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CAN LATIN AMERICAN VOTERS SEE THE FUTURE? CITIZEN FORECASTING IN ARGENTINA

¿Los ciudadanos latinoamericanos pueden adivinar el futuro? La predicción ciudadana en Argentina

Os eleitores latino-americanos conseguem enxergar o futuro? Previsões cidadãs na Argentina

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Abstract
The present study examined whether Argentinian citizens could predict election results at the sub-national level. We targeted Argentinian Twitter users in seven provinces with polls using Twitter Ads. Argentinian Twitter users constitute a high-ability subgroup that possesses several characteristics that enhance citizen forecasting competence. The polls asked citizens to predict what party would win the first round of the upcoming presidential election in their province. We present a preliminary citizen forecast of the first round of the 2023 Argentinian presidential election. The forecast demonstrates three preliminary findings. First, citizens expect a competitive election in their respective provinces. Second, citizens in almost all the provinces expect an opposition victory. Finally, a high degree of uncertainty surrounds these predictions, with no party obtaining a greater than 50 percent probability of winning in any of the provinces.

Palabras clave:
predicción ciudadana; expectativas del voto; delegación; Twitter; democracias jóvenes

Resumen
En este estudio examinamos si los ciudadanos argentinos serían capaces de predecir los resultados de una elección a nivel subnacional. Lo dirigimos a usuarios argentinos de Twitter en siete provincias utilizando Twitter Ads. Los usuarios argentinos de Twitter constituyen un subgrupo de alta habilidad el cual posee varias características que incrementan su competencia de pronóstico ciudadano. En los sondeos se les pidió a los ciudadanos pronosticar cual partido ganaría la primera ronda en la elección presidencial próxima en su provincia. Presentamos un pronóstico ciudadano preliminar de la primera ronda de la elección presidencial de 2023. El pronóstico muestra tres resultados preliminares. Primero, los ciudadanos anticipan una elección competitiva en sus respectivas provincias. Segundo, los ciudadanos en casi todas las provincias sondeadas suponen una victoria de la oposición. Finalmente, un alto grado de incertidumbre rodea estos pronósticos.

Palavras-chave:
previsão cidadã; expectativas de voto; delegação; Twitter; democracias jovens

Resumo
O presente estudo examinou se os cidadãos argentinos poderiam prever os resultados eleitorais em nível subnacional. Alvejamos usuários argentinos do Twitter em sete províncias com pesquisas usando Twitter Ads. Os usuários argentinos do Twitter constituem um subgrupo de alta habilidade que possui várias características que aprimoram a competência de previsão cidadã. As pesquisas pediram aos cidadãos que previssem qual partido venceria o primeiro turno das próximas eleições presidenciais em sua província. Apresentamos uma previsão cidadã preliminar do primeiro turno das eleições presidenciais argentinas de 2023. A previsão demonstra três descobertas preliminares. Primeiro, os cidadãos esperam uma eleição competitiva em suas respectivas províncias. Segundo, cidadãos em quase todas as províncias esperam uma vitória da oposição. Finalmente, um alto grau de incerteza envolve essas previsões, sem que nenhum partido obtenha uma probabilidade superior a 50 % de vitória em qualquer das províncias.

1. INTRODUCTION*

Election forecasting remains a popular activity across established democracies. Researchers create election forecasting models to reveal specific aspects of the electoral process (Campbell, 2000). However, their use remains rare in Latin America. The limited number of elections, the small number of polls released per election, and the complexity of the models required to address these issues all hamper the use of traditional election forecasting methods in the region (Ratto, Lewis-Beck, & Bélanger, 2022). This article proposes using citizen forecasting techniques to address these problems. In this article, we present a new method for eliciting citizen forecasts using the Twitter Ads feature on the Twitter social

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networking site. We also provide a preliminary forecast of the first round of the 2023 Argentinian presidential election. Citizen forecasting resolves the small-N problem, the problem of limited polling, and is more straightforward to implement than available alternatives. Twitter Ads offers a cost-effective method for collecting citizen forecasting data that is well-suited to Latin America.

