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Borders of Socio-Economic Development in Türkiye

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Abstract

Turkish economy is characterized by a dual regional structure. Historically, western regions form the relatively more developed and rich geography of the country. In the meantime, landlocked eastern regions are realizing a period of marginalization pushing majority of these regions toward full isolation from rest of the country. Our knowledge on this dual pattern departs mostly from monetary indicators. In this study, I use the socio-economic development index (SDI) which is first constructed by the State Planning Organization (SPO). The main objective is to use spatial tools for the period of 1963-2017 and to explore the historical evolution of spatial externalities and heterogeneity. This aims to visualize the socio-economic borders of Turkish provinces. While our findings confirm the spatial inertia for the under-developed eastern regions, they also show rising spatial spillovers among the developed western geography. However, this positive impact is geographically bounded by the central part of the country.

Keywords: socio-economic development, regional inequality, Türkiye

JEL Codes: R10, R11

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Türkiye’de Sosyoekonomik Gelişmişliğin Sınırları

Öz

Türkiye bölgesel olarak ikili bir ekonomik yapıya sahiptir. Tarihsel olarak, zengin bölgeler batı coğrafyasında kümelenirken, görece daha yoksul ve içine kapalı bölgelerin doğu coğrafyasında bulunduğu görülmektedir. Bu konu hakkında sahip olduğumuz bilgiler ise ağırlıklı olarak parasal göstergelerden oluşmaktadır. Bu çalışmada ilki Devlet Planlama Teşkilatı (DPT) tarafından hazırlanan sosyoekonomik gelişmişlik endeksi (SEGE) kullanılacaktır. Temel amaç, 1963-2017 dönemi için mekânsal araçlar kullanarak tarihsel olarak ortaya çıkan mekânsal dışsallıkları ve heterojenlikleri araştırmaktır. Bu şekilde Türkiye’de sosyoekonomik gelişmişliğin gerçek sınırlarının anlaşılması hedeflenmektedir. Mekânsal analizler batı bölgelerinde sosyoekonomik açıdan hızlı bir biçimde mekânsal yayılma olduğuna, öte yandan doğu bölgelerindeki geri kalmış yapının tarihsel olarak değişkenlik göstermediğine işaret etmektedir. Bu açıdan sosyoekonomik gelişmişliğin sınırlarının az gelişmiş bölgeler açısından katı ve sabit olduğu zengin bölgeler açısından ise orta Anadolu’yu geçmeyecek şekilde yayıldığını söylemek mümkün olmaktadır.

Anahtar Kelimeler: bölgesel eşitsizlikler, sosyoekonomik gelişmişlik, Türkiye

JEL Kodları: R10, R11

1. Introduction

The spatial inertia in the Turkish economy is not new to many scholars (see e.g. Filiztekin, 2018; Doğruel and Doğruel, 2003; Aksoy et al., 2019; Karahasan, 2020). The high prosperity observed among the western regions versus the underdeveloped eastern geography is one of the severest regional duality examples across the globe. Rey and Janikas (2005) also listed Türkiye as one of the core cases to investigate the regional disparities in the developing world.

While Türkiye receives huge interest in terms of the regional structure of economic life, majority of the studies depart from monetary measures to understand regional disparities. This could be perceived as an outcome of the theoretical dominance of neo-classical convergence theory (after 1990s) and the recent advances in the New Economic Geography (after 2000s). Inevitably, this results in under examination of other non-monetary dimensions of regional disparities. However, as highlighted in recent policy reports of the United Nations (UN), economic prosperity is no longer bounded within the borders' monetary indicators (UNDP, 2023).

In this study, I depart from the rising policy awareness on economic development dimension of regional disparities and examine the provincial socio-economic development in Türkiye. The main objective is to use a composite index that controls for various monetary and non-monetary dimensions of economic development and to understand the historical evolution of spatial imbalances in a developing economy. While doing this, spatial analyses will be the main tool as they are instrumental for understanding two central dimensions of regional disparities: (i) spatial externality, (ii) spatial heterogeneity. I believe these dimensions will be central to assess the local borders of socio-economic development in Türkiye.

Findings of the paper are expected to contribute not only to our understanding on regional disparities in Türkiye but also would offer additional insight to the evolving discussions on controlling for non-monetary aspects of regional prosperity. Moreover, the use of spatial methods will provide more space to discuss the effectiveness of regional policies. While this could be perceived as a tool to understand the success and failure stories, what is more remarkable is the ability to distinguish the effectiveness of policy borders for developed and less-developed territories.

