

Is E-Voting an Alternative to the Ballot Box? A Field Study in Gaziantep

E-oylama Sandığa Alternatif mi? Gaziantep'te Bir Alan Araştırması

Muhammet Yusuf Cinkara, Öğr. Gör., Gaziantep Üniversitesi Sosyal Bilimler MYO,

E-posta: yusufcinkara1@gmail.com,

ORCID ID: 0000-0001-9097-9600

Süleyman Şahan, Doç. Dr., Gaziantep Üniversitesi İletişim Fakültesi,

E-posta: suleymansahan80@hotmail.com,

ORCID ID: 0000-0001-5137-0317

Araştırma Makalesi/Research Article

Abstract

Recent health risks and the high number of voters make it necessary to produce alternatives to the traditional ballot used in elections. For this purpose, new methods that facilitate the voting process and the advantages provided by technology are evaluated in terms of increasing democratic turnout. The aim of this study is to understand which of the two methods, e-voting and voting at the ballot box, voters would prefer as the dependent variable. Since the dependent variable in the study has two categories, Binary Logistic Regression analysis was applied. Data were collected from 475 respondents living in Gaziantep through a questionnaire on voting method preference. Among the dependent variables, age and gender were not statistically significant in determining the preferences for voting methods of the participants. A relationship was found between education level and voting preferences. It was also observed that the higher the level of education of the voter, the higher the rate of preference for e-voting. The questions measuring the level of political interest were developed in the light of the findings of previous studies. Individuals with high political interest are more likely to vote at the ballot box than via e-voting. Ideological differences also affect the preferences for voting methods of individuals. Considering the data obtained from the study; it can be assumed that e-voting as an alternative voting method will be preferred by voters in Türkiye in the future.

Keywords:

e-voting, democracy,
voter turnout

Öz

Son dönemde ortaya çıkan sağlık riskleri, seçmen sayısının fazlalığı gibi sebepler seçimlerde kullanılan geleneksel oy pusulasının alternatiflerinin üretilmesini gerekli kılmaktadır. Bu amaçla oy verme işlemi kolaylaştırıcı yeni yöntemler ve teknolojinin sağladığı avantajlar demokratik katılımı artırıcı yönleriyle değerlendirilmektedir. Bu çalışmada amaç seçmenlerin bağımlı değişken olarak sorulan elektronik oy verme ve sandıkta oy verme yöntemlerinden hangisini tercih edeceklerini anlamaktır. Çalışmada bağımlı değişken iki kategoriye sahip olduğundan İkili Logistic Regression analizi uygulanmıştır. Veriler oylama yöntem tercih anketi aracılığıyla Gaziantep'te yaşayan 475 katılımcıdan elde edilmiştir. Bağımlı değişkenlerden yaş ve cinsiyet katılımcıların oylama yöntem tercihlerinin belirlenmesinde istatistiksel olarak anlamlı bulunmamıştır. Eğitim durumu ile oylama tercihleri arasında bir ilişki tespit edilmiştir. Seçmenlerin eğitim seviyesi arttıkça oylama yöntemlerinden elektronik oylamayı tercih etme ihtimali artmaktadır. Politik ilgi düzeyini ölçen sorular daha önce yapılmış başka çalışmalardan elde edilen bulgular ışığında tasarlanmıştır. Politik ilgisi yüksek olan bireylerin sandıkta oy verme olasılığı, Elektronik oy verme olasılığına göre daha yüksektir. İdeolojik değişimler de kişilerin oy verme yöntemi tercihlerini değiştirmektedir. Çalışmadan elde edilen veriler ışığında alternatif oylama yöntemi olarak elektronik oylamanın gelecekte Türkiye'de seçmen tarafından tercih edileceği düşünülebilir.

Anahtar Kelimeler:

e-oylama, demokrasi,
seçmen katılımı

Başvuru Tarihi: 15.08.2023

Yayına Kabul Tarihi: 06.05.2024

Cinkara, M. Y., & Şahan, S. (2024). Is e-voting an alternative to the ballot box? A field study in Gaziantep. *Kastamonu İletişim Araştırmaları Dergisi (KIAD)*, (12), 78-97. DOI: 10.56676/kiad.1343892

Introduction

There are many different approaches to defining democracy. Although these approaches are compatible, they also have contradictory aspects. In analyzing and defining political regimes, it is often impossible to avoid subjective judgments. In this respect, the concept of democracy is interpreted in different ways by different people. Popper provides a reasonable definition of democracy for a state to get rid of bad rulers without bloodshed or violence (Popper, 2018, pp. 43–49). According to this definition, democracy is a mechanism that protects power on behalf of the people based on moral values. According to Plato, democracy is an unreliable form of government. He thinks that democracy will destroy the idealized notion of democracy in an absolute sense and turns into a despotic rule (Topakkaya & Özyürek Şahin, 2015, p. 194). Sartori (1996, pp. 227–231) states that this differentiation in definitions of democracy is due to the difference between the dictionary meaning of democracy and the terms ascribed by thinkers. Democracy is far from being a single meaningful and easy to understand concept. The large number of theories of democracy means that each presents a different understanding of popular government (Heywood, 2021a, p. 274).

Abraham Lincoln's famous definition of democracy in his 1860 Gettysburg Speech can be said to be a modern definition of democracy. Lincoln reduced democracy to its commonly known definition as "government of the people, by the people, for the people" (Heywood, 2015b, p. 57). The diversity of definitions and the reductionist approach did not allow for the adoption of a clear definition of democracy. Because of its simplicity and memorability, Lincoln's definition was more readily accepted by the people. As an application of the critical progressive rhetoric, different views on democracy continue to change from past to present. Even today, there are opinions that the ideal idea of democracy is unlikely to be realized. There are several of reasons for this, ranging from debates about the competence of voters to the reliability of voting methods. Some of these reasons remain valid among many voters. Will technological progress, increased turnout in elections and improved electoral security make democracy a more inclusive regime than in the past? This question leads us to consider the advantages and disadvantages of greater use of technology in the practice of representative democracy.