2. CITIZEN FORECASTING

2.1. *Overview of Citizen Forecasting*

Murr & Lewis-Beck (2020) divide election forecasting models into three categories. These categories include structural models, opinion polls, and prediction markets (Andrade-Bayona, 2022). Structural models use econometric techniques to predict election results from aggregate-level economic and political data (Campbell & Lewis-Beck, 2008). Prediction markets create forecasts by aggregating the trading activity of market participants (Luckner, 2012). Participants in these markets buy and sell contracts corresponding to election outcomes. The third election forecasting method, opinion polls, is the best known. Opinion polls can be classified into vote intention polling and vote expectation polling (Lewis-Beck & Tien, 1999). The main difference between these is question wording. Vote intention polling asks citizens what candidate or party they intend to vote for (Temporão *et al.*, 2019). Vote expectation polling asks citizens what candidate or party they expect will win (Lewis-Beck & Tien, 1999). Sometimes vote intention polling misses behaviour of key groups in the electorate, such as during the 2020 US presidential election (Castillo *et al.*, 2021). Vote expectation polling, or citizen forecasting, can complement traditional polls in these cases.

Citizens possess several characteristics that influence the accuracy of election forecasts. These include individual and contextual characteristics. Individual characteristics can be further divided into psychological characteristics and informational characteristics (Mongrain, 2021a). Political affiliation represents the principal psychological characteristic influencing citizen forecasting competence (Mongrain, 2021a; Dolan & Holbrook, 2001). Several studies reveal that citizens engage in «wishful thinking» and overestimate the probability of their preferred party winning an election (Dolan & Holbrook, 2001). Although the effect of political affiliation on citizen forecasts is large, certain informational characteristics attenuate its effect on prediction. Citizens with higher levels of political knowledge make more accurate forecasts even if their party loses (Dolan & Holbrook, 2001). Mongrain (2021a) confirms this finding across several national and sub-national elections. However, he cautions that only very high levels of political knowledge

limit the impact of partisan affiliation on citizen forecasts. Tetlock (2005) reports that cognitive styles help prediction.

Education improves the accuracy of citizen forecasts. Lewis-Beck & Tien (1999) first identified its effect on citizen forecast accuracy. Stiers & Dassonneville (2018) determined that higher levels of education attenuate the impact of partisan affiliation on citizen forecasting accuracy. They found that more educated voters were less likely to overestimate their parties' vote shares. Although education's effect on citizen forecasts has been confirmed across several studies, the channel through which it acts remains unclear. Lewis-Beck & Tien (1999) originally proposed that more educated individuals enjoyed larger social networks that exposed them to more information and allowed for better predictions. However, Leiter *et al.* (2020) and Leiter *et al.* (2018) confirm that social networks exert an effect independent of education.

Social networks represent a third individual-level characteristic that influences citizen forecasting accuracy. Leiter *et al.* (2018) describe three social network characteristics that improve citizen forecasts. They include the size of a citizen's social network, the frequency of political discussion within that network, and the partisan composition of the network (Leiter, *et al.* 2018). They use two measures of partisan network composition to measure the effect of social network diversity on citizen forecasts. Citizen forecasts at both the district and national level benefit from partisan diversity in social networks (Leiter, Reilly & Stegmaier, 2020). However, more recent research has called into question whether social networks aid citizen forecasts at all. Mongrain (2022) tests the effect of social networks on citizen forecasts across 68 elections, finding no effect on accuracy.

Characteristics of the electoral context also affect citizen forecasting accuracy. These include the previous margin of victory in a constituency, whether that constituency changes hands each election, the time remaining until the election, and the amount of polling available in that constituency (Murr, 2015; Murr, 2011; Lewis-Beck & Tien, 1999; Blais & Bodet, 2006). Elections with narrow margins of victory complicate the prediction task and lower citizen forecasting accuracy (Murr, 2015). Murr finds that US «swing» states are more difficult to predict. Citizens form more accurate predictions closer to election day (Lewis-Beck & Tien, 1999). Blais & Bodet (2006) determine that politically sophisticated citizens use polling to form election predictions when available. When not available, they rely on the previous election result in the district.

2.2. Democratic vs. Technocratic Citizen Forecasting

Citizen forecasts can be collected using two methods: Democratic citizen forecasting and technocratic citizen forecasting (Mongrain, 2021b). The group's

forecasting competence distinguishes the two methods. Forecasting competence refers to the percentage of citizens in a group that correctly predict the election winner. Democratic citizen forecasting asks a representative sample of citizens to provide election predictions. This method uses a representative cross-section of society, including individuals who are highly likely, somewhat likely, and not very likely to provide a correct forecast. Technocratic citizen forecasting identifies citizens with characteristics increasing their forecasting competence and delegates the forecasting task to them (Murr, 2015). Delegation can be carried out in two ways. Murr (2015) identifies the most competent forecasters from representative surveys and delegates the task to respondents possessing high levels of competence-enhancing characteristics. Other researchers identify high-competence subgroups existing in the population and delegate the citizen forecasting task to them (Murr & Lewis-Beck, 2020; Graefe, 2016; Ganser & Riordan, 2015).