In the next section (Section 2), I will first introduce the data and provide the technical basics of spatial analyses used in this paper. In Section 3, findings will be summarized, and the paper will end with discussions for future research paths in Section 4.

2. Data and Methodology

2.1 Data

The data source is the Socio-economic development index (SDI) which is first developed by the State Planning Organization (SPO). It covers various dimensions of regional development and not bounded by monetary indicators. Historically, SPO announced the SDI for certain years. Later on, SPO is closed, and the production of the index is carried out by the Ministry of Development. With the very recent constitutional and administrative changes, it is now published by the Ministry of Industry and Technology. The first report of SPO is published in 1969. However, it is remarkable to underline that calculation of the index dates back to 1963 and accessible from the first socio-economic development report of the SPO. This points-out the planning and development awareness of the SPO during the early years of its establishment. Index can be obtained from periodicals continuously covering the years between 1963 and 1972. Later, SDI is announced in a discontinuous way for 1980, 1985, 1991, 1996, 2003, 2011 and 2017 at the provincial level. As of 2024, the whole index reports are provided by the Ministry of Industry and Technology (MIT, 2024). It must be noted that there are various methodological and coverage changes in the SDI throughout the sample period. In this study, I do not carry out any harmonization attempts but the SDI scores are standardized by using the min-max methodology. Moreover, the number of provinces increases from 67 to 81 during the sample period. To make annual analyses comparable, I collapse each year to 67 provinces by taking the mean values of the provinces that used to belong to the same administrative unit.

Overall SDI is an index composed of various monetary and non-monetary indicators. The objective of the index is to provide an aggregate development measure at the regional level. Interestingly, it receives less attention by the scholarly literature as most of the existing studies depart either from monetary dimension of regional disparities (e.g. see Doğruel and Doğruel (2003) for per capita GDP differences among others) or prefer to focus on individual aspects of regional development (e.g. see Karahasan and Bilgel (2019, 2020) for education and health among many others). Yet, a holistic approach to analyze historical origins of regional socio-economic development in Türkiye is still missing.

An important dimension of the SDI is its coverage. Historically, variables and dimensions used in the SDI are updated. While this makes a historical comparison challenging, it also provides a better understanding of regional disparities from a historical perspective. This is because updated dimensions make it easier (and more accurate) to understand the socio-economic development as priorities of regions and Türkiye is not static and stable. Within the recent report for the year 2017, main dimensions covered by the index are gathered under eight domains and are as follows: (i) demography, (ii) labour force, (iii) education, (iv) health, (v) competitiveness and

innovation, (vi) finance and monetary indicators, (vii) accessibility and (viii) quality of life. Details of the variables can be traced from MIT (2024).

2.2 Measuring spatial externalities and heterogeneity

There are two main dimensions in the empirical setup of my analyses. I start by considering the spatial autocorrelation as an important exploratory exercise to understand whether socio-economic development of provinces is spilling over to their proximity. This is what I mean by the spatial externalities generated at provincial level. I believe analyzing spatial externalities includes clues on the potential differences between administrative and factual borders of the Turkish regions. In other words, examining the spatial externalities are expected to show the accurate extent of the socio-economic policies which are not necessarily constrained by the administrative borders of Turkish provinces.

To understand spatial externalities, I refer to a very well-known and commonly used exploratory tool in the spatial data analysis; Moran's *I* (Equation 1). *w* is the weight matrix, *n* is the number of provinces, *s* is the summation of all elements in the weight matrix. There are different weight matrices to define spatial relationships. Among many, contiguity and different distance-based weight matrices are commonly preferred by scholars. In this study, I use an inverse distance weight matrix that assigns the inverse of the distance between each pair of provinces in the corresponding cell of the weight matrix (*67x67*). The null hypothesis of the Moran's *I* test is spatial randomness. Rejection of the null hypothesis confirms the existence of spatial autocorrelation, thus externalities.

$$I = \frac{n}{s}\frac{\sum_{i=1}^{n}\sum_{j=1}^{n} w_{ij}(x_i-\bar{x})(x_j-\bar{x})}{\sum_{i=1}^{n}(x_i-\bar{x})^2} \quad (1)$$

Analyzing the spatial externalities is vital as it shows the likelihood for close provinces to affect each other. That said, spatial externality detected in Equation 1 gives a global picture to the researchers and fails to provide any feedback on the local reflections. However, detected spatial dependence in the first set of analyses can depart from provinces with different socio-economic fundamentals. It could be the less developed regions that generate negative externalities which spillover towards their proximity. On the contrary, spatial externality can evolve from prosperous regions in the form of rising positive economies. In other words, there can be sizable spatial heterogeneity in terms of the externalities created in close proximity.