As an authority that regulates people's lives, the activities of the state have an impact on limited groups or on society as a whole (Uygun, 2015, p. 1).. Therefore, it is very challenging for a person to escape the sphere of influence of the state. Democracy is a word that people have adopted as the main basis for their struggle for better living conditions and freedom (Diamond & Plattner, 1995, p. 67). Determining who exercises state power has a significant effect on the character of democratic systems. People want to participate in public decisions that have an influence on them. It is seen that most countries in the world have adopted democracy in some form. The democratic systems practiced today are representative democracies. Representative democracy is a unique blend of governance where the power of decision-making directly rests in the hands of the people, yet the execution and implementation of these decisions are delegated to elected officials. (Arslan, 2015, p. 36). The participation of the people in government through

representatives leads to the emergence of people and institutions such as parliament, government and deputies. Who these people and institutions will be and for how long they will exercise their powers can be determined through democratic elections. It is vital that the people participate in the processes of government, that their rights are recognized and that an environment of democratic equality is ensured. For democracy to function in the true sense of the word, citizens must be equal before the law and barriers to political participation must be eliminated. It is important that the number of civil society organizations increases and that the people are directly involved in local government mechanisms and decision-making processes. Sustainable democracy can promote greater participation and voice for poor populations, not only through political parties, but also by expanding civil society and civil society organizations. Especially in the poorest countries, both local and foreign civil society organizations often advocate for better services for the poor (Nelson, 2007, p. 89). Democratic regimes require clear limits on the exercise of state power. Moreover, city councils are not the only instruments of direct democracy. Referendums and plebiscites may also be used. In this case, the way politicians make decisions on behalf of the electorate is abandoned. Instead, the electorate decides directly for itself through different voting methods (Heywood, 2021a, p. 276). In this way, arbitrariness in government is prevented. Through elections, the people have a control mechanism over those who govern. However, democracy does not only utilize elections for this control. Those who govern must also act in compliance with the law. An independent judiciary, civil society organizations, and media effectiveness are also important. In this sense, examples that do not meet the ideal requirements of democracy are likely to slide into tyranny and anarchy. Besides this major shortcoming, democracy is a utopian phenomenon. It is very difficult for the public to constantly in assemblies to make decisions about public affairs and to constantly participate in elections (Ağaoğulları, 2020, pp. 145–146). Diminished electoral participation rates may cast doubt on the democratic legitimacy of the decisions rendered. Accordingly, increasing turnout will increase the functionality of the ideal decision-making procedures of democracy. For democratic legitimacy, the situation that has emerged thanks to technical developments is also important. The crisis of political turnout has led to the need to discuss and develop democratic methods. The difference between direct democracy method and new methods is the widespread use of Internet technology. E-democracy methods do not create a political situation on the internet. Instead, they create a new hybrid political environment in which both the real and the electronic environment are intertwined (Kersting, 2013, p. 273). In this way, it becomes easier for voters to implement decision-making and control methods in both real and virtual environments.

In modern times, there has been a transition from conventional modes of democracy to increasingly sophisticated approaches, exemplified by the adoption of technologically advanced methods like e-voting. E-voting, usually referred to as e-voting, is a topic that is often discussed in the context of politics and democracy. As technology develops and plays an ever-increasing role in our lives, it becomes more critical to examine the potential advantages and disadvantages of e-voting in the context of democratic government. The academic study of e-voting can help us better understand how this technology affects the integrity of elections, voter turnout, and the overall state of democratic institutions.

Studying the e-voting implementation experiences internationally, we can learn about best practices and potential dangers. Research in this field can also help in the creation of laws and rules that ensure the security and dependability of e-voting systems. Scholarly research on e-voting is crucial to ensure that this technology is utilized in a way that promotes and strengthens democratic government, academic study on e-voting is crucial.

It is inevitable that there will be a transformation from classical democracy with the benefits of technology. Due to certain driving influences and necessities, innovative and facilitating methods are emerging. For example, as a solution to the global pandemic situation, countries are working on e-voting methods that allow social distancing (Kamil, Sunarya, Rahardja, Santoso, & İqbal, 2021, p. 27). In the case of epidemics, face-to-face elections accelerate the spread of the disease (Palguta, Levinsky, & Skoda, 2022, p. 199). In the post-pandemic period in the U.S., the use of e-voting methods in addition to postal voting was discussed to prevent the spread of disease (Sullivan, 2020).

E-voting has become popular in democracies around the world in recent years due to its potential to increase political turnout, ensure accurate and transparent results, and reduce the costs of elections (Alvarez, Hall, & Llewellyn, 2008, p. 756). Countries that use e-voting methods exists in different geographies around the world. For example, countries such as the United States of America, Brazil and India use e-voting as a voting facilitation method, despite the population there. That being said, electronic methods are applied in countries such as Belgium, Italy, Spain, Costa Rica, England, Australia and Argentina (Kumar & Walia, 2011, p. 1828). Despite its potential benefits, e-voting is not without its challenges, such as security, privacy and the potential for technological error. However, as technology continues to advance, e-voting has the potential to play an increasingly important role in the future of democracy.

One of the most important precursors to this situation was the recent pandemic lockdown. At the same time, traditional voting methods have become risky as people necessity to avoid crowded environments and maintain physical distance due to the pandemic. It became clear that the issue of how to conduct general and local elections under conditions of social distance and pandemic prevention was an important issue. Therefore, e-voting systems emerged as an alternative. E-voting makes the voting process faster and more efficient while reducing the risks posed by crowded communities with an excessive number of voters. Therefore, the issue of e-voting has become more important to researchers during the pandemic. However, issues such as security and privacy issues should also be considered.

Most of the research has focused on the technical feasibility of electoral methods (Alvarez, Hall, & Trescel, 2009, p. 498). In addition, its positive potential effect on security and political turnout should also be considered. As a voting method, e-voting methods, which offer both time and labor advantages, are developments that facilitate the easy implementation of democracy. The reminder of the paper is organized as follows: The introduction is followed by a literature review on the importance of e-voting and voting methods for democracy. At the end of literature review, the problem statement and

research questions are explained.

Literature Review

Throughout history, there have been some changes in democratic forms of government. In ancient Greece, it was possible for the public to participate in the decision-making process through direct voting. Apart from this, new methods have also emerged that allow the people to express their opinions in the administration through the representative mechanism. Accordingly, two different types of democracy can be distinguished: direct democracy and representative democracy. Modern forms of government bear little resemblance to the direct democracy of the Athenians. In this respect, representative democracies are both limited and indirect forms of democracy (Heywood, 2021, p. 277). Elections are of great importance in the theory of democracy.