A visualization serves to better explain the concept of delegation. The following table adapts Murr's (2015) explanation of delegation in citizen forecasting. The values in the table demonstrate how increasing the forecasting competence of the individuals in a group improves the group's overall forecasting competence. The table presents the group forecasting competence for two hypothetical groups of citizens. The first group contains individuals that predict the correct election winner 60 % of the time. The second group contains individuals that predict the correct election winner 70 % of the time. The table shows how slight increases in the forecasting competence of a group's members can lead to substantial increases in the probability of a group «getting it right.»

Table 1. Individual Forecasting Competence, Group Size, and Group Forecasting Competence

Individual forecasting competence	Group size	Group forecasting competence
60 %	5	68 %
60 %	25	85 %
70 %	5	84 %
70 %	25	98 %

Source: Table adapted from Murr (2015)

Delegating the forecasting task to an unrepresentative sample of citizens works due to Condorcet's Jury Theorem (Temporão *et al.*, 2019). Condorcet's Jury Theorem states that, if certain conditions are met, then a group of citizens should achieve the correct answer to a problem as the size of the group increases (Murr,

2011). Condorcet's Jury Theorem originally stated three indispensable conditions for a correct forecast (Murr, 2015). These included a binary problem, uncorrelated group votes, and unvarying competence between group members (Murr, 2015). Subsequent research relaxed these conditions (Temporão *et al.*, 2019; Murr, 2015). Groups can now forecast problems with multiple outcomes, correlated predictions, and the group's average competence must be at least 0.5 (Murr, 2015). In practice, a group of citizens can correctly predict an election if it has a greater than 0.5 probability of providing the correct answer.

Researchers have previously identified high-competence groups and delegated the forecasting task to them. Ganser & Riordan (2015) test whether delegating the forecasting task to high-ability subgroups of citizens improved forecast accuracy. Using a representative dataset, they create three unrepresentative, high-ability subgroups: Individuals high in political knowledge, individuals who gather information «very often», and individuals high in education. The high-ability subgroups perform only marginally better than the entire sample. Despite this setback, other research supports the use of delegation in citizen forecasting. By utilizing delegation and weighting, Murr (2015) correctly predicts 87 % of state-level electoral results in US elections between 1952 and 2012. This represents a 5 % improvement over an undelegated sample.

3. ELECTION FORECASTING IN YOUNG DEMOCRACIES

Structural forecasting models represent a principal method for forecasting elections in the developed world. However, these models may not be well-suited to forecasting elections in young democracies (Bertholini, Rennó, & Turgeon, 2022). The limited number of elections in Latin America constitutes the principal obstacle to employing structural models in the region (Arce & Vera, 2022). Researchers have attempted to deal with this problem in two ways. The first entails pooling national elections with regional ones (Lewis-Beck & Bélanger, 2012). The second involves disaggregating data down to the subnational level (Lewis-Beck & Bélanger, 2012; Turgeon & Rénno, 2012). Both methods increase the number of cases and allow for the use of structural models within the Latin American context.

Forecasts generated from vote intention polls suffer from similar problems of limited data. Unlike the wealth of polling data available in mature democracies, Latin American elections sometimes only see a handful of publicly released polls per cycle (Bunker, 2020). Bunker (2020) presents a two-stage model for creating forecasts of Latin American elections. First, polls are gathered and weighted according to their biases. Second, Bayesian predictions of the vote are generated using a dynamic linear model. However, vote intention polling still faces two

obstacles when employed in Latin America. The first obstacle is the limited number of polls released per election cycle that may provide analysts with an inaccurate view of the race. Second, correcting biases introduced by limited polling require relatively complex weighting and modeling schemes.

The limitations inherent to structural modeling and vote intention polling have led researchers to focus on alternative election forecasting methods. Santander *et al.* (2017) create a forecast of the 2017 Chilean primary election using computational analysis of Twitter messages. The results are quite accurate, exhibiting an MAE of 1.6 and 0.5 percentage points in predicting the vote shares of the two main political coalitions (Santander *et al.*, 2017). However, the final prediction's lead time is only five days (Santander *et al.*, 2017). Rodríguez *et al.* (2018) deploy five algorithms to predict the 2017 presidential elections in Chile. They determine the ensemble vote classifier algorithm to be the most accurate (Rodríguez, *et al.* 2018). This algorithm achieved a Mean Absolute Error (MAE) of 0.51 percentage points when estimating the results of the second round of the Chilean election (Rodríguez *et al.*, 2018).

