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Policy Report

Understanding Turnout in the Lebanese Elections

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JAN 2021



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This report is published in partnership with HIVOS through the Women Empowered for Leadership (WE4L) programme, funded by the Netherlands Foreign Ministry FLOW fund.



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Executive Summary

Lebanon's 2018 parliamentary elections, the first in nine years, saw a sizable decrease of voter turnout, with 49.7% of registered voters casting a ballot compared to 54% in 2009. The low participation ran counter to predictions that changes in the electoral law and the introduction of the diaspora vote would increase turnout. This report aims to provide an in-depth analysis of voter turnout in the 2018 Lebanese parliamentary elections, the striking discrepancies across socio-economic cleavages, and the relevant drivers of citizens' participation. It also sheds light on the changes in turnout rates between the 2009 and 2018 elections. Our analysis shows that in 2018, women and older voters voted more than men and the youth. We also find that Sunni and Alawite voters were the least likely to cast their ballot in 2018, while Shia and Druze voters had the highest participation rates. Turnout also varied across regions, ranging from below 40% in the largest urban centers of Beirut and Tripoli to more than 65% in Keserwan and Jbeil. Some of the key changes that could explain the reduction in voter participation in 2018 were: The sizable increase in first-time voters—given the delay in the latest elections—who had a lower propensity to vote; the fall in turnout among Sunni and Alawite voters who, in many instances, refrained from voting as an act of discontent toward the main sectarian parties; and the increase in the share of confessionally mixed voting centers—from 14% to 23% of voters—which led to lower turnouts.

I Introduction

Voter turnout is one of the key measures to assess citizens' participation and engagement in politics in a democracy. Turnout rates are expressed as the percentage of eligible voters who cast a vote during an election. This total number of votes includes not only those who cast a valid vote, but also those who cast blank or invalid votes, which is still a form of participation. Article 3 of electoral law No. 44 of 2017 establishes the right to vote for 'every resident or non-resident, male or female Lebanese citizen...provided that they have attained the legal age stipulated in the Constitution, enjoy their civil and political rights and are not in any of the non-eligibility situations set forth in the present law.' As in previous elections, the minimum voting age was 21. The 2018 elections were the first to include the opportunity to vote for the 150,000 Lebanese in the diaspora, setting the number of eligible voters to 3.75 million.

In the 2018 parliamentary elections, 49.7% of voters cast their ballots,¹ a sizable decrease from 54% in 2009,² but still larger than in other previous elections (46.5% in 2005, 45% in 2000, 43.1% in 1996, and 30.4% in 1992).³ The low participation in 2018 ran contrary to predictions that changes in the electoral law would push the country to a more proportional system and that the inclusion of the diaspora vote would enhance participation. The observed low turnout rates are in line with most other elections in the Middle East (36% in Jordan in 2016, 44.8% in Iraq in 2018, 37.1% in Algeria in 2017, 43% in Morocco in 2016, and 41.7% in Tunisia in 2019), but significantly lower than those in Western democracies (for example, the average turnout rate in European Union countries stands at about 67%).

This report provides an in-depth analysis of voter turnout in the 2018 parliamentary elections in Lebanon, the striking discrepancies across socio-economic cleavages, and the most relevant drivers of citizens' participation. It also takes a comparative perspective, shedding light on the changes in turnout rates with respect to the previous elections of 2009. In order to do so, this report makes use of administrative electoral data obtained from the Ministry of Interior, complemented with post-election survey data and other sets of socio-economic data at the municipal and district level. The second section analyzes in detail how turnout rates in the 2018 elections changed across electoral districts and confessions. It also provides a quantitative analysis of the main characteristics of voters, polling stations, municipalities, and districts that affected the likelihood of voting. In the third section, we use administrative data of both the 2009 and 2018 elections and aggregate it at the municipal level to study the trends in turnout across time and its potential determinants. In particular, we assess the role of first-time voters, sectarian cleavages, changes in the electoral law that shaped political

¹ Lebanese Ministry of Interior and Municipalities. 2018. <https://tinyurl.com/y7yezg36>

² National Democratic Institute. 2009. 'Final Report on The Lebanese Parliamentary Election.' https://www.ndi.org/sites/default/files/Lebanese_Election_s_Report_2009.pdf

³ Institute for Democracy and Electoral Assistance (IDEA). <https://www.idea.int/>

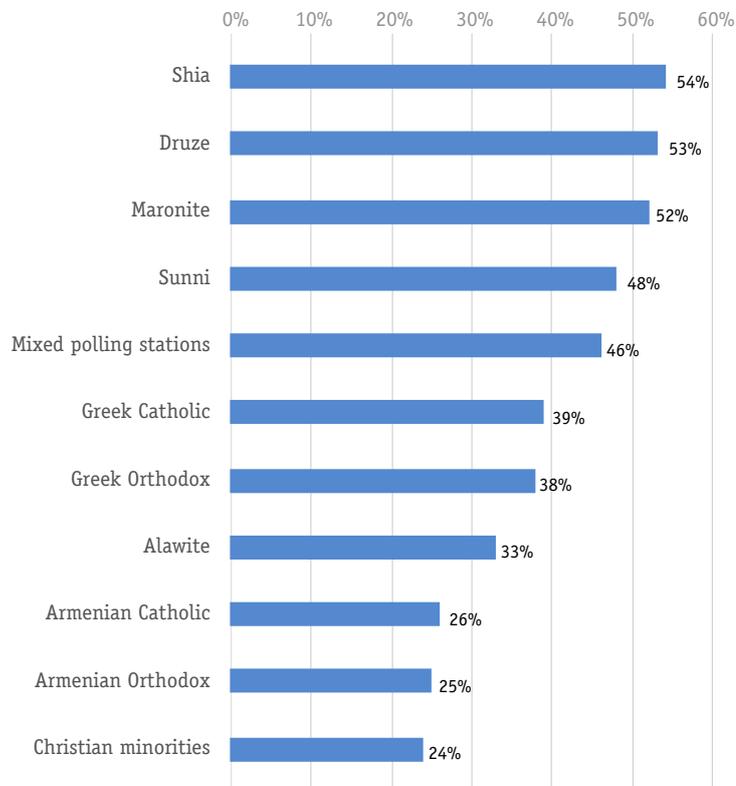
competitiveness in each electoral district, and variations in voter mobilization through different means including vote buying. Finally, the fourth section summarizes the main findings and provides key concluding remarks on voter turnout.

II Turnout in the 2018 National Elections

Differences by Region, Confession, and Residence

Behind the general pattern of low turnout rates in the 2018 elections, important differences emerge across different socio-economic cleavages in the country. An initial striking variation is observed across sectarian groups. While there is no information on individual data by confession beyond incomplete and non-representative surveys, the unique peculiarity of the Lebanese electoral system in which most voters are assigned to vote in polling stations of their same sect allows the analysis of turnout by sect. Using administrative data from the Ministry of Interior that provided electoral outcomes for every polling station in the country, we find that 77% of voters were registered to vote in polling stations that only had voters of the same confession, as opposed to 23% of voters voting in confessionally mixed centers. Focusing on the polling stations with confessionally homogeneous voters, the largest turnout in the country was observed among Shia, Druze, and Maronite voters, all of whom had a turnout above 50% (54%, 53%, and 52% respectively). Among the largest sectarian groups in Lebanon, Sunnis had the lowest turnout rate with only 48% of the constituents voting (figure 1). However, the largest contrast in turnout was observed with other minority groups that were significantly less inclined to cast their ballot. For example, only 24% of minority Christians, 25% of Armenian Orthodox, and 26% of Armenian Catholics that were eligible to vote ended up voting. Therefore, while turnout was at most moderate for all sects, minority groups were even more reluctant to vote, particularly voters that were not confessionally represented by a candidate in their district.

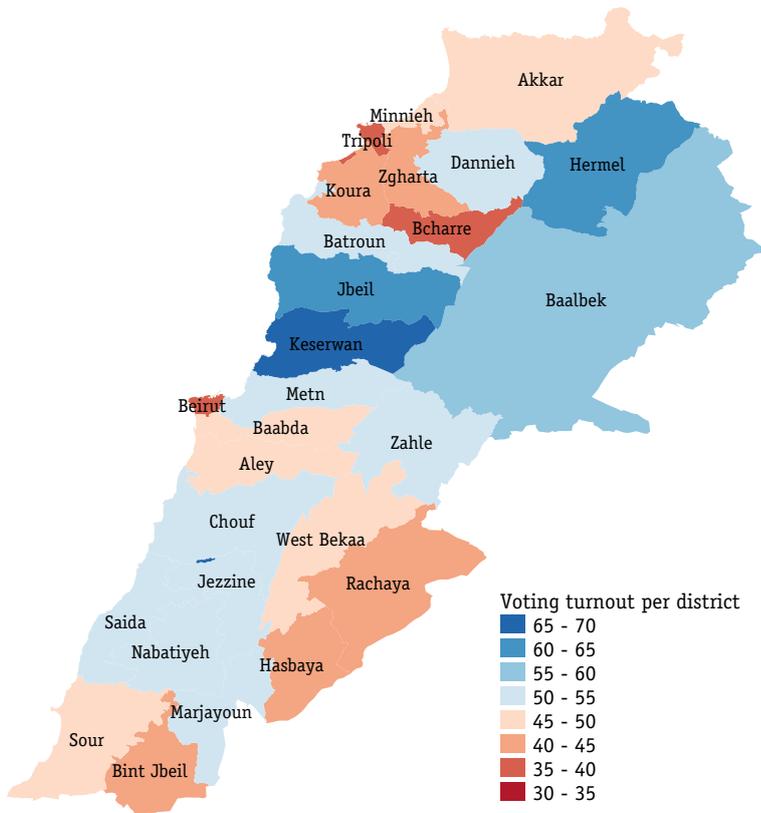
Figure 1 Turnout rates in the Lebanese parliamentary elections of 2018 by voters' sect



Source Own calculations based on data from the Ministry of Interior.

The 2018 elections also showed large variations in turnout across districts in Lebanon. The largest urban centers of Beirut and Tripoli, as well as the district of Bcharre, had the lowest participation, in all three cases below 40% (figure 2). Other districts in the north (Koura and Zgharta) and southwest (Rachaya, Hasbaya, and Bint Jbeil) had turnout rates significantly below the national average. Conversely, Keserwan had the highest participation of all districts, averaging 66%, followed by Jbeil (65%) and Baalbek and Hermel (60%). Overall, although there are certain geographical patterns such as the larger voter apathy in the north of Lebanon or in the main cities, important variations are found both across and within governorates. For example, Mount Lebanon had some of the largest participation in the northern districts while turnout remained low in Aley and Baabda.

Figure 2 Turnout rates by district



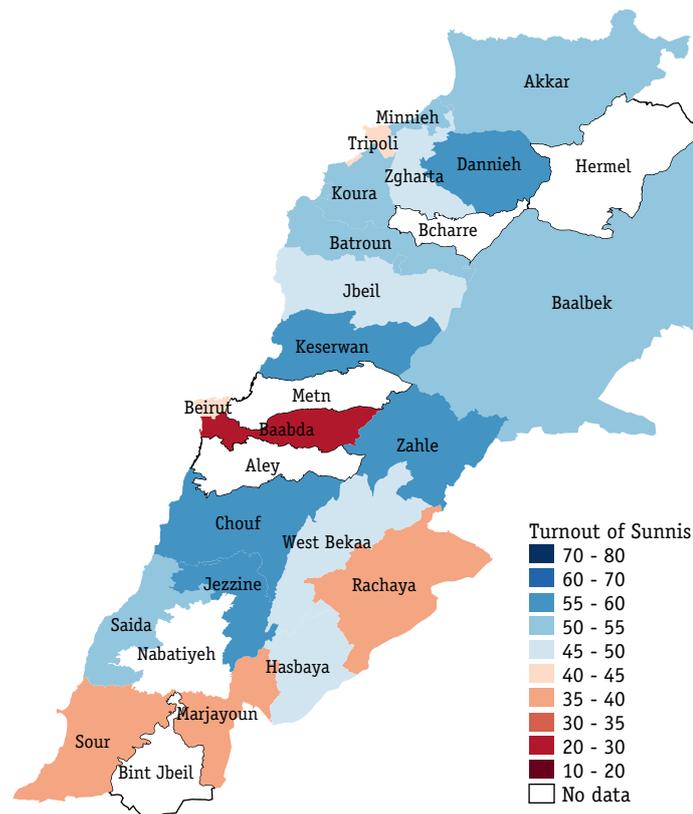
Source Own calculations based on data from the Ministry of Interior.

