

# Vaccines for Votes

A case study examining the provincial disparities in the distribution of  
Covid-19 vaccines in Turkey



John Bahadır Sirin

# Abstract

How do governments allocate scarce resources in the face of political survival? Do they allocate according to social equity or welfare criteria, or do political concerns play a role? Over the course of three decades, the literature on distributive politics documented numerous cases where governments distributed goods and services strategically for electoral gains. By building on the theories of distributive politics, this thesis aims to investigate provincial disparities in Covid-19 vaccine distribution in Turkey. The investigation is undertaken in the context of Turkey, as competitive authoritarian regimes are argued to be more prone to politicize the allocation of public resources. To this end, this paper presents a single-case study and constructs a novel quantitative data set based on secondary data. Using OLS regressions, results show that even after controlling for socioeconomic factors, electoral concerns remain relevant predictors of the allocation of Covid-19 vaccines. In particular, while swing districts receive more vaccines, provinces with higher Kurdish populations receive fewer.

Keywords: Distributive Politics, Covid-19, Vaccines, Turkey, Elections

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# List of abbreviations

AKP - Adalet ve Kalkınma Partisi (Justice and Development Party)

HDP - Halkların Demokratik Partisi (People's Democratic Party)

MHP - Milliyetçi Hareket Partisi (Nationalist Movement Party)

OLS - Ordinary Least Squares

PKK - Partiya Karkerên Kurdistan (Kurdistan's Workers Party)

TRT - Türkiye Radyo Televizyon Kurumu (Turkish Radio and Television Institute)

YSK - Yüksek Seçim Kurulu (Turkey's Electoral High Committee)

WHO - World Health Organization

TUIK - Türkiye İstatistik Kurumu (Turkish Statistical Agency)

# 1 Introduction

Since its first occurrence in 2019, the Covid-19 pandemic has created numerous challenges to nations, devastated economies and incurred great human losses. The pandemic also poses a great threat to the stability of governments all over the world, as the global public is losing confidence in governments (Ipsos, 2021). As a result, vaccination programs have the potential to function as political survival tools. In other words, governments might consider political objectives, alongside welfare objectives, when distributing vaccines to their respective populations. While affluent countries have cleared the shelves for vaccines, many developing countries are struggling to meet local demand. This shortage begs the question: How do governments allocate scarce resources in the face of political survival?

Allocation of public goods remains a first-order challenge for governments across the globe. Do they allocate according to social equity or welfare criteria, or do political considerations play a role? For the past thirty years, a burgeoning literature has focused on distributive politics, i.e., the practice of targeting public resources to certain constituencies as to maximize electoral objectives rather than welfare objectives (Kramon & Posner, 2013). Studies of distributive politics, despite the variety in research designs employed and goods investigated, share an underlying assumption that politicians are primarily concerned with staying in power (Golden & Min, 2013). It is this desire that compels them to distribute goods and services strategically. Given the strategic utility of vaccines and the potential of political involvement in its distribution, I argue that incumbent governments, especially autocratic regimes, may distribute vaccines in order to increase their electoral gains. Yet, to date, no studies have investigated whether medical supplies, including vaccines, are used to maximize political ends.

The Turkish case provides a unique opportunity to lay the foundations of the first account of vaccine distribution through the lens of distributive politics. The Turkish government has been under great pressure in the last three years. Since 2018, the country has been in the midst of a devastating economic crisis. Covid-19 pandemic only aggravates the situation. The AKP's (Justice and Development Party) position has never been weaker. The discussions around snap elections intensify each passing day and the party's ability to address Covid-19 will have a great role in its

potential to survive these elections. To slow down the spread of the virus, the Turkish government initiated the Covid-19 vaccination program on 14 January (TRT Haber A, 2021). The first stage of the vaccination program, which includes health care workers and people older than sixty-five, was completed on 28 March (TRT Haber B, 2021). However, vaccination data shows stark disparities across provinces. Eastern provinces are lagging behind considerably in terms of the share of vaccinated adults. I argue that the present economic and political conditions that Turkey is facing intensify the need for tactical distribution of vaccines, particularly in the early stages due to the shortage. As Jablonski (2014) puts it, “While governments may care about economic development, disaster relief, or other development objectives, their first priority is to remain in power” (p.13). As Turkey is traditionally regarded as highly clientelist, it is expected to be more disposed to political manipulation of collective goods (Arslantaş and Arslantaş, 2020).

In particular, I argue that incumbent parties could influence the distribution of vaccines in favor of groups that are likely to respond to the delivery of vaccines by turning out and voting for them. Based on this literature, I ask the following research question:

Can theories of distributive politics offer an explanation for Covid-19 vaccine distribution in Turkey?

The theoretical literature on distributive politics offers several scenarios, three of which are more relevant for the case of Turkey. First, the government is expected to reward core provinces by providing them with more vaccines. Second, the government delivers more vaccines to swing districts where electoral competition is high. Last, the government is potentially denying vaccines to Kurdish regions in order to garner votes by instilling the fear of exclusion.

# 1.1 Purpose, Significance and Scope

## 1.1.1 Purpose

The purpose of this research is to explain the logic behind the initial inequalities in vaccine distribution across Turkish provinces. To this end, this thesis systematically examines the case based on a distributive politics framework. In addition, the thesis has three subordinate purposes:

1. To develop relevant hypotheses for Turkish context drawing on theories of distributive politics.
2. To collect data, construct a novel quantitative data set based on the theory and analyze the data through OLS regressions.
3. To test and reconnect the empirical results with the theory to inform on the applicability of a distributive politics framework for vaccine distribution in Turkey.

## 1.1.2 Significance

The importance of this thesis rests on three pillars. First, as Covid-19 threatens the wellbeing of everyone through economic and human losses, initial inequalities in vaccine distribution are of crucial importance. Any tactical distribution in this period, if not documented, will vanish in the dusty pages of history, leading to the overlooking of important inequalities.

Second, the distributive politics of wide-ranging topics, including healthcare spending, have been researched extensively more in other countries and to a limited extent in Turkey. However, no quantitative studies in distributive politics literature have investigated the distribution of vaccines.

## 1.1.3 Delimitation

There are two factors that determine the scope of this thesis, one obvious and one subtle. The apparent reason is space and time constraints. The subtle reason has to do with the significance of initial inequalities. In delimiting the scope, the thesis will focus solely on the first phase of vaccination; that is, the vaccination of healthcare workers and adults aged sixty-five and older, which, as presented above, have great importance.



## 1.2 Outline of the Thesis

The thesis is organized as follows. Section 2 provides an overview of Turkey, including its electoral institutions, recent authoritarian reversal, ethnic politics, and the Covid-19 crisis. In section 3, I present empirical literature on distributive politics and identify the gaps that this paper aims to fill. In Section 4, I introduce the theoretical literature on distributive politics. Section 5 presents the research hypotheses derived from the theories. Section 6 describes the methodology, research design, empirical strategy, data collection, and potential limitations. Section 7 presents the regression results and discusses their implications. Finally, section 8 provides suggestions for future research and concludes.

# 2 Background

## 2.1 Institutional Background

### 2.1.1 Electoral Institutions

The electoral system of Turkey is described as a party-list proportional representation system in which voters can only vote for the parties, while parties decide who will sit in the parliament. Moreover, there are 81 electoral districts that correspond to provinces. The allocation of the number of parliamentary seats to electoral districts is undergone through the D'Hondt method, implying that each electoral district is represented by the number of MPs proportional to its population (Luca & Rodríguez-Pose, 2015). In the last elections in 2018, the number of MPs elected from each province ranged between 1 (Bayburt) and 98 (Istanbul) (YSK, 2018).

For the general elections, 600 Members of Parliament are elected to the Grand National Assembly every five years (Çınar & Göksel, 2019). In order to gain seats in the parliament, a party should obtain more than 10% of the votes countrywide, resulting in some parties winning the majority votes in certain regions but not being able to return any MPs to parliament due to low results overall (Özgül, 2002). The exceptionally high threshold is argued to have been the principal barrier to Kurdish access to the political arena (Savran, 2020).

### 2.1.2 Electoral Competition in Turkey

In its recent form, Turkey is considered as a competitive authoritarian regime where competitive elections and authoritarian tendencies coexist (Castaldo, 2018). Compared to fully-fledged authoritarian regimes, it is argued that competitive authoritarian regimes are inherently unstable and vulnerable to electoral upsets due to the presence of electoral competition. In fact, AKP lost the majority of parliament in the June 2015 elections despite having significant resource advantages and media backing (Esen & Gümüşçü, 2016).

Moreover, according to the Database of Political Institutions (Keefer, 2007), a country is considered electorally competitive if multiple parties compete in elections and no party receives 75 percent of the vote. Since 1950, multiparty elections are held in Turkey and no single party has received more than 57 percent of the votes (Savut, 2020). This further suggests that Turkey is electorally competitive. Therefore, regime survival is dependent on electoral performance.