The possibility of long-term obstacles hindering the realization of elections always exists. Although the pandemic has drawn attention to this situation, it is not the only obstacle to the functioning of democracy. In addition, in protracted conflicts, the means by which people can express their will disappear. For these reasons, it is of utmost importance that elections be transparent and open to scrutiny. Measures to be taken and techniques to be put into practice in this direction will ensure that appropriate and effective solutions are found. Otherwise, the understanding of democracy is likely to regress. In addition, the right to vote and turnout in governance, which are fundamental rights, will be jeopardized (Landman & Splendore, 2020, p. 1065). The democratic principles of the right to vote and online voting are not always congruent. Although they are compatible with the principle of universal and equal suffrage, these concepts have lost their traditional meaning. In the new process, the need for e-voting comes to the fore (Börekçi, 2021, p. 630). It may be a positive outcome to take advantage of the positive aspects of this new method for fast and reliable result detection.

In democracies, citizens are not put in charge of the state according to their abilities or political knowledge, but through elections and often by lot (Ağaoğulları, 2004, pp. 226–227). The importance attached to elections in democratic governments should be investigated with their complex structure. Analyzing how relations between rulers and citizens are designed is important for the institutionalization of sovereignty and political representation (Abeles, 2020, p. 213). Democracy requires free political elections and effective decision-making by rulers in the interests of the majority (Touraine, 2002, p. 98).

Recent public health hazards pose risks to the use of traditional voting methods in elections. Emerging public health conditions can jeopardize electoral practices. Due to its easy access and advantages of use, the Internet opens the door to an extraordinary public awareness by recognizing the positive effects for democracy within the negativity of the pandemic (Zhang, Phang, & Zhang, 2022, p. 1). As a result of the coronavirus, there has been increased interest in promoting alternative voting methods (Baringer, Herron, & Smith, 2020, pp. 289–292). There is much disagreement regarding the risks of holding elections during the pandemic. Given the adverse contingencies, the state must guarantee

a reliable election that eliminates health risks. It can be argued that an important problem area has also arisen for elected officials to consider. Accordingly, a risk management plan for elections is important for the functioning of democracy. Each country should prepare alternative plans for holding elections on time and in accordance with accountability criteria. Kapsamlı bir planlama, kapanma durumlarında bile seçimlerin yapılabilirliğini garanti altına almak için gereklidir. It is crucial to avoid elections being delayed and to encourage turnout in the event of a pandemic (Landman & Splendore, 2020, p. 1065). If elections cannot be held in the event of epidemics and other disasters, the legitimacy of governments that exceed their mandates will be called into questions. Today, thanks to technological developments, it is now easier than ever to ensure public participation. However, the new technologies also bring disadvantages that must be taken into account. One of them is the difficulty of guaranteeing the secrecy of the vote with absolute certainty. The other is the question of how to guarantee the reliability of the system, i.e., to ensure that the system works as it should in all situations. Another disadvantage is the development and operational costs (Kaliyamurthie, Udayakumar, Parameswari, & Mugunthan, 2013, p. 4831). Advances in technology and new hardware make it easier to disseminate data, as well as to access and report on it. Many countries have recognized the need to take advantage of these innovations to improve the functioning of democracy. It can be predicted that using e-voting as a reliable method for representative democracy will become more widespread with the technical infrastructure and legal regulations in place.

Due to the COVID-19 pandemic, many countries have taken some measures to prevent the spread of the disease. These measures ranging from social distancing rules to curfews have been described as ‘hard’ and ‘soft’ in France (Giommoni & Loumeau, 2020). Such a definition can be applied to the entire world. At the same time, elections continued to be held in the United States and many other countries as an important component of democratic procedures (James & Alihodzic, 2020). In 2020, according to a study conducted in Ghana, fear of the pandemic, low turnout and the spread getting out of control brought up the possibility of postponing the elections (Ijon & Bingab, 2020, p. 95). The fact that the elections were held during the epidemic accelerated the spread of the disease, which has led to discussions of alternative voting methods. Several studies have been conducted, including the financial resources and legal arrangements that should be allocated to these methods (Sullivan, 2020). Personal protective equipment, disinfectants, plastic gloves and shields are needed to ensure the safe conduct of elections regarding health. Given the new economic burden this creates the need for a healthy and sustainable economic environment for elections has gained importance. Conducting elections is not just about laws and rules. In addition to these, issues such as physical environment improvements, equipment and technology supply are also important. Financial resources must be appropriately managed to cope with the adverse effects of future epidemics or other disasters (Maffioli, 2021, p. 151).

There has long been a theoretical debate between representative democracy and direct democracy. Improving the functioning of democracy through electronic tools and methods could be a possible solution to this debate. Can the idea of e-democracy help us

overcome the disadvantages of direct democracy? This question can contribute to reducing problem areas ranging from the competence of decision makers to the implementation problems of electoral methods (Coleman & Norris, 2005, p. 31). The populism problem of direct democracy and the audit efficiency problem of representative democracy can be overcome with new interactive methods. In this sense, the importance of electoral voting methods that make democracy faster and control more effective is increasing day by day. Faster and effective democracy can also contribute positively to the debate on the legitimacy of democracy in the name of democracy.

E-voting is one of the methods to facilitate the functioning of democracy. These methods include election management literature, vote counting accuracy, optimal design of ballots and voting machines, residual voting, voter trust, internet voting and e-voting (Gronke, Glanes-Rosenbaum, Miller, & Toffey, 2008, p. 448). Among these, e-voting involves utilizing computer technology or digital systems for casting ballots in elections, which enhances voter turnout, reduces expenses and transportation time, and enhances the precision of election outcomes. In this way, the results are obtained more reliably and quickly, as data are counted faster and transmitted in less time. At the same time, countries with low turnout rates in elections have the chance to increase turnout through e-voting methods (Kersting & Baldersheim, 2004, p. 3). The implementation of such a cost-effective voting method allows for a louder debate on the feasibility of direct democracy in the near or distant future.

Increased use of technology in the delivery of public services was included in national plans and strategies of Türkiye after 2000 (Aslan, 2022, p. 232) after which, that e-government applications spread to public service areas. The use of technological developments in elections, as well as in the provision of services, is expected to facilitate the voting process. The SECSİS Project, which is still ongoing in this regard, had a centralized structure in 2005 as an online and “web” -based system (Sarıfakıoğlu, 2018, p.6).

