Political Climate and Regional Well-being in Turkey*

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Abstract

Politicians can use social and economic policies on clientelist grounds neglecting the efficiency and equity concerns of public policy. While incumbents might reward and punish voters based on party-specific fundamentals, the role of political ideologies and fragmentation is mostly neglected. For societies like Turkey, where the ideological stance is mixed and the level of fragmentation is varying, the regional political climate has implications for regional well-being beyond the borders of political parties. Our findings for the post-2000s validate that regions that are ideologically closer to the right and the incumbent party (Justice and Development Party-AKP-) attain higher well-being, while the opposite is true for-ideologically polarized regions and regions closer to left-wing ideologies. Results are robust to the endogeneity of political climate and various model specifications.

Keywords: ideology, inequality, political climate, regional well-being,

Turkey JEL Classification: R11, R12, R13

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Introduction

There has been increasing scholarly attention on the influence of distributive politics on regional inequalities. The central discussion stems from the fact that governments do not always make decisions based on efficiency and equity concerns, rather they engage in clientelist relations to consolidate their territorial power and long-term survival. Cox and McCubbins (1986) remark that incumbent parties would prefer to target their strongholds to reward regions that vote for them.– This translates into a punishment for those voting for the opposition parties. Meanwhile, Dixit and Londregan (1996) offer an alternative argument. The incumbent prefers to focus more on the competitive battleground regions as voters are more likely to swing parties in these regions and marginal political gains in these regions are higher. While political views and the dominance of ruling political elites in a given region matter for the incumbent's resource allocation (Rodríguez-Pose et al., 2016a; Psycharis et al., 2019), we know relatively less whether the incumbents only target their strongholds. However, recent discussions highlight that ideological similarities and fragmentation are vital aspects of distributive politics (Alesina et al., 2003; Potrafke, 2009, 2010; Funke et al., 2016). Solé-Ollé and Sorribas-Navarro (2008) and Arulampalam et al. (2009) remark that incumbents can target aligned and swing regions which are ideologically close to their fundamentals. In other words, both ideological position and political fragmentation at the regional level could affect the incumbent's resource allocation.

This paper examines the role of political ideologies and fragmentation in explaining the well-being differences across Turkish regions based on these theoretical discussions. Turkey is a developing country with sizable political flux during the last decades and has been governed by the Justice and Development Party (Adalet ve Kalkinma Partisi, AKP) since 2002. Pork-barreling and clientelist behavior of the incumbent party has been widely examined (See Aytaç (2014); Luca and Rodríguez-Pose (2015); Çarkoglu and Aytaç (2015); Arslantas et al. (2020) among others and prior literature section for the detailed discussion). While there is an overall consensus on distributive politics based on the incumbent's strongholds, less has been examined on the role of political

ideologies and the extent of its fragmentation for the regional well-being. Therefore, studying distributive politics beyond the already known borders of political parties is crucial. While incumbents can target regions populated by their strongholds, they can equally target other regions for ideological reasons. Similarly, the political fragmentation in a region may also matter for the incumbent's allocation of resources across regions. Henceforth, we argue that not only do incumbents target their strongholds, but also they can target regions that are ideologically close to their fundamentals. Additionally, while fragmented and competitive regions are set as targets for distributive politics, an incumbent party may choose not to target politically polarized regions as the likelihood of swinging ideologically distant voters would be relatively lower.

This paper, therefore, contributes to the existing literature in various ways. First, the extent of distributive politics is mostly investigated via party politics; however, a growing body of literature argues the importance of political views, ideologies, and extent of polarization for distributive politics (Le Maux et al., 2011; Nupia, 2013). Moreover, distributive politics is usually evaluated on monetary grounds via public expenditure and income distribution. However, there is widespread agreement that well-being is a multidimensional concept, and income cannot capture all aspects of well-being (Fleurbaey, 2009; Stiglitz et al., 2009; Fleurbaey and Blanchet, 2013). To our knowledge, this paper is one of the first attempts to examine the effect of the political factors on multidimensional well-being at the regional level. Given the political turmoils of the post-2000 period and the unique west-east regional duality in Turkey, findings are expected to contribute not only to distributive politics literature in Turkey but also to discussions on other countries where electoral politics are motivated by deep ideological fundamentals.

The remainder of the paper is organized as follows. The next section reviews the literature and contextualizes the political climate and regional well-being relationship. The third section introduces the data. The fourth section provides the results, and the fifth section gives an overall discussion. The final section concludes the paper.

Prior Literature

Political cleavages potentially motivate incumbents to use public policy beyond efficiency and equity concerns. Inefficient policy choices are rooted in clientelist and pork-barreling government behaviors. While clientelism entitles mostly the transfer and use of resources to obtain political support, pork-barreling refers to the local implementation of the clientelistic behaviors for political concerns by disregarding public priorities (Rodríguez- Pose et al., 2016b; Sharma, 2017). These discussions motivate the distributive politics literature to understand the vote-buying patterns. Two main hypotheses offer insight. (i) Core hypothesis: An optimal strategy for the incumbent is to distribute public resources disproportionately to their stronghold constituencies for maintaining existing power. When the incumbent focuses on rewarding the strongholds, then pork-barreling would exist (Cox and McCubbins, 1986).[1] (ii) Swing hypothesis: Pork-barreling is used to targets swing voters. A tactical distribution is effective when the political competition is high and there are more chances for gaining the interest of the voters of the opposition. Dixit and Londregan (1996) discuss that swing voters are relatively indifferent and would look for reward-based incentives to adjust their votes among different political parties. Incumbents would target swing voters as distributive politics are expected to be relatively more effective.[2] The distinction between core and swing hypotheses also enters the realm of clientelism discussions. While Magaloni (2006) remarks that clientelistic networks are instrumental in influencing swing voters, Dunning and Stokes (2010) underline labor division among party members where brokers target core voters and the leader targets swing voters.

Evidence suggests that clientelistic networks and pork-barreling create a circular economy that relies on distributive politics, vote-buying and economic well-being for certain society segments. Levitt and Poterba (1999) for the US, Golden and Picci (2008) for Italy point out that distributive politics influence local electoral behavior. Rodríguez-Pose et al. (2016a) and Psycharis et al. (2019) explore the pork-barreling patterns in Greece and highlight that political actors from different ideological views use power to target voting behavior. Among various tools, clientelistic networks and pork-barreling are

materialized through different public services both in developed and developing countries. While Kauder et al. (2016) and Garmann (2017) highlight that discretionary grants and building licenses in Germany are used to target voters during election periods, Asher and Novosad (2017) remark that politicians change public regulations to favour their strongholds in the case of India.

While pork-barreling and clientelistic behavior are instrumental for vote-buying patterns, political climate can be contextualized beyond the borders of core and swing hypotheses (Solé-Ollé and Sorribas-Navarro, 2008; Arulampalam et al., 2009; Casas, 2018). Political ideology is important to understand the spillover of distributive politics (Calvo and Murillo, 2013; Alexander et al., 2016). Theoretically, Dixit and Londregan (1998) argue that redistributive politics (e.g., tax policy) could operate with pork-barreling where ideological position plays a dominant role in assuring the right policy mix. Leftist and rightist ideologies can shape the extent of distributive politics, or liberal and conservative views can be effective for understanding electoral politics. Another important aspect that affects the allocation of public expenditure across voting constituencies is the level of political fragmentation (fractionalization and polarization) (Alesina and Tabellini, 1990; Alesina et al., 2003). Evidence shows that the level of fragmentation in coalition governments affects the extent of public expenditure and the budget deficit (Volkerink and De Haan, 2001; Perotti and Kontopoulos, 2002). Nupia (2007) points out that political fragmentation affects government spending only if political polarization is high enough to influence incumbent parties. Le Maux et al. (2011) demonstrate that effective political power and the degree of political fragmentation in France influence public spending depending on majority and opposition parties' ideological positions. Additionally, Nupia (2013) argues that polarization acts as a mediator while understanding the link between political fragmentation and government spending. These discussions confirm our concerns that clientelism and pork-barreling can be beyond the incumbent parties' political positions and political ideologies can be a vital dimension of distributive politics.

Our central objective is to investigate the impact of political ideologies and fragmentation on the distribution of regional well-being in Turkey. We claim that distributive politics at the local level is an

effective tool for vote-buying, which helps to-explain the preferential treatment of regions in the country. This could be better motivated by reviewing the contemporary discussions on clientelism and distributive politics in Turkey. The clientelistic behavior during the 2000s roots back to the 1950s (Heper and Keyman, 1998; Gumuscu, 2013; Keyman and Gumuscu, 2014; Sayarı, 2014). However, Sayarı (2014) highlights a shift from rural peasant-oriented clientelism towards an urban poor and business elite-dominated approach during the post-2000s. Baykan (2018) defines these clientelistic networks based on collective incentives of peripheral masses and elites and argues that the face-to-face interaction and a leader figure play an important role. Kumbaracıbası (2019, 2020) validate the dominant leader oriented clientelistic networks during the AKP ruling period in the 2000s. Esen and Gumuscu (2020) define a triangular clientelism link: (i) Urban poor relies on AKP for social transfers, (ii) Business elites rely on AKP for business contracts, tax reliefs, etc. and urban poor as a base for cheap labor, (iii) AKP relies on urban poor for votes and business elites for private resources and indirect media support.

A related dimension is the transition of AKP during its successive election periods. Moving from a dominant to hegemonic party, AKP stands as a suitable example to investigate the clientelistic implementations and vote-buying patterns (Cinar, 2016; Arslantas et al., 2020; 2020b). Referring to the resource theory (Greene, 2007), the predominant incumbent is eager to use public resources and politicizes the bureaucracy to reproduce electoral dominance (Magaloni, 2006; Szwarcberg, 2015). Scheiner (2006) and Wang (2014) highlight that such transitions are best effective under the institutional protection of clientelistic actors. Similarly, Esen and Gumuscu (2016) point out the neutralization of judicial supervision as an important element for expanding the incumbent's clientelistic networks. Esen and Gumuscu (2018, 2020) argue that the rise of authoritarianism during the last phase of AKP is institutionalized by redistribution of the state resources.