## 2.2 From a Flourishing Democracy to an Authoritarian Reversal

After it was founded in 1923, the Republic of Turkey held its first multiparty elections on 14 May 1950. Since then, the country has undertaken more than 16 multiparty elections. However, the international political and academic community has traditionally hesitated to label Turkey a “true democratic regime” due to frequent military coups, internal armed conflicts and human rights abuses (eds. Sayari and Esmer 2002 p.2). Nevertheless, since 1983, relative political stability and democratic elections have prevailed.

The Turkish political landscape after the 1980s was politically fragmented, shaped by increased electoral volatility (Hazama, 2003) and characterized as a party system of uncertainty (Sayari, 2002, p. 17). Particularly, during the 1990s, the Turkish governments consisted of short-lived coalitions. In this state of flux, the personalization of politics, which can be defined as the increased importance of politicians at the expense of political groups, became more prevalent, particularly in the eastern provinces (Luca & Rodríguez-Pose, 2015). This new trend, still relevant in today’s Turkish politics, paved the way for Erdogan’s party (AKP) to win the elections in 2002 and to remain in power ever since. The 2001<sup>1</sup> economic crisis also played a crucial part in the AKP’s rise to power, resulting from bad economic policies and political instability that had upset Turkey for a decade (Öniş, 2010).

The early years of the AKP government were accompanied by a surge in global commodity prices (Baffes & Haniotis, 2010). Through the combination of a favorable global economic climate and political stability brought by a single-party government, Turkey achieved significant economic

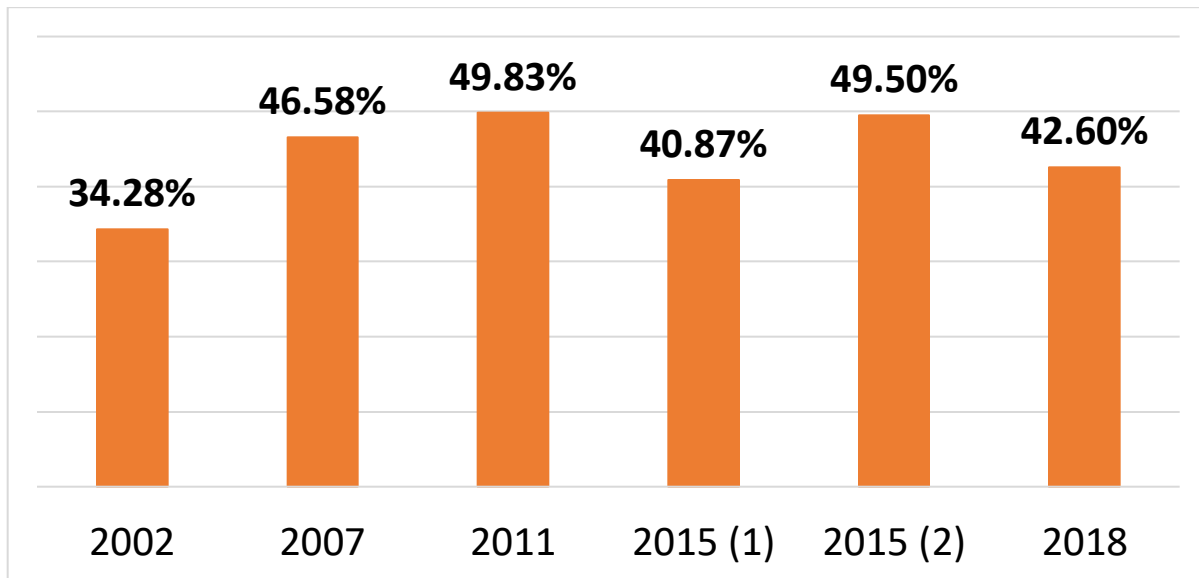
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<sup>1</sup> The Turkish economic crisis of 2001 was caused by a political feud between Prime Minister Bülent Ecevit and President Ahmet Necdet Sezer, which resulted in a twenty-billion-dollar loss.

growth under AKP's neoliberal economic policies. The Turkish economy grew around 6 percent annually in the years between 2002 and 2006. The economic success was complemented by a decline in poverty and inequality as well as an expansion of the middle class (Acemoglu & Ucer 2015). Moreover, in the mid-2000s, ethnic tensions were softened, and civil society grew stronger (Bayulgen et al., 2018). Turkey also showed a strong commitment to international institutions and embarked on political and economic reforms to become a full member of the European Union (Öniş, 2015). Arguably, both structural and external conditions were in place for democratic consolidation.

Yet, as of 2007, AKP began to show authoritarian tendencies fueled by regime survival instincts (Castaldo, 2018). With every challenge it faced, the Turkish regime moved further away from democratic principles. The first blow to AKP rule came in 2007, just before the presidential elections, when Military staff released an official statement criticizing the current government, particularly the weakening of the secular state of Turkey (Ocaklı, 2018). However, the military's attempt to meddling in politics only boosted the popularity of AKP. By the time of the 2008 financial crisis, the AKP already built a strong profile on economic growth, stability, and prosperity. AKP's core supporter base was formed during this period, attested by consecutive wins in mostly free and fair elections throughout the 2000s. The electoral victories provided a basis for AKP to change the political regime toward a more authoritarian one through influencing power dynamics within state institutions (Bakiner 2017, pp.27-32). In other words, gradual autocratization was realized through democratic means.

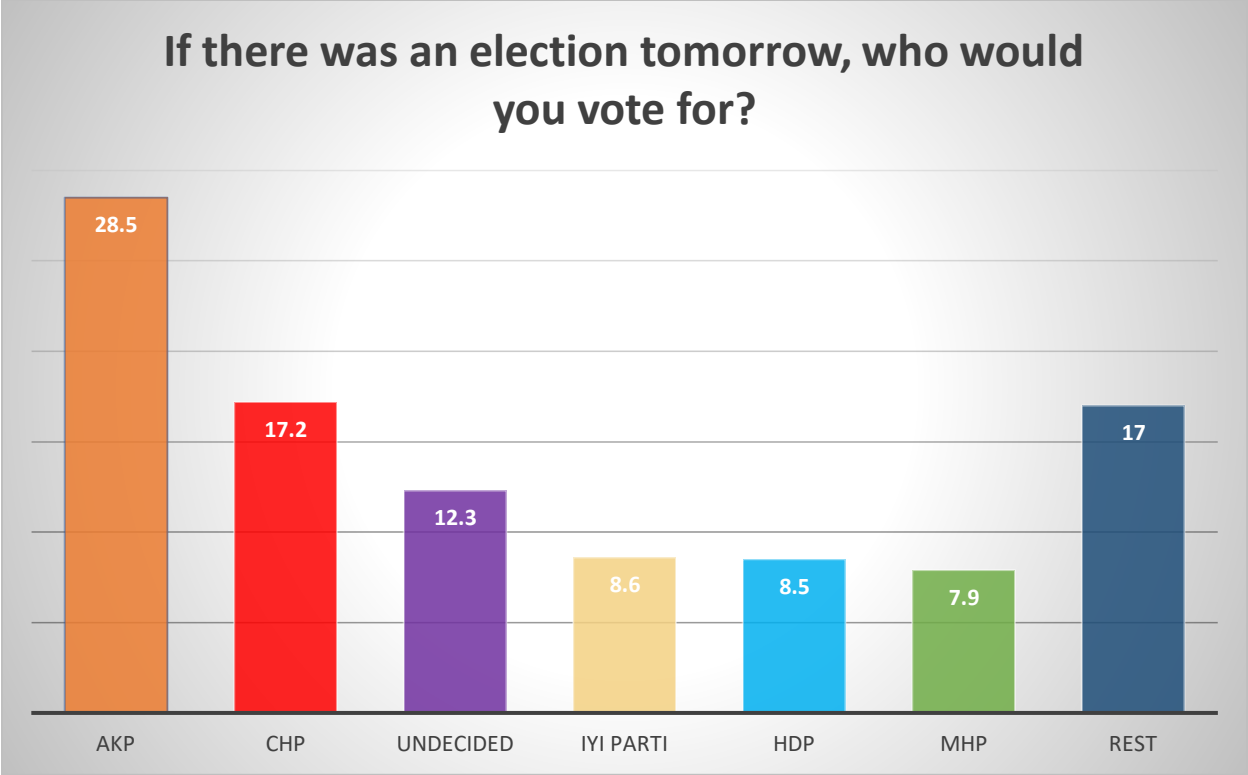
## 2.3 The Fall



*Figure 1: AKP votes in the last general elections.*

*Source: YSK 2018 (Supreme Election Council)*

AKP received its first electoral blow on 7 June 2015 elections where it lost parliament majority for the first time since 2002. From that point on, the political landscape shifted dramatically in favor of the AKP, and political opponents, particularly Kurdish democracy activists, have become subject to intense political pressure (Kemahlioğlu, 2015). Despite increasing its executive power and grip on society, AKP's loss of momentum persisted. In the 2018 general elections, AKP was compelled to join forces with the nationalistic MHP. Although the coalition won the elections, the party has lost votes in the strongholds, including Erzurum, Bayburt, Sivas, Konya, Kayseri, and Erdogan's hometown Rize. The decline in the votes was as steep as 16%. AKP's underperformance continued in the 2019 local elections. Erdogan's party has lost a dozen cities, including Ankara and Istanbul, both of which had been ruled by the incumbent for the last 20 years (KONDA, 2018).