Regional variations in turnout partially reflect the districts' confessional composition, with various degrees of voter mobilization depending on their confession. However, beyond differences in the sectarian structure, there were also regional variations in turnout across regions within voters from the same sect. This points toward unique social, political, or economic factors of each district also being at play. When narrowing the study of turnout across polling stations where only Sunni voters were registered, large ranges of turnout are found between districts, from less than 30% in Baabda to more than 55% in Chouf, Jezzine, Keserwan, or Zahle (figure 3.a). Other districts with below average turnout rates among Sunni constituents include Marjayoun, Rachaya, and Sour. While Shias tended to vote more in the 2018 elections, turnout rates for this group were below the national average in Akkar, Bint Jbeil, and Metn (figure 3.b). In contrast, more than 60% of Shias voted in Hermel, Baalbek, Batroun, Keserwan, and Jbeil. Among Maronites, the largest voter participation was observed in Mount Lebanon (in particular in Jbeil and Keserwan where turnout was above 65%), Baalbek, and Zahle, while the lowest participation rates were observed in the southern and northern districts, particularly in Sour and Tripoli where less than one in five

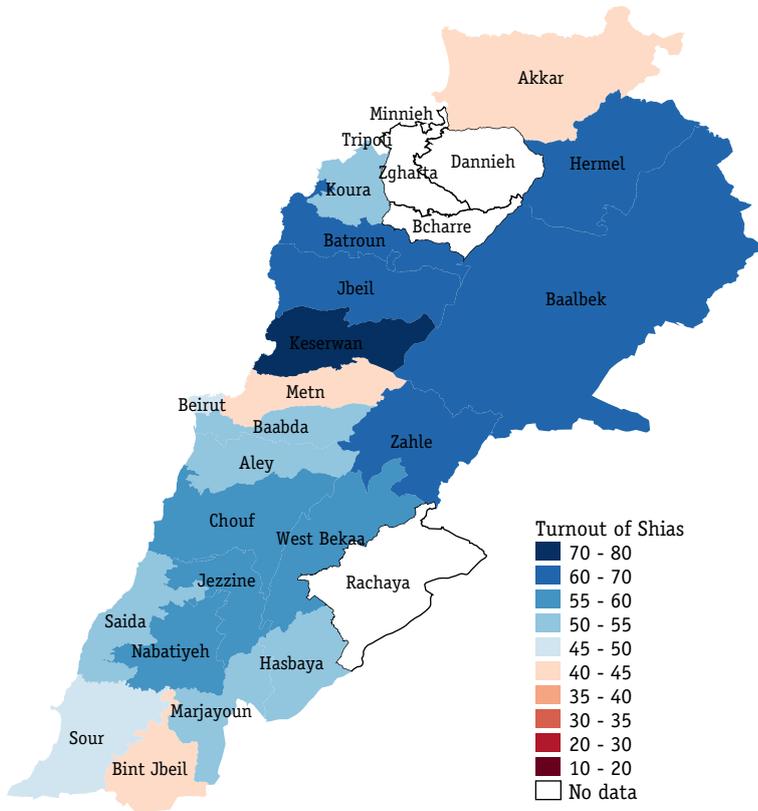
registered Maronites cast their ballot (figure 3.c). As opposed to most other sects, Druze mobilization was more uniform across districts. In six out of the seven districts with polling stations with only registered Druze voters, turnout remained between 50% and 55%, and only in Beirut was participation significantly lower, below 45% (figure 3.d). Across the different confessions, a general pattern of lower participation emerges with voters of a given confession in districts where that confession was in the minority or where the confession was not represented by a seat, and, thus, had no confessional political representation.

Figure 3 Turnout rates across different sects and districts

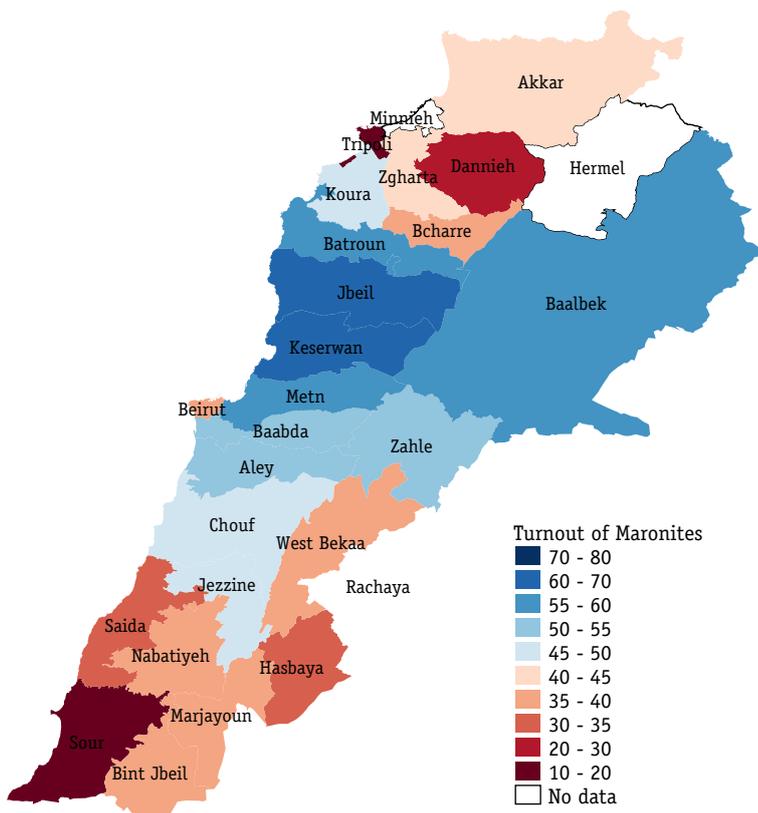
a Turnout rates for Sunni voters



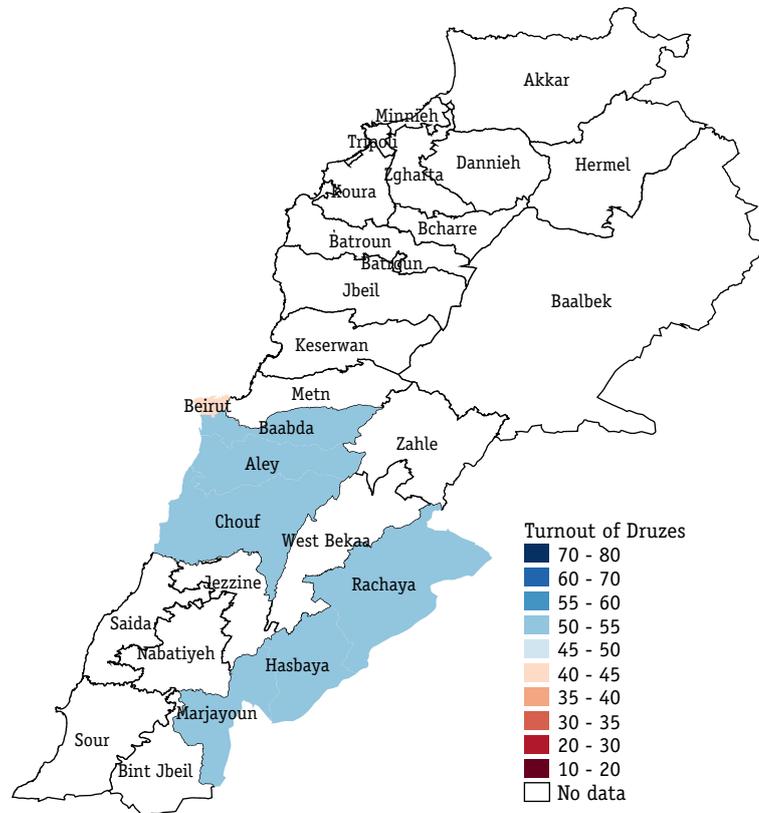
b Turnout rates for Shia voters



c Turnout rates for Maronite voters



d Turnout rates for Druze voters



Source Own calculations based on data from the Ministry of Interior.

Alongside the differences by districts and voters' sects, results show that the Lebanese diaspora, who were allowed to vote for the first time, showed stronger engagement. Turnout among registered voters abroad stood at 56% compared to 49% of Lebanese residing in the country. Lebanese emigrants tend to have a different profile than the general population residing in the country, which hinders any meaningful comparison between the two groups. Although the statistics of the diaspora voters are not disaggregated by confession, gender, or other individual characteristics, available ad-hoc surveys and different estimates provide an approximation, albeit an imperfect one, of their profile. Lebanese abroad tend to be younger, mostly workers between the ages of 25 and 44.⁴ Regarding their socio-economic status, Lebanese abroad are more educated and tend to occupy higher skilled managerial, professional, or entrepreneurial positions (in particular those in the Gulf). By sect, although there are no reliable statistics, it seems that Christians are overrepresented among the Lebanese diaspora.

Garrote-Sanchez and Mourad (2019), based on a survey run by the IRI in the immediate aftermath of the elections, demonstrated that the youth were less likely to vote in the 2018 Lebanese elections.⁵

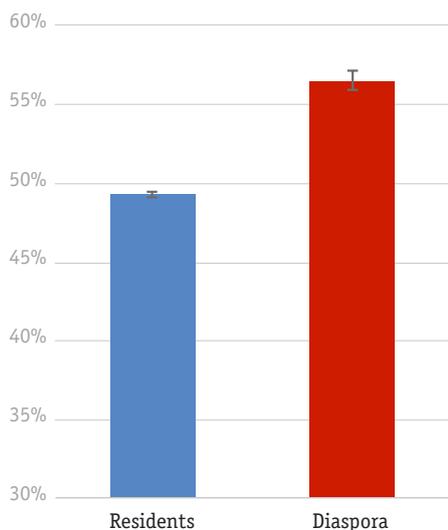
⁴ De Bel-Air, F. 2017. 'Migration Profile: Lebanon.' Robert Schuman Center for Advanced Studies.

⁵ Garrote-Sanchez, D. and J. Mourad. 2019. 'Voter Turnout and Vote Buying in the 2018 Parliamentary Elections.' Policy Brief No 39, Lebanese Center for Policy Studies.

Education, income, and employment status were weakly correlated with turnout but, if anything, Lebanese with lower socio-economic status were actually more likely to vote. From the confessional breakdown of the polling station data statistics released by the Ministry of Interior, Christians were not systematically more likely to vote either. Therefore, the differences in demographic, socioeconomic, and confessional characteristics of the diaspora would be associated with a lower turnout, not a higher one. However, we observe that the diaspora turned out to vote more than Lebanese residents in all districts.

Although there is no concrete evidence, the higher mobilization of the diaspora might be caused by other factors, such as the requirement to register before the elections, which reduced the number of emigrants in the voting lists, in particular the more disenfranchised Lebanese abroad.

Figure 4 Turnout rates by residency



Source Own calculations based on data from the Ministry of Interior.

Note 95% confidence intervals are included for comparison.

Drivers of Turnout: A Multivariate Analysis

In order to understand the relevance of different factors in explaining voter turnout in the 2018 elections, we used statistical techniques and ran a logistic regression analysis using several characteristics as potentially explanatory variables: Voters, candidates, polling stations, localities, and districts that were available in each of the 9,467 polling stations.

- Voters' characteristics: Gender of voters (male or female, if the polling station is gender segregated), the sectarian composition (confession of voters in a polling station if it was composed of a single confession), and whether the confession of the voter is in the minority (30% or less) in the district or not.

- Characteristics of polling stations: Size (number of registered voters in each polling station), a dummy variable of whether it is gender mixed or not, and a dummy variable of whether it is confessionally mixed or not.
- Characteristics of the municipality where the polling station is situated: We matched the Ministry of Interior's electoral data per polling station with other variables at the cadaster/municipality level that provide more information about the economic and political environment voters reside in. In particular, we include information on:
 - The level of economic development in a municipality, approximated by night-time light intensity using satellite images from the National Oceanic and Atmospheric Administration (NOAA, 2017). Nightlight refers to light resulting from human activity visible from outer space at night, such as city lights, houses and firms' lights, car headlights, and fires, among others. It has been proven to be a robust measure of economic activity, as most economic transactions require lighting.⁶
 - The prevalence of poverty in each municipality, measured by the number of beneficiaries of the Ministry of Social Affairs' National Poverty Targeting Program (NPTP, 2018) divided by the resident population in the municipality. Although imperfect, given that there can be non-poor families receiving assistance from the NPTP due to leakages as well as poor families not receiving assistance (false negatives, or 'type two errors'), it is the best proxy for poverty available at such granular level.
 - Share of registered Syrian refugees in each municipality, obtained from the UNHCR 2017 database. The total number of refugees is divided by the estimated Lebanese population using the European Commission Global Human Settlement (GSH) data from 2015.
 - Population density: Total population in a municipality based on GHS data per square kilometer of a municipal area.
 - Sectarian homogeneity: We create a Herfindahl-Hirschman type index of sectarian homogeneity per municipality $SH = 1 - \sum si^2$, where si is the share of each sect in the total population in the municipality. The index ranges between 0 (most heterogeneous) and 1 (most homogeneous where there are only members of one sect in the municipality).
- Candidates in the district from each confession: Given the central role of sectarian politics in Lebanon, we also include other variables at the confessional and district levels, such as the presence of candidates from the same confession as voters in the district, as well as the number of wealthy candidates and candidates from political families with the same confession as voters in the district.

⁶ There is a strong economic literature using night-time light intensity as a measure of economic activity starting with Henderson et al. 2012. 'Measuring Economic Growth from Outer Space.' *American Economic Review*.

- Variations across electoral districts: We also include dummies that capture differences in turnout across electoral districts that are not due to variations in voters, polling stations, or municipality characteristics mentioned above.

The results of the multivariate statistical analysis show how voters' characteristics shaped turnout rates in the 2018 parliamentary elections. In order to compare the size of the different factors, we standardized all variables by subtracting the mean and dividing by the standard deviation. Results in figure 5 can then be read as follows: For every 1 standard deviation increase in each factor, turnout rate increases by x standard deviations, where x is defined as the coefficient that is shown in the graph for that variable. In this way, all variables are expressed in the same units so that the factor that sticks out as more important can more easily be identified.

With respect to voters' characteristics, polling stations with only women voters had significantly higher participation rates compared to centers with only men. While the larger mobilization of women voters is statistically significant, the impact of gender on turnout is smaller than other factors. In fact, one of the key explanatory drivers of voter participation is their confession. Controlling for all other differences in voters, polling stations, and geographic characteristics, Shia voters had the largest turnout rate, followed by Druze, Alawites, and Sunnis. On the other side of the spectrum, polling stations with voters from the Armenian Orthodox and Maronite sects were the least likely to vote (close to 0.2 standard deviations lower than Shia voters). It is important to note that these differences are solely due to the confession of voters and not to differences in the location of the different sects, or variations in other socio-economic drivers that are accounted for in the regression analysis.

Another fundamental driver of turnout is the characteristics of polling stations, in particular their size and whether they had mixed constituents or not. The size of the polling station, which varied between only dozens of voters to more than 800, is the single factor with the highest explanatory power of variations in voter turnout. On top of that, polling stations that had mixed voters in terms of gender or confession had significantly lower turnout rates than homogeneous centers. Combined, these two findings provide suggestive evidence of the presence of vote buying or pressures to vote across the country in the last elections.⁷ Indeed, the secrecy of the vote hinders the ability of politicians to bribe voters in return for their vote as they cannot ensure if, and for whom, voters will vote. However, the smaller and more homogeneous a polling station is, the easier it is for politicians and their 'brokers' or intermediaries—that have longer and closer relations with constituents—to monitor voters' actions during election day, which facilitates vote buying.

⁷ Garrote Sanchez, D. 2020. 'An Assessment of Election Irregularities During the 2018 Parliamentary Elections.' Lebanese Center for Policy Studies.

