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Report

The 2018 Lebanese Parliamentary Elections:
What Do the Numbers Say?

Mount Lebanon 3 Electoral District: Baabda

Georgia Dagher

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Baabda

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Sadat Tower, Tenth Floor
P.O.B 55-215, Leon Street,
Ras Beirut, Lebanon

T: + 961 1 79 93 01
F: + 961 1 79 93 02
info@lcps-lebanon.org
www.lcps-lebanon.org

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Mount Lebanon 3 Electoral District: Baabda

Georgia Dagher

Georgia Dagher is a researcher at the Lebanese Center for Policy Studies. Her research focuses on parliamentary representation, namely electoral behavior and electoral reform. She has also previously contributed to LCPS's work on international donors conferences and reform programs. She holds a degree in Politics and Quantitative Methods from the University of Edinburgh.

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Executive Summary

In the Lebanese parliamentary elections of 2018, Baabda voters showed strong party loyalty, with nearly all Shia voters voting for Hezbollah and Amal, nearly all Druze voting for the Progressive Socialist Party and Lebanese Democratic Party, and nearly all Christian voters choosing the Free Patriotic Movement and Lebanese Forces. This resulted in a high share of votes given to co-confessional candidates. In contrast to many districts, the confessional bias in Baabda did not significantly vary across geographical areas or across confessional groups—it was strong in all cases. A high confessional bias was observed even among voters who did not vote for an established party or for one of the main political party candidates. Indeed, each of the candidates running on the anti-establishment Kulluna Watani list owed their success to the support they received from their sectarian communities, with barely any voters casting their preferential vote for a Kulluna Watani candidate from a different sect. Apart from the performance of specific Kulluna Watani candidates, the list was generally more successful in more confessionally fragmented areas, highlighting sectarian parties' higher capacity to mobilize the vote in more homogeneous localities. The analysis of the elections results in Baabda shows some signs of voter rigging on the part of the Lebanese Forces. Two patterns, which tend to occur in irregular elections, were observed in the votes for the party: It generally performed better in polling stations with smaller numbers of registered voters, and in stations that recorded significantly high turnout rates.

Introduction

After passing a new electoral law in 2017, the Lebanese parliament finally agreed to hold elections in 2018—nine years after the previous ones, and two mandate extensions later. The new electoral law established a proportional representation system for the first time in the country's history, paving the way for increased competition. This new system, however, led to little changes in political representation, with voters in 2018 reiterating their support for the main established political parties. Nevertheless, these results must not be taken at face value and require a closer analysis, as voting patterns across and within electoral districts, as well as across voters' demographic characteristics, still showed variations.

As part of a larger study on the 2018 elections, LCPS analyzed voter behavior at the national level and the electoral district level. Using the official elections results at the polling station level published by the Ministry of Interior,¹ the analysis unpacks the elections results and examines differing patterns in voting behavior across demographic characteristics and geographical areas. The results at the polling station

¹ Available at: <http://elections.gov.lb>.

level were merged with a series of potential explanatory factors at the individual and cadastral levels. First, based on the ministry's list of registered voters by confession and gender in each of the polling stations,² we identified the demographic characteristics of registered voters. The results at the polling station level were also merged with a series of factors that may have affected voters' choices at the cadastral level in each electoral district. These factors include the level of economic development in a cadaster, density;³ the poverty rate in a cadaster, approximated by the ratio of beneficiaries of the National Poverty Targeting Program over the population in the cadaster;⁴ the level of sectarian homogeneity in a cadaster, constructed by LCPS and based on the distribution of voters by confession in each cadaster;⁵ and, finally, the share of refugees over the number of registered voters in a cadaster.⁶ Through the use of multivariate regression analyses, the explanatory significance of each of these factors on voter behavior is identified.

Apart from voters' preferences, the study also examines incidents of electoral fraud. We seek to identify evidence of voter rigging—such as vote buying—and vote rigging—such as ballot stuffing and vote counting manipulations.