*Figure 2: Vote Shares according to Metropoll Survey*  
*Source:Metropoll (2020)*

Given that citizens choose AKP for two key reasons: "successful public services" and "economic and political stability" (Uncu, 2018), pandemic-induced pressures on public services and the rampant economic crisis<sup>2</sup> further damage the government's position. Recent polls show that the party is losing popularity even in strongholds, whose vote share has plunged to an all-time low of 28 percent (Metropoll, 2020). The current situation casts doubt on President Erdogan's ability to rule. Discussions around snap elections are gaining increasing popularity. Therefore, Erdogan needs to perform well during the Covid-19 crisis to win the hearts and minds of the -at least some- citizens again.

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<sup>2</sup> The 2018-2021 Turkish Currency and Debt crisis is an ongoing financial and economic crisis caused by President Erdogans' interventionist monetary policies.

## 2.4 Ethnic Politics and Kurds

Since its founding, the Turkish Republic has had a problematic relationship with Kurds who live in the southeast parts of Turkey. In the initial years, the government attempted to assimilate Kurdish regions, which was a part of broader ethnic and linguistic homogeneity policy to establish a “nation-state”. While the Turkish Republic successfully integrated Muslim migrants from the Caucasus and the Balkans, the policy failed miserably for the Kurdish populations (Tezcür & Gürses, 2017). In one regard, this lack of integration made the Turkish state reluctant to invest in the region. Historically, eastern regions where Kurdish populations concentrate received fewer public resources (Çelebioğlu and Dall’erba, 2010). The government’s lack of willingness to industrialize and the subordination of eastern regions in public investment was argued to be one of the main drivers that initiated an armed rebellion against the Turkish government (Belge, 2011).

Kurdish provinces first became electorally important in 1950, when Turkey transitioned into a multi-party system. The political elite began to understand the electoral value of Kurdish regions. To this end, the local elite was employed to mobilize the voters in the region (Nergiz, 2019). In recent years, the Kurdish issue has also constituted crucial importance to AKP, who also had an unsteady relationship with Kurds. While at the beginning of the party’s rule, AKP was able to attract votes in the region, AKP’s popularity began to diminish after the 2011 elections as independent Kurdish candidates appealed to voters in the region (Satana, 2012). The relationship with Kurds completely broke down after the pro-Kurdish party HDP (Halkların Demokratik Partisi) achieved an unprecedented 13% of the national vote on 7 June 2015 elections and posed a direct challenge to Erdoğan’s hegemony (Christofis, 2019).

Following the elections, AKP was accused of purposely ending the solution process<sup>3</sup> by instigating a clash between the Turkish Armed forces and Kurdistan Worker’s Party (PKK) to win back nationalistic voters and pacify the ascendant position of HDP (Özpek, 2019). The Turkish government launched a military attack on several Kurdish provinces, including Diyarbakır and Şırnak, where HDP received more than 75 percent of the vote. During the armed conflict, many civilians lost their lives. This severe punishment of the regions led to an around 3 percent decrease

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<sup>3</sup> The solution process was a peace process aimed at resolving the Kurdish-Turkish conflict lasting for over 30 years.

in the HDP votes in the next elections (Özpek & Mutluer, 2016). In particular, HDP lost around 9 percent in Diyarbakır, which is one of the prominent strongholds of the party (YSK, 2015).

## 2.5 Covid-19 and Government Response

Covid-19 is taking a heavy toll on Turkey. Since the first confirmed case of Covid-19 on March 11, 2020, the number of positive cases has increased rapidly. On April 19, 2021, around four and half million covid-19 cases have been reported, and more than thirty-eight thousand have lost their lives (WHO, 2021). However, the Turkish government has been criticized for manipulating Covid-19 related data, particularly mortality rates. While there has been a spike in non-covid death rates in 2020 and early 2021, Covid-19 related mortality rates have been stable despite an increased spread of the virus. The situation in Turkey has been argued to be worse (Öç & Ersöz 2020).

The Turkish government began vaccinating on March 14. Turkey purchases its vaccines from China. Vaccines are first received by the Ministry of Health and then consigned to provinces (TRT Haber, 2021). The Ministry of Health devised a vaccination plan which comprises four stages. On March 28, the first stage has been completed in which healthcare workers and adults aged sixty-five and older were targeted (A.A, 2021). Individuals need to book an appointment to get a vaccination which takes place in hospitals and health centers. (Öztürk, 2021a). Turkey's need for vaccines has been estimated to be around hundred twenty million. However, the government was only able to secure fifty million vaccines (Öztürk, 2021b).



# 3 Literature Review

## 3.1 Distributive Politics

Politics is, as in Harold Laswell's words, about "who gets what, when, and how". (1936, p. 1). Politics resolve how resources are allocated. This, in fact, implies that distributive politics, which examines the allocation of government goods and services, is at the center of politics. Studies of distributive politics address questions such as who gets more and who gets less, who is targeted or prioritized, and who is excluded or subordinated. A common approach to study this is how incumbents concentrate the benefits in geographically specific constituencies while dispersing costs across all voters (Weingast et al. 1981; Golden & Min, 2013).

The distributive politics literature mostly studies democratic political systems. However, in recent years, competitive authoritarian regimes have also gone under scholarly investigation. The reasoning behind studying such regimes is that in competitive authoritarian regimes, although they are weakened, democratic institutions still constitute the primary ways to acquire political power (Levitsky & Way, 2002).

The research has reported several patterns in allocating government goods and services that distinguish democratic from semi-democratic regimes. Across the national territory, the government goods and services are distributed more equitably in democracies. Democratic regimes offer more healthcare (Ruger, 2005) and basic education (Stasavage 2005), and provide wider access to electricity (Min 2015, p.153). Democracies are also better at redistributing the surplus than competitive authoritarian regimes, whose leaders are more prone to extract rents (Lake & Baum 2001).

Studies of distributive politics, despite the various research design employed and dependent variables examined, share a common presumption that politicians seek reelection. Therefore, virtually all studies in this line of research highlight the importance of electoral incentives. Distributive politics literature studies these incentives under four specific classes of work. The first group of studies investigates whether incumbents target goods to swing or core voters. An extension of this line of work analyzes the government allocation at the district level. It asks

whether core or swing districts receive more public goods. The second group of studies scrutinizes whether certain population subgroups -identifiable by ethnicity- receive disproportionately more or less public goods. Another group of studies inspects how the allocation is timed with respect to the electoral cycles. A final set of studies investigates the electoral payoff to these tactical distributions (Golden & Min, 2013).

Despite the variety and richness of the distributive politics literature, a common thread can be presented, which revolves around the question of who benefits from government allocation decisions. As a result, it's vital for scholars to identify the voter groups that benefit from government policies. For this, tangible evidence on recipient groups is collected and tested against the theoretical expectations regarding which groups should benefit from government policies (Posner & Kramon, 2013).

## 3.2 Empirical Studies

As presented, political favoritism takes many forms. The types of favoritism this thesis investigates are swing and core districts, as well as ethnic favoritism and punishment. For reasons of space, this section will only present empirical evidence for the most relevant aspects.

### 3.2.1 Swing vs Core Districts

One of the critical debates in distributive politics is on whether government allocation targets swing or core districts. While a swing district is an electoral district where the vote differential is small, core districts are party strongholds where the vote for the ruling party are high (Vaishnav & Sircar, 2010). So far, the empirical studies have generated mixed results (Stokes, 2011). In support of the swing district hypothesis, Dahlberg and Johansson (2002) show that municipalities with a tight race in the last election received more money in central government grant programs in Sweden. Magaloni (2006) finds that in Mexico, the incumbent PRI channeled more funding to highly contested municipalities (p.102). Similarly, Weitz-Shapiro (2006) reports that swing districts benefited more from the distribution of unemployment compensation in Argentina. Kwon (2005) shows that in South Korea, competitive provinces received a larger number of subsidies

from the central government. Ward and John (1999) find that swing districts received more grants from the central government in England.