Rising authoritarianism and the evolution of the clientelistic networks during the AKP period has motivated a number of recent studies about patron-client relations that explain vote-buying patterns. Examples include "patronage links in public sector employment" (Kemahlioglu, 2012), "excessive use of public procurement law" (Gürakar, 2016), "conditional cash transfer" (Aytaç, 2014), "vote-buying"

(Çarkoglu and Aytaç, 2015; Arslantas and Arslantas, 2020a; Kılıçdaroglu, 2020), "credit allocations by the state banks" (Bircan and Saka, 2018) and the "quality of power provision" (Pinar et al., 2020). Although the patron-client relationship has been investigated before in Turkey, this paper is unique with its empirical foci where it elaborates on the causal link between clientelism (described by political climate) and multidimensional well-being at the regional level.

Before formalizing the research hypotheses, three contributing dimensions of this paper are worth highlighting. Firstly, prior literature shows the key role of distributive politics in regional success for Turkey (see, e.g., Luca and Rodríguez-Pose, 2015; Luca, 2016, 2018; Luca and Rodríguez-Pose, 2019); however, these studies have not examined the role of distributive politics on the regional well-being at a broader level, and also have not accounted for the spatial heterogeneities and spillovers, which this study tackles with the use of spatial methods. Second, although distributive politics and voting behavior have been examined before, the role of ideologies and fragmentation has not been studied. Examining whether pork-barreling works over ideologies and political fragmentation is an essential exercise for understanding the confines of distributive politics. Çarkoglu and Hinich (2006) and Çarkoglu (2008) point out that two lines have explanatory power in understanding the ideological stance of Turkish voters: (i) Secularist *versus* Pro-Islamist discourse, (ii) Kurdish *versus* Nationalist sentiments. In related attempts, Çarkoglu and Aytaç (2015) and Kumbaracıbası (2016) assert that AKP fills an ideological gap evolving around center-right ideologies in Turkey, as AKP voters are defined as right-wing and relatively more conservative. Hence, the political ideologies and polarization may play a role in distributive politics, and therefore, we incorporate political climate measures (ideological position and fragmentation of regions) to investigate the regional variation in well-being. Finally, while the outcome of distributive politics has been mostly investigated through monetary indicators, regional welfare can also be defined by using regional well-being that includes the non-monetary dimension of disparities (Aslam and Corrado, 2007; Lawless and Lucas, 2011; Faggian et al., 2011). Distributive politics might use both monetary and non-monetary tools. For this reason, examining the regional multidimensional well-being beyond monetary dimensions (e.g., public investment or cash transfers)

would provide a more holistic examination of the pork-barreling and clientelist behaviour of the incumbent.

This paper aims to test the three hypotheses based on the importance of political climate and regional well-being. Firstly, incumbents favor regions where their vote share is high, but they also engage in clientelistic networks to favor regions dominated by similar political ideologies. We hypothesize that core and swing hypotheses work together. The presence of political parties with similar ideologies (of the incumbent) acts as a significant motivation for distributive politics (core hypothesis). Besides, voters' likelihood to swing from one political party to another is higher if political parties are ideologically closer to each other. Strategically, voters' likelihood to swing is higher among ideologically close political entities (swing hypothesis).

Hypothesis 1: Regions that are ideologically close to the incumbent party's political ideology will realize higher well-being.

The extent of competition creates a voting battle among political parties. Rising competition would influence the incumbent and act as a motivation to affect swing voters via different distributive politics. However, at this stage, we do not consider the ideological stance of the competition. Instead, we test whether fractionalized regions with different political parties create room for distributive politics from the incumbent's perspective. Therefore, higher well-being is expected among regions with higher fractionalization.

Hypothesis 2: Regions that are politically fractionalized will be a battleground and are likely to attain higher well-being.

Regions polarized with different political ideologies may stand as an inefficient area for the incumbent's targeting strategy. Referring to the first hypothesis, we expect that incumbents would target ideologically close strongholds. Even the second hypothesis holds (i.e., the rising competition attracts incumbents' distributive attitude), we argue that incumbents will not prefer to target regions where competition is among polarized political views. As political polarization increases, the incumbent will implement an exclusionary expenditure policy, and this will result in lower well-

being for polarized regions.

Hypothesis 3: Politically polarized regions will be inefficient battleground areas for the incumbents and are likely to realize lower well-being.

Political Climate and Regional Well-being

Data

We use the regional well-being index (*RWI*) from the Turkish Statistical Institute provincial well-being database (TurkStat, 2015) as our dependent variable to examine regional well-being differences across Turkish provinces. *RWI* covers the 81 NUTS III (Nomenclature of territorial units for statistics) regions for 2015 and ranges between 0 and 1, where a higher score represents higher well-being. There are 11 domains in the index: housing, work-life, health, education, environment, safety, civil participation, access to infrastructure services, social life, life satisfaction.[3]

To examine the role of the political climate for regional well-being variation, we consider three measures of the political climate for each region: (i) average ideological position (*AIP)*, (ii) political fractionalization (*PF)*, and (iii) political polarization (*PP)*. As our dependent variable (i.e., *RWI)* is for 2015, and we expect a time-wise lagged effect, we used the vote shares of political parties in each province in the 2011 parliamentary elections to construct these political measures.[4] The electoral data comes from the Higher Election Council of Turkey (Hec, 2019).

The *AIP* for each province is calculated as follows:

$$AIP_j = \sum_{i=1}^{n} \left(\frac{LRS_i * V_{ij}}{\sum_{i=1}^{n} V_{ij}} \right) \quad (1)$$

where j = 1, 2, …..81, n is the number of political parties, V_{ij} is the vote share of party i in region j. LRS_i is the left/right ideological position score of a given political party obtained from Döring and Manow (2019) database, which ranges between 0 and 10, representing the extreme left and right ideologies, respectively.[5] The ideological stances of parties are based on expert surveys, commonly used and accepted as the most reliable measure for party positions (Castles and Mair, 1984; Huber and

Inglehart, 1995; Benoit and Laver, 2006; Bakker et al., 2015). Political fractionalization is measured based on the Herfindahl-Hirschman type of index as follows:

$$PF_j = 1 - \sum_{i=1}^{n} V_{ij}^2 \quad (2)$$

where V_{ij} is the vote share of political party i in region j. Following Dalton (2008) and Funke et al. (2016), political fractionalization measures the probability of two randomly selected individuals from a population to support different parties. 0 and 1 represent no and maximum fractionalization in a given province, respectively.

It is possible to observe low levels of polarization in highly fragmented party systems and high polarization levels in non-fragmented party systems (Pelizzo and Babones, 2007). Besides, it is possible to observe high fragmentation of parties with similar ideologies or lower political fragmentation from very different ideological fundamentals. Based on Dalton (2008) and Wang (2014), we calculate the political polarization as follows:

$$PP_j = \sqrt{\sum_{i=1}^{n} V_{ij} * (\frac{LRS_i - AIP_j}{5})^2} \quad (3)$$

where PP ranges between 0 and 10, where 0 suggests that all political parties in this region occupy the same ideological position, and 10 suggests that all the parties in this region are split between the two extremes ideologies.

Descriptive Findings

The descriptive statistics of the political climate variables and RWI are given in Table 1. In addition to the usual statistics, we also provide a measure for spatial clustering (Moran's I).[6] Political climate and regional well-being variables are spatially clustered. Regions in close proximity influence each other in terms of ideologies, fragmentation and well-being. Moreover, a cross-comparison of the deviation measures (standard deviation -s.d.-, coefficient of variation -CoV-) shows that the extent of the variation is similar, but the lowest deviation is observed in political fractionalization.

>Table 1 about here<

Figure 1 shows the spatial distribution of the political climate and RWI. The spatial distribution of the RWI perfectly mimics Turkey's already known regional disparities (Dogruel and Dogruel, 2003; Gezici and Hewings, 2004; Karahasan and Bilgel, 2018). Historically under-developed eastern and southeastern regions constitute the poorest set of regions. These regions are not only deprived of monetary terms but also suffer from other non-monetary dimensions of development. On the contrary, central, western and some of the northern regions realize higher regional well-being.

>Figure 1 about here<

The spatial distribution of political climate contains interesting findings. The average ideological position of regions ranges between 2.4 and 7.2, with the highest value attributed to central, northern, non-coastal (west and south) and non-south eastern regions. While central, northern and non-coastal regions are ideologically close to right-wing views, coastal regions in the west, south and the isolated southeastern regions are closer to left-wing political views. Meanwhile, central regions closer to the right-wing ideologies and isolated southeastern regions that are ideologically left-wing realize lower fractionalization. However, western and southern coastal regions realize higher fractionalization. The extent of polarization shows that some of the low fractionalized regions (southeastern) and almost all of the highly fractionalized regions (mostly west and south coasts) realize higher polarization in political views. However, central regions that are dominantly right-wing and realize relatively lower fractionalization also witness very low polarization levels.[7]

Econometric Specifications

Baseline Models

The impact of the political climate on regional well-being is assessed by Equation 4:

$$y_i = \phi k_i + \sum_{j=0}^{m} \beta_j x_{ij} + \epsilon_i \quad (4)$$

where y_i is the RWI; k_i is the regional political climate measures: AIP, PF and PP; x_j represents m number of control variables. Human capital is measured by average years of schooling.

Agglomeration effects are controlled by population density. The production structure is defined by the share of employment for agriculture and industrial production. Finally, the public policy's extent is controlled by public expenditures in each province.[8] Political climate variables and all other control variables are available for 2011.[9] Note that except for the employment data, all variables are at the NUTS III level. Employment composition can only be obtained at the NUTS II level and hence used for the relevant NUTS III regions.

Results for the baseline models are provided in Table 2. Findings with full controls highlight that average ideological position and political polarization significantly influence regional well-being. A higher AIP score indicates that regions are ideologically close to the right political views. Therefore, our results suggest that those regions which are ideologically close to the right are benefitting from higher regional well-being. The influence of political fragmentation works through polarization, while the effect of fractionalization is statistically insignificant. These first set of findings validate our first and third hypotheses. However, we are inconclusive on the second hypothesis.

>Table 2 about here<

These results confirm the descriptive findings on the relationship between political climate and regional well-being. However, they are still incomplete and could be improved further. First, we have not controlled for the possible reverse causality and omitted variable bias that might give rise to an endogeneity problem. In the next sub-section, we carry out several analyses to deal with the identification problem. Furthermore, several robustness analyses are carried out to investigate the robustness of the results to the choice of variables, regions and sub-dimensions of *RWI*, and spatial dependence.