4. HOW CITIZEN FORECASTING RESOLVES PROBLEMS ASSOCIATED WITH ELECTION FORECASTING IN YOUNG DEMOCRACIES

Lewis-Beck outlines four criteria when judging an election forecasting model. These criteria include accuracy, replicability, parsimony, and lead time (Jennings *et al.*, 2020). Citizen forecasting addresses the problem of replicability associated with structural models in the Latin American context by not relying on historical data to generate predictions. Instead, citizens rely on psychological and informational variables readily available to them (Mongrain, 2022). Therefore, a country does not need a long democratic history for citizens to predict the outcome of the next election. By employing citizen forecasting, researchers can solve the small-N problem without resorting to pooling or going down a level of analysis.

Citizen forecasting represents a parsimonious approach to creating election forecasts in young democracies. Addressing the limited number of vote intention polls released each election cycle involves creating two-step Bayesian models (Bunker, 2020). Compared to citizen forecasting, these models constitute a relatively complex approach to solving this problem. Machine learning alternatives relying on sentiment data gathered from social media require the implementation of complex algorithms (Rodríguez *et al.*, 2018; Santander *et al.*, 2017). By contrast, citizen forecasts simply require asking individuals who they think will win an upcoming election. According to Bélanger & Trotter (2017), parsimony gains greater importance when sample sizes are small. Therefore, the parsimonious approach

afforded by citizen forecasting may be of particular importance in Latin America, given its limited election history.

5. DELEGATED CITIZEN FORECASTS USING TWITTER

5.1. Why Delegate to Twitter?

Twitter provides an ideal platform for reaching the populations in Latin America that are likely to possess high levels of forecasting competence. Previous research employed a candidate's number of Twitter followers to predict their chances of victory (Congosto *et al.*, 2011). Mongrain (2021a) found that citizens with higher levels of political knowledge predicted elections more accurately. Persons higher in political knowledge are more likely to use Twitter (Basyouni, 2021). Once online, regular Twitter users benefit from increased levels of political knowledge (Boukes, 2019). According to Boukes, Twitter use increases political knowledge for two reasons. First, individuals high in political interest are more motivated to use Twitter. Second, much of the information on Twitter is political and even individuals with lower levels of political interest will improve their knowledge by mere exposure. Research finds that politically specialized publics in Latin America use Twitter at very high rates to obtain political information (Beatriz Fernández & Rodríguez-Virgil, 2019) Politically specialized publics include political consultants, political journalists, and academics, the type of individuals likely to possess a high level of political interest and knowledge about politics (Beatriz Fernández & Rodríguez-Virgil, 2019).

5.2. Instruments

This research utilized the Twitter Ads feature on Twitter to target citizens with polls through advertisements and elicit their vote expectations. Twitter Ads allowed researchers to target Twitter users based on their region of residence. To address the possibility that provinces may be over-represented, a limit of $30 for ad buying was placed on each. Once targeted, the polls appeared on ads featured on users' Twitter timelines. The tweets appeared on users' timelines on February 17, 2023. Researchers targeted Twitter users in seven Argentinian provinces. Researchers chose the provinces based on each province's average partisan lean during the last two presidential elections, also known as the Cook Partisan Voter Index (Cook & Wasserman, 2014), selecting only provinces characterized by a partisan lean of less than ten points in either direction. Competitive elections represent a more difficult test of citizen forecasting than 'safe' districts, in which

citizen forecasting is expected to be systematically correct. In other words, these provinces were selected because they represent a challenging context for citizen forecasting due to their close margins of victory. The competitive provinces included in the sample were Buenos Aires, Entre Rios, La Pampa, La Rioja, Santa Fe, San Luis, and Neuquen.

Instability characterizes the Argentine political context. Center-right Mauricio Macri won the 2015 presidential election (Herrera & Relmucao, 2021). However, sluggish economic growth and controversy surrounding a massive International Monetary Fund loan led to the election of Alberto Fernández, who selected former president and first lady Cristina Fernández as his running mate (Herrera & Relmucao, 2021). The COVID-19 pandemic and high inflation caused widespread dissatisfaction. Cristina Fernández received a six-year prison sentence and lifelong ban on holding office (Booth, 2022). The rise of populist outsider Javier Milei introduced even greater uncertainty into a competitive election (Reuters).