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Wolfinger, R. E. and S. J. Rosenstone. 1980. *Who Votes?* New Haven: Yale University Press.

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Kasara, K. and P. Suryanarayan. 2015. 'When Do the Rich Vote Less Than the Poor and Why? Explaining Turnout Inequality across the World.' *American Journal of Political Science*, 59 (3): 613-627.

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In the case of Argentinian elections, see: Stokes, S. C. 2005. 'Perverse Accountability: A Formal Model of Machine Politics with Evidence from Argentina.' *American Political Science Review*, 99 (3): 315-325; in Egypt, see: Blaydes, L. 2006. 'Who Votes in Authoritarian Elections and Why? Determinants of Voter Turnout in Contemporary Egypt.' APSA 2006 Annual Meeting paper; or for elections in different sub-Saharan countries, see: Jensen, P. S. and M. K. Justesen. 2014. 'Poverty and Vote Buying: Survey-Based Evidence from Africa.' *Electoral Studies*, 33: 220-232.

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Dustmann, C., K. Vasiljeva, and A. P. Damm. 2019. 'Refugee Migration and Electoral Outcomes.' *Review of Economic Studies*, 86 (5): 2035-2091.

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Altındağ, O. and N. Kaushal. 2020. 'Do Refugees Impact Voting Behavior in the Host Country? Evidence from Syrian Refugee Inflows to Turkey.' *Public Choice*.

Economic factors were also strong predictors of turnout. In particular, the level of economic development of the locality and its distribution across its residents, measured by the incidence of poverty, have important implications: Less developed municipalities and those with higher poverty rates in their communities are associated with higher turnout rates. Historically, political science literature revealed that rich voters tend to vote more in elections than poor ones.⁸ However, this finding is mostly observed in developed economies. On the contrary, more recent studies in developing countries observed a positive relationship between poverty and turnout rates. Kasara and Suryanarayan (2015) provide some evidence that wealthier people turn out to vote more when their preferences diverge from those of the poor, and where bureaucratic capacity is high—so the state has the capacity to tax more—which tends to occur in developed economies.⁹ In developing countries, the higher turnout among the poor population has been related to higher instances of being targeted by vote buying, given that they tend to be cheaper to buy and more vulnerable to intimidation by politicians.¹⁰ The targeting of vote buying is found to be stronger when elections are highly competitive. Therefore, the higher turnout rates in poorer Lebanese municipalities can be associated, as in other developing countries, to clientelistic politics that particularly target more vulnerable populations, increasing their participation in the voting process.

Another factor related to the environment in the localities in which voters reside is the presence of refugees. The large presence of 1.5 million refugees, unevenly distributed across the country, can have implications in the mobilization of voters. Results of the regression analysis for the 2018 Lebanese elections show that a larger presence of refugees per capita in a municipality is associated with slightly larger turnouts, which is statistically significant, although small in size compared to other factors. This result adds to the emerging literature on the topic. In Denmark, Dustmann et al. (2019) found that the share of refugees randomly allocated in different municipalities increases voter turnout,¹¹ while Altındağ and Kaushal (2020) did not find any significant impact of refugee presence on election outcomes in Turkey during the period 2012-16.¹²

At the cadaster/municipality level, the sectarian structure is also associated with the likelihood of voting in the parliamentary elections. More heterogeneous localities, or those with a higher level of sectarian fragmentation, are found to have lower turnout rates than those that are more confessionally homogeneous. This finding is not due to the fact that more developed urban centers in Lebanon tend to be more heterogeneous, as we control for the degree of urbanization of the municipality (which is not significant), the economic development, and other socio-economic and political factors. The link between sectarian

homogeneity and turnout observed in the Lebanese elections is in line with recent studies on ethnic, social, and racial fractionalization in both developed and developing countries.¹³ As Lago et al. (2018) pointed out, fragmentation reduces social capital and civic duty, which in turns has a negative impact on political participation.¹⁴

The influence of the sectarian component in the political mobilization of voters is also apparent when comparing the turnout of voters who could vote for a co-confessional candidate to the turnout of voters who did not have that choice. Voters who had a political candidate from their same sect in their district were more likely to cast their ballots. This provides further suggestive evidence of the role of confessional politics in the Lebanese elections, as well as potential larger voter mobilization by co-confessional politicians, including vote buying. Results also show that not all co-confessional candidates were equally likely to entice their constituents to vote, and turnout rates were particularly high in districts where voters had a co-confessional candidate that came from a traditional political family or that was wealthy, suggesting that the sectarian system is particularly designed and suited for key influential political families to mobilize the sectarian vote.

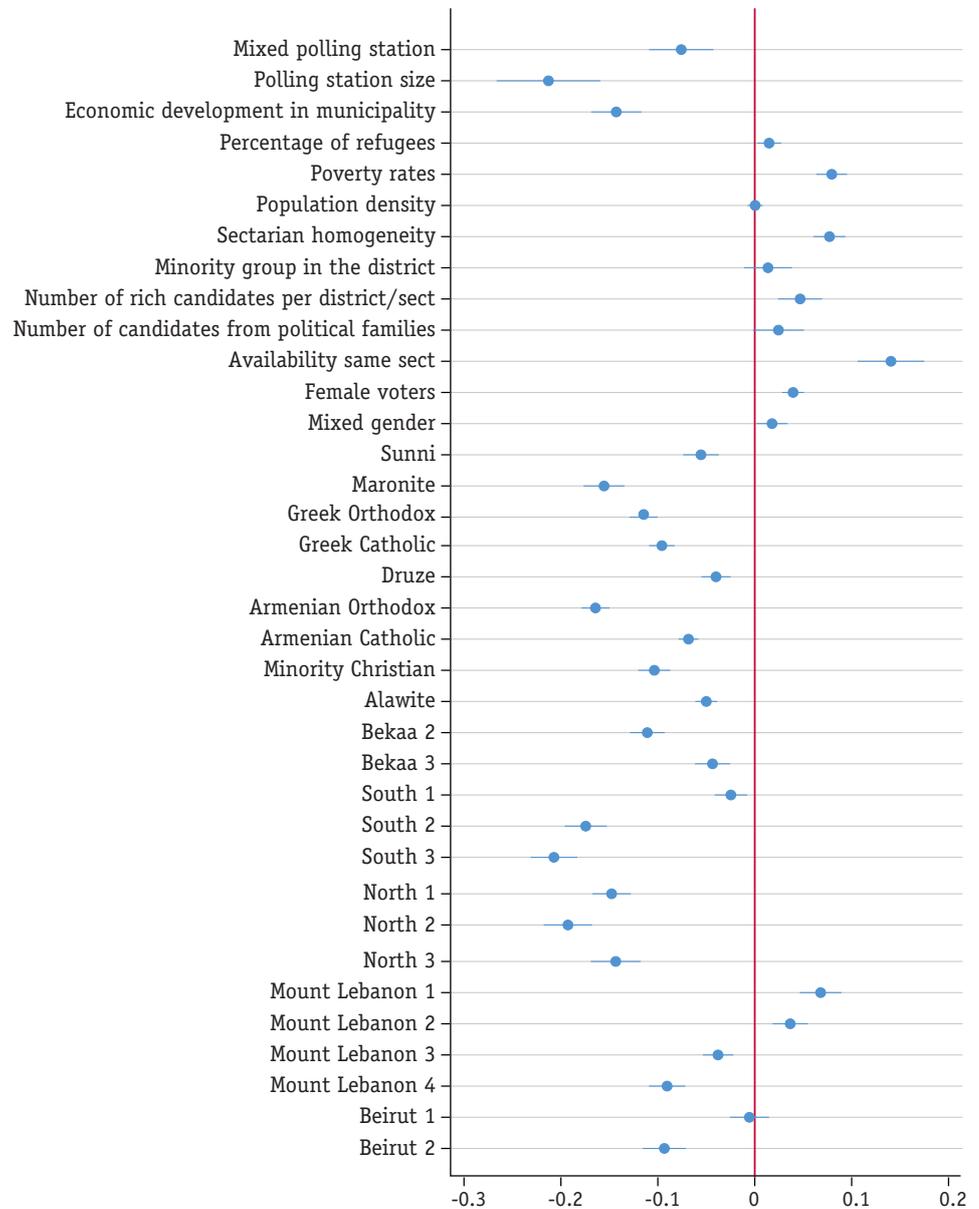
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Hill, K. Q. and J. E. Leighley. 1999. 'Racial Diversity, Voter Turnout, and Mobilizing Institutions in the United States.' *American Politics Quarterly*, 27(3): 275-295; and Förster, A. 2018. 'Ethnic Heterogeneity and Electoral Turnout: Evidence from Linking Neighbourhood Data with Individual Voter Data.' *Electoral Studies*, 53: 57-65.

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Lago, I., S. Bermúdez, M. Guinjoan, and P. Simón. 2018. 'Turnout and Social Fractionalization.' *Politics*, 38(2): 113-132.

Figure 5 Determinants of turnout rates in Lebanon



Source Own calculations based on data from the Ministry of Interior (2018), GHS (2015), Ministry of Social Affairs' NPTP (2018), NOAA (2018), and UNHCR (2017).

Note In order to facilitate the comparison of the impact of different factors on turnout rates, all variables are standardized (de-meanned and then divided by the standard deviation). 95% confidence intervals are included to assess whether the impact is statistically different from zero or not.

On top of the individual characteristics of voters, the candidates' profiles and the different socio-economic features of the municipalities where voters reside, there are large and persistent variations in turnout across electoral districts (figure 5). Taking all other factors into consideration, turnout rates were still the highest

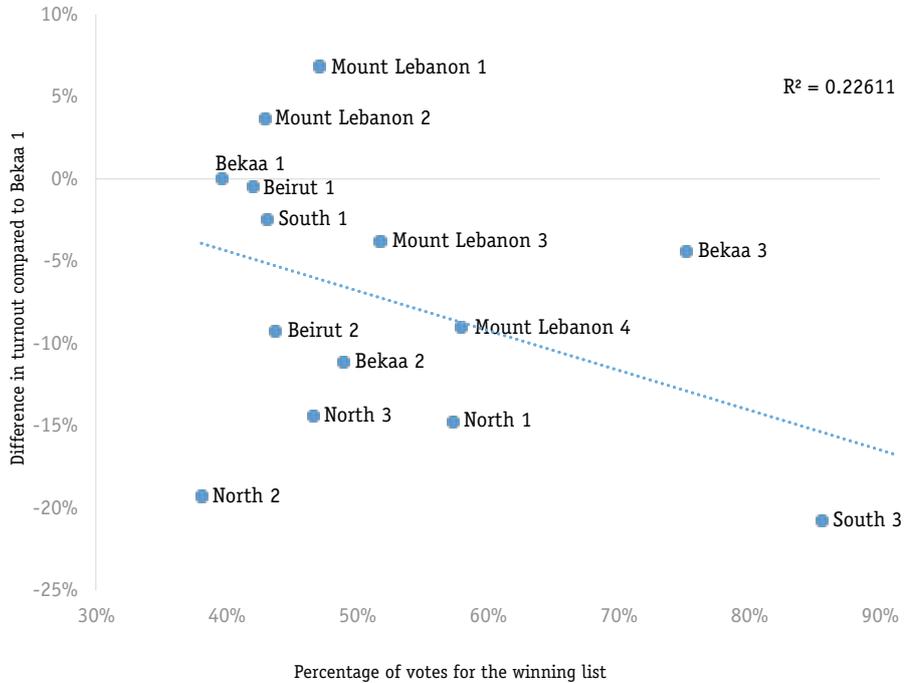
in Mount Lebanon 1 (Keserwan and Jbeil), followed by Mount Lebanon 2 (Metn), while the lowest participation rates were observed in South 3 (Bint Jbeil, Marjayoun-Hasbaya, and Nabatiyeh), North 2 (Tripoli, Minnieh, and Dannieh), and South 2 (Sour and Zahrani).

We found that electoral districts have their own unique political characteristics that affected turnout rates. There are two alternative political science theories that study the correlation between political competitiveness in a district or region and turnout rates. The first one states that less political competition lowers participation rates as voters have less options to choose from, and as the marginal vote is less likely to translate into a change in electoral outcomes. The second theory is that less competition increases participation as major parties might engage in more strategies of voter mobilization or vote buying, as there are less checks and balances to control any irregularities. In order to assess the validity of those theories in the Lebanese context, we plot the district dummy coefficients obtained from the previous regression analysis against the share of votes in the district that went to the winning list, as a proxy for political competitiveness. As figure 6.a shows, districts with lower political competition (higher percentage of votes for the winning list) are correlated with lower turnout, after controlling for all other individual and municipal factors. This points toward the key role of political competition, measured by how close the electoral race was, in boosting voter participation in the 2018 parliamentary elections.

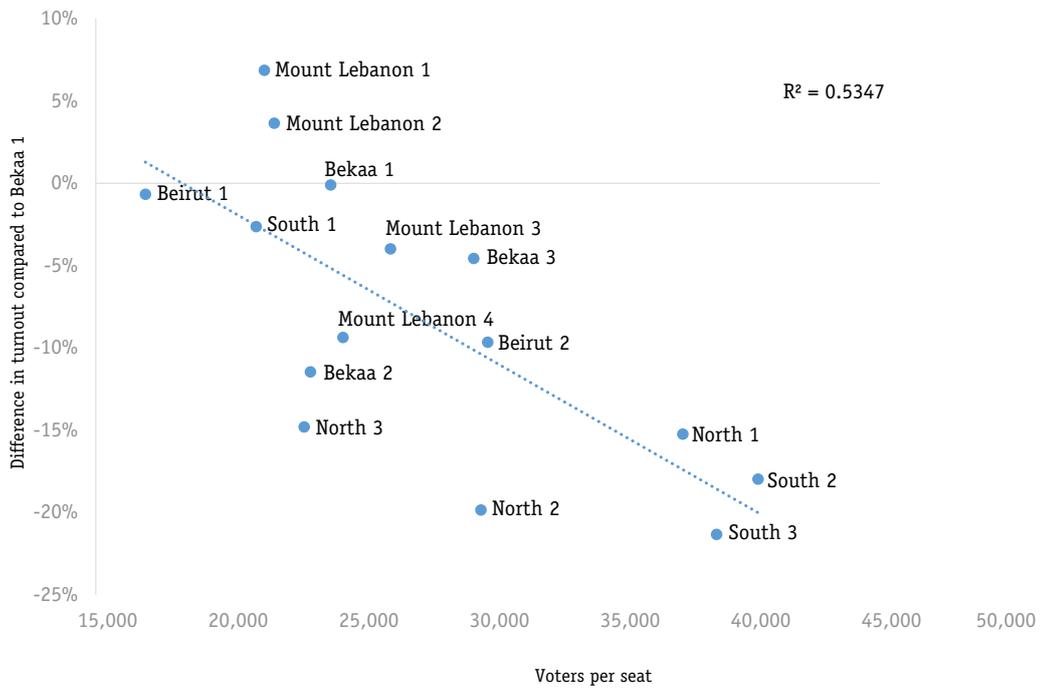
Turnout rates in a district are even more strongly correlated with the degree of voters' representation. We define voter representation by the number of voters per seat at stake. Representation varied from 17,200 voters for every seat in Beirut 1, to about 45,000 voters for every seat in South 2 (Sour and Zahrani). Therefore, a single vote in South 2 represented just above one third of that of a vote in Beirut 1. As a result, we find that districts with a higher number of voters needed for a seat are associated with significantly lower turnout rates (figure 6.b).