Identification

An important dimension of regional well-being and political climate link is the endogeneity issue, which may stem from reverse causality and omitted factors that are likely to influence regional well-being. It could be possible that people vote for political parties based on their economic conditions. For instance,

individuals vote for political parties that use redistributive policies (Meltzer and Richard, 1981). In other words, the well-being of regions could affect voting behaviour. Moreover, there can be some other confounding factors that might be influencing both well-being and political climate.

To deal with the endogeneity problem, we apply an instrumental variable (IV) approach following Bartik (1991) and recent applications of Luca (2016, 2018). The shift-share instrument for vote shares of each political party is used to construct the instrumental variables for political climate variables. The shift-share instrument is linked with the fact that national vote share changes are party-specific and potentially external to individual provinces. This represents the existence of exogenous political shocks at the province level. Therefore, the following formula is used to construct an instrumental variable for each political variable:

$$POL_{IV,i,k} = n_{i,k,2002}\left(1 + \frac{N_{k,2011} - N_{k,2002}}{N_{k,2002}}\right) \quad (5)$$

where $n_{i,k,2002}$ is the vote share of political party k within region i in 2002. $N_{k,2002}$ and $N_{k,2011}$ are the national vote shares of political party k in 2002 and 2011. Note that 2002 represents the first election year that AKP enters the Turkish political spectrum. As discussed in Luca (2018), there is a jump in the newly elected parliamentarians in the 2002 elections. Moreover, vital political parties of the period such as Motherland Party (Anavatan Partisi-ANAP-), Democratic Left Party (Demokratik Sol Parti-DSP-) and Nationalist Movement Party (Milliyetci Hareket Partisi-MHP-) were no longer in the parliament as they fell below the 10% threshold required to have a seat in the parliament. Therefore, 2002 is likely to serve as an exogenous event for Turkish political history. In addition to the use of 2002 elections within the shift-share instrumental variable, we also directly use the 2002 election results (lagged-values instrument) to test the sensitivity of our results to instrument selection.

Using two sets of instrumental variables (i.e., shift-share, lagged values), we re-estimate the baseline models using the two-stage least squares (2SLS) estimation technique.[10] Results for the second stage regression are provided in Table 3. Our results validate that the average ideological position

influences regional well-being. Regions voting for right-wing parties are associated with higher regional well-being, which validates our first hypothesis. Our second set of findings for the political fragmentation suggest that both polarization and fractionalization affect well-being. Note that IV results are robust both for unconditional and conditional models. Moreover, both the shift-share and the lagged value instruments yield similar results for conditional models. Comparing with the baseline models, results from IV estimates are larger in magnitude for each specification.

>Table 3 about here<

Diagnostics of the 2SLS indicate that chosen variables and estimation strategy are valid. F-statistics from the first stage shows that proposed instruments explain the endogenous political climate variables. Meanwhile, the endogeneity test has the null hypothesis of exogeneity of the political climate variables. Other than Model (III) and (XI) in Table 3, we reject the null hypothesis of exogeneity of the political climate. As for Model (III) and (XI), we still argue that controlling for endogeneity, when the variable under concern could be exogenous, is still a safeguard and a better strategy compared to not controlling for the endogeneity. The over-identification test has the null hypothesis of the relevancy of excluded instruments. Other than Model (V), (IX) and (XI), we fail to reject the null hypothesis and conclude that our instruments are valid in general. For the case of a shift-share instrumental variable, except for the conditional models, which test the impact of political fractionalization, none of the models suffer from an over-identification problem. For the models with lagged values as instruments, an unconditional model for political polarization and a conditional model for political fractionalization suffer from the over-identification. Finally, the weak identification test reports the Cragg-Donald Wald F-statistic with the null hypothesis that the equation is weakly identified. Weak identification test critical values for 10 and 15 percent maximal size are 5.44 and 3.87, respectively (Stock and Yogo, 2005). None of the models suffer from a weak identification problem. While results confirm our first and third hypotheses, findings on fractionalization are not in line with the expectations. However, considering the conditional models with different instrument constructions, these models fail to satisfy the over-identification criterion. Therefore, we approach those results

obtained for the fractionalization with caution.

Robustness Analyses

Considering the control variables used in the initial models, the interdependence among political climate variables and public expenditure can be important. Even though the instrumental variable strategy solves the possible dependence and the simultaneity issue, we estimate the initial set of models by excluding public expenditure as a control variable. Results given in Panel A of Table 4 suggest that the average ideological position and political polarization affect regional well-being. While the regions voting for right-wing parties experience high well-being, political polarization decreases regional well-being. Although political fractionalization is also significant, it fails to satisfy the over-identification restriction making results unreliable. These findings act as a safeguard as the political climate's influence on regional well-being is robust to different combinations of regional characteristics. They also enable to avoid the possibility of bad control problem (Angrist and Pischke, 2009, 2017).

>Table 4 about here<

As a second robustness check, we re-estimate the IV models by keeping three major provinces out of the sample. Istanbul, Ankara and Izmir are three crucial economic centers producing more than 30% of the total Turkish GDP (Karahasan et al., 2016; Luca and Rodríguez-Pose, 2019). The economic environment of these urban areas is divergent from the rest of the country, and particularly the well-being of the urban population in these areas can be independent of the extent of distributive politics. Results are given in Panel B of Table 4 and are comparably the same concerning the models that include all provinces. Regions voting for right-wing political parties are associated with higher regional well-being. Furthermore, the negative association between political fragmentation and regional well-being mostly works through political polarization. Even though we detect a significant impact of political fractionalization on regional well-being, this model fails to satisfy the over-identification test. These results highlight that exclusion of the three major metropolitan areas has a negligible influence on the political climate's impact on regional well-being.

We also consider the possible influence of the eastern regions on the results obtained. One common characteristic of these underdeveloped eastern regions is the extreme political polarization and extremely low well-being levels. We re-estimate the IV models by dropping the south and middle eastern regions out of our sample. The results are provided in Panel C of Table 4. Our results confirm that regions voting for right-wing parties and with low political polarization experience relatively higher well-being as predicted by the baseline models. Again, the association between political fractionalization and regional well-being fail to satisfy the over-identification restriction. These findings suggest that exclusion of the less developed rural areas does not impede our overall results.

The initial set of models rule out possible spatial networks. Referring to Table 2, residuals of the unconditional models suffer from spatial auto-correlation. However, we fail to reject the null hypothesis of spatial randomness for conditional models. To understand the validity of spatial variants of the baseline model, one can focus on the Lagrange-Multiplier (LM) tests. As discussed in Elhorst (2010), the LM test results point out the applicability of Spatial Lag Models for unconditional models.

To control spatial dependence, we estimate the baseline model's spatial variants as follows:

$$y_i = \theta k_i + \rho W y_i + \sum_{j=0}^{m} W \gamma x_{ij} + u_i \tag{6}$$

$$u_i = \lambda W u_i + \epsilon_i$$

where ρ, γ and λ represent the spatial mechanisms for a given weight matrix W.[11] Following Anselin (2010) and Elhorst (2010), three spatial models are considered. When ρ and γ are set to zero, the spatial error model (SEM) considers common spillover of shocks (omitted variables). When γ and λ are set to 0, we obtain the spatial lag model (SAR), and the spillovers or externalities arise from the outcome. When $\lambda = 0$, we obtain the spatial Durbin model (SDM), allowing for global spillovers in observables.

Table 5 presents the results when spatial dependence is taken into account. The results concerning the relationship between ideological position (political polarization) and regional well-being are similar

to our initial set of findings. We detect a significant relationship between political fractionalization and regional well-being with the SAR and SDM models. Our results also indicate that only the ρ parameter is significant, suggesting that the SAR model's explanatory power is the most reliable one. For the SEM and SDM, we fail to detect any significant relationships within the spatial channels.[12] These early findings are validated by the Wald test results, which supports the use of the SAR model.[13]

>Table 5 about here<

Having considered various caveats that can bias the baseline estimation results, we focus on the sub-channels of distributive politics. We decompose monetary and non-monetary aspects of regional well-being and re-estimate the IV models for each sub-category. Results are given in Table 6. Decomposing the regional well-being and investigating the impact of the political climate on each sub-category contains information on the background of distributive politics. Overall, the direction of relations holds for the sub-categories. However, we detect a lack of significant connection between political climate measures and well-being for some dimensions. Moreover, some of the results do not satisfy the pre-discussed requirements of IV estimation. Regions voting for right-wing political parties experience higher well-being in income and wealth, safety and civil participation. In other words, regions voting for the parties with a similar ideological stance to the incumbent's one (i.e., right-wing parties) benefit more from monetary well-being. The same set of regions also realize a safer local environment and higher possibility of civil participation. The results obtained with the political fragmentation variable are mixed. For instance, politically fractionalized regions have lower well-being in housing, education and overall life satisfaction. On the other hand, politically polarized regions experience lower well-being in housing, income and wealth, health, safety and civil participation. While the significant influence for political ideologies and polarization is in line with our research hypotheses, political fractionalization results do not confirm our expectations. The impact of political fractionalization on the overall well-being is not reliable due to previously mentioned identification problems; however, results for these mentioned sub-categories pass IV estimations' diagnostics. These results point out that distributive politics works over

certain dimensions of regional well-being. Remarkably, effective dimensions are mostly non-monetary. Even though assessing the causal channels through which political climate affects regional well-being is beyond examining these sub-categories, we still argue that non-monetary channels act as good mediators for distributive politics.

>Table 6 about here<

Discussion

Distributive politics and political economy issues have increasingly received interest among regional scholars (Martin, 2015). The role of distributive politics has been mostly examined by comparing voting for incumbent and opposition political parties. However, the political climate, which we measure by ideological stance and political fragmentation, is also important for distributive politics. While examining the influence of distributive politics, most studies focus on income and public expenditure distribution. However, another line that deserves attention is the non-monetary and multidimensional aspects of regional well-being. Our findings contribute to the knowledge of distributive politics for Turkey and regional well-being in developing countries with persistent regional disparities.