One way to understand this locality is to decompose the spatial externalities. Anselin (1995) offers a solid way to decompose the Moran's *I* (Equation 1) and constructs the Local Indicator of Spatial Association (*LISA*) (Equation 2). The main idea is to cluster regions based on how the values locate within the overall distribution. However, the important modification is the geographical clustering of the provinces.

Four main groups (2 clusters and 2 outliers) are formed and regions that significantly contribute to the spatial externalities are grouped accordingly. High-High (H-H) and Low-Low (L-L) clusters are composed of provinces that have high and low values (compared to the average). Meanwhile, High-Low (H-L) and Low-High (L-H) are the outliers with high and low values unlike their close proximity.

$$I_i = (x_i - \bar{x}) \sum_{j=1}^{n} w_{ij}(x_j - \bar{x}) \quad (2)$$

A notable dimension of the spatial heterogeneity analysis is its ability to show how regions cluster and polarize from each other. Moreover, it enables to distinguish the low and high values of the association. In other words, it allows for decomposing the spatial externalities and observing the different forms of spatial association at the local level.

3. Findings

I start by analyzing the path of regional disparities and spatial autocorrelation for each year SDI is provided. First set of descriptive findings are summarized in Table 1. Historically, the mean value of the SDI increases. Note that, potential methodological modifications make it difficult to trace the historical evolution. However, it is worth highlighting that rising average socio-economic development also coincides with acceleration in the standard deviation (St. dev.) of the SDI (and partially coefficient of variation-CoV.). This could be the minor signs on the start of socio-economic polarization across the Turkish regions.

Table 1. Regional disparities and spatial externalities

	Mean	St. Dev.	CoV.	Moran's *I*
1963	0.170	0.148	0.867	0.119***
1964	0.175	0.157	0.900	0.114***
1965	0.166	0.149	0.898	0.113***
1966	0.173	0.147	0.845	0.098***
1967	0.181	0.151	0.830	0.114***
1968	0.185	0.152	0.825	0.113***
1970	0.188	0.154	0.817	0.105***
1971	0.193	0.157	0.812	0.107***
1972	0.199	0.159	0.801	0.103***
1980	0.198	0.160	0.808	0.098***
1985	0.083	0.148	1.788	0.018***
1991	0.325	0.236	0.727	0.225***
1996	0.330	0.224	0.679	0.258***
2003	0.265	0.198	0.746	0.223***
2011	0.501	0.300	0.600	0.288***
2017	0.679	0.344	0.507	0.317***

Notes: *** represents significant spatial autocorrelation at 1%

While dispersion measures are useful to evaluate the path of regional variation in socio-economic development, it fails to describe the formation of spatial clustering and externalities. Missing the information embedded in spatial externality causes loss of information on the true borders of the socio-economic development. Moran's *I* values show significant and positive spatial autocorrelation for each of the years in the sample (Table 1). Moreover, the strength of spatial externality accelerates throughout the sample period. After the early 1990s, there is a significant jump in the spatial autocorrelation which seems to stabilize even at higher levels during the 2000s. From a technical perspective this must be perceived as a vital sign for the acceleration of spatial externalities. On the other hand, globalization trends have inevitable influence on the potential reshuffling of spatial interactions.