Figure 6 Variations in turnout across electoral districts, political competition, and participation

a Political competition and turnout



b Political participation and turnout



Source Own calculations based on data from the Ministry of Interior (2018), GHS (2015), Ministry of Social Affairs' NPTP (2018), NOAA (2018), and UNHCR (2017).

Note The y-axes represent the coefficients of dummy variables for each electoral district in a multinomial regression that includes characteristics of voters (gender and sect), polling stations (size, whether they are gender or confessionally mixed or segregated), relation between voters and candidates (availability of same-confession candidates, presence of co-sectarian candidates from political or wealthy families), and features of the municipality where they reside (economic development, poverty rates, share of refugees, and sectarian homogeneity). In both graphs Bekaa 1 (Zahle) is selected as the baseline, so the coefficients for all other districts show the gap in turnout vis-à-vis Bekaa 1 controlling for all other factors.

Other Socio-Economic Characteristics of Turnout: Survey-Based Results

The results above present an analysis of turnout based on all the administrative data available. However, there are many other voters' characteristics that shaped their voting behavior but that cannot be observed based on this type of available data. In order to complement the analysis, the Lebanese Center for Policy Studies and Statistics Lebanon conducted the Lebanese Public Opinion Survey (LPOS) in October 2018. The survey, which targeted 1,200 respondents, was distributed equally between genders, and was representative of the confessional and geographical distribution of Lebanese citizens across governorates. One main caveat of using public opinion surveys to assess voters' turnout is the problem of social-desirability bias. This challenge emerges given that survey respondents want to appear to be good citizens and have socially accepted behaviors, thus many respondents who did not vote could nonetheless say they did so. As a result, estimates of turnout rates based on surveys tend to be significantly higher than those based on administrative records. The LPOS is not immune to that problem and, while official records show a 49.7% turnout in the 2018 elections, 77% of respondents eligible to vote reported doing so. In spite of this bias, similar over-reporting in turnout rates are found in terms of confessional and regional differences, which supports the use of the LPOS 2018 to complement the analysis by comparing different groups of citizens (relative turnout rates across groups) while putting aside the absolute numbers.

Political science research has shown that the demographic and socio-economic factors affect voter turnout. Garrote-Sanchez and Mourad (2019) summarize the main findings at the individual level based on the LPOS 2018 survey in the Lebanese parliamentary elections.¹⁵ One of the most salient results is that older Lebanese voters turn out to vote significantly more than their younger counterparts, even after controlling for other potential confounders such as confession, gender, marital status, education level, family income, or region of residence. The higher youth disenfranchisement with the electoral process is a common phenomenon worldwide, as shown in the World Value Survey conducted from 2010 to 2014 in 59 countries.¹⁶ One argument to this pattern is that citizens are more

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Garrote-Sanchez and Mourad. 2019. 'Voter Turnout and Vote Buying in the 2018 Parliamentary Elections.'

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Inglehart, R., C. Haerpfer, A. Moreno, C. Welzel, K. Kizilova, J. Diez-Medrano, M. Lagos, P. Norris, E. Ponarin, and B. Puranen et al. (eds.) 2014. 'World Values Survey: Round Six - Country-Pooled Datafile 2010-2014,' Madrid: JD Systems Institute.

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Rosenstone, S. J. 1982. 'Economic Adversity and Voter Turnout.' *American Journal of Political Science*, 26 (1): 25-46.

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Ibid.; and Radcliff, B. 1994. 'Reward without Punishment: Economic Conditions and the Vote.' *Political Research Quarterly*, 47 (3): 21-31.

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Burden, B. C. and A. Wichowsky. 2014. 'Economic Discontent as a Mobilizer: Unemployment and Voter Turnout.' *The Journal of Politics*, 76: 887-898; Carreras, M. and N. Castañeda. 2019. 'Economic Adversity and Electoral Participation of Vulnerable Socioeconomic Groups.' *Electoral Studies*, 57: 110-120; and Hall, A. B., J. Yoder and N. Karandikar. 2020. 'Economic Distress and Voting: Evidence from the Subprime Mortgage Crisis.' forthcoming at *Political Science Research and Methods*.

22

Hall, Yoder, and Karandikar. 2020. 'Economic Distress and Voting: Evidence from the Subprime Mortgage Crisis'; and McCartney, W. B. 2020. 'Does Household Finance Affect Elections? Evidence from a Housing Crisis.' Forthcoming at *the Review of Financial Studies*.

likely to view voting as a civic duty as they grow older given their developed sense of attachment to their community and the increasing exposure to the dominant norm that good citizens should vote.¹⁷

The LPOS 2018 survey also showed that occupational status and political party affiliation were strong determinants of voter turnout. With respect to the labor market, unemployed voters were significantly more likely to vote in the 2018 national elections than employed citizens.¹⁸ The larger mobilization of unemployed constituents is in line with the previous findings where the least economically developed municipalities and those with higher poverty rates—which are correlated with unemployment—had larger electoral participation. As potential explanation, more vulnerable groups can be more targeted by vote buying. Finally, Lebanese who reported being affiliated to political parties were more likely to vote than non-party members. As expected, citizens affiliated to political parties have higher levels of political engagement and are also easier to be mobilized, resulting in higher turnout in the elections.

III Understanding the Changes in Turnout Between the 2009 and the 2018 Elections

Between the 2009 and 2018 Lebanese elections, there were significant changes in the socio-economic and political landscape of the country, with a major reform of the electoral law, a sharp decline in economic growth from 9-10% between 2007 and 2009 to less than 1% in 2015-2018, and the arrival of 1.5 million Syrian refugees which has destabilized the fragile sectarian ecosystem in the country. Under these changing circumstances, turnout rates in the 2018 elections suffered a significant drop to 49.7% of registered voters, compared to 54% in 2009.

The literature on the impact of economic adversity on turnout rates at the macro level is mixed, and theoretically, the correlation is ambiguous. On the one hand, an economic downturn can mobilize voters to express their discontent at the polls, in particular against incumbent parties—this is called the 'angry voter hypothesis'. On the other hand, it can also produce voter disenfranchisement and depressing electoral participation. As Rosenstone (1982) puts it, '... when a person suffers economic adversity, his scarce resources are spent holding body and soul together, not on remote concerns like politics.'¹⁹ While early studies found a negative effect of economic crisis on turnout,²⁰ more recent literature has found either neutral or positive effects in the aggregate of a country or region.²¹ Economic downturns also have unequal impact across individual voters. Studies in developed countries show that more distressed individuals are less likely to vote,²² although the opposite is true in developing

economies.²³ Overall, the economic downturn in Lebanon before the 2018 elections does not seem to explain the drop in turnout observed between 2009 and 2018.

The large arrival of Syrian refugees in Lebanon since 2011—representing about one fourth of the total population in the country—is not likely to be behind the fall in turnout either. As highlighted in the previous section, the literature has found either neutral or positive effects of the arrival of refugees in host countries, and a mildly positive impact is observed in the last Lebanese elections. Therefore, if anything, refugees would have increased and not decreased participation in the last elections.

Finally, the changes in the 2017 electoral law increased political competition across parties and lists and improved representation, from a ‘winner-takes-all’ system to a proportional representation one, where parties obtain a certain number of seats in a district depending on the votes they receive. Past studies have found that more political representation and competitiveness leads to higher turnout due to: (i) Voters feeling a higher efficacy of their vote with less distortions; (ii) the increasing opportunities for smaller parties to compete, so voters are less likely to abstain for lack of options; or (iii) the increasing chances of individual votes being ‘pivotal’.²⁴

Therefore, at first sight, the fall in voter participation seems counter-intuitive given the aforementioned social, economic, and political changes. In the following sections we assess other potential drivers of turnout in order to understand the observed decline in political participation and in particular: (a) Demographic changes and the role of first-time voters; (b) sectarian analysis of turnout trends to assess whether particular confessions were behind the fall in the overall turnout; (c) a further dive into the impact of electoral changes in political competitiveness and turnout; and (d) potential changes in electoral mobilization, in particular through vote buying.

First-Time Voters and Changes in Turnout

A first potential explanation for the reduction in voter turnout in the 2018 elections compared to 2009 is the change in the demographic structure of Lebanese constituents. In particular, the large increase in first-time voters, who may have a lower propensity to vote, could have led to a decrease in turnout.

The significant delay in the elections with a nine year gap between the 2009 and 2018, compared to the four years laps between the 2005 and 2009 elections, led to significant increase in first-time voters in 2018 compared to 2009. In 2009, first-time voters included all Lebanese born between 1985 and 1988, who represented 14% of the voting population in that year. Conversely, first-time voters in 2018 were all citizens born between 1989 and 1997 who, according to own

²³ Carreras and Castañeda. 2019. ‘Economic Adversity and Electoral Participation of Vulnerable Socioeconomic Groups.’

²⁴ Cox, G. W., J. H. Fiva, and D. M. Smith. 2016. ‘The Contraction Effect: How Proportional Representation Affects Mobilization and Turnout.’ *The Journal of Politics*, 78 (4): 1249-1263.

estimates based on the United Nations' DESA database, accounted for 28% of the voting population in Lebanon in 2018, double the rate of 2009. Similarly, the 2018 LPOS survey shows increases in first-time voters, from 13% in the 2009 elections to 28% in 2018.

A multivariate regression analysis using the 2018 LPOS survey estimates that first-time voters were 10% less likely to vote in the 2018 elections compared to older constituents who could vote in past elections. This gap remains even after controlling for other socioeconomic factors of individuals that may have affected their probability to cast a ballot, such as their gender, marital status, level of education completed, region where they are registered, sectarian identity, labor market status (such as being employed, unemployed, student, housekeeper, or retiree), or whether an individual received a handout in exchange for his/her vote. The lower turnout among the youth could be due to this group feeling more disenfranchised, as well as being less targeted by vote buying from politicians and brokers.²⁵

Although larger groups of new voters did lead to lower turnouts, a back of the envelope calculation shows that this channel would only explain a reduction in turnout of about 0.8% between 2009 and 2018, while the total observed drop in turnout was as high as 5.5%. Therefore, this driver would only explain at most 15% of the total reduction, meaning the bulk is due to other factors.

Voters' Sect and Changes in Turnout

Given the central role of sectarian politics in the Lebanese elections, we compare turnout rates in 2009 and 2018 across the different sectarian groups and electoral districts to assess whether the lower participation rates in the latest elections were driven by a particular confessional group. If so, voters' sect, as well as their support for their main sectarian parties, may explain the fall in turnout.

Figure 7 shows turnout rates in 2009 (horizontal axis) and 2018 (vertical axis) for each confession in each electoral district. Any point on the right of the green line shows a reduction in turnout in 2018 compared to 2009, while points on the left represent an increase. The size of the circles represents the share of that confession in each district; hence, the larger the circle, the greater the share of that confession in a district.

There is a strong heterogeneity across sects in changes in turnout between 2009 and 2018 (figure 7). On the one hand, we find a significant reduction in turnout in Sunni and Alawite polling stations in most districts, in particular in those where they represent a clear majority (Saida in the south and Akkar, Tripoli, Minnieh, and Dannieh in the north). The largest drop in turnout for Alawites was found in Akkar (from more than 60% to just above 34%) and for Sunnis, in Saida (from about 75% to slightly below 60%). Only in Baalbek-

25
Garrote-Sanchez and Mourad.
2019. 'Voter Turnout and
Vote Buying in the 2018
Parliamentary Elections.'

Hermel did turnout among Sunni voters increase between 2009 and 2018, although the district saw a similar trend among all sects.

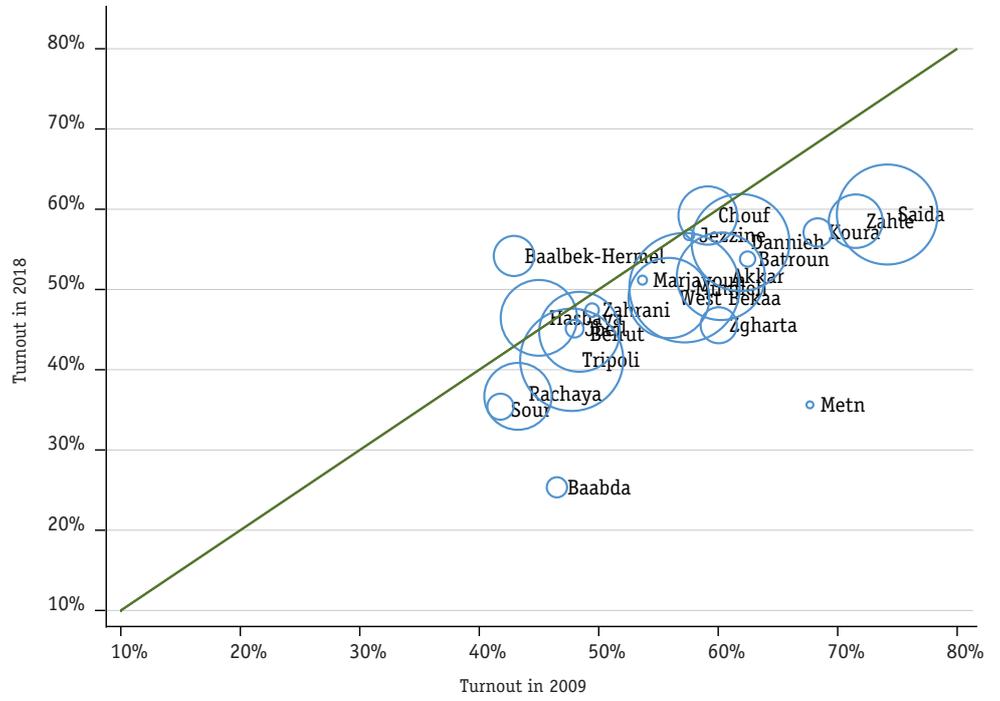
On the other hand, in districts where Shias or Maronites represent a majority, participation rates in Shia and Maronite polling stations were mostly sustained in 2018 compared to the 2009 levels, and it even increased in Baalbek-Hermel for both sectarian groups. A reduction in turnout in Shia voting centers was only observed in districts where the confession represented a minority and thus had less political interests with, often times, no Shia seat at play (such as in Akkar, Aley, Batroun, or Metn). Participation rates did not suffer from major drops among Druze and minority Christian polling stations by electoral district, although Greek Catholics and Greek Orthodox tended to vote slightly less in 2018 than they did in 2009.