An important challenge of the current study is the availability of the RWI for other periods. While it would be possible to construct a panel data set using electoral and other regional data sets, regional well-being was measured only in 2015. This prevents us from controlling for the region-specific time-invariant heterogeneities. As an additional robustness exercise, instead of controlling for time-invariant heterogeneities, we observe the spatial heterogeneity of the relationship between political climate and regional well-being. Following Fotheringham et al. (2002, 2017), we estimate a set of spatial models (i.e., geographically weighted regression (GWR) and multiscale geographically weighted regression (MGWR)). Our results, which are provided in the Online Appendix, suggest that the influence of political climate is spatially homogeneous and there is almost no local variation in the observed relationship. These results are robust to our attempts to combine the endogeneity of political climate with spatial heterogeneity. While we acknowledge the shortcoming of cross-sectional analyses, our safeguard is our

effort to check for the robustness of our results to different model specifications (see the robustness sub-section and the Online Appendix).

Another concern is the conflict in eastern Turkey, which evolves from ethnic grounds and transforms into a social problem creating sizable economic and non-economic costs to Turkey (Bilgel and Karahasan, 2017, 2019). We carry out separate analyses to control for the influence of this conflict. First, in the empirical models, we control for the average years of schooling, which dominantly mimics the distribution of underdevelopment and reflects the isolation of ethnically and politically differentiated segments of the society. Yildirim and Öcal (2013) point out that education is an inevitable dimension of the rising conflict among Turkey's far east geography. Second, in our robustness analyses, we consider the possible biases that can evolve from the increasing political polarization in the eastern regions. When we drop the eastern regions predominantly influenced by conflict from our analysis, our findings point out the continuum of the relationship between political climate and regional well-being.

Another line that deserves attention is the choice between local and parliamentary elections. As our interest is related to the extent of the political climate in Turkey, we are primarily interested in parliamentary elections. We argue that voting patterns at local elections can deviate from parliamentary elections as individuals' perceptions of local public services are mostly dominated on practical grounds, while parliamentary elections stand as a battleground for political views and ideologies (Akarca and Tansel, 2006). Moreover, political alliances across ideologically distant political parties and strategic voting at the local level are frequent for local elections. As Çarkoglu (2009) argued, dynamics during the local elections are divergent considering voting for the local mayor(s) and Turkey's municipality council. Furthermore, voters' attitude toward the municipality council mimics the voting behavior for the parliamentary elections. However, mayor selection is more likely to deviate from their political views and choices. We do not aim to detail this comparison; however, discussing the vote deviations among mayor and municipality council selection could be a useful exercise to understand the influence of strategic alliances on the links between political climate and regional well-being. A more in-depth analysis of this is a promising future research area.

Conclusion

Distributive politics and state-business relations are mostly investigated based on proximity to a ruling party. The implementation of government policies is closely associated with the local political spectrum. While this research line gains rising interest among scholars, the influence of political views beyond the already known impact of political parties is mainly neglected. In this paper, we aim to fill this gap by focusing on the spatial distribution of political climate and its effect on the well-being of Turkish regions.

The results indicate that regions in which more voters are ideologically close to right-wing political views and closer to the government's political ideology are achieving higher well-being in Turkey. These findings support our hypothesis that ruling political elites will favor not only those regions that vote dominantly for their survival but those geographies that have voters with relatively similar ideological positions. Our findings show that political fragmentation also matters for regional well-being. While the politically fractionalized regions attain-lower regional well-being, results mostly underline that low well-being at the regional level originates from political polarization. The association between average ideological position (political polarization) and regional well-being is robust to the possible endogeneity of political climate variables. Our findings are also robust to using an alternative set of variables, excluding some provinces, and controlling spatial dependence. Finally, when we decompose the well-being index, we find that political climate variables affect non-monetary aspects of regional well-being more than the monetary ones.

Preferential treatment of regions is rooted in the clientelistic and pork-barreling behavior of the incumbent and rising authoritarianism and transition of AKP from a dominant to hegemonic party during its successive periods. Which of these patterns work in the background is a separate question but has to be highlighted as none should be effective under a true democratic climate. These results should promote more discussions for understanding the evolution of the political environment. Another dimension is the existence of state-business relations. A detailed analysis of the formal and

informal lines of such a relationship could be important to understand the evolution of Turkey's local business environment. Finally, investigating different dimensions of regional well-being as possible mediators and replicating similar studies for alternative periods with the availability of new data sets are potential lines of future research.

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Tables

Table 1: Descriptive Statistics

	Moran's *I*	min	max	mean	s.d.	CoV
Average Ideological Position	0.688*** (0.071)	2.168	7.197	5.656	1.207	0.213
Political Fractionalization	0.419*** (0.071)	0.283	0.741	0.568	0.09	0.158
Political Polarization	0.562*** (0.072)	2.219	6.146	4.146	0.809	0.195
Regional Well-being	0.735*** (0.072)	0.276	0.674	0.524	0.104	0.198

Notes: Standard errors are in parentheses for Moran's I.
*** represents significant spatial auto-correlation at 1%.

Table 2: Baseline Models I: OLS

	Model (I)	Model (II)	Model (III)	Model (IV)	Model (V)	Model (VI)
Average Ideological Position	0.065***			0.024***		
	(0.009)			(0.005)		
Political Fractionalization		0.308			-0.165	
		(0.240)			(0.114)	
Political Polarization			-0.074***			-0.023***
			(0.013)			(0.006)
Regional Controls	No	No	No	Yes	Yes	Yes
R^2	0.41	0.05	0.38	0.83	0.81	0.82
Obs.	81	81	81	81	81	81
LL	89.812	70.669	88.403	141.002	135.932	138.658
AIC	-175.625	-137.338	-172.807	-266.005	-255.865	-261.316
Moran's I (resid.)	0.4945	0.6776	0.4602	0.0291	0.7123	0.4667
	[0.00]	[0.00]	[0.00]	[0.24]	[0.47]	[0.64]
LM-Lag	58.8488	91.0461	59.0664	2.5559	6.5648	3.0698
	[0.00]	[0.00]	[0.00]	[0.11]	[0.01]	[0.07]
LM-Lag (robust)	14.0908	10.0262	21.4643	3.2626	11.7056	6.8794
	[0.00]	[0.00]	[0.00]	[0.08]	[0.00]	[0.01]
LM-Error	44.7820	84.0750	38.7800	0.1548	0.0000	0.0607
	[0.00]	[0.00]	[0.00]	[0.69]	[0.99]	[0.80]
LM-Error (robust)	0.024	3.0550	1.1778	0.8615	5.1407	3.8703
	[0.88]	[0.08]	[0.28]	[0.35]	[0.02]	[0.05]

Notes: Standard errors are in parentheses and clustered at the NUTS II regions (26 Regions), p-values are reported in [ ]
***, ** and * represents significance at 1%, 5% and 10% respectively.

Table 3: Baseline Models II: IV-2SLS

	Instrument: Shift-share						Instrument: Lagged-values					
	Model (I)	Model (II)	Model (III)	Model (IV)	Model (V)	Model (VI)	Model (VII)	Model (VIII)	Model (IX)	Model (X)	Model (XI)	Model (XII)
Average Ideological Position	0.078***			0.036***			0.082***			0.036***		
	(0.011)			(0.007)			(0.011)			(0.007)		
Political Fractionalization		-1.272**			-0.413***			-0.160			-0.255**	
		(0.661)			(0.088)			(0.25)			(0.105)	
Political Polarization			-0.072***			-0.041***			-0.100***			-0.045***
			(0.013)			(0.010)			(0.012)			(0.013)
Regional Controls	No	No	No	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes
R^2	0.39	0.15	0.38	0.82	0.79	0.81	0.38	0.00	0.34	0.82	0.81	0.80
Obs.	81	81	81	81	81	81	81	81	81	81	81	81
Endogenity test	5.9948	22.9886	0.1337	37.970	8.676	8.7503	9.101	13.543	9.179	31.642	1.137	15.503
	[0.02]	[0.00]	[0.72]	[0.00]	[0.01]	[0.00]	[0.01]	[0.00]	[0.01]	[0.00]	[0.33]	[0.00]
First-stage F stat.	151.565	6.0179	43.589	66.7399	14.238	29.773	148.197	43.5811	85.212	44.114	34.373	9.683
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Overident. Test	1.795	1.0745	2.796	0.045	4.514	0.436	0.090	1.190	9.362	1.189	4.406	0.085
	[0.18]	[0.20]	[0.10]	[0.83]	[0.04]	[0.51]	[0.76]	[0.28]	[0.02]	[0.28]	[0.03]	[0.77]
Weak ident. Test	151.565	6.0179	43.589	66.7399	14.238	29.773	148.197	43.5811	85.212	44.114	34.373	9.683

Notes: Standard errors are in parentheses and clustered at the NUTS II regions (26 Regions), p-values are in [ ], ***, ** and * represents significance at 1%, 5% and 10% respectively

Table 4: Robustness Analyses: IV-2SLS Alternative Specifications

	Panel A			Panel B			Panel C		
	Model (I)	Model (II)	Model (III)	Model (IV)	Model (V)	Model (VI)	Model (VII)	Model (VIII)	Model (IX)
Average Ideological Position	0.036***			0.036***			0.037***		
	(0.008)			(0.007)			(0.007)		
Political Fractionalization		-0.407***			-0.438***			-0.511***	
		(0.088)			(0.096)			(0.091)	
Political Polarization			-0.041***			-0.042***			-0.042***
			(0.011)			(0.010)			(0.011)
Regional Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.82	0.79	0.81	0.83	0.78	0.81	0.83	0.78	0.82
Obs.	81	81	81	78	78	78	65	65	65
Endogenity test	35.583	8.036	8.843	31.498	9.7913	9.277	34.355	11.092	6.357
	[0.00]	[0.01]	[0.01]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.02]
First-stage F stat.	55.902	16.740	28.546	69.1411	13.816	28.416	67.680	12.740	30.046
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Overident. Test	0.038	4.736	0.431	0.042	3.589	0.701	0.227	4.618	0.365
	[0.85]	[0.03]	[0.51]	[0.84]	[0.06]	[0.40]	[0.63]	[0.04]	[0.55]
Weak ident. Test	55.902	16.740	28.546	69.1411	13.816	28.416	67.680	12.740	30.046

Notes: Standard errors are in parentheses and clustered at the NUTS II regions (26 Regions), p-values are in [ ]
***, ** and * represents significance at 1%, 5% and 10% respectively