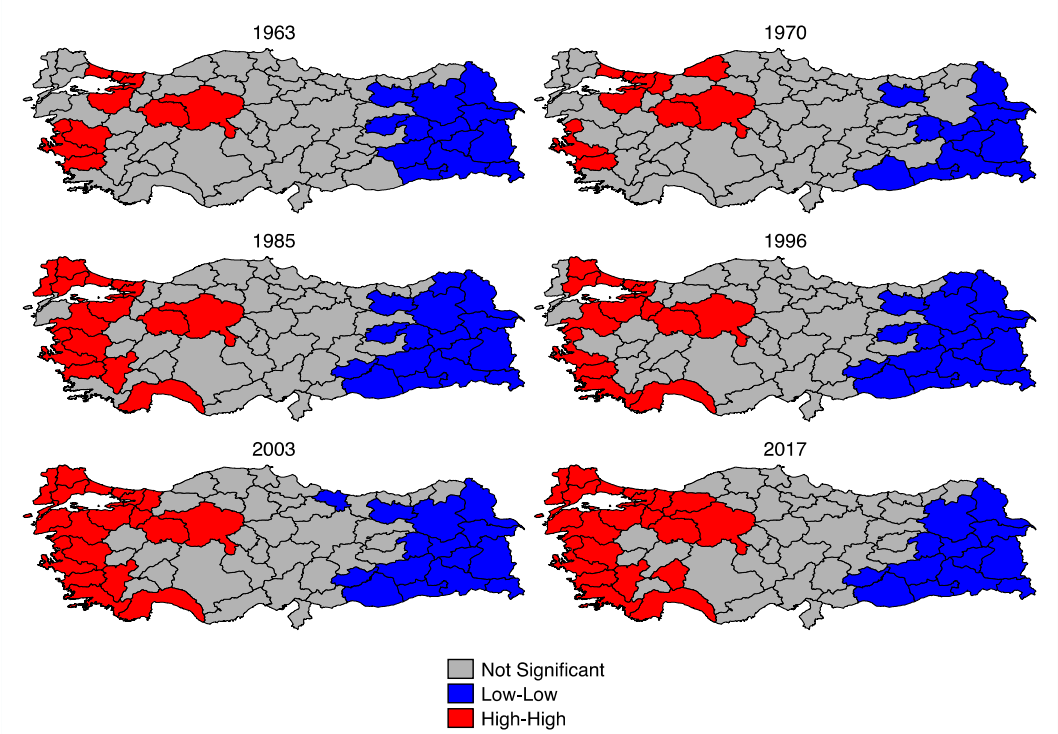
Regions' spatial clustering seems to be weaker during the early 1960s. Interestingly, through 1990s with rising average socio-economic development, one can observe rising spatial autocorrelation as well. This is a sign for more spatial dependence across the Turkish regions. From a developmental perspective, this also signals that while regions on average earns higher socio-economic development, their development

trajectories tend to become more dependent to their spatial proximity. In other words, spatial externality starts to get more central for the socio-economic development of the average Turkish region. This finding is crucial as it contradicts with the expectation that rising socio-economic development will foster more independence at the local level (in terms of economic fundamentals). On the contrary, the first set of analyses show just the opposite as socio-economic progress coincides with the rising spatial externality, thus dependence.

Our findings so far yield information on the average Turkish region. Therefore, from a technical standpoint these results must be perceived as the global analysis of regional socio-economic development. However, one might suspect of the potential spatial heterogeneity which groups winners and losers in terms of socio-economic development. Moreover, spatial heterogeneity is instrumental for understanding the borders of centralized and localized policies. Therefore, remaining analyses is devoted to decomposing the first set of spatial externality analyses by clustering regions based on varying spatial dependence patterns.

I start by implementing the *LISA* analyses for selected year of the sample (1963, 1970, 1985, 1996, 2003 and 2017). This enables a better evaluation of the spatio-temporal patterns in the local spatial interactions. Results for spatial heterogeneity analyses are provided in Figure 2. The first important finding is the lack of any significant spatial outliers during the entire sample. This is an early but an important sign for the polarization of the Turkish regions. In terms of socio-economic development, *LISA* analyses indicate the formation of two separate cluster of regions composed of high and low socio-economic development (High-High and Low-Low, respectively). The second important finding from the *LISA* analyses is about the Low-Low cluster which is historically composed of eastern regions. Careful inspection of the Low-Low cluster points out an important spatial inertia across the less-developed eastern regions. From mid-1960 to 2017, clustering pattern of the socio-economically less developed eastern regions does not change. During the entire sample period, this cluster has almost a stable border covering the historically less developed territory of the country. This reminds that, although we detect rising spatial externality for the average Turkish regions, it seems less likely for the less developed regions to benefit from the positive aspects of spatial externalities. This creates additional concerns on the existence of negative spatial externalities across the less developed regions of Türkiye.