There is also a set of studies supporting the core district hypothesis. In Argentina, Calvo and Murillo (2004) find a strong positive correlation between the incumbent party's vote share and expenditures financed by the federal state. Similarly, Giraudy (2007) reports that Peronist (incumbent) governors enjoyed a greater proportion of employment programs in Argentina. In Mexico, Diaz-Cayeros et al. (2016) find that traditional strongholds of the incumbent PRI received larger funding from Pronasol (Mexico's National Solidarity Program) (pp. 88-92). In South Korea, Horiuchi and Lee (2008) present that a larger amount of pork-barrel benefits were directed towards the incumbent president's strongholds. In India, Arulampalam et al. (2009) report that the central government targeted grants to core states. On the other hand, Schady (2000) finds that in Peru, compared to opposition strongholds, a disproportionately larger share of Peruvian Social Fund (FONCODES) was channeled to both core and swing districts.

### 3.2.2 Ethnic Favoritism and Punishment

Another group of studies investigates whether ethnicity influences the distribution of government goods and services. Scholars often employ preexisting literature on clientelism, patronage politics, and patrimonialism (eds. Kitschelt & Wilkinson 2007, p.4). Studies in this line of research attempt to identify the social groups that are likely to be favored by drawing on the prior knowledge of the particular setting. This effort yields a wide range of empirically essential elements, including history, culture and religion, caste and ethnic affiliation, and characteristics of government institutions (Golden & Min, 2013).

In their study of public goods provision in Kenya, Miguel and Gugerty (2005) found that local ethnic diversity accounts for the sharp decrease in local school funding and the quality of school facilities in a sample of 84 schools. Moreover, ethnically diverse communities receive 20% less funding per pupil than schools in homogenous communities and are 6 % less likely to have functioning water well. In their cross-country study of 18 African countries, Franck and Rainer (2012) find that co-ethnics of the leaders received more education spending. In India, a study reports that lower caste voters received larger portions of government spending in states where the government is controlled by political parties representing lower-caste voters (Teitelbaum &

Thachil,2010). In Kenya, Jablonski (2014) find that more aid funding is channeled to co-ethnics of the incumbent. Conversely, based on data from 30 African nations, Kasara (2007) find that co-ethnics of the head of the state pay higher agricultural taxes. Egel (2013) similarly reports that in Yemen, the central government provided higher educational resources to districts with higher tribal diversity.

### 3.2.3 Empirical Evidence from Turkey

Scholarly literature has long viewed Turkey as a kleptocratic country where the strategic distribution of public goods has been exploited to attract votes and retain power (Heper & Keyman, 1998). Ulubaşoğlu and Yaraşır-Tülümce (2019) report that between 1987 and 2004, Turkish right-wing governments channeled more public investment to core voter regions. According to Kemahlıoğlu (2012), in the AKP era, Turkish parties continued to employ patronage-based politics (pp.13-14). Marschall et al. (2016) show that the municipal district where AKP's vote share is higher received more housing investments. On the other hand, Aytaç (2014) finds that between 2005 and 2008, AKP government directed more CCT (Conditional Cash Transfer) funds to districts where the main opposition party was ideologically similar. Evidence regarding ethnicity also shows that eastern regions where Kurdish populations concentrate received fewer public resources (Çelebioğlu & Dall'èrba, 2010). On the other hand, Yörük (2012) finds that the Turkish government directs more social assistance to the regions where Kurdish unrest is present.

## 3.3 Research Gap

The review of the literature highlights several gaps in the literature. There has been no research on the distribution of Covid-19 vaccinations and medical supplies in the field of distributive politics. This thesis aims to fill this gap by providing the first account of the research that problematizes the spatial distribution of Covid-19 vaccines. Second, competitive authoritarian regimes such as Turkey are heavily underexplored in the distributive politics literature. Third, despite its growing influence as a key regional power, Turkey's coverage in scientific literature is low (Luca & Rodríguez-Pose, 2015). This thesis, therefore, aims to fill these gaps by answering the following research question:

Can theories of distributive politics explain the distribution of Covid-19 vaccines in Turkey?

# 4 Theoretical Framework

Why do governments distribute public goods and services disproportionately? What compels them to do so? At the foundation of distributive politics lies two assumptions of democratic accountability that are first, the strong desire of the political elite to retain the office and second, voters' ability to hold them accountable, meaning if the government underperforms, it will be penalized through elections (Dewan & Shepsle, 2011). It is this survival instinct that compels incumbents to influence the electoral decisions of voters. (Golden & Min, 2013). Distributing government resources is essential to reach such outcomes, as allocation of resources can buy or consolidate votes (Cox 2010, p.346).

Politics of distribution follows a similar logic in competitive authoritarian regimes in which, on top of seeking reelection, political elites are also interested in accumulating rents and other material benefits. As politicians' ability to maximize payoffs relies heavily on their ability to maintain political power, officeholders are assumed to desire reelection to reap the benefits of the office and pursue their policy agenda to ensure regime consistency (Shehaj, 2019). Therefore, assumptions of distributive politics are more pronounced for competitive authoritarian regimes.

## 4.1 Swing vs Core

Building on Cox and McCubbins (1986) and Lindbeck and Weibull (1987), Dixit and Londregan (1996) provides a formal model that lays the theoretical micro-foundations for studies of distributive politics. The model investigates which type of voters receive distributive benefits. In this model, there are two spatially arrayed political parties, one left-wing and one right-wing, compete for votes in a single electoral district where allocations are made across a group of voters. Voters are modeled as having ideological preferences and receiving utility from the benefits granted. According to the model, a voter will favor the party that is further from his ideological position if it provides him with a sufficient material benefit to break his ties with his own party. This implies that votes can be "purchased" through distributive benefits; that is, material incentives can shift voter preferences despite their ideological commitment to a party.

Depending on the transactional costs associated with such exchange, Dixit and Londregan's (1996) model either leads to a "swing voter" strategy, in which incumbents target voters who do not have strong candidate preferences (buy), or a "core voter" strategy, in which incumbents target their supporters (cement). The model is predicated on an underlying assumption that, compared to either core or opposition voters, swing voters are more responsive to material benefits, which means that a voter with weak ideological ties (swing voter) could be swayed to vote for a given party in exchange for a smaller material benefit. In contrast, both core and opposition voters are assumed to have stronger party attachments, thus constituting a higher price for "vote buying" (Cox & McCubbins, 1986; Lindbeck & Weibull, 1987).

For the swing voter hypothesis, as voters with strong partisan attachments— i.e., core or opposition voters - require higher material benefits to change their voting preferences, marginal utility in investing them becomes lower (Lindbeck & Weibull, 1987). On the other hand, parties also do not need to spend valuable resources on core voters because it is assumed that owing to their loyalty, core supporters will vote for the party regardless (Dixit & Londregan, 1996). Hence, it suggests that parties will channel resources to swing voters to ensure that the return for their investment is maximized.

In the case of the core voter hypothesis, Cox and McCubbins (1986) assume that politicians are risk-averse. Hence, uncertainty is an essential part of allocation decisions. Since it is not clear whether swing voters could be enticed into voting for their party, politicians turn to less risky investments, namely core voters. Similarly, Dixit and Londregan (1996) suggest that parties target their supporters when there is ample information regarding their voters (core voters). The reasoning for distributing benefits to core voters is that the benefits can be precisely targeted. Meanwhile, allocating benefits to swing voters poses a greater risk because not all the targeted voters will vote for the benefactor (Dixit & Londregan, 1996).

While originally Dixit & Londregan's (1996) model is formulated for individual voters in a single district, the results of this are easily adapted to electoral districts to study the distribution across districts (for instance, provinces, in the case of Turkey). This line of research studies whether swing districts or core districts benefit from the allocations. However, in applying these theories,

it is vital to realize the distinction between voter groups and districts (Cox 2010, p.350). While swing districts can be defined as constituencies where the margin for victory or loss is small (closeness in elections), core districts are party strongholds where incumbents win by a landslide (Golden & Min 2013; Ward & John, 1999).

According to the swing district hypothesis, utility-maximizing politicians should prioritize districts with higher electoral productivity, meaning that they will invest in districts where marginal increases in material benefits can yield greater results. As Cox (2010) puts it: “ doing a bit better in a swing district can ... make the difference between losing and winning a seat” (p.346).

On the other hand, the core district hypothesis posits that strongholds of the governing party should receive the most material benefit. Diaz-Cayeroz et al. (2016) argue that the partisan loyalties of the supporters are conditional and hinges on continuity of material benefits (pp.23-25). From this perspective, the loyalty of voters is gained not only through material benefits delivered today but also through the expectation that benefits will be delivered in the future. Therefore, a party shall prioritize its core electorates to ensure that elected officials deliver on the promise rather than undertaking politically risky electoral investments (Cox and McCubbins, 1986).