Overall, the sectarian analysis shows that the reduction in turnout in the 2018 elections was mostly concentrated among Sunni and Alawite voters in key electoral districts such as Tripoli or Saida. The difficulties in mobilizing Sunni voters led to losses for the main Sunni party, the Future Movement, against Hezbollah-backed Sunni key parliamentary seats in Beirut, Tripoli, and Saida—the Future Movement’s traditional strongholds that saw the largest drop in turnout among Sunnis. The Sunni voters’ apathy might be related to disenfranchisement of certain constituents that could have felt left behind, as well as lower levels of vote buying. Another argument put forward is that not voting was a form of action for part of the Sunni population, as a way to show opposition to Saad Hariri’s Future Movement’s alliances with President Michel Aoun, in what was perceived as a move that gave more leeway to Hezbollah.²⁶

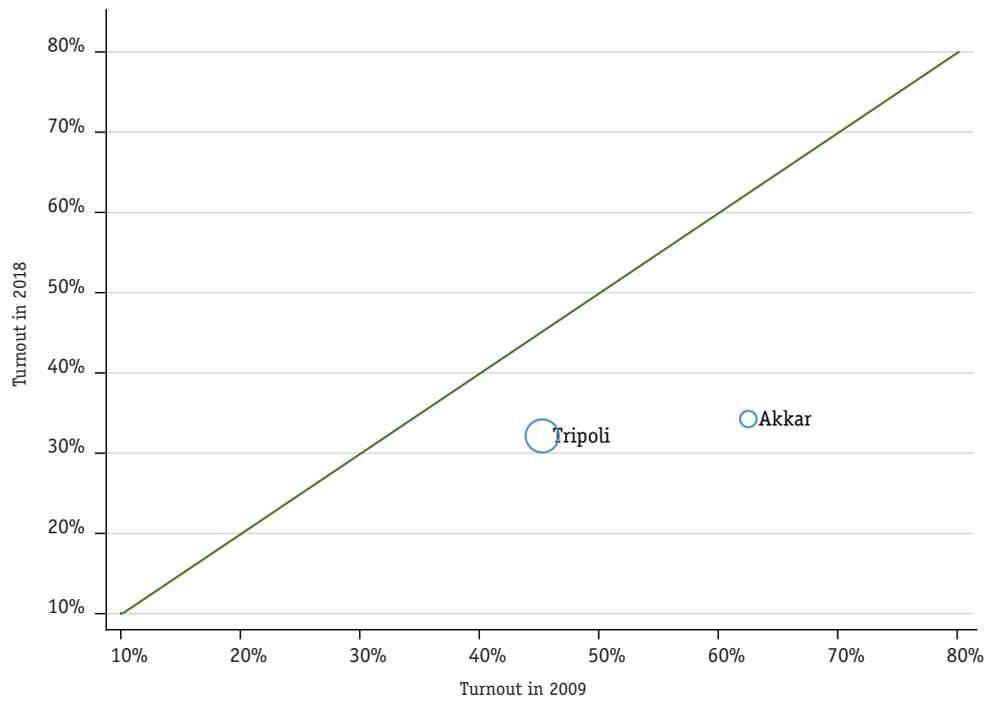
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Rabah, M. 2018. 'Shattering the Myths of the Lebanese elections.' Middle East Online. <https://middle-east-online.com/en/shattering-myths-lebanese-elections>

Figure 7 Changes in turnout between 2009 and 2018 across sects and electoral districts

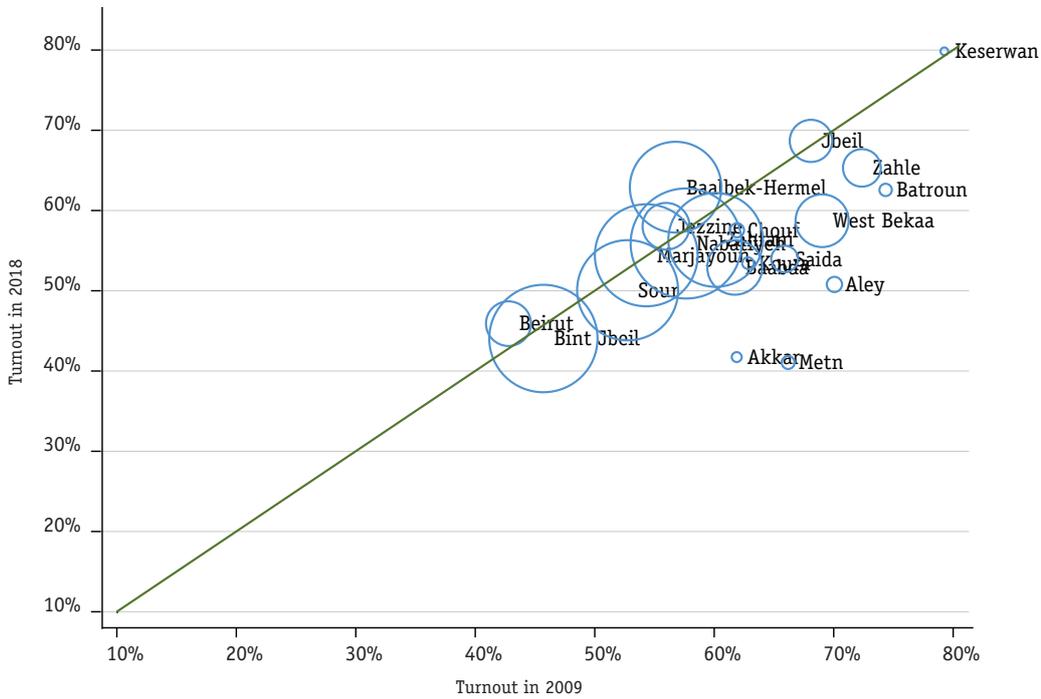
a Changes in turnout between 2009 and 2018 for Sunni voters



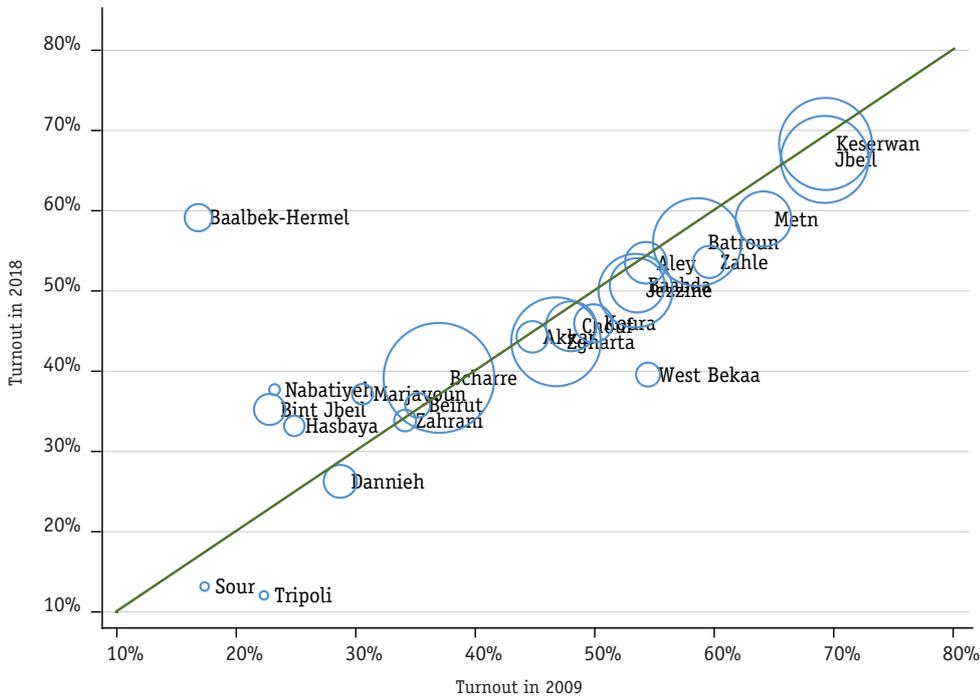
b Changes in turnout between 2009 and 2018 for Alawite voters



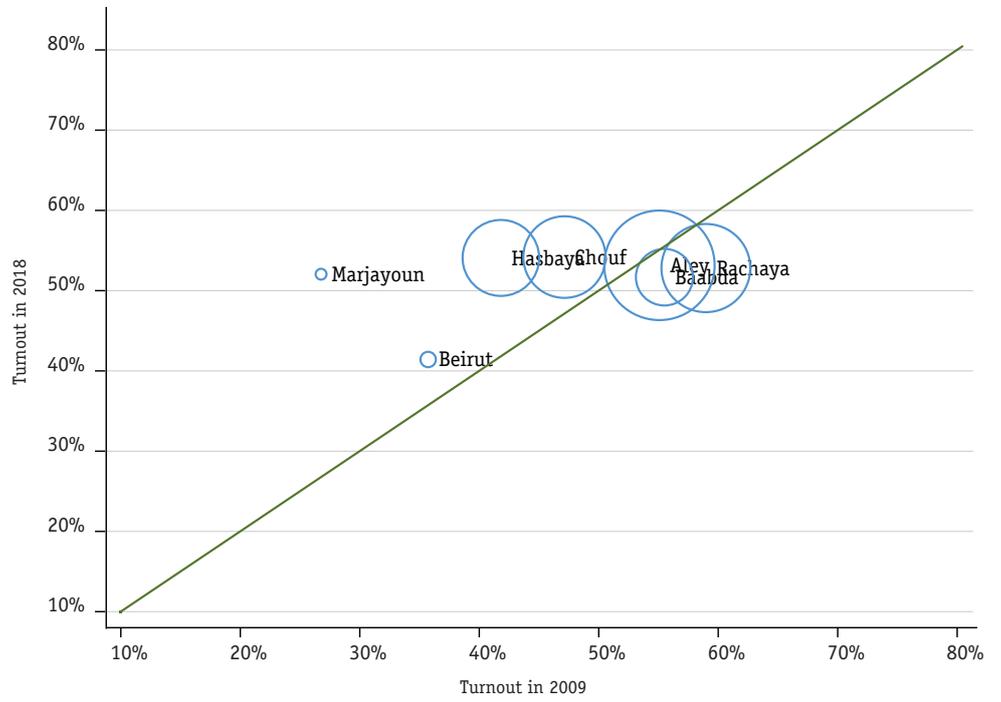
c Changes in turnout between 2009 and 2018 for Shia voters



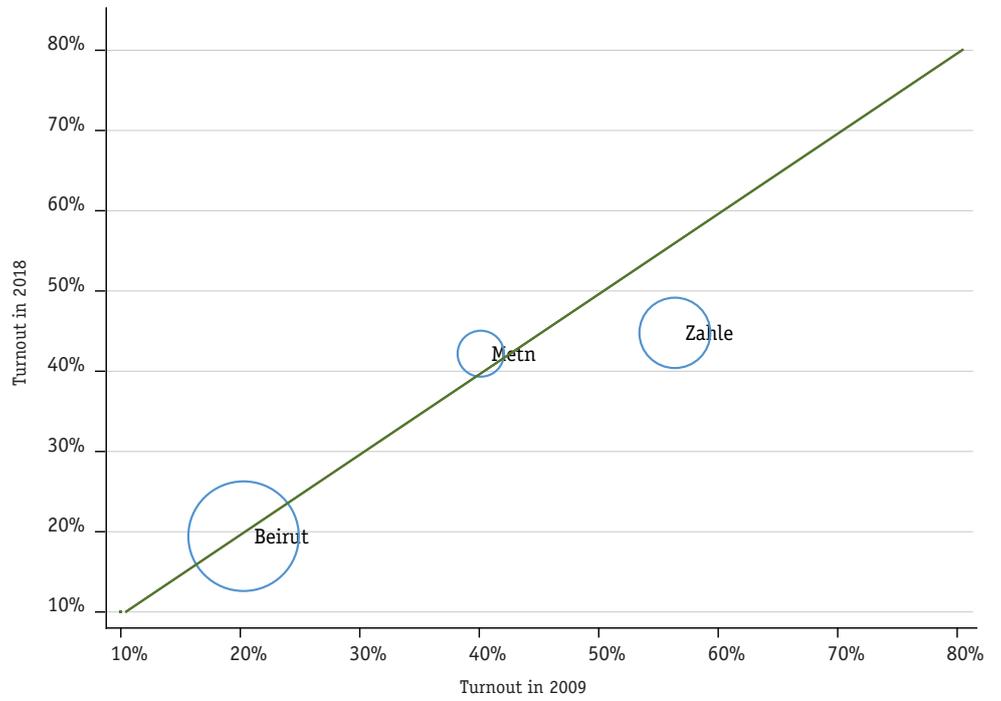
d Changes in turnout between 2009 and 2018 for Maronite voters