The Argentinian provincial context contains several characteristics that might affect voters' expectations. In addition to traditional forms of voting, other forms of electoral participation exist at the subnational level. Clientelism–specifically vote buying–remains a feature of the Argentinian provincial political landscape. Brusco, Nazareno, & Stokes (2004) find that voters in smaller provinces have a higher probability of receiving goods in exchange for votes. Ronconi & Zaragaza (2019) also report that political brokers distribute national social benefits at the local level. They find that brokers specifically target households with larger numbers of voting-age members. Some studies find that the Peronist parties rely on these local networks and benefit from clientelism to a greater degree (Brusco *et al.*, 2004).

5.3. Measures

Citizen forecasts were measured using polls embedded in tweets. Each poll asked citizens the following question: «What party do you think will win the first round of the October presidential elections IN YOUR PROVINCE?» Respondents were provided with four response choices. Each choice corresponded to the three major parties in the election. Response choices included the electoral coalitions Frente de Todos, Juntos por el Cambio, La Libertad Avanza, and «other». Twitter polls allow researchers to observe the percentage of respondents that selected each response choice and the total number of respondents that answered the poll.

5.4. A Forecast for the 2023 Argentinian Presidential Election

Citizen forecasts drawn from the seven selected provinces demonstrate several interesting findings (see Table 2). First, citizens in all the provinces under study expect a close race at the provincial level. Second, citizen forecasts in most of the seven provinces exhibit a pro-opposition trend except for the province of La Rioja, where the ruling Frente de Todos draws a slight lead in expectations. Finally, uncertainty surrounding provincial-level electoral outcomes remains high as no party surpasses the 50 % mark. Previous research establishes that if more than 50 % of respondents expect a party to win an election, that party is likely to win (Lewis-Beck & Tien, 1999). Despite the highly unrepresentative nature of Twitter users, their citizen forecasts do not appear overwhelmingly biased in favor of a particular party. The researchers placed a limit of $30 for ad buying to ensure that each region received equal exposure to the Twitter polls. However, these steps to reduce overrepresentation of provinces by proved ineffective as the population size of provinces declined.

Table 2. What party do you think will win the first round of the October presidential elections IN YOUR PROVINCE? February, 2023

Province	Frente de Todos (%)	Juntos por el Cambio (%)	La Libertad Avanza (%)	Other (%)	Total (%)
Buenos Aires	260 (27.7)	407 (43.4)	192 (20.5)	79 (8.4)	938 (26.5)
Santa Fe	141 (21.3)	309 (46.7)	153 (23.1)	59 (8.9)	662 (18.7)
Entre Rios	122 (23.7)	216 (42.2)	138 (26.8)	38 (7.3)	514 (14.6)
Neuquen	90 (23.4)	129 (33.6)	98 (25.5)	67 (17.5)	384 (10.9)
San Luis	79 (19.7)	177 (44.1)	105 (26.2)	40 (10.0)	401 (11.4)
La Pampa	130 (34.8)	139 (37.2)	79 (21.1)	26 (6.9)	374 (10.6)
La Rioja	90 (34.9)	81 (31.4)	67 (26.0)	20 (7.7)	258 (7.3)
Total	912 (25.8)	1,458 (41.3)	832 (23.6)	329 (9.3)	3,531 (100.0)

Source: The percentages in this table represent the percentage of respondents for a party divided by the total number of respondents in a province. Provinces are ranked by population in descending order.

