78	78	78	78
Adjusted R^2	0.629	0.633	0.640	0.682	//	//	//	//
First stage F	//	//	//	//	13.93	9.62	9.94	10.40
Prov FE	yes	yes	yes	yes	yes	yes	yes	yes
Year FE	yes	yes	yes	yes	yes	yes	yes	yes

Robust, clustered standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0