Figure 1. Evolution of spatial heterogeneity



Source: Author's calculations based on SDI

A final important dimension of Figure 1 relates to the High-High cluster which is composed of regions with advanced socio-economic development. Unlike the regions in the Low-Low group we realize increase in the number of regions in this cluster. These findings match with the remarks on manufacturing based industrial development mainly in the hinterland territory of İstanbul and Western Türkiye (Doğruel, 2013). Like the geographical enlargement of industrial externalities in the western part of the country socio-economic development of Turkish regions follow a similar topographical pattern. This reminds that industrialization attempts of the 1960s is beyond changing the production structure and has significant influence on development patterns of Turkish regions.

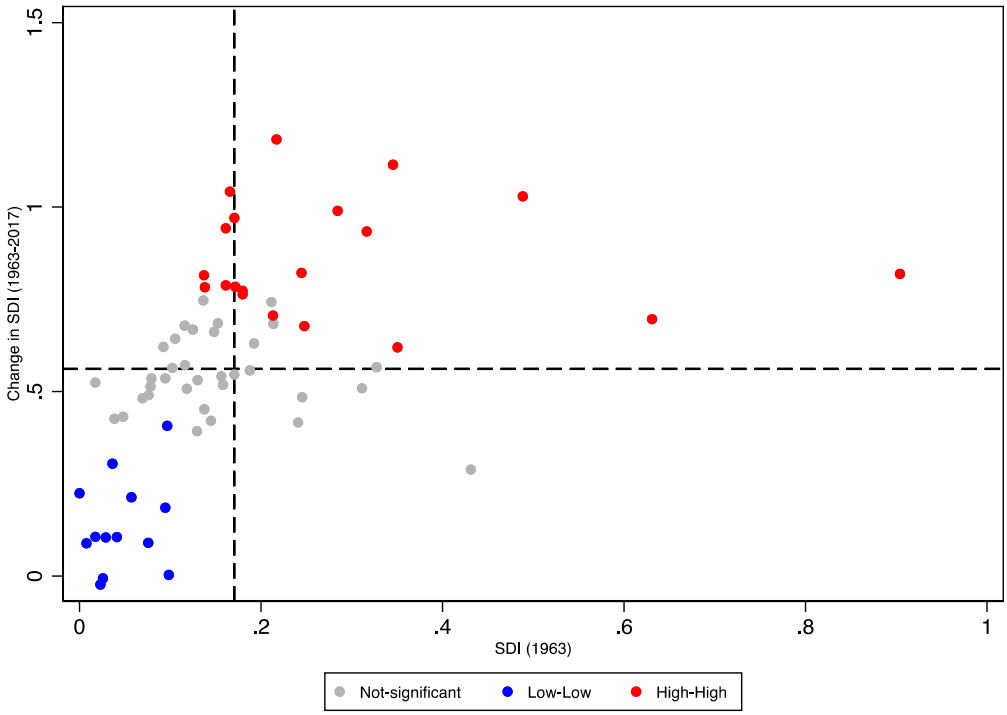
These exploratory findings provide clues on how the rise in global spatial externality is reflected across the relatively more advanced regions of the country. It is fair to acknowledge that spatial externality creates positive economies mostly across the already developed western regions. Remarkably, spatial externality seems to benefit some of the central regions closed to the western geography. In other words, it is mostly the already developed regions and their proximity that benefit from spatial spillovers.

However, the resulting pattern is a clear spatial heterogeneity which creates massive polarization in terms of local socio-economic development in Türkiye.

Our exploratory analyses so far show the polarization of socio-economic development. Moreover, these analyses also provide clues on the impact borders of spatial externalities. To link these findings with the evolution of regional development gaps in Türkiye, I carry-out a final descriptive exercise by borrowing the neo-classical spirit on the regional catch-up, thus convergence. Simply, I plot the correlation between the provincial SDI in 1963 with the change in the SDI from 1963 to 2017 (Figure 2). At this stage, I must acknowledge the potential limitation as SDI is constructed based on different methodologies (coverage modifications) during the entire sample. However, one must keep in mind that no inferential analyses are carried out at this stage. Still, these final set of descriptive findings must be evaluated based on the methodological differences of the SDI for various years.