## 4.2 Ethnic Favoritism and Punishment

A line of work within distributive politics investigates whether the allocation of public goods and services is affected by ethnic favoritism. The reasoning behind ethnic targeting corresponds to the core voter hypothesis. First, incumbents are claimed to target their co-ethnic supporters because ethnicity enables incumbents to quickly identify, monitor, and reward their supporters, rendering the exchange cheaper and more efficient (Brinkerhoff & Goldsmith, 2002). Second, risk-averse politicians might find investing in co-ethnics less risky because they are more likely to vote for the politician in exchange for material benefits (Frank & Rainer, 2012).

On the other hand, a group of studies focuses on ethnic punishment, which refers to incumbents strategically excluding particular groups from distributive benefits to keep them under control. As Cowen and Kanyinga (2002) argue, the fear of losing access to public resources pressures voters

to support the ruling party (p. 132). Similarly, Padró I Miquel (2007) argues that voters from ethnic groups with limited institutional access are compelled to vote for the incumbent party out of fear of future exclusion. Irrespective of any explanation as to why ethnicity is politicized, it is vital to understand that ethnicity plays a crucial role in the logic of distributing resources. While it is assumed that political parties are the bonding agent between politicians and voters, in much of the developing world, ethnicity is the link that governs the dynamic between voters and politicians (Knoesen, 2009).



# 5 Research Question and Hypotheses

This thesis develops a resource allocation model based on theoretical literature to analyze whether electoral concerns influence vaccine allocation. The model includes electoral concerns as key allocation criteria and socioeconomic factors as control. Here, I model vaccination as driven by:

$$\text{Share of vaccination} = f(\text{electoral concerns, socioeconomic factors}) \quad (1)$$

I assume that the Turkish government is driven by ‘tactical political redistribution’ in the spatial allocation of vaccines.

Based on the research question, the theoretical literature, and the Turkish context, I propose three hypotheses:

**Hypothesis 1:** Core provinces receive disproportionately more vaccines.

**Hypothesis 2:** Swing provinces receive disproportionately more vaccines.

**Hypothesis 3:** Provinces where Kurdish populations concentrate receive disproportionately fewer vaccines.

These hypotheses are derived from distributive politics literature, which has repeatedly demonstrated how politicians utilize the distribution of public goods and services to boost their chances of re-election.

# 6 Methodology

In this section, the employed research design and method will be explained and motivated. Possible limitations will also be discussed.

## 6.1 Research Design

The aim of this thesis is to investigate the empirical relationship between electoral concerns and vaccine distribution on sub-national levels in Turkey. To this end, this thesis is framed as a quantitative case study akin to many others in the distributive politics field. The advantages of the case study design are well suited to the goal of this research. A case study is a thorough and in-depth examination of a single case, enabling the researcher to unravel its intricacy and grasp its unique nature (De Vaus 2001, p.220). To put it another way, a case study enables the researcher to investigate a phenomenon (distribution of vaccines) in its actual setting (Turkey). (Punch 2005, pp. 144-145). Following De Vaus (2001, p.231), case study designs are particularly suited to situations involving a small number of cases with a large number of variables. In addition, case study design can work with a variety of data sources and collection methods (Punch 2005, p.145). As this thesis aims to analyze a wide range of data, this further motivates the selection of the case study design. Moreover, the theory testing nature of this study renders case study design more favorable, as this approach is viewed as being at the heart of case studies (De Vaus 2001, p.221; Lijphart, 1971).

The case study design is not devoid of limitations. While case studies might obtain commendable internal validity by delivering a deep grasp of a case, their lack of external validity has been pointed out. It is asserted that a deep grasp of a case does not provide a strong foundation for generalizing beyond that case, meaning it cannot be representative of a larger universe of cases (De Vaus 2001, p.237). This concern is also brought up by Punch (2005, pp.145-147) and Bryman (2012, p.69). Therefore, it needs to be addressed. This thesis does not aim to generalize its findings or refute the theory. Rather, it intends to test the hypothesis drawn on distributive politics literature and develop an idiographic explanation that seeks to explain a case completely (De Vaus 2001, p.233). If the findings of this thesis do not match the theoretical expectations, I aim to explore, through a

meticulous analysis of the case, why the predicted outcome did not eventuate. Ultimately, this thesis will provide a deeper understanding of the distribution of public resources in Turkey.

## 6.2 Operationalization

In order to test my hypotheses, the overall percentage of vaccination (dependent variable) to each province is regressed on its potential political and socioeconomic determinants (independent variable). The unit of analysis will be Turkish provinces (NUTS III level) because of four reasons:

- 1) Vaccination data is recorded at this level.
- 2) Electoral districts coincide with this level.
- 3) Data on dependent variables is recorded and available at this level.
- 4) Provincial level is the administrative partition between the central state and local municipalities.

Following the literature and the theoretical discussion of Section 4, the empirical model adopts the following form:

$$Y_i = \beta_1 P_i + \beta_2 X_i + \alpha_i + \varepsilon_i \quad (2)$$

where (i signifies provinces);  $Y_i$  is the share of the vaccinated population in each province;  $P_i$  and  $X_i$  are, respectively, vectors of electoral and socioeconomic factors and  $\varepsilon_i$  is the error term. The dependent and the explanatory variables are described in the following subsections.

## 6.3 Variables

### 6.3.1 Dependent Variable

***Share of the vaccinated population:*** Percentage of the vaccinated population in each province. Both Ministry of Health and TurCovid19 provides the number of vaccinated individuals per province and, the data is updated daily. I collected the data for the 28th of March since it was the date when the first stage of vaccination (health care workers and adults aged sixty-five and older) was completed. In order to obtain the percentage per province, population data through the Turkish Statistical Agency (TUIK) is also collected.

### 6.3.2 Explanatory Variables

The initial examination of the data reveals significant disparities in vaccine distribution between provinces. While the disparities might be due to the vaccination schedule set by the ministry of health, the theory of distributive politics would highlight the incentives behind the allocation based on political and electoral concerns. To this end, I will employ the following explanatory variables derived from the theoretical literature:

1. ***Incumbent's vote share***
2. ***Competition***
3. ***Kurdish Ethnicity***
4. ***Malapportionment***

***Incumbent's vote share:*** Political clout of provinces can be gauged by the percentage of party vote share at general elections (Luca & Rodríguez-Pose, 2015). I include the incumbent vote share in the last election (2018) to be able to test the core district hypothesis (Vaishnav & Sircar, 2010).

***Competition:*** The variable was created by taking the negative value of the absolute difference between the incumbent's and main opposition party's vote shares in the last elections (2018) (Vaishnav & Sircar, 2010). The swing district hypothesis would predict a positive relationship between Competition and vaccination.

***Kurdish Nationalism:*** Since 1965, the Turkish state does not collect data on the provincial dispersion of Kurdish ethnicity (Tezcür & Gürses, 2017). Therefore, the vote share of the pro-Kurdish party (HDP)<sup>4</sup> in the last elections will be utilized to proxy for Kurdish nationals. Based on the Turkish government’s relationship with Kurds and theoretical literature examining the distribution of public goods to ethnic groups, I expect a negative relationship between vaccination rates and Kurdish Nationalism.

***Malapportionment:*** This variable is based on the ratio between the number of seats allocated to each province and the total number of voters (everyone older than eighteen as a proxy). With this variable, I aim to gauge the electoral productivity, which depends on how many votes are needed to win a seat. Thus, it measures the profitability of investing in a constituency. I expect fewer vaccines to the provinces with higher malapportionment ratio as the provinces with higher malapportionment offers government a more profitable “investment”, meaning government can relatively allocate fewer resources to gain more seat in provinces with high malapportionment ratio.<sup>5</sup>

### 6.3.3 Socioeconomic Control Variables

***Per capita GDP:*** The ratio between provincial population and GDP. This variable is employed to proxy for the level of economic development of provinces. This variable is also utilized as a proxy for infrastructure, as there is no provincial data on infrastructure that might explain the provincial disparities in vaccine distribution through accessibility issues.

***Share of adults aged sixty-five and older:*** This variable is the ratio between adults aged sixty-five and older to the total population. Adults aged sixty-five and older are one of the prioritized groups in the first stage of the vaccination program.

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<sup>4</sup> HDP is the biggest pro-Kurdish party that consistently wins seats in the parliament.

<sup>5</sup> Let’s imagine two cities: A and B. City A has a population of sixteen individuals and two MPs and city B has twenty individuals and 5 MPs. While the A’s malapportionment would be eight, the B’s would be four. To win a seat in city A, a party would end up investing in eight voters, while in city B, four would make do.

**Educational attainment:** This variable is the share of individuals older than fifteen that completed at least primary school in a province, as a proxy for the level of education in each province. The literature on vaccine hesitancy in Turkey reports that an individual is more likely to get vaccinated if she attended a primary school (Türkay et al., 2017). Thus, primary school is selected as a threshold.