This report unpacks the results in the electoral district of Baabda (Mount Lebanon 3), which is allocated six parliamentary seats—three Maronite, two Shia, and one Druze. The report is divided into seven sections. First, we present the demographic distribution of registered voters in Baabda. The second section analyzes voter turnout, which varied across confessional groups, genders, and cadastral areas. The third section of this report delves into voters' preferences for political parties and candidates. Going beyond the results at the aggregate level, we shed light on the varying preferences for parties and candidates across voters' sect and gender and across geographical areas in Baabda, and how these preferences were affected by cadaster level characteristics. In the fourth section, we examine voters' sectarian behavior, namely their preferences for candidates of their own sectarian group. The fifth section looks at the performance of women candidates and who their main constituents were. The sixth section dissects the performance of the Kulluna Watani list, formed by independent and emerging political groups. The seventh and final section of this report identifies incidents of electoral fraud. Using a number of statistical methods—which include analyzing the distribution of results at the polling station level, such as turnouts, votes for each list and party, and the share of invalid ballots—we test for voter and vote rigging, such as pressure to vote through vote buying, or manipulations in the vote counting process.

2

Note that some polling stations had voters from multiple confessional groups registered to vote. Similarly, some had both men and women registered to vote.

3

Obtained from the National Oceanic and Atmospheric Administration.

4

Data on National Poverty Targeting Program beneficiaries was obtained from the Ministry of Social Affairs.

5

Based on electoral data on the sect of voters per polling station, we constructed an index of homogeneity (IH) = $\sum_{i=1}^n S_{ij}^2$, where S_{ij}^2 is the sum of the square root of the share of each sectarian group in the total number of registered voters in a cadaster. The index ranges between 0 (when the cadaster is fully heterogeneous) and 1 (when the cadaster is fully homogeneous, or only one sectarian group is present).

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Data on the refugee population is collected from UNHCR.

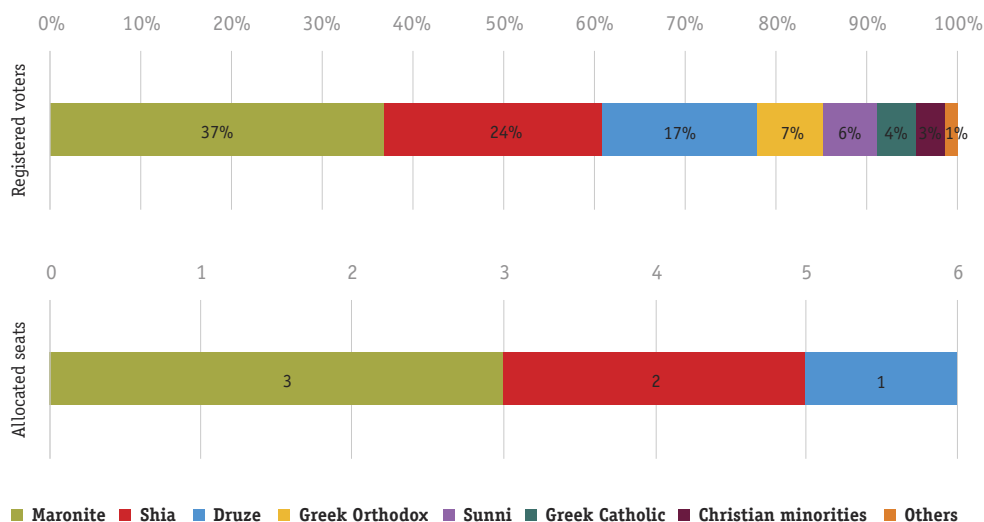
I Who are the voters?

In the Lebanese parliamentary elections of May 2018, close to 170,000 Lebanese were registered to vote in the electoral district of Baabda (Mount Lebanon 3). Among the registered voters, 164,885 were registered in Lebanon⁷ and 4,037 were registered abroad. Out of Lebanon's 128 parliamentary seats, six seats were at stake in Baabda: Three Maronite, two Shia, and one Druze seat. Compared to other electoral districts, Baabda has a high degree of confessional fragmentation. Maronites represent the largest group (37%), followed by Shias (24%) and Druze voters (17%). Most of the remainder was split between Greek Orthodox, Sunnis, Greek Catholics, and Christian minorities (between 3% and 7% each), with a few Armenian Orthodox, Armenian Catholic, and Alawite voters (1% in total) (figure 1).⁸

⁷ Including 339 public employees.