Administrators should consider the wishes and interests of citizens while planning and performing public services. This is only possible through the active and effective use of channels between the ruler and the ruled. The development of information and communication technologies is gaining importance with regard to greater political participation. The use of technological tools by the governed in political participation can be defined as e-turnout. It is an important positive feature in terms of legitimacy that the administration can approve or subject any action to scrutiny through relatively simple methods. In addition, cost-effective use of resources, easier access to data and faster service delivery are listed among the positive impacts. (Saylam & Uçar Kocaoğlu, 2022, p. 79).

The research aims to understand voter preference of the electoral method alternatives with regard to certain variables such as gender, income, education and age. The study further aims to unearth voters’ knowledge and interest in politics, and their knowledge in general citizenship. In order to guide the study, following research questions were

constructed:

1. Does the gender of the voters have an influence on the voting method preference?

Does the voter's age have an influence on the voting method preference?

Does the voter's educational status have an influence on the voting method preference?

Does the voter's level of interest in politics have an influence on the voting method preference?

Does the voter's ideology have an influence on the voting method preference?

Does the voter's party loyalty have an influence on the voting method preference?

Research Method and Data Set

This study employed quantitative survey method using a 13-item questionnaire to collect data. The original questionnaire was constructed and validated by Plescia et al. (2021), and the authors of the current study adopted the questionnaire to fit into Türkiye context. The adaptation process included translating the tool into Turkish using the translation-back translation methods by two scholars holding PhD in English Language Teaching and restating items to fit into the political setting in research context¹. Gender was measured through two variables such as female and male.

Age data was collected in a distribution of 18-24, 25-34, 35-44, 45-54 and over 54. Participants were asked to select one of the following options about their educational status: primary school, secondary school, high school, college/university and master's/doctoral degree. The level of political interest was measured by six sub-questions which measure respondents' knowledge of local and national politics. Questions such as how many deputies are in the parliament and who the minister of labour and social security is were asked. Some of the items checked their knowledge of the republican alliance parties, time of next local elections, name of the mayor and 2 parliament members of their city. These questions were based on an article published in the Journal of Elections, Public Opinion and Parties (Shino & Smith, 2020, p. 409). Ideologically, respondents were asked to choose between conservatives, liberals, nationalists, social democrats and others. Finally, the participants were asked to rate their level of loyalty to the political party they support on a scale of 1 to 10, with 1 being the lowest and 10 being the highest.

In this study, we used logistic regression analysis method depending on the status of the variables. This method is used to determine the relationship between a set of independent variables and a categorical dependent variable. Logistic regression analysis is a statistical analysis method used to calculate or estimate the probability of a situation occurring or not occurring by measuring more than one variable, whether numerical

¹For example, the original questionnaire asked about Governor elections, which was changed to Mayor elections in the Turkish version to match Türkiye political context.

or nominal. Logistic regression is used when there are two or more variables and the distribution of responses to the dependent variable is expected to have a non-linear relationship with one or more independent variables. The study attempted to investigate voting method preference (e-voting and ballot box voting) with the variables of gender, age, education level, level of political interest, ideological position and party loyalty. The statistical analysis methods are divided into two groups as univariate and multivariate with variable size. Multivariate statistical analyses are a set of methods developed to examine the complex relationships between variables and arrive at solutions by taking into account the event under study and the related variables, or by reducing a large number of variables to a smaller number of linear factors (Akbulut & Çapık, 2022). In this study, we employed multivariate logistic regression analysis as a multivariate statistical analysis method.

The data collection of the research was conducted using a face to face survey completed by 475 people. Participants consisted of people who live in Gaziantep and are voters. Before starting the research, ethics Committee approval was obtained from Gaziantep University Social and Human Sciences Ethics Committee dated May 6, 2022. After the ethical approval was granted, the survey was carried out by the interviewers for the target group with voting qualification.

The Number (n) and percentage (%) values were used to show the distribution of individuals' responses to the questions, which included demographic information such as gender, age group and other variables such as educational status, level of political interest, and voting method preference, ideology and party loyalty.

For the comparison of categorical variables by voting method preference, cross tabulations were created to present number (n), percentage (%) and chi-square) test statistics.

Variables potentially associated with Voting Method Preference were analyzed using multivariate Binary Logistic regression analysis. The results are presented as Odds ratio (Exp(B)) and 95% confidence intervals. In addition, the prediction probability values are shown graphically.

IBM SPSS Statistics 21.0 (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.) and MS-Excel 2007 programs were used. Statistical significance level was accepted as $p < 0.05$.

Results

Of the individuals who participated in the study, 52.8% (n=251) were male and 47.2% (n=224) were female. 30.7% (n=146) of the participants were 18 to 24, 19.8% (n=94) were 25 to 34, 16.2% (n=77) were 35 to 44, 21.1% (n=100) were 45 to 54 year-olds, and 12.2% (n=58) were 55 years old and older. In terms of education level, 32.2% (n=153) were university graduates, 30.3% (n=144) were high school graduates, 19.6% (n=93) were primary school graduates, 11.6% (n=55) were secondary school graduates, and 6.3% (n=30) were postgraduate graduates. It was found that 66.7% (n=317) of the

individuals had low level of political knowledge, and 33.3% (n=158) had high level of political knowledge. In response to the question “Which of the following voting methods would you prefer in the upcoming elections, if the appropriate conditions were met” 65.3% (n=310) of the individuals preferred voting at the ballot box, while 34.7% (n=165) answered that they would prefer e-voting. In addition, looking at the political views of the individuals, 38.7% (n=184) were nationalist, 21.7% (n=103) were social-democratic, 19.3% (n=92) were conservative, and 7.2% (n=34) were liberal. It was determined that 36.0% (n=171) of the individuals had a medium level of loyalty to the party they supported, 32.6% (n=155) had a high level of loyalty to the party they supported, and 31.4% (n=149) had a low level of loyalty to the party they supported (Table 1).

Table-1: Demographic Information

		n	%
Gender	Male	251	52.8
	Female	224	47.2
Age	Between 18-24	146	30.7
	Between 25-34	94	19.8
	Between 35-44	77	16.2
	Between 45-54	100	21.1
	55 and older	58	12.2
Educational Status	Primary School	93	19.6
	Middle School	55	11.6
	High School	144	30.3
	University	153	32.2
Degree of Political Interest	Low	317	66.7
	High	158	33.3
Preference for the Voting Method	E-Voting	165	34.7
	Ballot Box	310	65.3
Ideology	Conservative	92	19.3
	Liberal	34	7.2
	Nationalist	184	38.7
Party Loyalty	Social-Democrat	103	21.7
	Others	62	13.1
	Low	149	31.4
Party Loyalty	Medium	171	36.0
	High	155	32.6

While 35.1% (n=88) of males preferred E-voting and 64.9% (n=163) preferred voting at the ballot box, 34.4% (n=77) of females preferred E-voting and 65.6% (n=147) preferred voting at the ballot box. No statistically significant difference was found when

comparing preferences for voting methods by gender ($p>0.05$) (Table 2).