**Rural population:** The percentage of the provincial population dwelling in rural areas. I expect that rural areas have less access to health centers which might affect the vaccination rates.

**Per capita health center:** The ratio between health centers and provincial population. The vaccination takes place in both public and private health centers. Certain provinces might have a greater capacity to vaccinate faster. Therefore, a comparison between provinces is necessary.

**Per capita healthcare worker:** The ratio between healthcare workers and provincial population. Health care workers are one of the two prioritized groups in the first stage of vaccination program.

## 6.4 Sample and Data Collection

The analysis employs a cross-sectional data set covering 81 Turkish provinces. The data on vaccination per province was compiled from the Ministry of Health and TurCovid19. Electoral data for both *Incumbent's vote share* and the pro-Kurdish party's vote share for the latest elections (2018) was gathered from YSK (Turkey's Electoral High Committee). In the case of Malapportionment, while data on adults aged eighteen and older were collected from TUIK, the data for the number of MPs per province was obtained from YSK. For the *Competition* variable, the main opposition party's vote share was also collected from YSK.

Data on the provincial population was obtained from the Turkish Institute of Statistics (TUIK). Data on *provincial GDP*, number of health care workers per province, number of hospitals per province, *Rural population*, *Educational attainment* and *Share of adults aged sixty-five and older* are also collected from the TUIK. All of the data for socioeconomic variables is from 2019 and 2020 because it is the most recent year with recorded information on all the variables. A summary of the data sources and summary statistics for each variable are provided in Appendices 1 and 2.

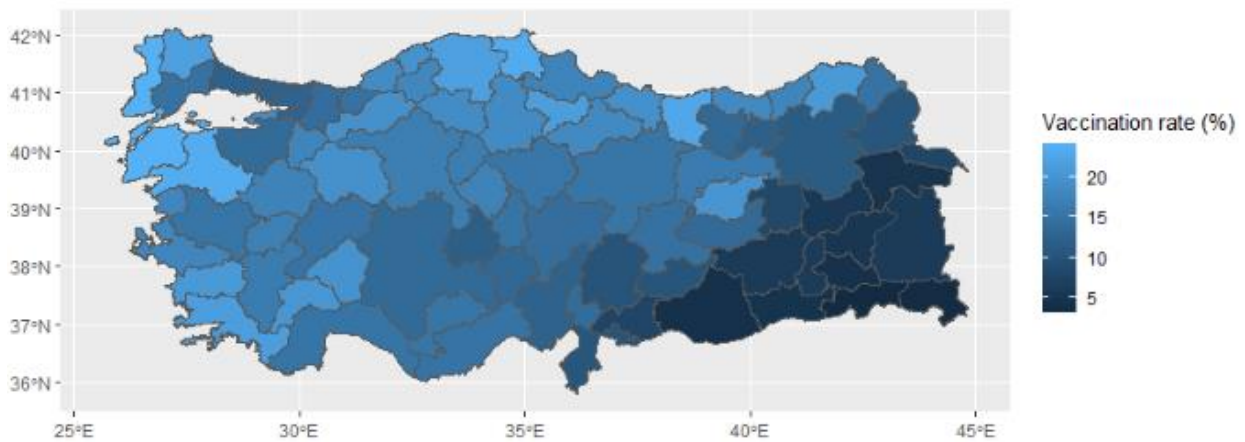
Furthermore, there was no need for an interpreter at any point during the data collection process since Turkish is my native language.

## 6.5 Data and Method Limitations

A critical and independent analysis of the data should acknowledge potential biases and weaknesses of the secondary data since the researcher does not have control over how data was collected. Although the reliability of some of the variables should be questioned, the risk that data errors systematically would co-vary with both my dependent and independent variables of main interest, which would cause a bias in the estimates, is arguably small. Nevertheless, this research counters this complication by using a vaccination database (TurCovid19) created by a group of independent researchers. Moreover, for quantitative methods, it is argued that when a complex subject is simplified to a numerical indicator, a gap between theory and reality arises (Coppedge 2012, p.258). To partly offset this weakness, this study paid close attention to the Turkish setting when formulating hypotheses and collecting data.

## 7 Results

In what follows, I present regression results to explain variation in the distribution of vaccines with the explanatory variables I presented in the previous section. By doing so, I will be able to inform whether theories of distributive politics can offer an explanation for vaccine distribution in Turkey.



*Figure 3: Vaccination Rates across Provinces*

*Source: TurCovid19, 2021*

All of the three models are statistically significant; see Appendix 3 for details. In Table 1, I present the estimates of the impact of political and socioeconomic factors on the distribution of vaccines using ordinary least squares (OLS) regression. Column 1 shows the results of the regression on the four political variables only. Column 2 reports the results for socioeconomic factors and Column 3 accounts for results of the full model, which is the model of preference.



**Table 1.** The Impact of political and socioeconomic factors on the *Share of the vaccinated population*.

	(1) Political	(2) Socioeconomic	(3) Full Model
Incumbent's vote	-0.276*** (0.0215)		-0.118*** (0.0196)
Kurdish nationalism	-0.318*** (0.0215)		-0.107*** (0.0179)
Competition	-0.0728*** (0.0260)		-0.0127 (0.0109)
Malapportionment	-0.00000746** (0.00000289)		-0.00000144 (0.00000118)
Per capita GDP		0.000350*** (0.0000953)	0.000112 (0.0000837)
Rural population		-0.0333*** (0.00855)	-0.0138 (0.00785)
Per capita health centers		-3.780 (7.328)	-7.288 (5.880)
Per capita workers		2.303 (1.604)	3.640*** (1.287)
Educational attainment		0.0406 (0.0578)	0.00264 (0.0473)
Share of old population		1.276*** (0.0577)	1.012*** (0.0705)
cons	31.62*** (1.824)	-3.606 (2.715)	10.04*** (3.130)
N	81	81	81
R-squared within	0.766	0.946	0.969
ymean	14.74	14.74	14.74

Standard errors in parentheses

\*\* p<0.05, \*\*\* p<0.010

## 7.1 Model-1 Political Factors

The first model only tests the political variables to investigate the three hypotheses proposed based on the theoretical literature and the Turkish context. All four variables that capture different political motivations are statistically significant. The model explains 76.6% (R-squared) of the variation in vaccination percentages across provinces.

Starting from the core and swing voter hypotheses, which, in the case of Turkey, implies that vaccines disproportionately should be distributed to core or swing provinces, the results contravene one another in terms of *Incumbent's vote share* and *Competition*. In the case of the incumbent party's (AKP) vote share, the negative coefficient implies a negative relationship between the vote share of the AKP and the *Share of the vaccinated population*. Holding other variables constant, a one-point increase in the *Incumbent's vote share* - a one-point / one unit increase means going from 0% to 100% of AKP-votes - is expected to decrease the *Share of the vaccinated population* by 27,6 percent. The second variable, commonly used in the literature, namely the competitiveness of an electoral district (*Competition*), also negatively affects vaccination rates. As a district becomes highly competitive, vaccination rates tend to fall. These results lend support neither to the core district hypothesis or the swing district hypothesis.

Following from the ethnic punishment hypothesis, which, for the Turkish case, expects provinces with higher Kurdish populations to receive fewer public goods, the initial results match with the theoretical expectations. The variable *Kurdish nationalism* features a negative coefficient in the regression. As the vote share of the pro-Kurdish party increases, vaccination rates decline. A one-unit increase in the pro-Kurdish party's vote share results in a decrease of almost 32 percent in the vaccination rate. In line with the distributive politics literature, ruling parties should be concerned with maximizing electoral productivity, meaning in the Turkish case, they should receive the highest return for their "vaccine investments". I add *Malapportionment* to better cover this aspect of the theory. Expectedly, the coefficient of *Malapportionment* is negative and statistically significant, suggesting that incumbents target electorally profitable areas.

Although the first model presents a first outlook of the data, one should always be cognizant of the risk of omitted variable bias when engaging in quantitative research (Clarke, 2005). This is particularly relevant for Kurdish nationalism. According to a study on Kurds by KONDA (2010), while there are 32 juveniles for every 67 adults in Turkey, this ratio drops to 58 adults for every 42 juveniles in Kurdish enclaves, implying that provinces with higher Kurdish populations may have younger demographics. Indeed, according to TUIK (2020), southeastern provinces, where Kurdish populations concentrate, have the youngest populations. This ultimately affects the vaccination rates negatively, given that the vaccination roll-out follows the intended schedule. Furthermore, vaccination rates could be influenced by access to vaccination, education level, and the groups prioritized according to health criteria (health care workers and adults aged sixty-five and older). In order to limit concerns of omitted variable bias, in the following models, I control for socioeconomic factors.