While plotting the relationship between the initial SDI scores and the change in the SDI, I also group the 67 provinces based on their spatial clustering behavior at the end of the sample, 2017. Results which are plotted in Figure 2 contain interesting insight on the importance of considering the non-monetary dimensions of regional disparities. These descriptive exercises show that there is no actual catch-up in terms of regional development. The socio-economic difference across the Turkish regions seems to widen even more during the whole sample. Majority of the Turkish regions that locate in the high socio-economic cluster in 2017 are already the ones with above average socio-economic development in 1963. It is remarkable to highlight that these regions realize an above average change in the SDI throughout the sample period. On the contrary, the cluster with lower socio-economic development are composed of regions with below average socio-economic development in 1963 and below average socio-economic development change during the entire analysis period. These results are crucial as they show that regional disparities are even wider once non-monetary and socio-economic aspects of development are considered.

Figure 2. Clustering and polarization



Source: Author's calculations based on SDI
Notes: Dashed lines represent the country averages for SDI (1963) and the change in SDI (1963-2017).

4. Discussion

Socio-economic development across the Turkish provinces mostly mimics the very well-known regional duality. Overall, similar to earlier remarks on monetary dimension of regional disparities (Doğruel and Doğruel, 2003; Filiztekin, 2018; Aksoy et al., 2019; Karahasan, 2020) there is a huge gap between developed west and underdeveloped east part of the country. That said, it also reminds that things are worse than it is believed based on monetary indicators. Specifically for the less developed eastern regions, there is huge spatial inertia rooted with deep negative economies. This pattern is stable for almost five decades for the Turkish economy. In the meantime, for more developed western regions, there is potential to generate a developmental positive externality. Careful inspection of local spatial associations shows that number of provinces in the high development cluster accelerates during the sample period. Yet, one must note that the detected positive economies are geographically bounded by the very close proximity of the developed western regions. It is the central Anatolia where the spillover of positive economies vanishes and loses its effectiveness. These results are consistent with earlier remarks on regional development differences that are measured by examining health and education domains of economic development (Karahasan and

Bilgel, 2019; 2020). However, findings of the paper provide additional information on the historical roots of socio-economic development. Unlike the prior studies which focus mainly on the post 2000s, findings of this study validate that, roots of the socio-economic development date back to almost half-century in Türkiye. Additionally, findings validate that last two-decades witness a clustering across winners and losers of economic development. While, developed west manages to spread its development (to its near proximity) less developed eastern regions become more isolated in terms of socio-economic development.

Moreover, findings provide interesting insight on the true nature of regional catch-up across Turkish provinces. While I do not have any causal assessment in this study, very basic correlation exercises show that socio-economic development and progress is still a phenomenon belonging to the already developed western regions. On the contrary, advancement in economic development of the eastern regions is far below the western counterparts. This suggests limited room to talk about closing the huge gaps between the developed west and the underdeveloped east part of the country.

The central objective of the paper is to analyze regional disparities from a developmental and spatial perspective in Türkiye. The follow-up question and concern should be "*what to do now?*". Eventually, one might think from a policy perspective and discuss certain tools to combat with regional disparities. Yet, this has already been done both in academic and policy circles. What is less preferred is to think on potential lines of research which will guide the regional science and economics community in the future. In this final part of the paper, I would like to direct a few lines which I believe needs further attention of scholars interested in the Turkish regional duality. It must be noted that listed dimension here should not be regarded as the policy kit to combat regional disparities. Rather, they are better evaluated if considered as potential elements creating endogenous feedback with regional disparities.

The main domain that requires further attention is the political economy of regions. Within this domain following dimensions are receiving huge interest by political scientists, regional scholars and eventually economists: the spread of the discontent from global to local economies, the rise of discussions on clientelism which fosters local distributive politics and the potential influence of local institutional quality. The seminal contributions of Rodríguez-Pose (2018) on how falling regions react in elections is an important starting point. However, for the Turkish context "fall" of a region should not be perceived only from an economic perspective. The discontent as a result of non-economic factors is also critical (e.g. healthcare crisis, natural disasters, wildfires and other sector specific disasters among many others). One might argue the exogeneity of these events but must also consider the lack of policy effectiveness which is endogenous by its nature. Related with these non-economic events local infrastructural and institutional capabilities that shape human capital development, cultural and related amenities are also critical dimensions which influence life

satisfaction. Inevitably, life satisfaction stands as a vital candidate to understand local discontent and dissatisfaction. A related dimension of the political economy of regions is the distributive politics. Recent discussions validate that distribution of public sources directly or indirectly affects regional welfare and can be a key element for understanding political decision of regions (see e.g. Livert and Gainza, 2018). This must be perceived crucial for regional disparities as existing geographical gaps stand alone as a motivation for further clientelist relations.