Table-2: Comparison of preferences for voting methods by gender

	Preferences for Voting Methods		
	E-Vote	Ballot Box	Test Statistic
	n (%)	n (%)	χ^2 p
Gender			
Male	88 (35.1)	163 (64.9)	0.024 0.876
Female	77 (34.4)	147 (65.6)	

χ^2 : Chi-squared Test Statistic

39.0% (n=57) of individuals in the 18-24 age group preferred E-Voting, 61.0% (n=89) preferred voting at the ballot box, 35.1% (n=33) of individuals in the 25-34 age group preferred E-Voting, 64.9% (n=61) preferred voting at the ballot box, 33.8% (n=26) of individuals in the 35 to 44 year-olds preferred E-Voting, 66.2% (n=51) preferred voting at the ballot box, 33.0% (n=33) of individuals in the 45-54 age group preferred E-Voting, 67.0% (n=67) preferred voting at the ballot box. 2% (n=51) preferred voting at the ballot box, 33.0% (n=33) of the individuals in the 45-54 age group preferred E-voting, 67.0% (n=67) preferred voting at the ballot box, and 27.6% (n=16) of the individuals aged 55 and over preferred E-voting, while 72.4% (n=42) preferred voting at the ballot box. No statistically significant difference was found in the comparison of preferences for voting methods according to age grouping ($p>0.05$) (Table 3).

Table-3: Comparison of preferences for voting methods by age groups

	Preferences for Voting Methods		
	E-Vote	Ballot Box	Test Statistic
	n (%)	n (%)	χ^2 p
Age			
Between 18-24	57 (39.0)	89 (61.0)	2.672 0.614
Between 25-34	33 (35.1)	61 (64.9)	
Between 35-44	26 (33.8)	51 (66.2)	
Between 45-54	33 (33.0)	67 (67.0)	
55 and above	16 (27.6)	42 (72.4)	

χ^2 : Chi-squared Test Statistic

Among primary school graduates, 24.7% (n=23) preferred E-Voting, 75.3% (n=70) preferred voting at the ballot box; among secondary school graduates, 20.0% (n=11) preferred E-Voting, 80.0% (n=44) preferred voting at the ballot box; among high school graduates, 38.2% (n=55) preferred E-Voting, 61.8% (n=89) preferred voting at the ballot box; among university graduates, 41.8% (n=64) preferred E-Voting, 58.2% (n=89) preferred voting at the ballot box; among university graduates, 41.8% (n=64) preferred E-Voting, 58.2% (n=89) preferred voting at the ballot box. 8% (n=89) preferred voting in the ballot box, 41.8% (n=64) of university graduates preferred E-voting, 58.2% (n=89)

preferred voting in the ballot box, and 40.0% (n=12) of postgraduates preferred E-voting and 60.0% (n=18) preferred voting in the ballot box. A statistically significant difference was found in the comparison of preferences for voting methods according to educational status ($\chi^2=13.897$, $p=0.008$) (Table 4).

Table-4: Comparison of preferences for voting methods according to degree of education level

	Preferences for Voting Methods		Test Statistic	
	E-Vote	Ballot Box	χ^2	P
	n (%)	n (%)		
Education Status				
Primary School	23 (24.7)	70 (75.3)		
Middle School	11 (20.0)	44 (80.0)		
Hish School	55 (38.2)	89 (61.8)	13.897	0.008
University	64 (41.8)	89 (58.2)		
Postgraduate	12 (40.0)	18 (60.0)		

χ^2 : Chi-squared Test Statistic

While 38.5% (n=122) of individuals with low political interest preferred E-voting and 61.5% (n=195) preferred voting at the ballot box, 27.2% (n=43) of individuals with high political interest preferred E-voting and 72.8% (n=115) preferred voting at the ballot box. A statistically significant difference was found in the comparison of preferences for voting methods according to political interest level ($\chi^2=5.908$, $p=0.015$) (Table 5).

Table-5: Comparison of preferences for voting methods according to political interest level

	Preferences For the Voting Method		Test Statistic	
	E-Vote	Ballot Box	χ^2	P
	n (%)	n (%)		
Level of Political Interest				
Low	122 (38.5)	195 (61.5)		
High	43 (27.2)	115 (72.8)	5.908	0.015

χ^2 : Chi-squared Test Statistic

29.3% (n=27) of conservatives (29.3%) preferred E-Voting, 70.7% (n=65) preferred voting at the ballot box, 52.9% (n=18) of liberals (52.9%) preferred E-Voting, 47.1% (n=16) preferred voting at the ballot box, 39.1% (n=72) of nationalists individuals preferred E-voting, 60.9% (n=112) preferred voting at the ballot box, 24.3% (n=25) of social democrats preferred E-voting, 75.7% (n=78) preferred voting in the ballot box. A statistically significant difference was found in the comparison of preferences for voting methods according to the ideology of the individuals ($\chi^2=12.843$, $p=0.012$) (Table 6).

Table-6: Comparison of preferences for voting methods by ideology

	Preferences for Voting Methods			Test Statistic	
	E-Vote	Ballot Box			
	n (%)	n (%)	χ^2	P	
Ideology					
Conservative	27 (29.3)	65 (70.7)			
Liberal	18 (52.9)	16 (47.1)			
Nationalist	72 (39.1)	112 (60.9)	12.843	0.012	
Social-Democrat	25 (24.3)	78 (75.7)			
Others	23 (37.1)	39 (62.9)			

χ^2 : Chi-squared Test Statistic

Of those with low party loyalty, 43.0% (n=64) preferred E-voting and 57.0% (n=85) preferred voting at the ballot box; of those with medium level of party loyalty, 37.4% (n=64) preferred E-voting and 62.6% (n=107) preferred voting at the ballot box; among individuals with high level of party loyalty, 23.9% (n=37) preferred E-voting and 76.1% (n=118) preferred voting at the ballot box. A statistically significant difference was found in the comparison of preferences for voting methods of individuals according to their level of party loyalty ($\chi^2=13.055$, $p=0.001$) (Table 7).