⁸ We calculate the number of registered voters by confession using the official election results published by the Ministry of Interior, as well as the ministry's list of registered voters by confession in each of the polling stations. Our approximation of the confessional composition of each district excludes public employees and diaspora voters, whose confessions were not specified.

Figure 1 Registered voters and allocated seats by confessional group in Baabda



Note Percentages have been rounded up.

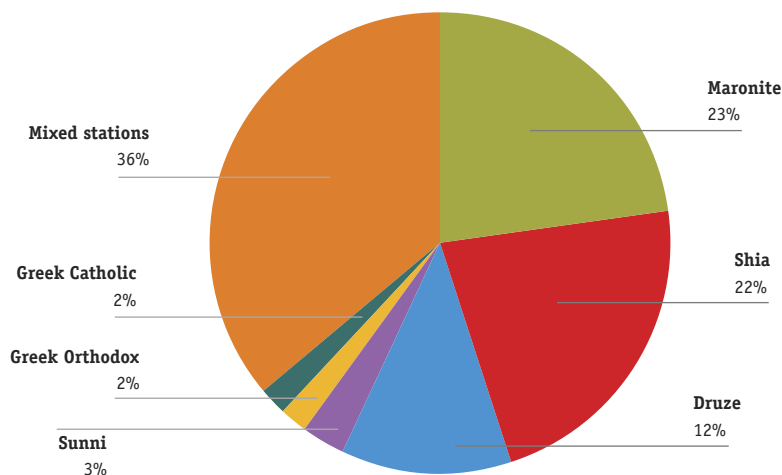
Given the confessional allocation of seats, representation is not equal for each voter, but rather depends on the confessional group to which they belong. In Baabda, Shia and Maronite voters benefit significantly more from the quota than Druze voters. While each Maronite and Shia seat represents about 20,000 constituents, the Druze seat represents almost 28,000 Druze voters (table 1).

Table 1 Confessional composition of Baabda and allocated seats by confessional group

Confession	Number of voters	Percentage	Number of seats	Voters per seat
Maronite	61,072	37%	3	20,357
Shia	39,469	24%	2	19,735
Druze	27,940	17%	1	27,940
Greek Orthodox	11,987	7%		
Sunni	9,790	6%		
Greek Catholic	7,097	4%		
Christian minorities	4,928	3%		
Armenian Orthodox	1,437	1%		
Armenian Catholic	812	0%		
Alawite	14	0%		
Total	164,546	100%	6	
Public employees	339			
Diaspora	4,037			
Total	168,922			

Note Percentages have been rounded up.

Registered voters were generally divided into electoral centers depending on their gender and confession. In Baabda, however, 36% of the polling stations had multiple confessional groups registered to vote (about 59,000 voters), thus hindering a comprehensive analysis of voter behavior by confessional group. Among the remaining polling stations, about 20% were reserved for Shia and Maronite voters, each, and 12% for Druze voters. The few remaining voters in homogeneous stations were Sunni, Greek Orthodox, and Greek Catholic (figure 2).

Figure 2 Confessional composition of polling stations in Baabda

Note Percentages have been rounded up.

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This is calculated by comparing the total number of registered voters by confessional group to the number of voters registered in their own stations. On the same basis, it is also possible to calculate the confessional composition of mixed stations, by looking at the share of each group that was registered in those stations.