5.5. Discussion on the Use of High-Competence Subgroups to Predict Argentine Subnational Election Results

This study examined whether high-competence, unrepresentative samples of Argentinian citizens could predict presidential election results at the provincial level. This research question arose from Condorcet's Jury Theorem which states that, if a group of citizens has a greater than 50 % probability of correctly predicting the election result, they will do so even if the sample is demographically unrepresentative of the population at large. Results suggest that high-competence, unrepresentative subgroups of citizens in Argentine elections cannot predict the results of presidential elections at the provincial level seven months in advance. Groups of citizens predicted that Juntos por el Cambio, the centre-right coalition, would win all the provinces in this study. During the first round, the seven provinces in this sample, four voted for the Peronist party and three voted for La Libertad Avanza, the right-wing coalition led by Javier Milei that eventually won the second round (Cámara Nacional Electoral, 2023). These results appear to contradict the theoretical expectation that high-competence subgroups can predict election results. Three explanations exist for this anomalous research finding. First, Twitter users may not possess sufficiently high levels of citizen forecasting competence to forecast elections accurately. Second, the citizen forecasts may have been made too far in advance of the election. Citizens' forecasts were collected in February, eight months before the election. Previous research by Murr *et al.* (2021) shows that citizens can predict British elections several years in advance, but this might vary according to local characteristics. Finally, institutional characteristics of the Argentinian context might affect election results. As previously stated, clientelism allows Argentinian incumbents to turn out their supporters in ways that may not be easily predictable to other citizens. Additionally, party candidates are not defined until the PASO primary election held a month in advance of the first round of the general election (Harrison, 2023). Before this election, citizens may find it difficult to gauge the relative strength of each candidate and formulate predictions for the election. Based on these results and the theoretical framework of Condorcet's Jury Theorem, we conclude that high-competence subgroups cannot predict Argentine presidential elections at the provincial level eight months before the first round of the general election.

5.6. Potential Limitations of Using Twitter to Elicit Citizen Forecasts

Three potential limitations exist when delegating citizen forecasts to groups of Twitter users. The first limitation is that citizens on Twitter may draw the information they use to make their forecasts from vote intention polling. If citizens

draw information from vote intention polling, then there is a risk that citizen forecasts are merely highly correlated with polls. The evidence for citizens drawing information from this source is mixed, with two studies finding that attentiveness to news does not influence citizen forecasts (Mongrain, 2021a; Leiter *et al.*, 2018) and others arriving at the opposite conclusion (Blais & Bodet, 2006). In this study, vote intention polling is unlikely to have influenced citizen forecasts because we elicited district-level results, an outcome for which polling in Argentina is extremely limited. This makes it highly unlikely that vote intentions are correlated with citizen forecasts.

A second potential limitation is that citizens are simply becoming aware of objective economic conditions. Instead of engaging in cognition to create a forecast, citizens are simply learning what candidate is likely favored by existing economic conditions. If this were the case, we would expect to see evidence of citizens learning of these economic conditions as the campaign progressed. Temporão *et al.* (2019) test this hypothesis by comparing how the forecasts of Twitter users and non-Twitter users evolve over the course of several campaigns. They discover that the gap between Twitter users and non-Twitter users remains stable across various election campaigns. This indicates that citizens–both the highly competent and the less competent–are not updating their predictions in response to new information. The stability exhibited by citizen forecasts throughout an electoral campaign indicates that citizens make judgments about who will win an election instead of becoming aware of objective economic conditions.

A third limitation to our research is that Twitter users' levels of political knowledge may vary across countries, limiting its generalizability. Previous research demonstrates that Argentinian Twitter users include the politically sophisticated (Beatriz Fernández & Rodríguez-Virgil, 2019). This might result in two types of biases: first, these politically engaged users tend to evolve in echo chambers (Colleoni *et al.*, 2014), and hence may have a distorted vision of their party's chances of winning, and second, they might be politically motivated to predict their party's victory to indicate momentum (Bolsen *et al.* 2014), resulting in lower accuracy. However, levels of political knowledge among Twitter users may be lower in other Latin American countries, and this may affect delegation of citizen forecasting to users on that platform. Further research is needed to determine whether Twitter users in other Latin American countries possess sufficient political knowledge to create accurate citizen forecasts. All in all, because forecasting on Twitter has its own unique biases, it makes it a complementary method to traditional survey approaches, rather than a replacement of such methods.

6. CONCLUSION

This paper proposed a novel method for delegating citizen forecasts to Twitter users. To our knowledge, this study also represents the first time any form of citizen forecasting has been carried out in Latin America. Delegating the citizen forecasting task to Twitter users resolves several issues currently affecting election forecasting in Latin America. First, it solves the small-N problem that prevents structural models from being employed efficiently in many Latin American countries. Second, it provides a parsimonious approach that is easier and more straightforward to implement than Bayesian models or machine learning algorithms. Previous research suggests that, despite not being representative of the general population, citizen forecasts collected from Twitter should be accurate thanks to users' high levels of political knowledge. Preliminary citizen forecasts collected during February 2023 indicate a tight race in seven Argentinian provinces that have proven to be competitive during the previous two presidential elections. Citizen forecasts collected during that month favor the opposition party Juntos por el Cambio, although levels of uncertainty remain high. Future research areas could include delegating the citizen forecasting task to Twitter users in other Latin American countries and identifying the mechanisms through which aggregation works using a framework similar to Satopää *et al.* (2023).

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