Table-7: Comparison of preferences for voting methods according to party loyalty level

	Preferences for Voting Methods			Test Statistic	
	E-Vote	Ballot Box			
	n (%)	n (%)	χ^2	P	
Party Loyalty					
Low	64 (43.0)	85 (57.0)			
Medium	64 (37.4)	107 (62.6)	13.055	0.001	
High	37 (23.9)	118 (76.1)			

χ^2 : Chi-squared Test Statistic

Since our dependent variable has two categories (E-vote, Ballot Box), Binary Logistic regression was used. All our independent variables were included categorically in the model. Education level, political interest level, ideology and party loyalty were found to be statistically significant in the logistic regression model ($p<0.05$). The results of the Binary Logistic regression are shown in Table 9.

Table-8: The effect of education level, level of political interest, ideology and party loyalty on the probability of choosing voting methods

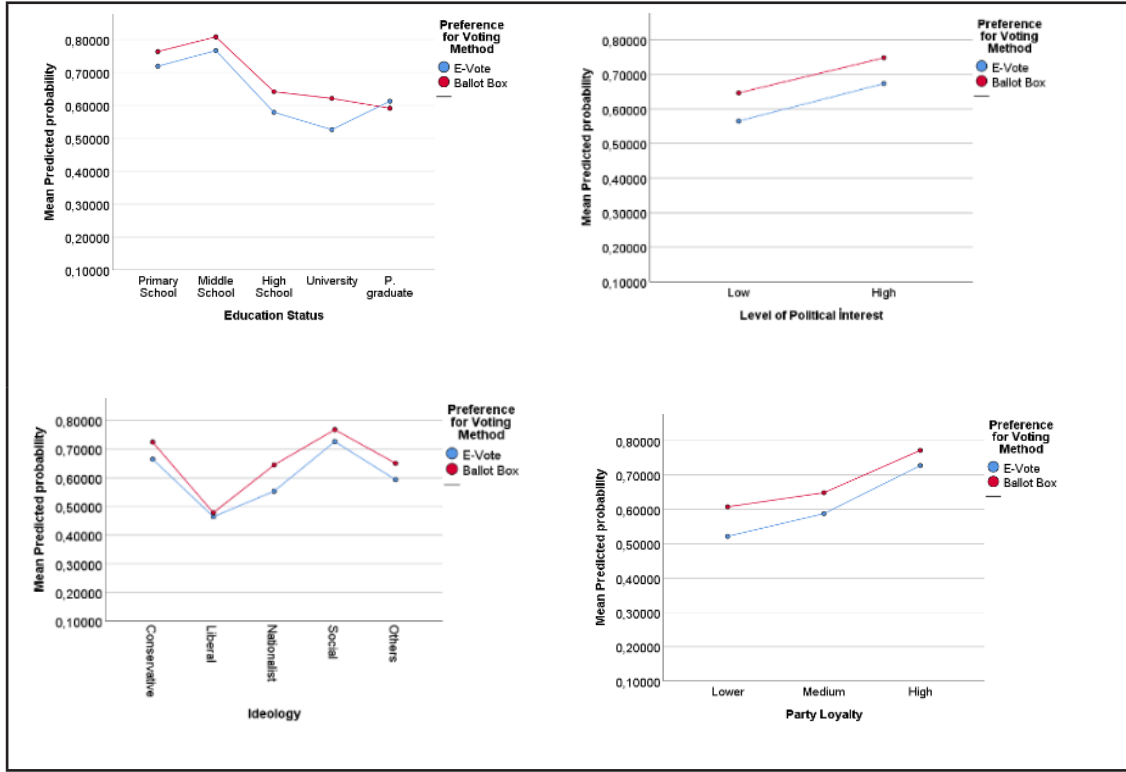


Table 8 is used to assess the predictive probabilities of preferences for voting methods based on the data obtained from the independent variables. This is explained in more detail in Discussion chapter.

According to the results of multivariate logistic regression analysis, the effect of the variables gender (Wald=0.244; p=0.621), and age (Wald=2.450; p=0.654) on voting method preference was found to be insignificant, while the effect of education level (Wald=14.247; p=0.007), level of political interest (Wald=5.453; p=0.020), ideology (Wald=12.786; p=0.012) and party loyalty (Wald=6.708; p=0.035) was significant.

Table-9: Effect of Voting Method Preference in Multivariate Logistic Regression Model

Variables	β	Standart Error	Wald	p	Exp(B)	95% confidence interval for Exp(B)	
						Lower	Upper
Fixed	1.091	0.490	4.951	0.026	2.976		
Gender	0.104	0.211	0.244	0.621	1.110	0.734	1.678
Age			2.450	0.654			
18-24	-0.028	0.297	0.009	0.925	0.973	0.543	1.741
25-34	-0.359	0.348	1.063	0.303	0.699	0.353	1.382
35-44	-0.459	0.340	1.823	0.177	0.632	0.324	1.230
45-54	-0.364	0.425	0.733	0.392	0.695	0.302	1.599
Education Status			14.247	0.007			
Middle School	0.279	0.442	0.398	0.528	1.322	0.556	3.144
High School	-0.858	0.368	5.443	0.020	0.424	0.206	0.872
University	-1.036	0.371	7.775	0.005	0.355	0.171	0.735
Postgraduate	-1.023	0.507	4.072	0.044	0.359	0.133	0.971
Level of Political Interest	0.560	0.240	5.453	0.020	1.751	1.094	2.803
Ideology			12.786	0.012			
Liberal	-0.651	0.432	2.274	0.132	0.521	0.224	1.216
Nationalist	-0.344	0.290	1.404	0.236	0.709	0.402	1.252
Social-Democrat	0.551	0.345	2.549	0.110	1.734	0.882	3.410
Others	0.095	0.385	0.061	0.806	1.099	0.517	2.336
Party Loyalty			6.708	0.035			
Medium	0.101	0.248	0.165	0.685	1.106	0.680	1.799
High	0.681	0.285	5.724	0.017	1.976	1.131	3.451
N	475						
Cox&Snell Square	R	0.089					
Nagelkerke Square	R	0.122					
Log-likelihood	569.494						

In terms of education, graduates of high school, university and graduate degrees are less likely to vote at the ballot box than primary school graduates ($\beta_{\text{highschool}} = -0.858$, $\beta_{\text{university}} = -1.036$, $\beta_{\text{graduate}} = -1.023$). It was found that those with high political interest were 1.751 times more likely to vote at the ballot box than those with low political interest. Those people with high levels of party loyalty are 1.976 times more likely to vote in the ballot box than those with low levels of party loyalty.