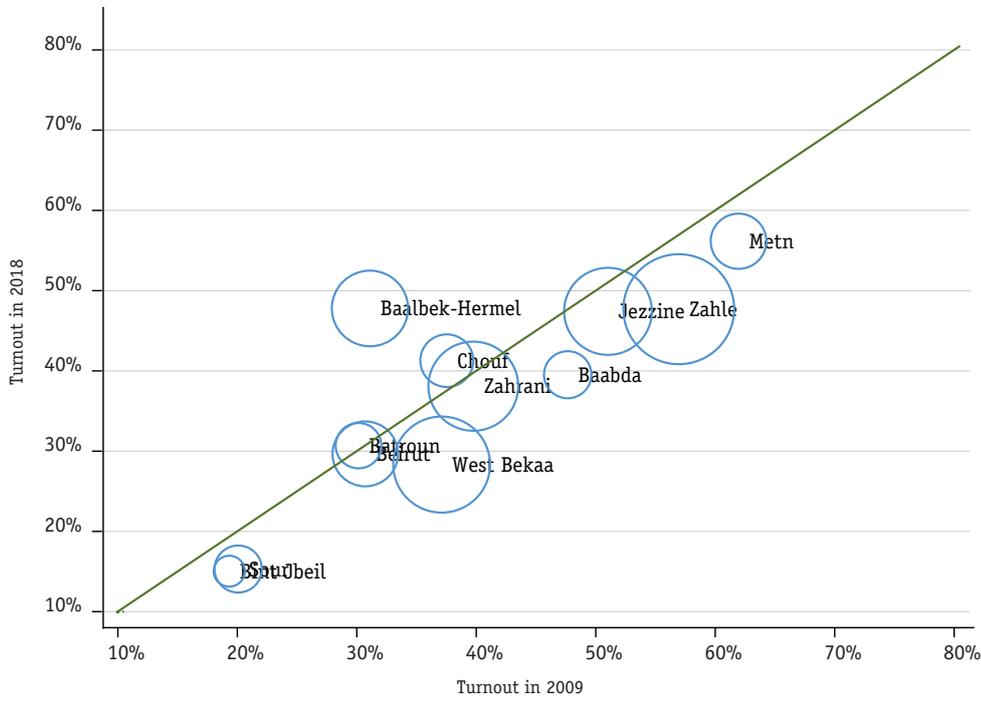
e Changes in turnout between 2009 and 2018 for Druze voters



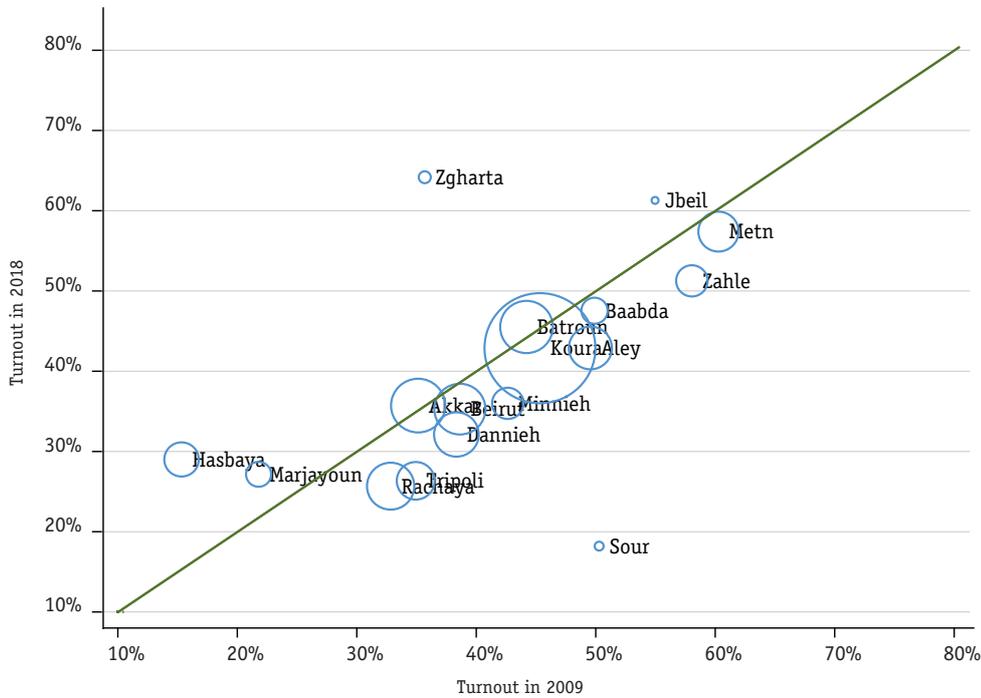
f Changes in turnout between 2009 and 2018 for minority Christian voters



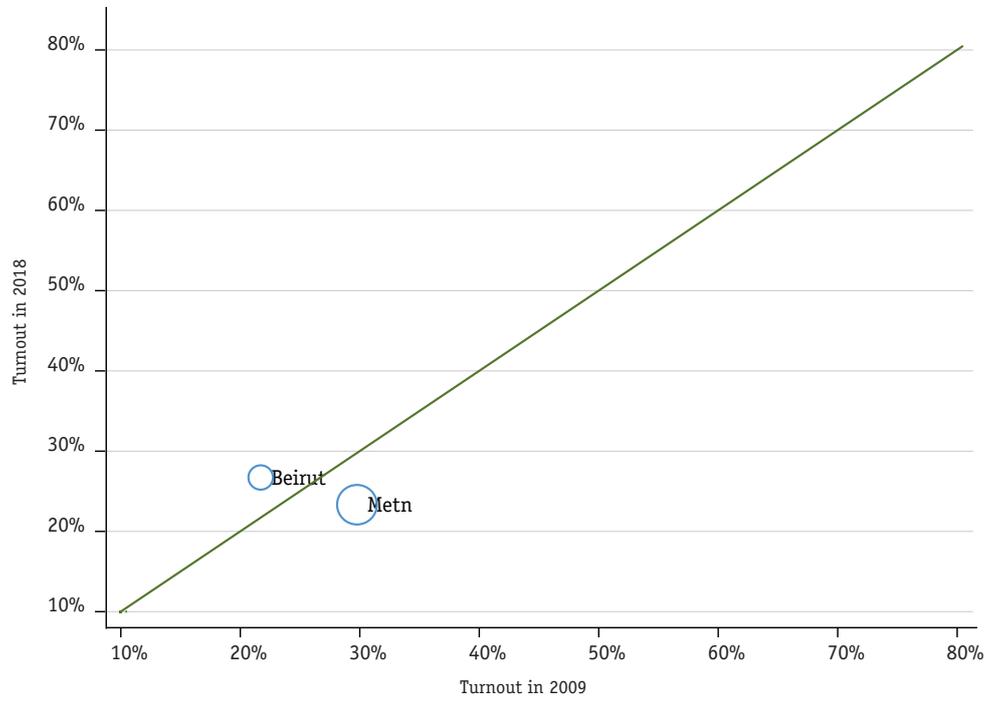
g Changes in turnout between 2009 and 2018 for Greek Catholic voters



h Changes in turnout between 2009 and 2018 for Greek Orthodox voters



i Changes in turnout between 2009 and 2018 for Armenian Catholic voters



j Changes in turnout between 2009 and 2018 for Armenian Orthodox voters

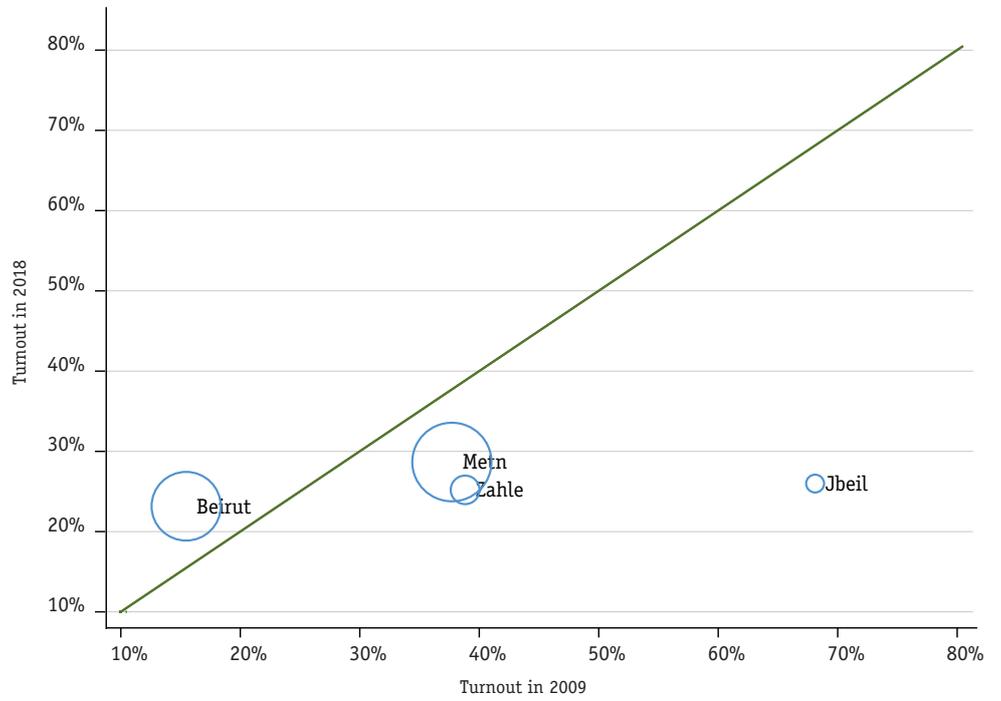


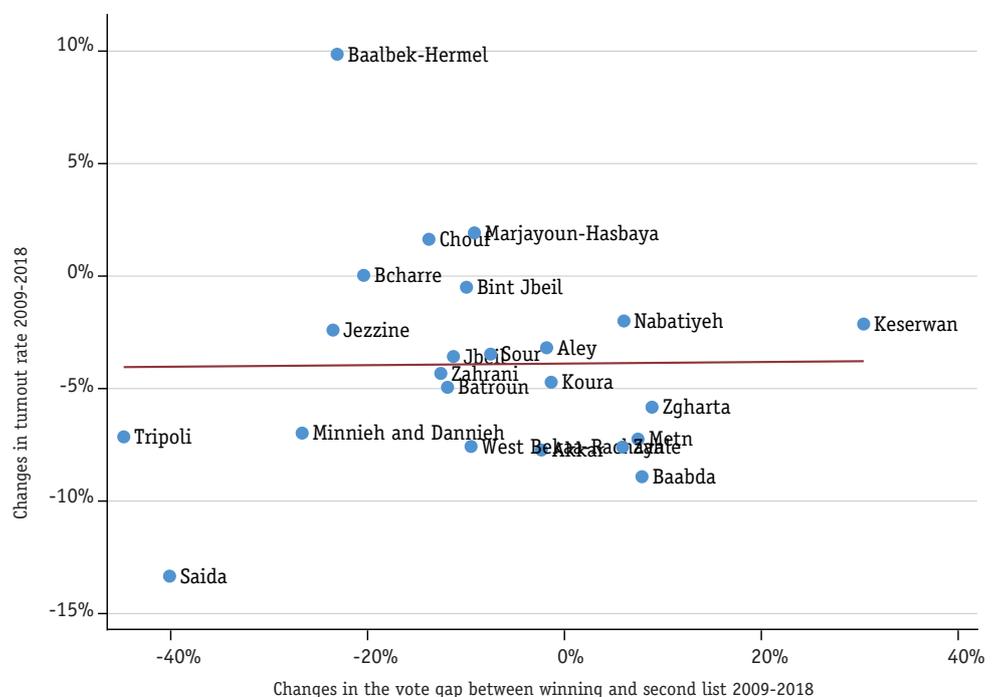
Table 1 Changes in the levels of political competitiveness between 2009 and 2018

	2009	2018	Changes
Share of voters for winning list	64.7%	56.0%	-8.8%
Gap in the share of votes between winning and second most voted list	37.1%	32.5%	-4.6%
Political Competitiveness Index (0 – 1)	0.42	0.50	0.08

Source Own calculations based on data from the Ministry of Interior (2009 and 2018).

The traditional empirical literature on political competitiveness and turnout tends to find a positive correlation between electoral reforms toward more proportional representation, political competitiveness, and turnout.²⁸ However, there is no clear correlation in the case of Lebanon. Figure 8 shows the changes between the 2018 and the 2009 elections in the gap between the share of votes for the winning and the second-most voted list in each electoral district, and the corresponding variations in turnout rates during the same period. In this case, improvements in political competitiveness did not result in higher turnouts. In Saida, for example, where the largest improvement in political competitiveness between 2009 and 2018 was recorded, turnout rates actually suffered the steepest decrease (14%).

28 See: Powell Jr., G. B. 1980. Voting Turnout in Thirty Democracies: Partisan, Legal, and Socioeconomic Influences. In: Rose, R. (Ed.), *Electoral Participation: A Comparative Analysis*. Sage, Beverly Hills, CA; Blais, A. and R. K. Carty. 1990. 'Does Proportional Representation Foster Voter Turnout?' *European Journal of Political Research*, 18 (2): 167-181; Franklin, M. N. 2003. *Voter Turnout and the Dynamics of Electoral Competition*. Cambridge University Press, Cambridge; Blais, A. and A. Dobrzynska. 1998. 'Turnout in Electoral Democracies.' *European Journal of Political Research*, 33 (2): 239-261; and Karp, J.A. and S. A. Banducci. 1999. 'The Impact of Proportional Representation on Turnout: Evidence from New Zealand.' *Australian Journal of Political Science*, 34 (3): 363-377.

Figure 8 Changes in political competitiveness and in turnout rates between 2009 and 2018

Source Own calculations based on data from the Ministry of Interior (2009 and 2018).