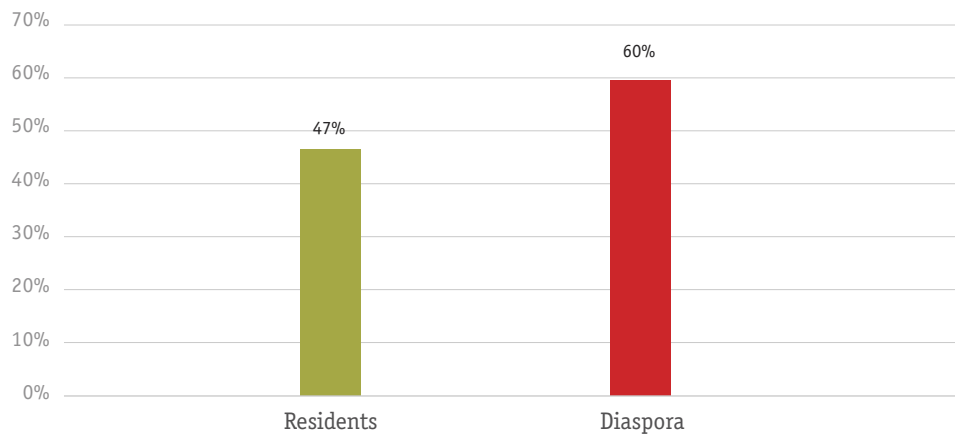
A comparison between the total number of registered voters by confession and the number of voters registered in stations exclusively servicing voters of their confession shows that around 90% of Shia voters, 70% of Druze voters, and 60% of Maronite voters in Baabda were registered in their own polling stations. Regarding the confessional composition of mixed stations, the largest share of voters registered in mixed stations were Maronite (40%), followed by Druze and Greek Orthodox (about 14% each). Between 5% and 8% of voters in mixed stations were Greek Catholic, Sunni, Christian minorities, and Shias, while 4% were Armenian Orthodox, Catholic, and Alawites, combined.⁹

II Who voted?

Turnout in Baabda stood at 47%, lower than the country average of 49%. Among the 168,922 Lebanese registered in the district who were of the legal age to vote, 80,052 cast a vote while the remaining 88,870 did not. Baabda saw a large drop in turnout from the 2009 elections, when turnout was at 55%.

Similar to trends in other electoral districts, constituents in the diaspora had a much higher participation rate in the elections compared to residents of Lebanon. While only 47% of domestic voters registered in Baabda decided to vote, 60% of those residing abroad did so (figure 3).

Figure 3 Turnout by residency in Baabda



Note Percentages have been rounded up.

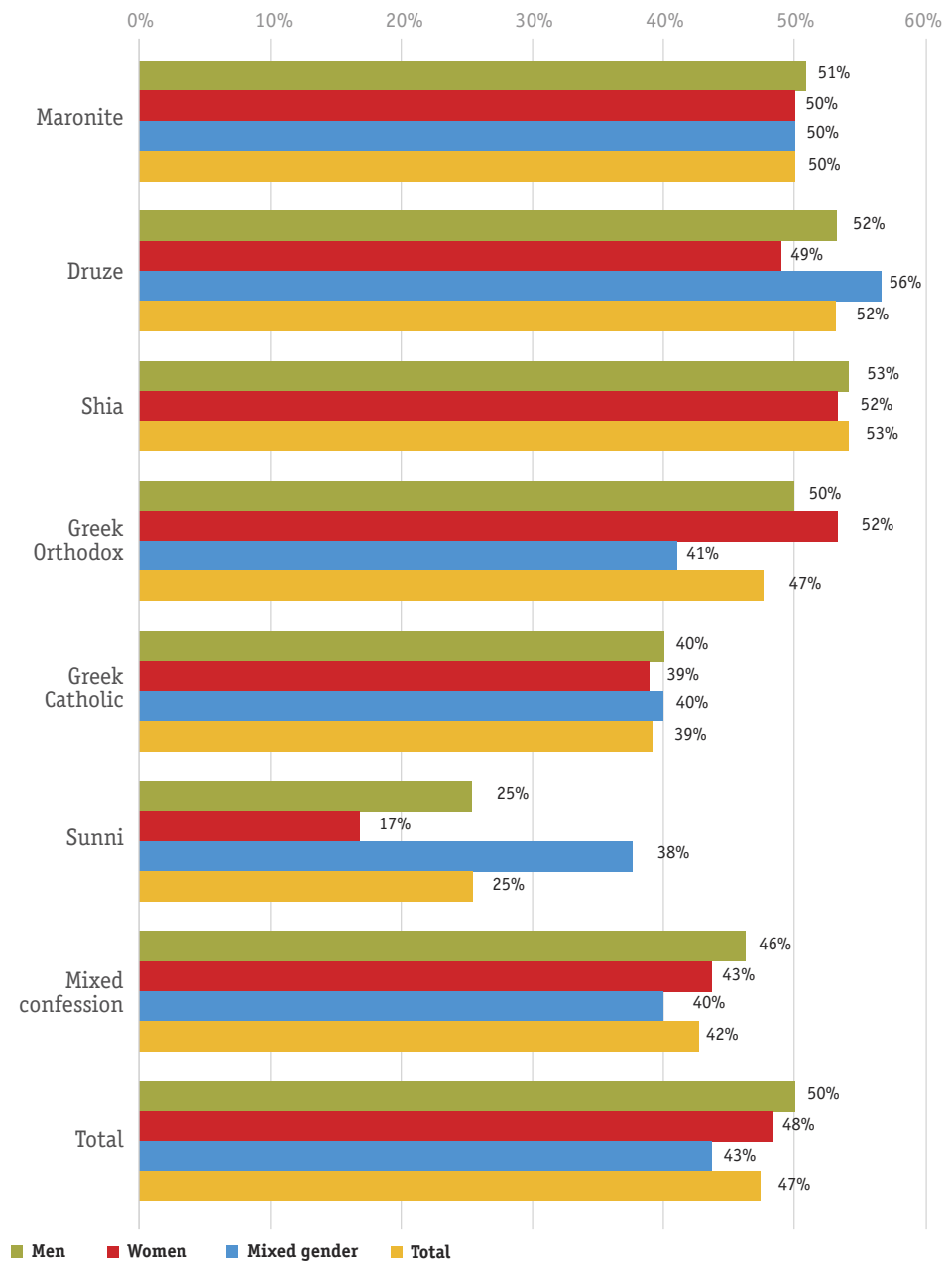
Shia voters and male constituents were the most likely to vote