## 7.2 Model-2 Socioeconomic Factors

The coefficients for socioeconomic factors are shown in table 1, column 2. In model 2, three out of six variables are statistically significant. These are *Per capita provincial GDP*, *Rural population* and *Share of adults aged sixty-five and older*. Model 2 explains around 94 percent of the variation in vaccination roll-out across provinces.

Expectedly, the *Per capita GDP* variable has a positive coefficient sign, i.e., a positive relationship with the dependent variable. Holding other variables constant, a unit increase in *Per capita provincial GDP* is accompanied by a 0.03 percent increase in vaccinations. In the case of the *Rural population*, results indicate a negative relationship. A unit increase in the share of the rural population is associated with a decrease of 3 percent in vaccination rates. The logic behind including this variable is the importance of access to vaccination. Generally, healthcare centers where vaccination takes place are located in urban parts of the provinces (Yetim & Çelik, 2020). Moreover, the results for *Per capita health centers* show no statistical significance.

Interestingly, *Per capita healthcare workers* have no significant relationship with the dependent variable, as they were one of the prioritized groups. However, the variable is significant in the third

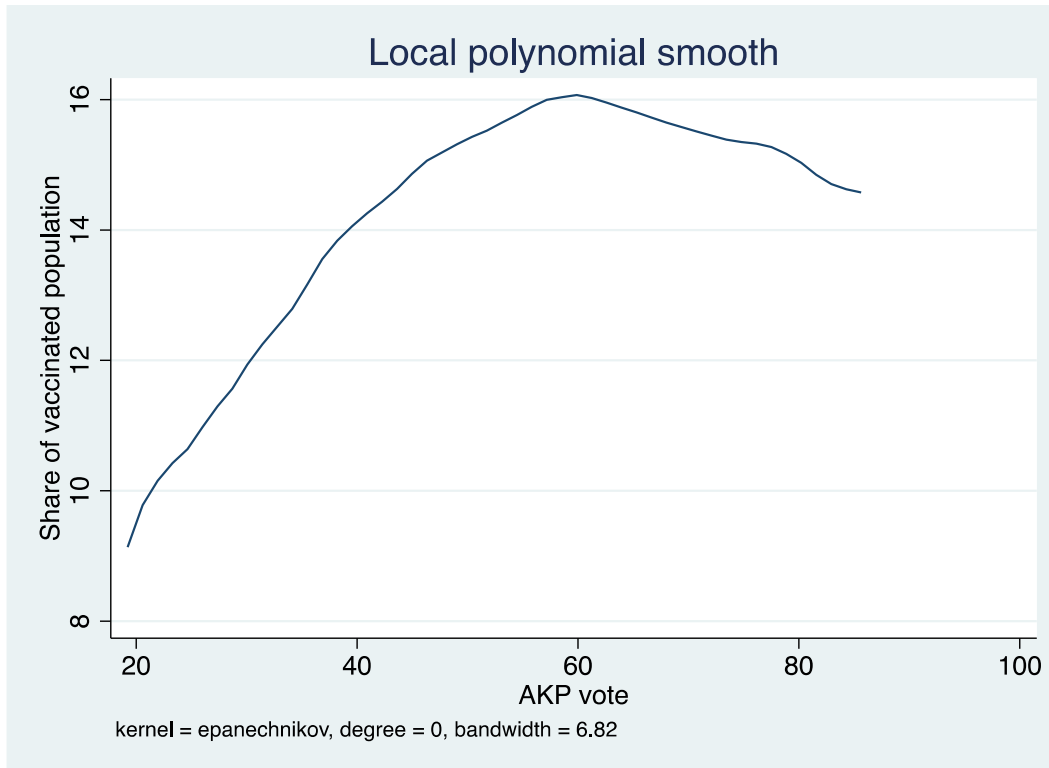
model, where all variables are controlled for. It is also surprising that *Educational attainment* shows no statistical significance both in the second and final models. However, it has the expected positive sign. According to the literature on vaccine hesitancy in Turkey, having a higher level of education increases willingness to receive the vaccination (Türkay & Aytekin, 2017).

Lastly, as expected, the *Share of adults aged sixty-five and older* has a robust positive relationship with the dependent variable. A unit increase in the *Share of adults aged sixty-five and older* corresponds to a 127 percent increase in the *Share of the vaccinated population*. This result shows that the vaccine distribution partly aligns with the programmatic schedule decided by the Ministry of Health.

### 7.3 Full Model

In the final model, to analyze the association of political variables with the Share of the vaccinated population, I control for socioeconomic regressors in order. In the case of political variables, Incumbent's vote share and Kurdish nationalism are still statistically significant, and there is no change in their signs. Competition and Malapportionment become insignificant but do not change in sign either. For socioeconomic variables, while in the final model, both *Per capita provincial GDP* and the *Rural population* lose significance, expectedly, *Per capita healthcare workers* gain significance. *The Share of adults aged sixty-five and older* also remains statistically significant. Moreover, none of the socioeconomic variables switch signs in the final model. Compared to model 2, the full model does not show a significant increase in adjusted R-square (0.946 to 0.969), implying socioeconomic factors account heavily for the vaccine distribution outcomes.

Beginning with political factors, the regression result for Incumbent's vote share, even after controlled for socioeconomic factors, shows a strong negative relationship with vaccination. A one-point increase in the vote share of AKP, for instance, is expected to decrease vaccination rates by approximately 11.8 percent. A closer examination, however, provides a more nuanced picture.



*Figure 4: Non-linear relationship between AKP vote and Vaccination rates*  
*Source: Own elaboration*

As can be seen in Figure 4, vaccination rates are increasing until 60 percent and then start to plummet. This seems to suggest that AKP targets moderately competitive areas. This pattern seems to support the notion that government allocation is directed according to political criteria rather than concentrating resources in already politically secure core regions, but with the aim of winning in moderately contested areas. In this respect, the results are more in favor of the swing district hypothesis.

The result for the pro-Kurdish party, on the other hand, seems to confirm the ethnic punishment hypothesis. Even when socioeconomic characteristics are controlled for, the provinces with higher support for the pro-Kurdish party tend to have lower vaccination rates. In other words, the Turkish government seems to distribute fewer vaccines to these provinces. This might appear to be an ambitious conclusion. However, similar behavior against Kurdish regions is reported in a number of studies (Danielson and Keleş, 1985; Çelebioğlu and Dall’erba ,2010). It should be kept in mind

that according to public surveys, Kurdish populations are younger than Turkey’s average. As is presented in the first model, while the kids to adult ratio across turkey is 32.9 to 67 for Kurdish populations, the ratio goes up to 42 to 58 (KONDA, 2010). However, even after the *Share of adults aged sixty-five and older* is controlled for, the results show that Kurdish populations received fewer vaccines than other provinces. Similarly, it could be argued that vaccination rates should be lower due to the lower level of education in Kurdish provinces. However, the *Educational attainment* variable is insignificant, meaning that the level of education does not strongly affect vaccination rates.

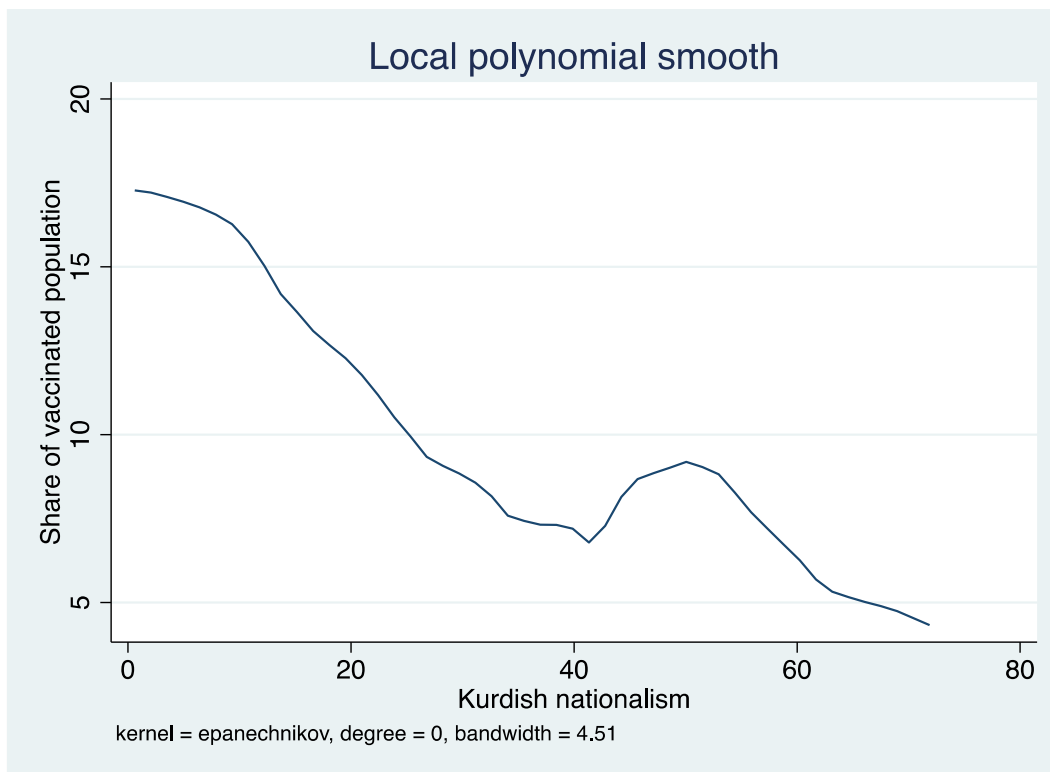


Figure 5: Relationship between Kurdish Nationalism and Vaccination Rates

Source: Own elaboration

Both *Per capita healthcare workers* and the *Share of adults aged sixty-five and older* are statistically significant and have a positive sign for coefficients. This implies that as the *Share of adults aged sixty-five and older* and *Per capita healthcare workers* in a province increase, so do vaccination rates. These results are expected because both groups were prioritized in the Ministry of Health’s vaccination plan. While both *Per capita GDP* and *Rural population* have expected

signs, both variables are statistically insignificant. It means that the level of development and the share of the rural population do not play a significant role in the distribution of vaccines when a large range of covariates are controlled for.