Table 5: Robustness Analyses: Spatial Regression Models

	SAR			SEM			SDM		
	Model (I)	Model (II)	Model (III)	Model (IV)	Model (V)	Model (VI)	Model (VII)	Model (VIII)	Model (IX)
Average Ideological Position	0.020***			0.024***			0.027***		
	(0.005)			(0.005)			(0.006)		
Political Fractionalization		-0.161*			-0.165			-0.200**	
		(0.089)			(0.109)			(0.095)	
Political Polarization			-0.018***			-0.023***			-0.015**
			(0.006)			(0.006)			(0.007)
Regional Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.83	0.83	0.84	0.83	0.81	0.82	0.86	0.85	0.85
Obs.	81	81	81	81	81	81	81	81	81
LL	142.469	139.849	140.467	141.105	135.932	138.698	148.657	145.018	144.985
AIC	-264.938	-259.698	-260.933	-262.210	-251.865	-257.397	-263.315	-256.037	-255.97
Spatial Mechanisms									
P	0.201**	0.319***	0.228**				-0.004	-0.003	-0.062
	(0.082)	(0.084)	(0.089)				(0.147)	(0.150)	(0.140)
λ				0.086	-0.0001	-0.055			
				(0.217)	(0.218)	(0.178)			
γ (Political Climate)							-0.011	0.006	-0.008
							(0.013)	(0.128)	(0.012)
Wald Test Results									
ρ=0	5.945	14.195	6.438						
	[0.02]	[0.00]	[0.01]						
λ=0				0.159	0.000	0.096			
				[0.69]	[0.99]	[0.76]			
ρ=0							0.001	0.000	0.200
							[0.98]	[0.98]	[0.65]
γ=0							16.059	16.736	9.392
							[0.31]	[0.27]	[0.81]

Notes: Standard errors are in parentheses and clustered at the NUTS II regions (26 Regions), p-values are in [ ], ***, ** and * represents significance at 1%, 5% and 10% respectively

Table 6: Robustness Analyses: Regression Results for Sub-Categories

	Housing	Work Life	Income and Wealth	Health	Education	Environment	Safety	Civil Part.	Access to Infra.	Social Life	Life Satisfaction
Panel A											
Average Ideological Position	0.054**	0.008	0.024*	0.036***	0.031**	0.011	0.038***	0.060***	0.007	0.02	0.107***
	(0.023)	(0.011)	(0.014)	(0.011)	(0.016)	(0.017)	(0.010)	(0.009)	(0.014)	(0.014)	(0.040)
Regional Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.77	0.74	0.79	0.63	0.8	0.52	0.41	0.5	0.76	0.55	0.18
Obs.	81	81	81	81	81	81	81	81	81	81	81
Endogenity test	8.687	0.036	12.899	7.547	2.201	1.874	2.487	8.824	0.033	6.281	12.659
	[0.01]	[0.85]	[0.00]	[0.01]	[0.15]	[0.18]	[0.13]	[0.01]	[0.85]	[0.02]	[0.00]
First-stage F stat.	66.739	66.739	66.739	66.739	66.739	66.739	66.739	66.739	66.739	66.739	66.739
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Overident. Test	3.116	6.429	0.168	0.346	4.199	1.36	0.021	1.61	1.494	0.126	5.179
	[0.07]	[0.01]	[0.68]	[0.56]	[0.04]	[0.24]	[0.88]	[0.20]	[0.22]	[0.72]	[0.02]
Weak ident. Test	66.739	66.739	66.739	66.739	66.739	66.739	66.739	66.739	66.739	66.739	66.739
Panel B											
Political Fractionalization	-0.877***	0.205	-0.023	-0.616***	-0.308**	-0.105	-0.364	-0.617***	-0.277	-0.33	-1.23**
	(0.314)	(0.187)	(0.248)	(0.181)	(0.143)	(0.294)	(0.261)	(0.220)	(0.259)	(0.229)	(0.587)
Regional Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.77	0.79	0.79	0.6	0.73	0.52	0.38	0.27	0.74	0.56	0.19
Obs.	81	81	81	81	81	81	81	81	81	81	81
Endogenity test	8.687	0.0009	0.071	3.755	8.311	0.132	0.609	14.049	3.757	0.541	0.232
	[0.01]	[0.98]	[0.79]	[0.06]	[0.01]	[0.72]	[0.44]	[0.00]	[0.06]	[0.47]	[0.63]
First-stage F stat.	14.238	14.238	14.238	14.238	14.238	14.238	14.238	14.238	14.238	14.238	14.238
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Overident. Test	1.689	0.109	6.599	4.383	1.222	1.083	1.66	3.94	0.797	0.989	1.494
	[0.19]	[0.74]	[0.01]	[0.03]	[0.27]	[0.29]	[0.19]	[0.04]	[0.37]	[0.32]	[0.22]
Weak ident. Test	14.238	14.238	14.238	14.238	14.238	14.238	14.238	14.238	14.238	14.238	14.238
Panel C											
Political Polarization	-0.079***	0.002	-0.037*	-0.054***	-0.008	-0.0004	-0.050**	-0.053***	0.02	-0.026	-0.17***
	(0.023)	(0.016)	(0.019)	(0.018)	(0.012)	(0.024)	(0.020)	(0.016)	(0.019)	(0.016)	(0.045)
Regional Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.79	0.74	0.79	0.61	0.77	0.53	0.36	0.39	0.77	0.5	0.2
Obs.	81	81	81	81	81	81	81	81	81	81	81
Endogenity test	5.768	0.814	6.852	6.42	0.108	0.698	6.795	5.746	1.577	4.286	7.261
	[0.02]	[0.37]	[0.01]	[0.02]	[0.75]	[0.43]	[0.01]	[0.02]	[0.22]	[0.05]	[0.01]
First-stage F stat.	29.773	29.773	29.773	29.773	29.773	29.773	29.773	29.773	29.773	29.773	29.773
	[0.00]	[0.00]	[0.99]	[0.99]	[0.99]	[0.99]	[0.99]	[0.99]	[0.99]	[0.99]	[0.99]
Overident. Test	0.146	1.044	0.383	1.746	0.412	3.669	0.341	0.169	0.289	0.706	4.386
	[0.70]	[0.31	[0.54]	[0.18]	[0.52]	[0.06]	[0.56]	[0.68]	[0.59]	[0.40]	[0.03]
Weak ident. Test	29.773	29.773	29.773	29.773	29.773	29.773	29.773	29.773	29.773	29.773	29.773

Notes: Standard errors are in parentheses and clustered at the NUTS II regions (26 Regions), p-values are in [ ]
***, ** and * represents significance at 1%, 5% and 10% respectively