Turnout largely differed across confessional groups, with participation rates being highest among represented groups who had a stake in the elections results. The highest turnout was observed among Shia voters (53%), followed by Druze (52%) and Maronite voters (50%). The higher turnout among the Shia community reflects a trend observed at the national level, with this group generally being the most mobilized in the electoral districts that have Shia seats. Druze voters also tended to vote more than other groups across the country, while among Maronite voters, higher turnouts were observed mainly in the Mount Lebanon region.

The lower turnout in the district compared to the country average was largely driven by lower turnouts among groups that were not represented by a seat. Sunnis had the lowest turnout (25%), followed by Greek Catholics (39%) and Greek Orthodox (47%). Polling stations that had more than one confessional group registered to vote saw a 42% turnout. The lower turnouts among Sunni, Greek Catholic, and Greek Orthodox voters, who represented a low share of registered voters in Baabda, also reflects a pattern observed in many districts: Generally, minority groups in a district tended to vote less than majority groups. Even after controlling for voters' gender as well as certain characteristics of the cadasters in which they were registered, such as the level of confessional fragmentation and economic development, Shia voters were significantly more likely to vote, while Sunnis and Greek Catholics were the least likely to do so. Maronite, Druze, and Greek Orthodox voters stood in between. Voters registered in mixed stations were also overall less likely to vote compared to those in homogeneous stations.

By gender, women constituents had a lower turnout than male constituents. Voting centers that had only women registered to vote saw a 48% turnout, while those that had only men registered to vote saw a 50% turnout (figure 4). Turnout rates in centers that had both women and men registered to vote were significantly lower (43%). The variations in turnouts across genders are statistically significant, even after controlling for voters' confession and characteristics of the cadaster they were registered in—such as the level of confessional fragmentation and economic development. Moreover, men from all confessional groups voted more than their women counterparts, with the exception of Greek Orthodox men who had a slightly lower turnout than Greek Orthodox women.

Figure 4 Turnout by confessional group and gender in Baabda



Note Percentages have been rounded up.

Geographical disparities in participation rates were apparent

The majority of cadasters in Baabda had a turnout that varied between 40% and 60%. Compared to other districts, overall turnout by cadaster in Baabda was low—at the national level, turnouts exceeded 80% in some cadasters.

A few cadasters saw turnouts at or below 40%. The lowest participation rate was observed in the cadaster of Merdache (34%), followed by Furn El-Chebbak, which includes El-Tahouita and Ain El-Remmaneh (36%), Aabadiyeh, and Kneisset Baabda (40% each).¹⁰

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Note that the very small cadaster of Deir Khouna saw a 21% turnout. However, only 14 voters were registered to vote in this cadaster.