Discussion

The study investigates how people in the political sphere perceive technological

progress, especially with regard to voting methods. There are a sufficient number of studies on the subject in the foreign literature clearly reporting alternative voting methods and their applications that can be interpreted in various ways (Alvarez et al., 2008; Kersting et al., 2004; Shino & Smith, 2020). Applications such as voting by mail, voting via the internet, voting through specially designed machines, and the use of blockchain technology diversify alternative voting methods. In the Turkish literature on the subject, studies mostly focus on the technological infrastructure of voting (Yaşa, 2022), however, there is a lack of research to report diverse voter preferences regarding the integration of technology in voting process. Therefore, this study focuses on the variables affecting people's preferences for voting methods rather than the technological dimension of the issue.

As the dependent variable in the study has two categories, a binary logistic regression analysis was applied. The estimated probabilities of choosing each of these voting methods were analyzed. When analyzing the research results, it can be seen that gender does not affect the voting method. Whether a voter is male or female does not affect the probability of voting at the ballot box or by electronic methods. Data analysis showed that male and female participants did not differ in terms of their voting method preferences. It is understood that whether a voter is female or male has no effect on the voting preferences. Similarly, it was observed that the age of individuals did not affect their preferences for voting methods. Age has no effect on the preference for e-voting and voting at the ballot box. In a study conducted in the United States, age was found to be an important variable. Accordingly, younger respondents were more likely to choose internet voting, an e-voting method (Plescia, Sevi, & Blais, 2021). In the study conducted in Gaziantep, neither a positive nor a negative effect of age on voting method preference was found. Therefore, it is not possible to predict peoples' preferences for e-voting or voting at the ballot box with age.

According to the study, people's level of education differs in terms of their preferences for voting methods. Individuals with secondary school qualifications prefer voting in the ballot box more than with primary school qualifications. Individuals with high school, university and master's degree prefer voting at the ballot box less than people with a primary school degree. Peoples with as master's degree are more likely to use e-voting than vote at the ballot box. Also, educated people are more likely to prefer e-voting over other alternative voting systems.

In this study, the level of political interest was measured by asking the participants a number of questions that measured their knowledge of the issue. Individuals with high level of political interest are more likely to vote at the ballot box than via e-voting. According to a study conducted in the United States in 2020 on preferences for simple voting methods, people who have a high level of interest in political issues and answer the questions correctly are more likely to prefer easy voting methods to cast their votes (Shino & Smith, 2020, p. 410). In this conducted in Gaziantep, it was found that as voters' knowledge of political issues increased, their preference of e-voting decreased. Accordingly, it can be predicted that people with increased political interest will prefer

voting at the ballot box as a voting method.

Ideological changes also differ in individuals' preferences for voting methods. For example, individuals who describe themselves as social democrats prefer voting in the ballot box more than conservatives, albeit to a lesser extent. Social democratic individuals prefer traditional ballot box method more than conservatives. Liberal individuals, on the other hand, prefer voting in the ballot box less than all other ideological classifications. Moreover, liberal individuals are equally likely to use e-voting and ballot box voting. There is a positive relationship between the degree of party loyalty and the voting method. Individuals with high party loyalty are more likely to vote at the ballot box than to via e-voting.

Conclusion

This research presents data that corresponds to the findings obtained within its limitations. Studies on alternative voting methods in Türkiye are quite limited. Recently, this subject has been studied in the fields of political science and political communication. Studies to be conducted in Türkiye with a larger number of participants, in different settlements and considering different variables will contribute to the emergence of a new and rich literature.

Those who responded correctly to the questions about interest in politics were more likely prefer e-voting less as a simple voting method that increases turnout. In this context, it can be elaborated why voters with a high level of knowledge keep their distance from e-voting. While the variables of age and gender do not lead to any change in voting preferences, it can be seen that individuals' ideologies are effective in their voting preferences.

A clear understanding of individuals' preference models in relation to voting methods is important in terms of guiding the studies to be carried out by the public authority in this direction. The fact that e-voting is less preferred as a voting method in the young age group may be related to the distance of young people from political issues. The underlying reasons for this can be analyzed in more detail. In addition, trust in the security conditions of the voting method should be ensured. Literature suggests that the change in education level affects individuals' preference for voting method (Plescia, Sevi, & Blais, 2021). A study to be conducted on two sample groups with different educational backgrounds can reveal the reasons for the effect of education on voting method preference.

As a result of the research, some suggestions can be made to practitioners. In parallel with the development of technology, studies can be conducted on different voting methods, especially e-voting. However, the fact that individuals' political preferences and behaviors are shaped by the influence of many different variables should be taken into account. In this context, the application of different research methods that allow social psychological assessments will also contribute to the literature.

Etik Beyanı: Gaziantep Üniversitesi Sosyal ve Beşeri Bilimler Etik Kurulu'nun

06/05/2022 tarihli ve 6 karar sayılı (Başvuru No: 175480) Etik Kurul onayı alınmıştır.

Yazar Katkı Oranı Beyanı: Çalışma iki yazarlı olup, yazarların katkı oranı eşittir.

Çıkar Çatışması Beyanı: Yazar herhangi bir çıkar çatışması olmadığını beyan etmektedir.