Figures

Figure 1: Spatial Distribution of Political Climate and Regional Well-Being

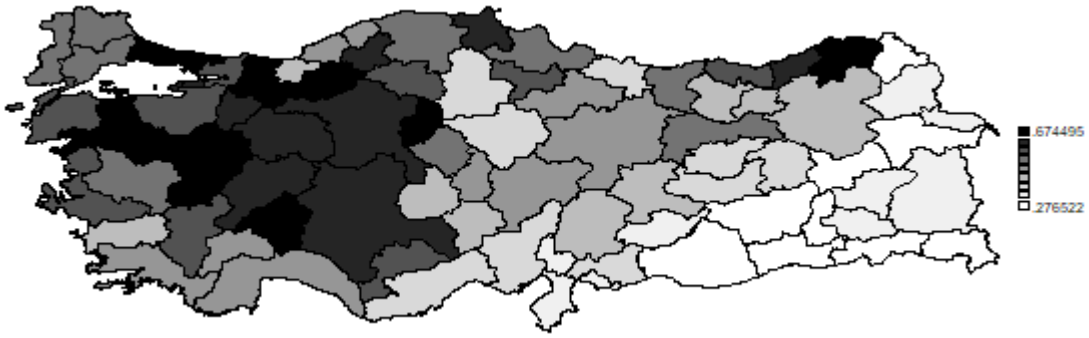


Figure 1-a: Regional Well-being Index

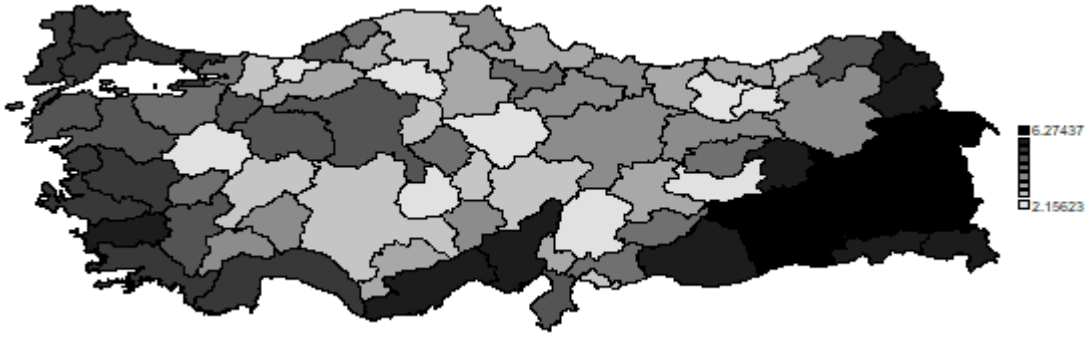


Figure 1-b: Average Ideological Position

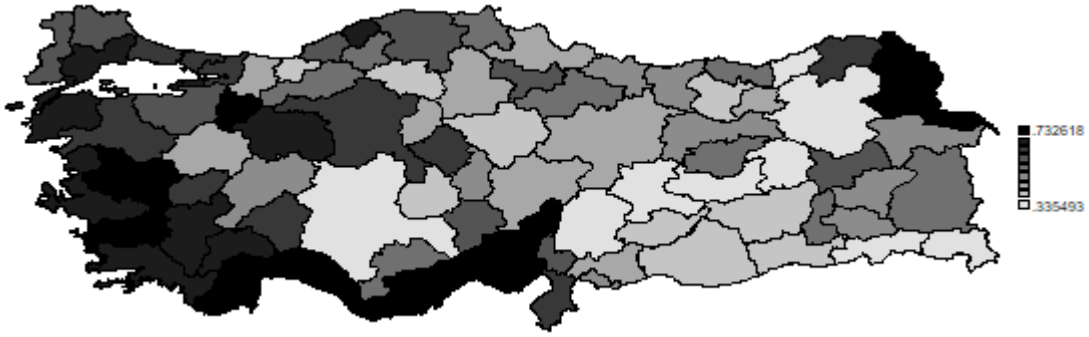


Figure 1-c: Political Polarization

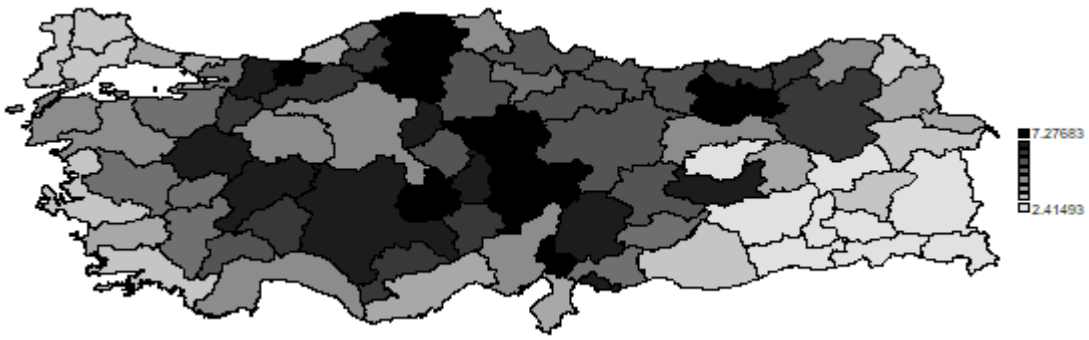


Figure 1.d: Political Fractionalization

Source: TurkStat (2015); Hec (2019), Authors' own calculations

[1] See Johnston (1977); Levitt and Snyder Jr (1995); Golden and Picci (2008); Cox (2009) among many others.

[2] See Lindbeck and Weibull (1987); Ward and John (1999); Stokes (2005) among many others.

[3] See TurkStat (2015) for technical details (https://turkstatweb.tuik.gov.tr/PreHaberBultenleri.do?id=24561) and the Online Appendix for the 11 domains of RWI.

[4] See the discussion section for an alternative use of local elections.

[5] See the Online Appendix for the political parties and ideology scores in Turkey.

[6] Moran's I is defined as : $I = \frac{n}{s}\frac{\sum_i w_{ij}(y_i-\bar{y})(y_j-\bar{y})}{\sum(y_i-\bar{y})^2}$. n is the number of cross-sections, s is the summation of the weight matrix (w) elements. We use a contiguity weight matrix. Results from different weight matrices yield similar results and available upon request.

[7] These descriptive findings point-out spatial similarities between RWI and the political climate in Turkey. Additional correlation analysis indicates the strength of the relationship between regional well-being and political climate. See Online Appendix for details.

[8] We do not use the vote share of political parties due to two reasons. In empirical terms, the correlation between vote shares of political parties and political climate variables is sizable. Considering the vote share of the incumbent party -AKP -, correlation with AIP, PF and PP in absolute terms are 0.75, 0.38 and 0.65 respectively. Second, while constructing the political climate indices we already use the vote shares of the political parties. As we are not in a position to compare and contrast the influence of these two batteries, focusing on a broader measure (political climate) fits better to our research hypotheses.

[9] See the discussion section for the use of cross-sectional analyses and arguments on dealing with possible issues originating from data availability.

[10] We use both the levels and the quadratic forms of the instruments in all models.

[11] We use a contiguity weight matrix in our analyses. Results with alternative weight matrices are available upon request.

[12] For the SDM, we only provide results for the spatial lag of the political climate as the independent variables. We fail to detect any spatial links for the remaining control variables. These results are not supplied but available upon request.

[13] We also estimate a SAR model that takes into account the endogeneity of political climate. Results are virtually unchanged and provided in the Online Appendix.

Online Appendix:

Political Climate and Regional Well-being in Turkey

A.1 Data and Descriptive Statistics

The regional well-being index (RWI) is constructed by the Turkish Statistical Institute (TurkStat, 2015) using a min-max normalization procedure. RWI is a multidimensional index and has 11 domains. For each domain, different dimensions define the overall performance of a region linked with a given domain. In total, there are 41 dimensions. These 11 domains and the related 41 dimensions are given in Table A.1.

To construct the Average Ideological Position (*AIP)* of each region, we need political parties' ideological positions in Turkey. Following Döring and Manow (2019), LRS summarized the nationwide scores for political parties' ideological position in Turkey (see Table A.2 for the ideology scores used for each political party in Turkey).

Figure A.1 makes an initial comparison between regional well-being and political climate. Without controlling for a host of factors that are likely to be a part of the relationship, correlation analyses show a clear positive relationship between average ideological position (i.e., regions voting more for right-wing parties) and regional well-being. On the side of political fragmentation, the impact of political fractionalization is less clear. While there tends to be a positive link, a careful inspection shows that outlying low fractionalized and low well-being regions drive this relationship. However, for highly fractionalized regions, the story is mixed as there are certain regions with high and low well-being among the highly fractionalized geographies. Finally, when the political polarization measure is used, the picture is clear as higher polarization is linked with lower regional well-being. These first set of findings are very preliminary and mostly descriptive; however, they certainly point out a relationship between political climate and regional well-being.

A.2 Spatial Dimension

Following the concerns for the endogeneity of the political climate, we also estimate the instrumental variable (IV) and two-stage least squares (2SLS) models for the spatial lag regression (SAR) specification. As we do not detect any spatial networks for the spatial error model (SEM) and spatial Durbin model (SDM), we do not provide any details about these models. Results are given in Table A.3. Once again, our results show that political climate measures affect overall well-being across the Turkish regions. Average ideological position significantly affects

regional well-being as regions that vote more for the right-wing parties experience higher well-being. Similar to early findings, political polarization and fractionalization are associated with lower well-being for Turkish regions. Similar to these cases of non-spatial ordinary least squares (OLS) and IV models, fractionalization has an insignificant influence when endogeneity is disregarded. However, the effect of fractionalization becomes significant once the endogeneity of political climate is considered.

Results so far represent the global relations between the political climate and well-being of Turkish regions. However, the spatial distribution of the political environment and regional well-being indicates sizable spatial heterogeneity among the variables. Therefore, following Fotheringham et al. (2002, 2017), we estimate two different variants of locally weighted regressions: (i) geographically weighted regression (GWR) and (ii) multiscale geographically weighted regression (MGWR).

An additional dimension which traditional spatial models do not consider is the spatial variability of the causal relations (Fotheringham et al., 2002; Bivand, 2017). For each m regions, spatial variability refers to the spatial heterogeneity of coefficient parameters: $\widehat{\beta_\iota} = (\widehat{\beta_{\iota 0}}, \widehat{\beta_{\iota 1}} \ \ldots\ldots \widehat{\beta_{\iota m}})$. To cope with the issue of spatial heterogeneity, all models are re-estimated by following the GWR approach as follows:

$$y_i = \phi(u_i v_i) k_j + \sum_{j=0}^{m} \beta_j \ (u_i v_i) x_{ij} + \epsilon_i \qquad (1)$$

where x_{ij} is the j^{th} variable, $\beta_j(u_i v_i)$ is the j^{th} coefficient, k_i is the variable controlling for the political climate (i.e., ideological stance, fragmentation). Note that $(u_i v_i)$ represents the coordinates (location) of the region i. Calibration is a vital process of GWR estimation. The logic is to weight each observation based on the proximity to a given region i. While different discrete distance weight matrices can be preferred in spatial models, GWR models construct the weighting scheme by a Gaussian or bi-square decay function based on fixed and adaptive kernels (Fotheringham et al., 2002). We use an adaptive bi-square weighting function, and the optimal bandwidth is selected based on Cross-Validation Score and Akaike Information Criterion (AIC).

GWR model is based on a fixed bandwidth and restricts the spatial variability among the variables at the same spatial scale. However, recent developments on the examination of spatial heterogeneity relax this restriction. MGWR model constructs the bandwidth by enabling individual bandwidth selection for each variable and spatially varying relations (Fotheringham et al., 2017). Therefore, MGWR captures the spatial heterogeneity for spatial processes more accurately, minimizes over-fitting, mitigates concurvity, and reduces parameter estimates biases (Wolf et al., 2018; Yu et al., 2019; Wu et al., 2019). The MWGR model is defined as follows:

$$y_i = \phi(u_i v_i) k_j + \sum_{j=0}^{m} \beta_{bwj} \ (u_i v_i) x_{ij} + \epsilon_i \qquad (2)$$

The central distinction is the inclusion of bwj that depicts the bandwidth used during the calibration of the j^{th} relationship. The calibration of the MGWR model is different compared to the GWR. As each pair of relations rely on varying different bandwidth, the GWR estimator is no longer applicable. Instead of this, a back-fitting algorithm is offered to obtain the MWGR estimator (see Fotheringham et al., 2017; Wolf et al., 2018, for further details).

Our combined results from GWR and MWGR models are provided in Table A.4. For both specifications, signs of the coefficients of the political climate variables are similar to the initial set of models. In other words, there is no contradictory relation at any given thresholds of the coefficient estimates. To observe the geographical dimension of spatial variability, we plot the coefficient estimates derived from each specification both for GWR and MWGR models (Figure A.2). There are some differences in the extent of the spatial distribution. While results show that ideological position influences western regions more, for political fragmentation, findings are mixed. In GWR estimates, there is a lack of local significance for the eastern regions considering fragmentation. However, careful observation of Table A.4 and Figure A.2 show that once bandwidth is allowed to vary among modeled relations (MGWR), the range of the distribution of coefficient estimates converges to zero. In other words, while GWR results show the possibility of varying spatial relations, MGWR findings signal out that the relationship between political climate and regional well-being is indeed spatially stable.

To increase the reliability of the impact of the MWGR model, we apply an IV strategy to both GWR and MWGR models. This will help control the endogenous relations that have been already controlled for in the previous set of analyses. One solution to overcome the endogeneity within locally weighted regressions is to manually implement the 2SLS approach (Bilgel, 2019). The first stage regression is given below:

$$k_i = \sum_{j=0}^{m} \theta_{bwj} Z_i + \sum_{j=0}^{m} \beta_{bwj} (u_i v_i) x_{ij} + \epsilon_i \quad (3)$$

where k is the right-hand side (dependent) variable assumed to be endogenous. Z is the vector that contains the excluded instruments, and θ_{bwj} is the locally varying coefficients of the instruments.