Even within these low-turnout cadasters, there were some variations. In El-Tahouita and Ain El-Remmaneh (Furn El-Chebbak), which had polling stations reserved for multiple confessional groups, Maronite polling stations recorded much higher turnouts (above 45%) than other ones—most of which were mixed. A few stations were reserved for Greek Catholics and had turnouts at or lower than 30%. The low turnout in the cadaster was largely driven by the lower turnouts in mixed stations. While some of these stations had voters from the majority groups registered, most voters in mixed stations were from the minority groups (Greek Catholic, Sunni, Armenian Orthodox, Armenian Catholic, and Christian minorities), who generally voted much less. In Aabadiyeh, which also had stations reserved for multiple confessional groups, Maronite voters had a much higher turnout than others (45%). The lower turnouts in the cadaster were driven by voters in Druze and Greek Orthodox stations (38-39% turnout), as well as those in mixed stations (34%), the majority of whom were Druze and Greek Orthodox. However, Merdache and Kneisset Baabda, which saw very low turnouts, only had one polling station each and were almost entirely Maronite.

Turnout was above 60% in a large number of cadasters. The highest participation rates were observed in Bsaba Baabda, Haret El-Sit, and Qirtada (between 66% and 68% each), followed by Aain Mouaffaq, Khreibet Baabda, Louayzeh Baabda and Faiyadiye, and El-Ksaibeh (between 60% and 65% each). There was no clear pattern between the turnouts in these cadasters and the confessional composition of each. In Aain Mouaffaq, Haret El-Sit, and Qirtada, nearly all voters were Maronite, while in Bsaba Baabda, and Louayzeh Baabda and Faiyadiye, the majority of voters were Maronite (about 60% in each), with most of the remainder being Greek Orthodox. El-Ksaibeh, however, is majority Greek Orthodox (60%) with a large Maronite minority, while Khreibet Baabda is nearly fully Druze.

The confessional composition of cadasters seems to have affected turnout rates only to a minor extent. In general, cadasters that had a mix of Maronite and/or Druze/Shia voters registered to vote, or those that neighbored cadasters with different confessional compositions, tended to see lower turnouts. These include, for example, Aabadiyeh, El-Tahouita (both highly fragmented), and Merdache (a small town located between Boutchay, Kfarchima, Hadace—which host a variety of different groups). El-Tahouita also neighbors cadasters which host different groups, such as Bourj El-Brajneh (majority Shia with a considerable share of Sunni and Christian voters) and Chiyah (fragmented between different Christian groups).

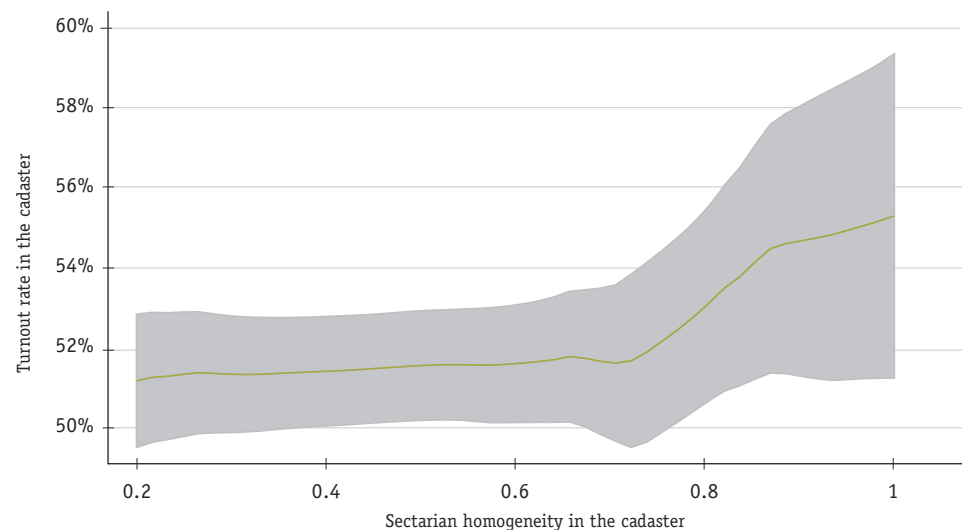
In line with this, beyond the prevalence of any specific confessional group, geographical variations in turnouts may be affected by the