In the introduction of the thesis, I hypothesized that the vaccine distribution schemes might be related to political machinations. The evidence seems to confirm my hypotheses. In particular, it lends support to the swing district hypothesis as well as to the ethnic punishment hypothesis. This, however, does not mean that the Turkish government completely abandons the programmatic schedule; instead, it showcases the balancing between institutional and political goals typical of competitive authoritarian regimes.

## 7.4 Making Sense (Discussion of Results)

As briefly discussed previously, despite the prevalence of socioeconomic factors, the results of my analysis suggest that political concerns are relevant predictors of the distribution of public resources in Turkey. My results are in line with the theoretical expectations of distributive politics. In particular, the analysis shows that the AKP government favors moderately swing districts and denies vaccines to Kurdish populations. There is a simple reasoning behind such “misallocation”. The party needs to survive the upcoming elections. AKP has seen record low support due to economic crisis, political tensions, and, lastly, the Covid-19 crisis, which further jeopardizes its future. Linking back to the theoretical framework, the AKP should be expected to resort to tactical distribution to get the best return for its “vaccine investments”. To this end, AKP seems to prioritize swing districts where competition is higher and performing slightly better can win seats (Cox 2010, p.346).

The analysis also uncovers an ethnic dimension of allocation. AKP’s relationship with Kurds has been unstable over the years and it rapidly deteriorated after that the Peace Process (2013-2015) fell short of expectations. While the government increased its grip on the pro-Kurdish party, jailed its leader and attempted to close it down, the armed conflicts in the region escalated (Christofis, 2019). With this in mind, it is not surprising that Kurdish regions receive fewer vaccines. This, in fact, is well in line with the theories of distributive politics. To instill fear and ultimately pressure

them to vote in favor, incumbents punish ethnic groups by denying them public resources. However, there is a more nuanced way of problematizing the issue at hand by employing the electoral productivity perspective once again. Given that in the early periods of vaccination, the Turkish government did not have enough vaccines to inoculate the whole population and early elections were being discussed continuously, it is possible to reason that the party prioritized other regions at the expense of Kurdish populations where electoral productivity is seemingly low. In other words, AKP might be supplying moderate swing provinces disproportionately with the vaccines that should, in principle, be intended for Kurdish regions.



# 8 Conclusion

This thesis has sought to provide the first account of the research that examines the provincial distribution of Covid-19 by drawing upon the theories of distributive politics. This thesis argued that any tactical distribution in the initial period of vaccine distribution, if not documented, will vanish in the dusty pages of history, leading to the overlooking of important inequalities. To this end, the investigation was undertaken in the context of Turkey, as competitive authoritarian regimes are argued to be more prone to politicize the distribution of public resources. In order to test the political nature of the distribution of vaccines, three hypotheses derived from the distributive politics and Turkish context were proposed, a novel data set based on secondary data was constructed, and quantitative analysis of data through OLS regressions have been carried out. The findings suggest that even after controlling for socioeconomic factors, electoral concerns play a role in the distribution of vaccines in Turkey. In particular, results show that while moderately swing provinces received more vaccines, provinces where Kurdish populations concentrate received fewer.

## 8.1 Future Research

This thesis investigated the distribution of Covid-19 vaccines in Turkey through quantitative analysis. Nevertheless, it is of crucial importance that future research studies the distribution of vaccines in other settings with different research designs, methods, and various control variables. Regarding methods, although quantitative analyses as those employed in this thesis have significant advantages, they can be complemented with qualitative methods, especially when investigating informal channels which are deemed to be at the center of pork-barrel decisions. For the control variables, the literature on vaccine hesitancy in Turkey also emphasizes the role of religiosity in taking vaccines. Qualitative methods can also be of use here. Through the use of surveys, this aspect can be widely investigated. Lastly, the novel data set constructed, with contextual changes, can be adapted to other settings to study the distribution of Covid-19 vaccines.

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**APPENDIX 1, Summary statistics**

VARIABLE	MEAN	STD. DEV.	MIN	MAX
VACCINATION	14.73584	5.418098	3.19	24
AKP VOTE	56.45259	16.30484	19.22	85.64
OPPOSITION VOTE	37.57506	14.2503	13.39	71.88
COMPETITION	-51.24284	19.26615	-84.93	-0.91
KURDISH NATIONALISM	13.50136	20.39919	0.61	71.88
MALAPPORTIONMENT	99462.81	105140.1	34490	1018586
PER CAPITA GDP	6986.938	2398.583	2946	15285
SHARE OF OLD POPULATION	11.06556	3.802008	3.44	19.75
EDUCATIONAL ATTAINMENT	53.02739	4.656602	39.4029	66.88073
SHARE OF RURAL PER CAPITA HEALTHCENTER	30.09531	22.24829	0	76.7
PER CAPITA HEALTHCARE WORKER	0.3243024	0.0219831	0.2436997	0.3931814
PER CAPITA HEALTHCARE WORKER	0.8061261	0.1574827	0.440131	1.218008

Source: own elaboration

## APPENDIX 2, Data sources

<i>Variable</i>	<b>Description</b>	<b>Source</b>
<b><i>Dependent Variable</i></b>		
<i>Share of the vaccinated population</i>	Vaccinated population divided by provincial population	Ministry of Health (2021); TurCovid19 (2021)
<b><i>Political Variables</i></b>		
<i>Incumbent's vote share</i>	Vote share of AKP in the last elections (2018)	YSK (2018)
<i>Competition</i>	Difference between incumbent and main opposition party	YSK (2018)
<i>Kurdish Nationalism</i>	Vote share of Pro-Kurdish party	YSK (2018)
<i>Malapportionment</i>	Provincial population divided by number of MPs representing the province.	YSK (2018); TUIK (2020)
<b><i>Socioeconomic Control Variables</i></b>		
<i>Per capita GDP</i>	Provincial GDP divided by provincial population	TUIK (2019a)
<i>Share of adults aged sixty-five and older</i>	Adults aged sixty-five and older divided by provincial population	TUIK (2020a)
<i>Educational attainment</i>	Individuals who completed primary school and above divided by provincial population	TUIK (2020b)
<i>Rural population</i>	Rural population divided by provincial population	TUIK (2020a)
<i>Per capita health center</i>	Number of health care centers divided by provincial population	TUIK (2019b)
<i>Per capita healthcare worker</i>	Number of health care workers divided by provincial population	TUIK (2019c)

### APPENDIX 3, Statistical significance

#### Model-1

Source	SS	df	MS	Number of obs	=	81
Model	1799.94245	4	449.985613	F(4, 76)	=	62.35
Residual	548.520381	76	7.21737343	Prob > F	=	0.0000
Total	2348.46283	80	29.3557854	R-squared	=	0.7664
				Adj R-squared	=	0.7541
				Root MSE	=	2.6865

#### Model-2

Source	SS	df	MS	Number of obs	=	81
Model	2222.44187	6	370.406978	F(6, 74)	=	217.50
Residual	126.020965	74	1.70298601	Prob > F	=	0.0000
Total	2348.46283	80	29.3557854	R-squared	=	0.9463
				Adj R-squared	=	0.9420
				Root MSE	=	1.305

#### Full Model

Source	SS	df	MS	Number of obs	=	81
Model	2275.41718	10	227.541718	F(10, 70)	=	218.05
Residual	73.045654	70	1.04350934	Prob > F	=	0.0000
Total	2348.46283	80	29.3557854	R-squared	=	0.9689
				Adj R-squared	=	0.9645
				Root MSE	=	1.0215