Applying the 2SLS procedure, second stage is given as follows:

$$y_i = \phi\beta_{bwj} (u_i v_i)\widehat{k_i} + \sum_{j=0}^{m} \beta_{bwj} (u_i v_i) x_{ij} + \epsilon_i \quad (4)$$

$$\widehat{k_i} = \sum_{j=0}^{m} \widehat{\theta}\, bwj\, Z_i + \sum_{j=0}^{m} \hat{\beta} bwj\, (u_i v_i) x_{ij}$$

where y is regressed on the predicted values of the right-hand-side variable assumed to be endogenous (k) and all the included instruments of the first stage model.

Results of the GWR-IV and MWGR-IV are given in Table A.5. Once again, a similar pattern is observed. For MGWR-IV models, the range of coefficient estimates is converging to zero. The spatial distribution of the relationship between political climate and regional well-being is given in Figure A.3. The ideological position has negligible influence among the local models when the endogeneity is controlled. However, the results are mixed for political fragmentation. For instance, the size of the coefficients of the political polarization is larger among the developed regions in GWR estimates with the IV models. Interestingly, for MWGR models, the reverse is the case for the underdeveloped regions. However, since spatial variability is extremely low and the range of the distribution converges to zero, we argue that it would be naive to examine the sources of this contradiction. A similar pattern

is applicable for political fractionalization as there is almost no significant local spatial variability in MGWR-IV estimations. Our results from local regression analyses show that the relationship between political climate variables and regional well-being is spatially stable. Henceforth, no sign of spatial variability is detected, and our results are robust to the controls on spatial heterogeneity.

Table A.1: Domains and Dimensions of Regional Well-being Index (TurkStat, 2015)

Domain	Dimension
Housing	Per capita room In house
	toilet
	Share of individuals with housing quality problem
Work Life	Employment rate
	Unemployment rate Average daily income
	Satisfaction from work (% share of total individuals)
Income and Wealth	Per capita saving deposits
	Share of households with middle and high income
	Share of households that cannot satisfy daily needs
Health	Infant mortality rate
	Life expectancy at birth
	Per medical doctor application
	Subjective health well-being
	Satisfaction with public health services
Education	Schooling ratio (3-5 age)
	Central High School Examination (TEOG) average score Higher education Examination (YGS) average score Undergraduate and vocation school graduate (% ratio)
	Satisfaction with public education services
Environment	Air pollution (PM10 station value average)
	Forestry Area (per square km)
	Population access to waste services
	Population (% share) with noise problem
	Satisfaction with municipality environmental services
Safety	Homicide rate
	Traffic accidents
	Safety at night (while walking alone)
	Satisfaction with public safety services
Civil Engagement	Voter turnout in local elections
	Political party membership
	Population (% ratio) with interest in unions and associations
Access to Infrastructure	Subscriber to internet
	Access to sewer and water system
	Access to airport
	Satisfaction with municipality transportation services
Social Life	Cinema and theater audience
	Shopping center per 1000 population
	Satisfaction on social relations
	Satisfaction with social life
Life satisfaction	Level of happiness

Table A.2: *LRS* Scores of Political Parties in Turkey

			LRS
AKP	Justice and Development Party	Conservative	6.9873
ANAP	Motherland Party	Conservative	6.213
BBP	Great Union Party	Right-wing	8.8
DSP	Democratic Left Party	Social democracy	3.8377
DTuP	Democratic Turkey Party	Conservative	7.4
DYP	Right Path Party	Conservative	6.8239
GP	Young Party	Right-wing	8.3821
HADEP	People's Democracy Party	Communist/Socialist	2.2267
HDP	Peoples' Democratic Party	Communist/Socialist	1.3
IYI	Iyi Party	Right-wing	8.8
MDP	Nationalist Democratic Party	Right-wing	8.8
MHP	National Action Party	Right-wing	8.6587
RP	Welfare (Virtue) Party	Special issue	8.3333
SHP	Social Democratic Populist Party	Social democracy	3.2661
CHP	Republican People's Party	Social democracy	3.2661
SP	Felicity Party	Conservative	7.4
YTP	New Turkey Party	Social democracy	3.3

Source: Döring and Manow. (2019)

Table A.3: Spatial IV-2SLS-SAR

	Model (I)	Model (II)	Model (III)
Average Ideological Position	0.034***		
	(0.007)		
Political Fractionalization		-0.446**	
		(0.217)	
Political Polarization			-0.034***
			(0.010)
Regional Controls	Yes	Yes	Yes
Spatial Controls	Yes	Yes	Yes
R^2	0.83	0.79	0.82
Obs.	81	81	81
LL	139.7951	131.0302	138.4329
Spatial Mechanisms			
P	0.003	0.009	0.008
	(0.006)	(0.007)	(0.006)
Wald Test Results			
ρ=0	0.352	1.837	1.639
	[0.56]	[0.18]	[0.20]

Notes: Standard errors are in ( ) and clustered at the NUTS II regions (26 Regions), P Values in [ ], ***, ** and * represents significance at 1%, 5% and 10% respectively

Table A.4: Local Regression Models: GWR and MGWR

	GWR					MGWR				
	Mean (sd.)	Min.	Max.	Range	Median	Mean (sd.)	Min.	Max.	Range	Median
Average Ideological Position	0.0255***	0.018	0.035	0.016	0.024	0.023***	0.023	0.023	0	0.023
	(0.005)					(0.001)				
R^2	0.84					0.84				
AIC	-266.158					-273.464				
Political Fractionalization	-0.186**	-0.304	-0.083	0.220	-0.189	-0.199***	-0.203	-0.195	0.008	-0.197
	(0.068)					(0.003)				
R^2	0.85					0.84				
AIC	-257.269					-259.123				
Political Polarization	-0.023**	-0.036	-0.013	0.023	-0.020	-0.018***	-0.018	-0.018	0	-0.018
	(0.008)					(0.0001)				
R^2	0.86					0.82				
AIC	-261.594					-262.158				

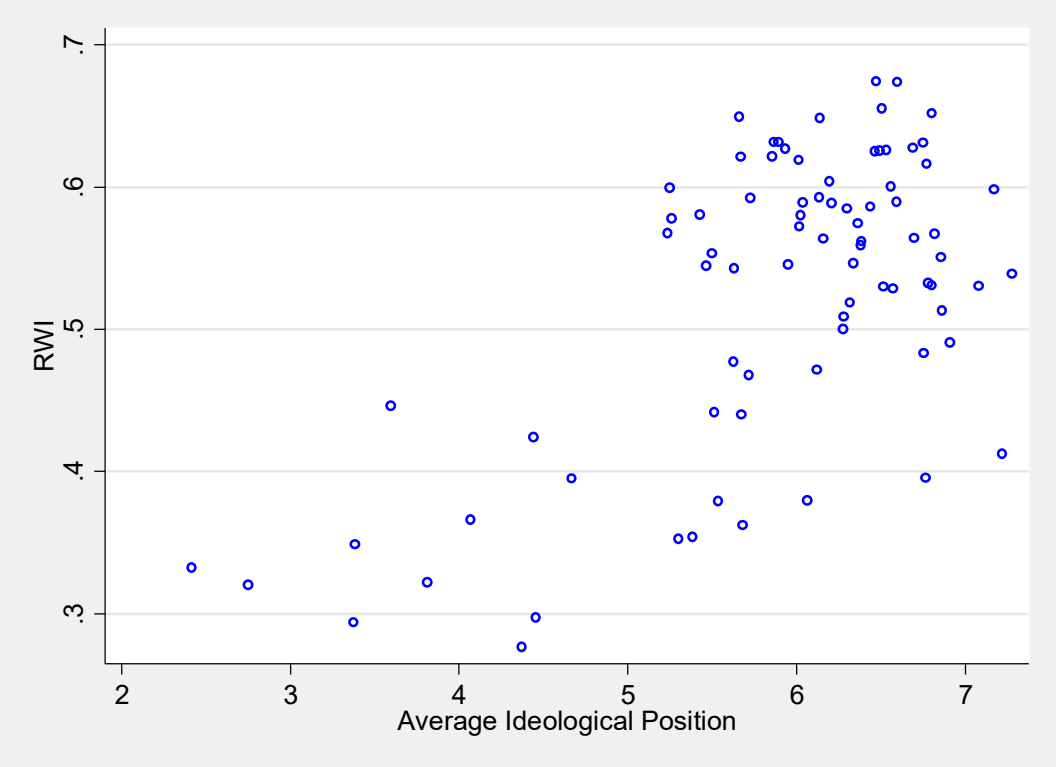
Notes: ***, ** and * represents significance at 1%, 5% and 10% respectively.