References

- Abeles, M. (2020). *Devletin antropolojisi* (2 ed.). (N. Ökten, Trans.) Ankara: Dipnot Yayınları.
- Ağaoğulları, M. A. (2004). *Kent devletinden imparatorluğa*. Ankara: İmge Yayınevi.
- Ağaoğulları, M. A. (2020). *Ulus-Devlet ya da halkın eğemenliği*. Ankara: İmge Kitabevi.
- Akbulut, Ö., & Çapık, C. (2022). Çok değişkenli istatistiksel analizler için örneklem büyüklüğü. *Atatürk Üniversitesi Yayınları*, 25(2), 111-116.
- Alvarez, R. M., Hall, T. E., & Llewellyn, M. H. (2008). Are Americans confident their ballots are counted? *The Journal of Politics*, 70(3), 754-766.
- Alvarez, R. M., Hall, T., & Trescel, A. H. (2009). Internet Voting in comparative perspective: The Case of Estonia. *Political Science and Politics*, 42(3), 497-505.
- Arslan, R. (2015). *Demokratik yönetim sistemleri* (2 ed.). Bursa: Dora Yayınevi.
- Aslan, A. O. (2022). *Yönetim danışmanlığı ve Türk kamu yönetimi tarihsel bir analiz*. Ankara: Türk İdari Araştırmaları Vakfı.
- Baringer, A., Herron, C. M., & Smith, A. D. (2020). Voting by Mail and Ballot Rejection: Lessons from Florida for Elections in the Age of Coronavirus. *Election Law Journal*, 19(3), 289-320.
- Börekçi, E. B. (2021). Oy hakkının internet oy kullanımı ile dönüşümü. *Dokuz Eylül Üniversitesi Hukuk Fakültesi Dergisi*, 23(1), 607-637.
- Coleman, S., & Norris, D. F. (2005). Oxford Internet Institute, Forum Discussion Paper. *A new agenda for e-democracy*. Oxford.
- Diamond, L., & Plattner, M. F. (1995). *Demokrasinin küresel yükselişi*. (İ. Sezal, & F. Dilber, Trans.) Ankara: Yetkin Basımevi.
- Giommoni, T., & Loumeau, G. (2020). Lockdown and voting behaviour: A Natural Experiment on Postponed Elections During the Covid-19 Pandemic. *Covid Economics*, 41, 69-99.

- Gronke, P., Glanes-Rosenbaum, E., Miller, P., & Toffey, D. (2008). Convenience voting. *Annu. Rev. Polit. Sci.*(11), 437-455. doi:10.1146/annurev.polisci.11.053006.190912
- Heywood, A. (2015b). *Siyasi ideolojiler* (9 ed.). (A. Bayram, Ö. Tüfekçi, H. İnaç, Ş. Akin, & B. Kalkan, Trans.) Ankara: Adres Yayınları.
- Heywood, A. (2021a). *Siyaset teorisine giriş* (11 ed.). (H. Köse, Trans.) İstanbul: Küre Yayınları.
- Ijon, F. B., & Bingab, B. B. (2020). COVID-19 Pandemic and the 2020 Elections in Ghana. *Journal of Scientific Research Reports*, 26(9), 94-102.
- James, T. S., & Alihodzic, S. (2020). When is it Democratic to Postpone an Election? .elections During Natural Disasters, Covid-19, and Emergency Situations. *Electional Law Journal*, 19(3), 344-362.
- Kaliyamurthie, K., Udayakumar, R., Parameswari, D., & Mugunthan, S. (2013). Highly Secured Online Voting System over Network. *Indian Journal of Science and Technology*(6), 4831-4836.
- Kamil, M., Sunarya, P. A., Rahardja, U., Santoso, L. N., & İqbal, M. (2021). Covid-19: Implementation e-voting Blockchain Concept. *International Journal Of Artificial Intelligence Research*, 5(1), 25-34.
- Kersting, N. (2013). Online Participation: From 'invited' to 'invented' Spaces. *Int. J. Electronic Governance*, 6(4), 270-280.
- Kersting, N., & Baldersheim, H. (2004). Electronic Voting and Democratic Issues: An Introduction. In N. Kersting, & H. Baldersheim, *Electronic Voting and Democracy: A Comparative Analysis* (p. 3). New York: Palgrave Macmillan.
- Kumar, S., & Walia, E. (2011). Analysis Of Electronic Voting System In Various Countries. *International Journal on Computer Science and Engineering*, 3(5), 1825-1830.
- Landman, T., & Splendore, L. (2020). Pandemic Democracy: Elections and Covid-19. *Journal of Risk Research*, 23(7-8), 1060-1066. doi:10.1080/13669877.2020.1765003
- Maffioli, E. M. (2021). The political economy of health epidemics: Evidence from the Ebola Outbreak. *Journal of Development Economics*(151).
- Nelson, J. M. (2007). Elections, democracy, and social services. *Studies in Comparative International Development*, 41(4), 79-97.
- Palguta, J., Levinsky, R., & Skoda, S. (2022). Do elections accelerate the COVID-19 pandemic? Evidence from a natural experiment. *Journal of Population Economics*, 35, 197-240.

- Plescia, C., Sevi, S., & Blais, A. (2021). Who likes to vote by mail? *American Politics Research*, 49(4), 381-385. doi:0.1177/1532673X211005684
- Popper, K. (2018). *Açık toplum ve düşmanları*. (M. Tunçay, & H. Rızatepe, Trans.) Ankara: Liberte Yayınevi.
- Sarıfakıoğlu, B. (2018). Seçim bilişim sistemi. Ankara.
- Sartori, G. (1996). *Demokrasi teorisine geri dönüş*. (T. Karamustafaoğlu, & M. Turhan, Trans.) Ankara: Yetkin Yayınları.
- Saylam, A., & Uçar Kocaoğlu, B. (2022). Kamu yönetiminde yönetsel kapasiteyi e-katılım perspektifinden değerlendirmek. *Amme İdaresi Dergisi*, 55(2), 63-88.
- Shino, E., & Smith, D. (2020). Political knowledge and convenience voting. *Journal of Elections, Public Opinion and Parties*, 408-428. doi:https://doi.org/10.1080/17457289.2020.1814308
- Sullivan, K. (2020). Impact Of Covid-19 On The 2020 Us Presidential Election. International Institute for Democracy and Electoral Assistance.
- Topakkaya, A., & Özyürek Şahin, B. (2015). Sakıncalı rejim demokrasi: Platon-Aristoteles örneği. *Felsefe ve Sosyal Bilimler Dergisi*(20), 191-210.
- Touraine, A. (2002). *Demokrasi nedir?* (3 ed.). (O. Kunal, Trans.) İstanbul: Yapı Kredi Yayınları.
- Uygun, O. (2015). *Devlet teorisi* (2 ed.). İstanbul: XII Levha Yayınları.
- Yaşa, A. A. (2022). Kamu sektöründe blok zincir teknolojisi kullanımı: Türkiye'de Mevcut Durum Analizi. *Journal of Yaşar University*, 17(66), 615-633.
- Zhang, Q., Phang, C. W., & Zhang, C. (2022). Does the internet help governments contain the COVID-19 pandemic? *Government Information Quarterly*, 39, 1-16.