Final dimension I would like to highlight is the role of institutions. When it comes to discuss how institutions influence economic outcomes, we tend to refer inevitably to Acemoğlu and Robinson (2013). As a rapidly developing field, regional science also uses a similar narrative to carry these discussions to local level. Among different attempts the one that receives the huge interest is the quality of government index of the European Union - EU (see Charron et al., 2024 for the most recent version of the index). Various studies show that institutional quality differences across the EU regions explain why some regions are more innovative and why these regions benefit from a better socio-economic well-being within their territories. It is true that institutions are not the only solution for mitigating the adverse effects of regional backwardness. Moreover, the way institutions affect economic development can be asymmetric across developed and developing countries. From the perspective of Türkiye, transformation of various institutions must be analyzed with caution to understand the full effect of institutional change and development. But it must be kept in mind that institutions have huge influence on certain factors that are already discussed to be the effective causes of regional growth and socio-economic well-being (e.g. innovation, investment climate, job creation, investment in human capital among many others).

To sum up, building on our accumulated knowledge on the sources of regional disparities, more effort seems essential to offer new solutions for decreasing the adverse effects of Turkish regional duality. While topics such as green growth, climate change, circular economy and innovation based digital transformation are receiving huge interests nowadays, application of all these batteries to regional level have roots with understanding the political economy of regions. Without proper investigation of discontent, clientelism and role of institutions at the regional level, even contemporary developments in the economic development theory will be threatened by the lack of effectiveness in the future.

References

Acemoglu, D., & Robinson, J. A. (2013). *Why nations fail: The origins of power, prosperity, and poverty*. Crown Currency.

Aksoy, T., Taştan, H., & Kama, Ö. (2019). Revisiting income convergence in Turkey: Are there convergence clubs?. *Growth and Change*, *50*(3), 1185-1217.

Anselin, L. (1995). Local indicators of spatial association—LISA. *Geographical analysis*, *27*(2), 93-115.

Charron, N., Lapuente, V., & Bauhr, M. (2024). The Geography of Quality of Government in Europe. Subnational variations in the 2024 European Quality of Government Index and Comparisons with Previous Rounds. University of Gothenburg, QoG Institute Working Paper Series, No: 2024:2.

Doğruel, F. (2013). Deindustrialization of old industrial regions in Turkey. *Rives méditerranéennes*, (46), 93-108.

Doğruel, F., & Doğruel, A. S. (2003). Türkiye'de bölgesel gelir farklılıkları ve büyüme. *Köse, AH, Şenses, F ve Yeldan, E.(der.) İktisat Üzerine Yazılar I: Küresel Düzen, Birikim, Devlet ve Sınıflar, Korkut Boratav'a Armağan içinde*, 287-318.

Filiztekin, A. (2018). Convergence across industries and provinces in Turkey. *Ekonomi-tek*, *7*(3), 1-32.

Karahasan, B. C. (2020). Winners and losers of rapid growth in Turkey: Analysis of the spatial variability of convergence. *Papers in Regional Science*, *99*(3), 603-644.

Karahasan, B. C., & Bilgel, F. (2019). Spatial distribution of healthcare access and utilization: do they affect health outcomes in Turkey?. *Middle East Development Journal*, *11*(1), 124-163.

Karahasan, B. C., & Bilgel, F. (2020). Market access and regional dispersion of human capital accumulation in Turkey. *Review of Development Economics*, *24*(3), 1073-1101.

Livert, F., & Gainza, X. (2018). Distributive politics and spatial equity: the allocation of public investment in Chile. *Regional Studies*, *52*(3), 403-415.

MIT (2024). Ministry of Industry and Technology, Socio-economic development index (SDI), https://www.sanayi.gov.tr/merkez-birimi/b94224510b7b/sege (last accessed on 19 July 2024).

Rey, S. J., & Janikas, M. V. (2005). Regional convergence, inequality, and space. *Journal of Economic Geography*, *5*(2), 155-176.

Rodríguez-Pose, A. (2018). The revenge of the places that don't matter (and what to do about it). *Cambridge Journal of Regions, Economy and Society*, *11*(1), 189-209.

UNDP (2023). 2023 Global Multidimensional Poverty Index, Unstacking global poverty: Data for high impact action, New York.

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