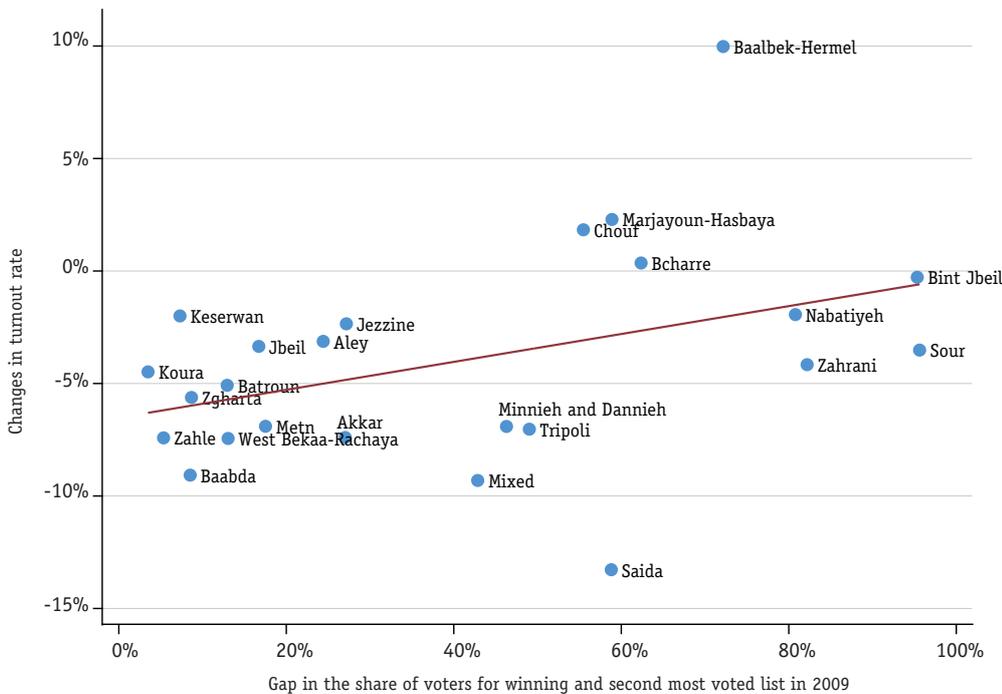
Note A negative (positive) number in the horizontal axis means that there was a reduction (increase) in the gap between the winning and the second-most voted for list, thus improving (deteriorating) the political competitiveness. A negative (positive) number in the vertical axis means that turnout rates in 2018 were lower (higher) than in 2009.

There are several reasons behind the correlation between more political competitiveness and higher turnout rates in the Lebanese elections. First, recent literature has found an asymmetric impact of electoral changes on political competition and turnout depending on the initial levels of competitiveness, which can produce mixed results.²⁹ In districts where there is low competition, turnout increases when moving from a ‘winner-takes-all’ system to a proportional representation one, as incumbents need to increase their mobilization efforts in order to retain their seats. However, in more competitive districts, changes toward a more power-sharing system actually reduces turnout as the stakes of not obtaining a majority are lower. The results in Lebanon validate this hypothesis. First, the most competitive districts (measured by the lowest gap in the share of votes between the winning and second-most voted for list) were the ones with a larger drop in turnout, while the opposite was true for the least competitive districts (figure 9.a). A similar pattern is observed when, instead of looking at districts, we analyze the more than 1,200 municipalities in Lebanon (figure 9.b).

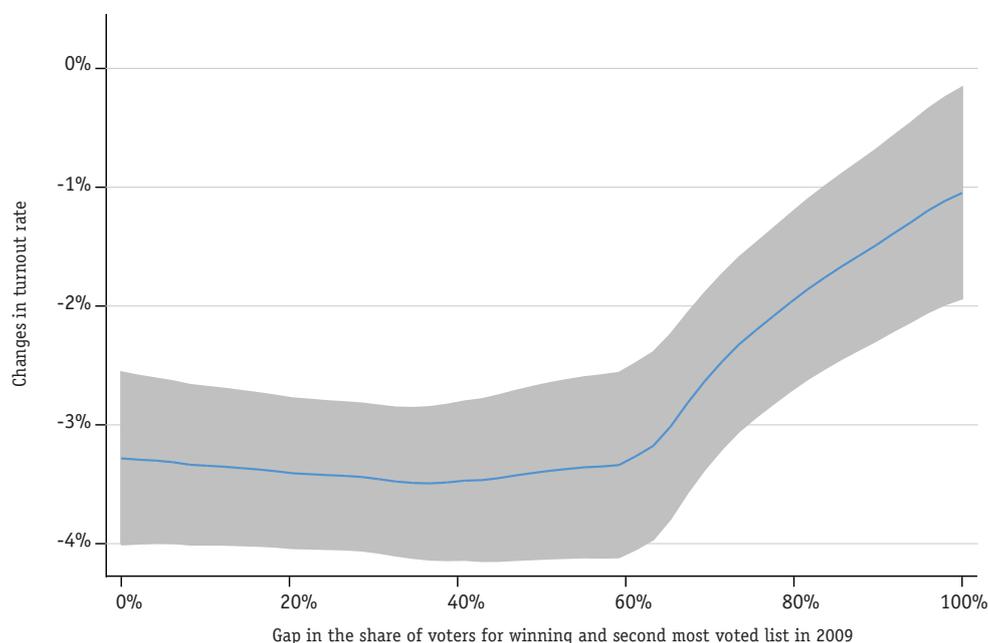
29
 Herrera, H., M. Morelli, and T. Palfrey. 2014. ‘Turnout and Power Sharing’ *The Economic Journal*, 124 (574): 131-162; and Cox, Fiva, and Smith. 2016. ‘The Contraction Effect: How Proportional Representation Affects Mobilization and Turnout’

Figure 9 Levels of political competitiveness in 2009 and changes in turnout between 2009 and 2018

a At the district level



b At the municipal level



Source Own calculations based on data from the Ministry of Interior (2009 and 2018).

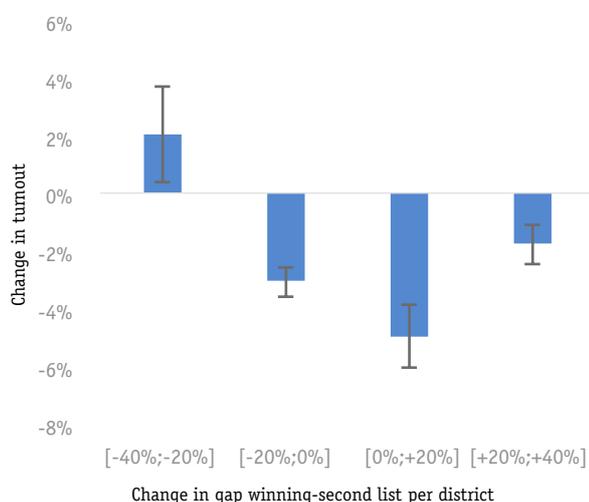
Notes Figure 9.b shows the mean and confidence intervals of changes in turnout across municipalities with different levels of political competitiveness in 2009 (measured by the gap in the share of votes between the winning and second-most voted for list) using a kernel-weighted local polynomial regressions.

Moreover, analysis at different administrative levels provides further clarification on the lack of a strong relation between political competitiveness and turnout. More political competitiveness in a district between the 2009 and 2018 elections increased turnout, but the opposite was true at the municipal level, so the effect is ambiguous. At the electoral district level, areas that saw improvements in political competitiveness between 2009 and 2018 (between 20% and 40% decrease in the gap between the share of votes for the winning and the second lists) also saw increases in turnout, while in districts where political competitiveness decreased or was similar, turnouts decreased (figure 10.a). However, political competitiveness at the municipal level, measured by the deviations in the gap between the share of votes for the winning and the second-most voted for lists in the municipality compared to the average in the district, moves in the opposite direction. Municipalities that have large deteriorations in the gap between the winning and second lists had larger increases in turnout (figure 10.b). This finding is in line with the theory of turnout buying, by which politicians focus their mobilization efforts in cadasters where voters are more loyal (so, less competitive), where they only need to focus on increasing turnout

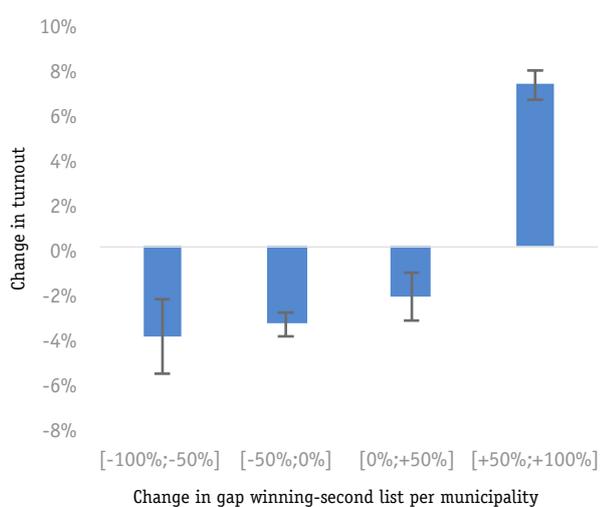
without needing to monitor the votes. Therefore, municipalities with larger increases in turnout are associated with stronger victories for the winning list, further weakening political competitiveness. Overall, the asymmetric changes in vote buying between 2009 and 2018 across municipalities might have diluted the expected positive effects of more political competitiveness derived from the change in the electoral law on citizen participation in the elections.

Figure 10 Changes in political competitiveness and turnout at the district and municipal levels (2018-2009)

a At the district level



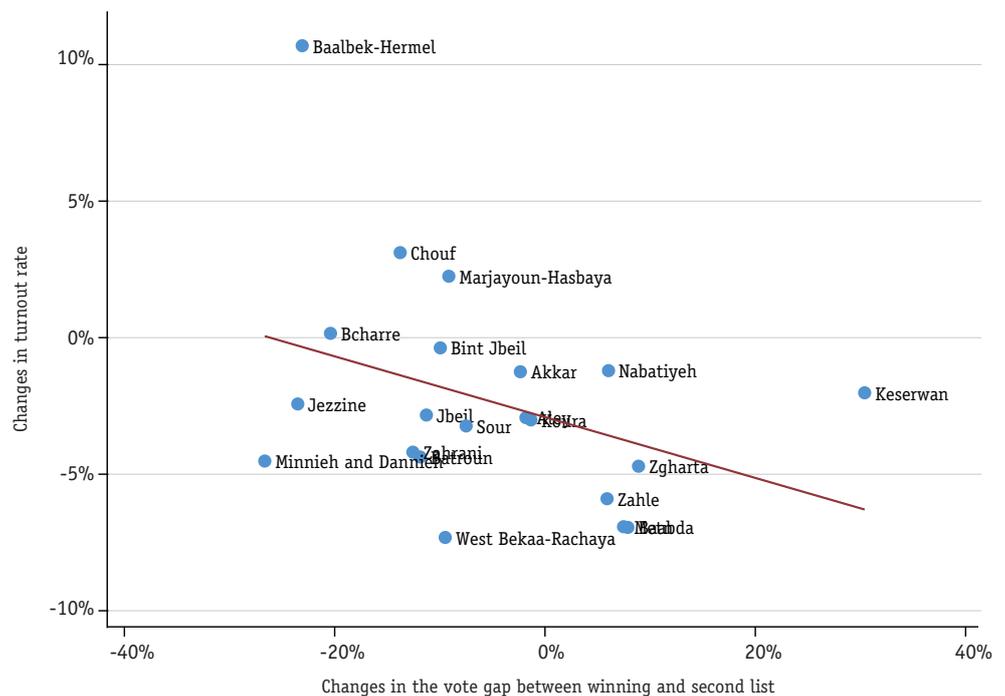
b At the municipal level



Source Own calculations based on data from the Ministry of Interior (2009 and 2018).

Finally, confessional factors are also associated with the lack of a clear link between the improvements in political competitiveness and higher turnout rates. As mentioned previously, the reduction in voter participation was mostly concentrated among the Sunni and Alawite electorate. At the same time, some of the largest gains in political competitiveness were observed in districts such as Saida and Tripoli, where Sunnis represent a large majority. The tighter political races in these districts might have been due to electoral absenteeism of a section of these electoral groups, as a type of protest voting, that hurt the incumbent party (mostly the Future Movement), lowering the gap with other parties and even making it lose key seats. Interestingly, if we exclude all municipalities where either Sunnis or Alawites represented 5% or more of the electorate, the correlation between changes in political competition and variations in turnout rates holds true (figure 11).

Figure 11 Changes in political competitiveness and turnout (2018-2009)



Source Own calculations based on data from the Ministry of Interior (2009 and 2018).

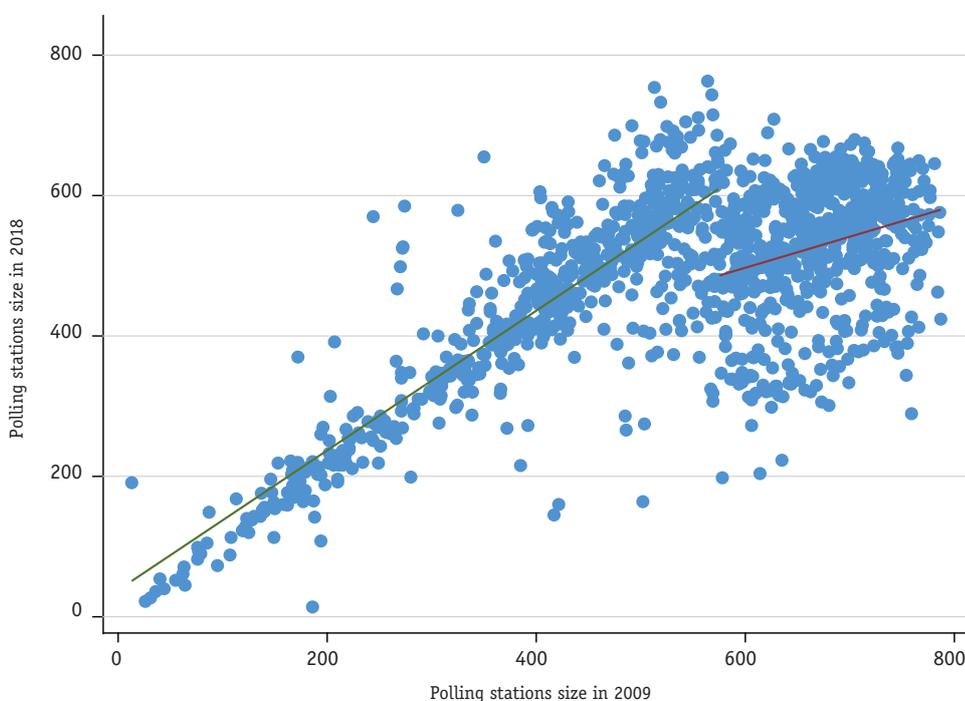
Note A negative (positive) number in the horizontal axis means that there was a reduction (increase) in the gap between the winning and the second-most voted lists, thus improving (deteriorating) the political competitiveness. A negative (positive) number in the vertical axis means that turnout rates in 2018 were lower (higher) than in 2009.