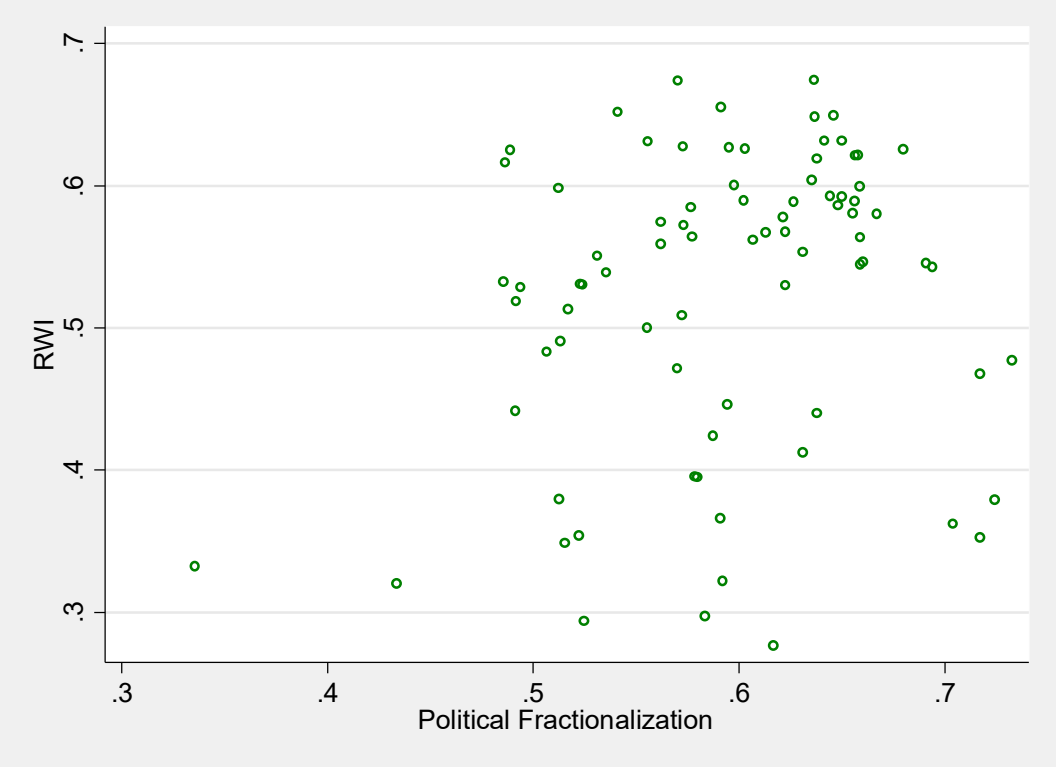
Table A.5: Local Regression Models (2SLS): GWR-IV and MGWR-IV

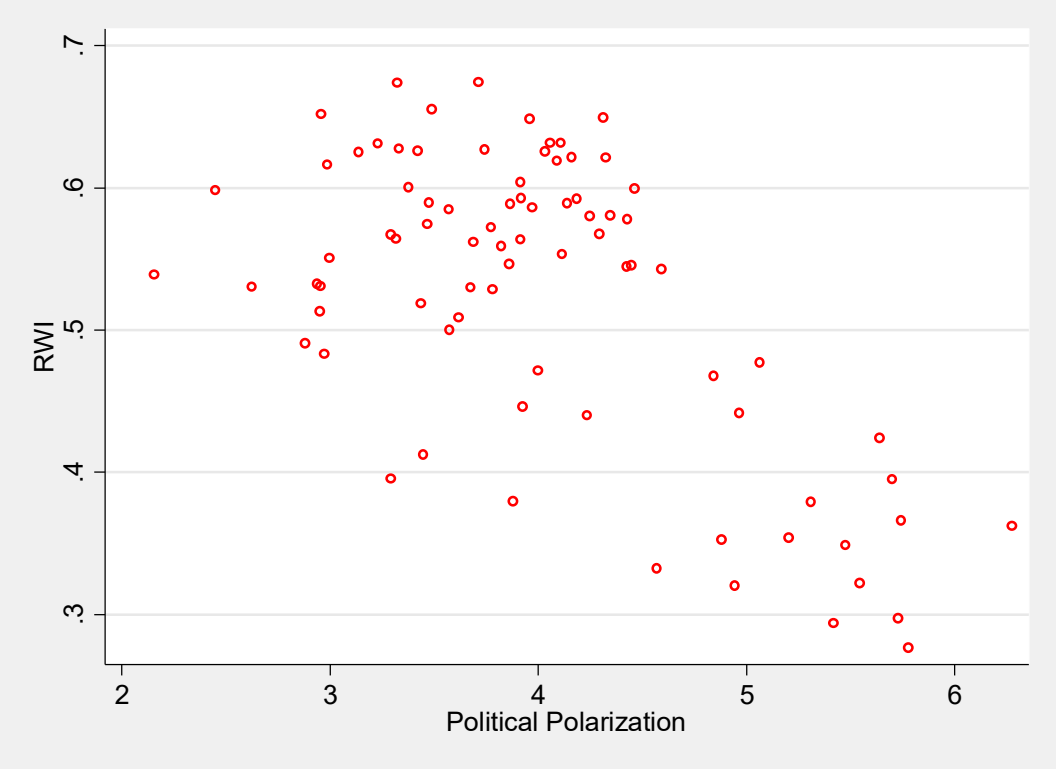
	GWR-IV					MGWR-IV				
	Mean (sd.)	Min.	Max.	Range	Median	Mean (sd.)	Min.	Max.	Range	Median
Average Ideological Position	0.035***	0.029	0.046	0.017	0.032	0.034***	0.034	0.035	0.001	0.034
	(0.006)					(0.001)				
R^2	0.86					0.89				
AIC	-286.493					-285.550				
Political Fractionalization	-0.476***	-0.957	0.014	0.972	-0.407	-0.299***	-0.306	-0.294	0.012	-0.296
	(0.277)					(0.004)				
R^2	0.82					0.83				
AIC	-257.866					-265.288				
Political Polarization	-0.037***	-0.045	-0.031	0.014	-0.036	-0.028***	-0.029	-0.028	0.001	-0.028
	(0.005)					(0.001)				
R^2	0.86					0.86				
AIC	-268.641					-270.636				

Notes: ***, ** and * represents significance at 1%, 5% and 10% respectively.

Figure A.1: Political Climate and Regional Well-being

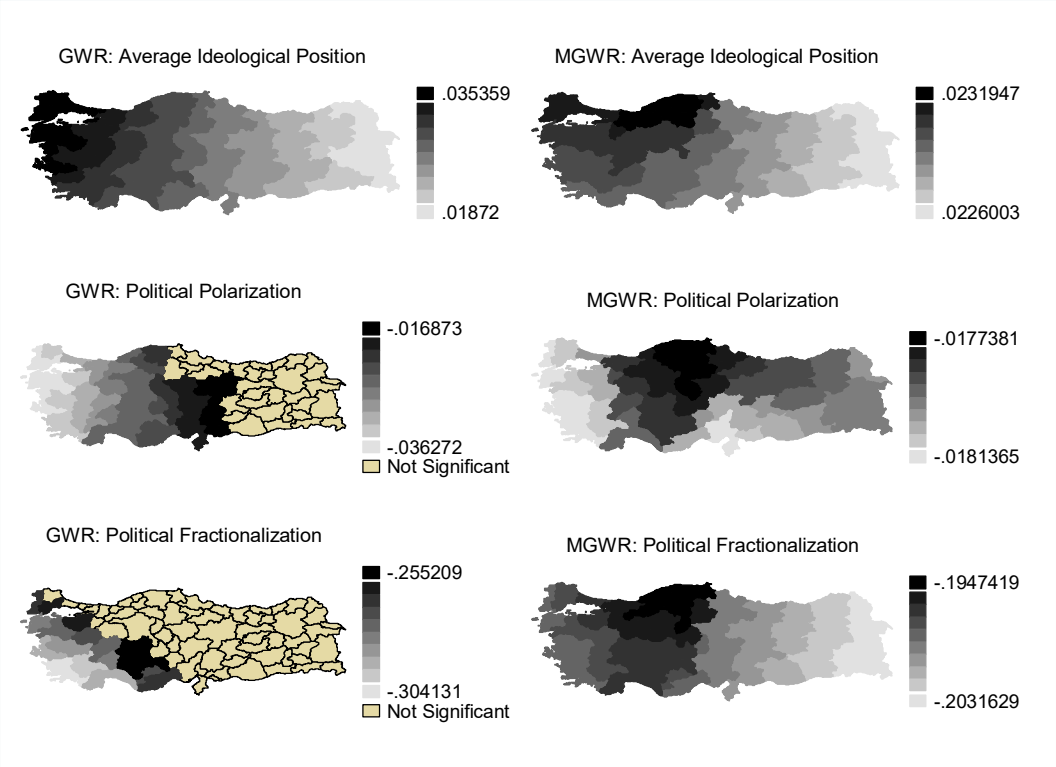






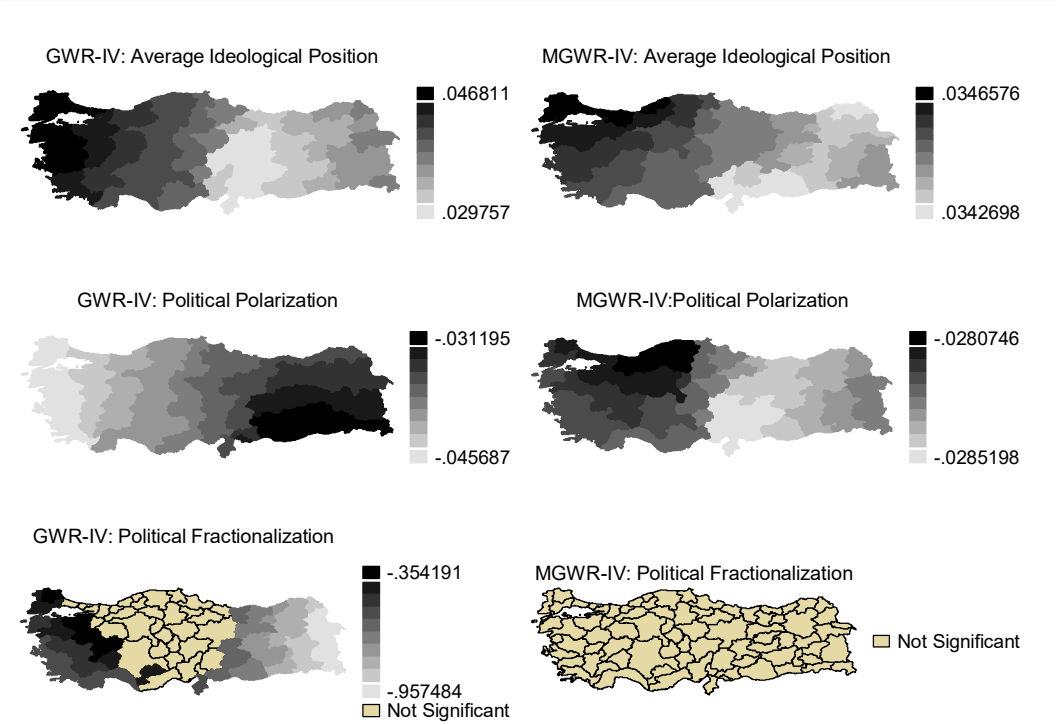
Source: TurkStat (2015); Hec (2019), Authors' own calculation

Figure A.2: GWR and MGWR: Spatial Distribution of Local Coefficients



Source: TurkStat (2015); Hec (2019), Authors' own calculations

Figure A.3: GwR-IV and MGWR-IV: Spatial Distribution Local Coefficients



Source: TurkStat (2015); Hec (2019), Authors' own calculations

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