Note This excludes the results in municipalities where 5% of voters or more were Sunni or Alawite.

Electoral Mobilization and Voter Turnout

Legal electoral changes may have impacted voter mobilization and vote buying. Evidence from the previous section suggests that the smaller and the more confessionally homogeneous a polling station is, the easier it is for politicians and their intermediaries to monitor voters. As a result, politicians have higher incentives to buy votes in these stations, which would increase turnout. Legal reforms between 2009 and 2018 have led to changes in the average size of polling stations, as well as the prevalence of single-sect centers as opposed to mixed ones. On the one hand, the percentage of voting centers that included more than one confession increased from 14% to 23%, a significant increase that could have reduced vote buying and turnout in the 2018 elections. On the other hand, the 2017 electoral law reduced the maximum size of a polling station from 800 to 600 registered voters, which, despite the numerous exceptions, reduced the average size of polling stations (figure 12). This could, in theory, have increased turnout, although given that the reduction in the size of polling stations was concentrated among the largest polling stations, the impact might not be sizable.

Figure 12 Changes in the size of polling stations and reduction in the legal limit from 800 to 600 voters

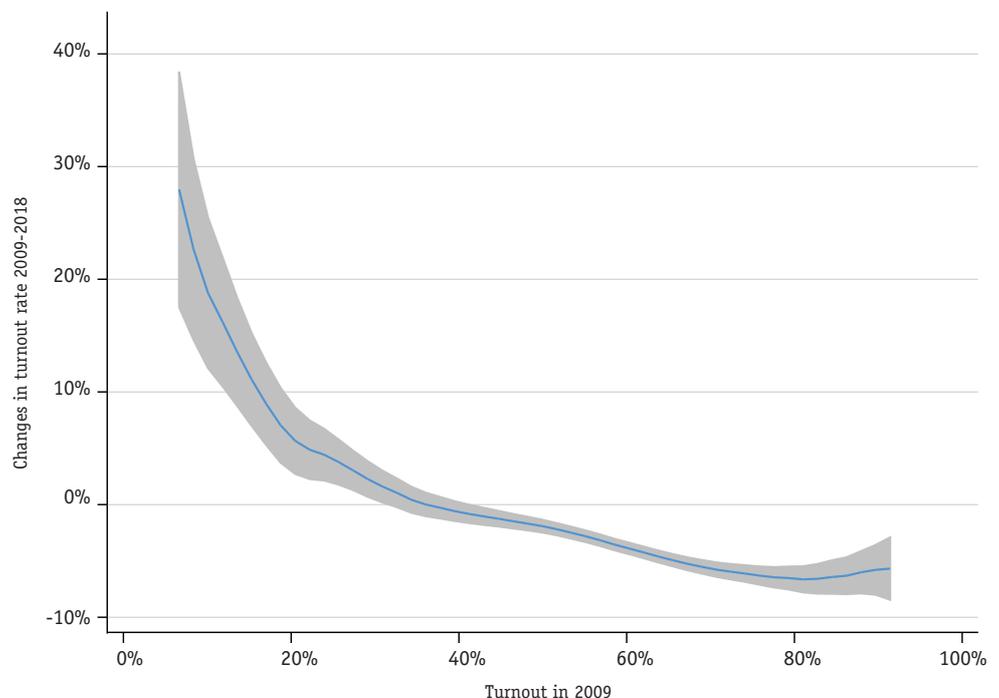


Source Own calculations based on data from the Ministry of Interior (2009 and 2018).

Note Every dot represents the average size of polling stations in each Lebanese municipality in the 2009 and 2018 elections.

Abnormally higher turnout rates in some polling stations in 2009 (for example, those significantly above the mean in a district for a given confession) could have been due to specific turnout-mobilization from the main political parties (e.g. through vote buying). However, unless parties sustained these same mobilization efforts in 2018, turnouts should revert to the mean. This pattern was observed, as municipalities with abnormally high turnouts vis-a-vis the mean for a given confession in a district in 2009 tended to see the largest drop in turnout in 2018, while municipalities with the lowest turnouts in 2009 actually saw an increase in 2018 (figure 13).

Figure 13 Reversion to the mean in turnout rates across Lebanese municipalities (2009-2018)



Source Own calculations based on data from the Ministry of Interior (2009 and 2018).

Notes The figure shows the mean and confidence intervals of changes in turnout across municipalities with different turnout rates in 2009 using a kernel-weighted local polynomial regressions.

Assessing the Importance of Different Factors in Explaining the Fall in Voter Participation Between 2009 and 2018

To further understand the drivers behind the reduction in turnout between 2009 and 2018, we used databases of the 2009 and 2018 elections and aggregated them at the municipal level. The analysis at the polling station level is not possible as the polling stations differed significantly from 2009 to 2018. Table 2 displays the average changes at the national level in different variables between the last two

elections. In particular, there was a significant drop in the average size of polling stations (89 less voters per center), an increase in the share of sectarian mixed centers (from 14% to 23%), and a large improvement in political competitiveness promoted by the changes in the electoral laws. Other relevant socio-economic changes include the arrival of refugees, as well as changes in the economic growth of municipalities, as mentioned before.

Table 2 Descriptive statistics on key changes between the 2018 and 2009 elections

	Mean	Standard Error	Significance
Change (Δ) in turnout 2018-2009	-0.05	0.00	***
Share of polling stations with more than 600 voters in 2009	0.78	0.02	***
Change in polling stations' size 2018-2009	-88.83	4.64	***
Change in share of mixed polling stations 2018-2009	0.09	0.01	***
Change in PCI in municipality 2018-2009	0.07	0.01	***
Change in PCI in district 2018-2009	0.08	0.00	***
Refugees per capita	0.36	0.04	***
Change in economic activity in municipality 2018-2009	0.19	0.01	***
Change in homogeneity in municipality 2018-2009	-0.09	0.01	***

Source Own calculations based on data from the Ministry of Interior (2009 and 2018).

Note PCI is the Political Competitiveness Index.

In order to assess the relative role of each of the factors previously mentioned, we run multivariate regressions that provide the effect of each variable on turnout rates in each municipality, controlling for differences in the other variables (table 3):

Voter apathy was particularly salient among Sunni and Alawite voters. Indeed, Models 2 and 3 in table 3 show that, compared to Sunni and Alawite polling stations, Maronite, Shia, and Druze polling stations had more positive trends in turnout between 2009 and 2018. In other words, Sunni and Alawite constituents showed a larger reduction in turnout between 2009 and 2018 compared to other confessions. This is true even after taking into consideration other factors affecting changes in political competitiveness, vote buying, and turnout. Therefore, the reduction in turnout in 2018 was partly due to the inability of the main Sunni parties, in particular the Future Movement, to mobilize the Sunni vote in many of its strongholds, and points at either Sunni voter apathy or a sign of Sunni voters'

discontent with their co-sectarian parties. In addition, as shown in model 1 in table 3, improvements in political competitiveness at the district level led to increases in turnout in 2018 (voter intrinsic mobilization), while municipalities that had larger increases in competitiveness in comparison to the average in the district were associated with a drop in turnout (extrinsic mobilization, including turnout buying). We also observe that, in relative terms, districts that were more competitive in 2009 had a reduction in turnout while less competitive districts had higher turnouts.

Changes in turnout were associated with characteristics of polling stations that facilitate or hinder vote buying through voter monitoring by politicians. In line with the vote buying theory, we find that municipalities where the average size of polling stations was reduced between 2009 and 2018 had an increase in turnout. Furthermore, polling stations that had more than 600 registered voters in 2009—and thus had their size reduced in accordance with the 2017 electoral law—were associated with a fall in turnout. Conversely, the increase in the share of mixed polling stations in a municipality is associated with a significant reduction in turnout, also in line with the vote buying theory. We also find that there is a strong negative correlation between the turnout in 2009 and the changes in turnout between 2009 and 2018, showing that the largest turnouts in municipalities in 2009 were partly due to non-fundamental factors such as one-off increases in voter mobilization or turnout buying.

Table 3 Regression analysis on the drivers of changes in turnout between 2018 and 2009

VARIABLES	Model (1) Δ Turnout 2018-2009	Model (2) Δ Turnout 2018-2009	Model (3) Δ Turnout 2018-2009
Turnout 2009	-0.239*** (0.0156)		-0.203*** (0.0175)
Change (Δ) in the political competitiveness index (municipality vis-à-vis district mean)	-0.144*** (0.0191)		
Change in the political competitiveness index (across districts)	0.181*** (0.0398)		
Polling station >= 600	-0.0353*** (0.00646)	-0.0440*** (0.00691)	-0.0431*** (0.00653)
Change in size of polling stations 2018-2009	-0.000119*** (2.57e-05)	-0.000167*** (2.72e-05)	-0.000137*** (2.58e-05)

Gap between winner and second list in district 2009		0.134***	0.0758***
		(0.0103)	(0.0109)
Refugees per capita	-0.00769**	0.00183	0.000974
	(0.00349)	(0.00358)	(0.00339)
Change in economic activity in municipality 2017-2011	0.0234***	0.0301***	0.0327***
	(0.00738)	(0.00723)	(0.00683)
Change in homogeneity in municipality 2018-2009	-0.0346**	-0.0193	-0.0179
	(0.0171)	(0.0170)	(0.0161)
Change in the percentage of mixed polling stations 2018-2009	-0.0299**	-0.0304**	-0.0251**
	(0.0128)	(0.0130)	(0.0123)
Percentage of Shia voters in 2009		0.0155*	0.0364***
		(0.00879)	(0.00849)
Percentage of Maronite voters in 2009		0.0605***	0.0527***
		(0.00819)	(0.00777)
Percentage of Greek Catholic voters in 2009		0.00126	-0.0185
		(0.0259)	(0.0245)
Percentage of Greek Orthodox voters in 2009		0.0514***	0.0129
		(0.0125)	(0.0122)
Percentage of Armenian Catholic voters in 2009		-1.612	-1.092
		(1.030)	(0.974)
Percentage of Armenian Orthodox voters in 2009		0.473**	0.283
		(0.214)	(0.203)
Percentage of minority Christian voters in 2009		-0.137	-0.267
		(0.392)	(0.370)
Percentage of Alawite voters in 2009		-0.0553*	-0.0526*
		(0.0298)	(0.0281)
Percentage of Druze voters in 2009		0.0903***	0.0773***
		(0.0103)	(0.00979)
Percentage of mixed sect polling stations in 2009		0.0247***	0.00974
		(0.00907)	(0.00867)
Constant	0.111***	-0.101***	0.0359**
	(0.0107)	(0.00932)	(0.0147)
Observations	1,127	1,127	1,127
R-squared	0.250	0.268	0.348

Source Own calculations based on data from the Ministry of Interior (2008 and 2019).

Notes Standard errors in parentheses. Three stars (***) denote a p-value of less than 0.01, two stars (**) a p-value of less than 0.05, and one star (*) a p-value of less than 0.1.

IV Conclusion

The 2018 Lebanese parliamentary elections exhibited large voter apathy, with a reduction of more than 5% compared to the 2009 elections. Low turnout marred the first parliamentary elections in nine years in spite of relevant changes in the electoral system that enhanced political representativeness and competitiveness across parties, as voters seemed dubious about the possibility of drastic changes in the political system.

Participation in the 2018 elections substantially varied depending on different socio-economic characteristics of voters, as well as the places they reside in. A multivariate regression analysis shows that women and older voters voted more compared to men and the youth, and first-time voters in particular had the highest apathy across all demographic groups. The Lebanese diaspora was allowed to vote in 2018 for the first time, and did so in larger shares than Lebanese at home, showing stronger political engagement. But perhaps the most salient determinant of turnout was voters' confession. Controlling for other individual and geographic factors, Sunni and Alawite voters were the least likely to cast their ballot in 2018, while Shia and Druze voters had the highest participation. The sectarian lens in the elections was also key in understanding turnout as voters were more predisposed to vote when they had a political candidate in their district from their own confession. The setting of voting centers also affected turnout, as smaller and single-sect polling stations showed higher voter participation, as these facilitate the monitoring of voters by politicians and their brokers, increasing the opportunity of vote buying.

Turnout rates were also affected by the socio-economic and political environments of the localities and districts. The least economically developed municipalities with larger number of poor constituents displayed higher political engagement than richer localities. The larger voter mobilization among the poorer population suggests the presence of vote buying, as financial incentives can more easily elicit their vote and they could also be more vulnerable to intimidation by politicians. We also observed that municipalities with a larger share of refugees and lower degrees of sectarian fractionalization exhibited higher turnout rates. Beyond these factors at the local level, the 2018 elections highlighted striking variations in turnout across electoral districts in Lebanon, ranging from below 40% in the largest urban centers of Beirut and Tripoli to more than 60% in Keserwan, Jbeil, and Baalbek-Hermel. Fluctuations in turnout

across districts were strongly associated with the degree of voters' representation and competitiveness.

Compared to the 2009 elections, the reduction in voter participation was influenced by three key changes. First, given the delay in the latest elections, there was a sizable increase in first-time voters, who had a lower propensity to vote. Second, the fall in turnout was mostly concentrated among Sunni and Alawite voters who, in many instances, refrained from voting as an act of discontent with the main co-sectarian parties, in particular the Future Movement. The legal changes toward more proportional representation only led to an increase in turnout in few non-competitive districts, while most of the more competitive ones exhibited a larger fall in participation. Furthermore, the increase in the share of confessionally mixed voting centers—from 14% of voters in 2009 to 23% in 2018—also hindered the ability to monitor voters and potentially led to lower vote buying, and thus lower turnout. The role of abnormal voter mobilization, potentially through vote buying, was also observed, as some of the municipalities that had higher turnout rates than the average in a district for a given sect in 2009 showed the largest reductions in voter participation in 2018.

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