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We use an index of confessional homogeneity (IH) = $\sum_{i=1}^n S_{ij}^2$, where S_{ij}^2 is the sum of the square root of the share of each confessional group in the total number of registered voters of a cadaster. The index goes from 0.2 (most heterogeneous) to 1 (fully homogeneous - only one group is present in the cadaster).

level of confessional homogeneity in a cadaster—that is, whether many different groups cohabit or there is a high predominance of one, regardless of which.¹¹ In Baabda, more homogeneous cadasters generally saw higher turnouts, with the average turnout increasing from 51% in the most heterogeneous cadaster to 55% in the most homogeneous ones (figure 5). Given the sectarian nature of politics in Lebanon, this result may point toward sectarian parties' higher interest in and capacity to mobilize the vote in homogeneous localities where their target group may be more prevalent. However, while this trend was observed in the 2018 elections, the relationship is not statistically significant after controlling for voters' gender and confession. This means that this trend may be related to other factors, such as the level of economic development or poverty rates in a cadaster, or the higher number of homogeneous cadasters that had the main confessional groups registered to vote.

Figure 5 Sectarian homogeneity by cadaster and turnout rate in Baabda



What are the main drivers of turnout in Baabda?

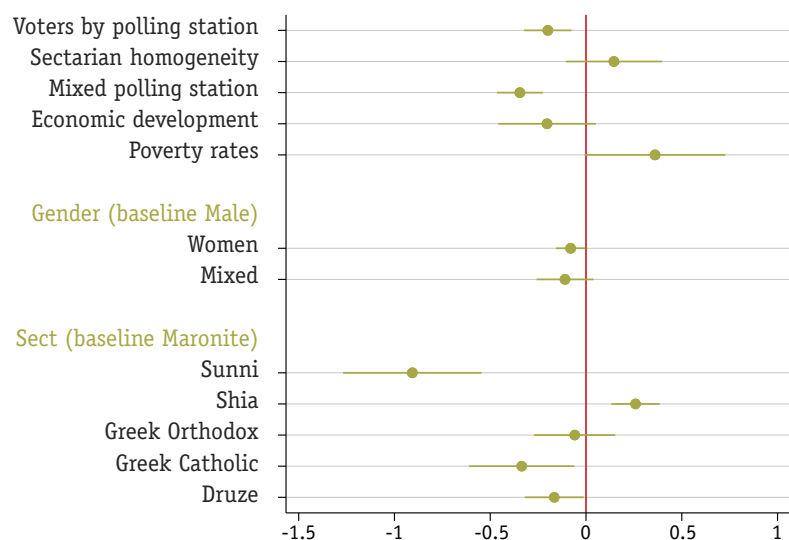
A multivariate analysis highlights the relevant impact of different individual and geographic factors on turnout rates. Factors that significantly affected turnout were the size of a polling station, whether a station was confessionally mixed, poverty rates in a cadaster, as well as voters' gender and sect.

Across geographical areas, voters registered in cadasters with higher poverty rates were more likely to vote. This could suggest that political parties were more capable of mobilizing constituents in poorer areas by offering benefits in exchange of votes. Regarding the variations across polling stations, constituents registered in smaller polling stations (measured by the total number of registered voters in a station) were

more likely to vote compared to those in larger polling stations. This could suggest voter rigging—as previous evidence shows that this tends to happen more often in small polling stations, where it is easier to monitor voters’ behavior. Moreover, voters in confessionally mixed polling stations were less likely to vote than those in homogeneous stations, which could point toward parties’ targeted mobilization of voters based on their confession.

Voters’ individual characteristics, as mentioned above, significantly affected turnouts. Across genders, men were more likely to vote compared to women. Across confessional groups, Shia voters were significantly more likely to vote compared to others, while Sunnis were less likely to do so. Shias, in most other districts, were also generally more likely to vote compared to voters from other confessional groups. Maronite, Druze, Greek Orthodox, and Greek Catholic voters stood in between, with no significant variations between them, although Greek Catholics were slightly less likely to vote compared to others.

Figure 6 Drivers of turnout in Baabda



III Who voted for whom?

Four lists competed in Baabda, with a total of 23 candidates. There were 12 candidates competing for the three Maronite seats, seven candidates competing for the two Shia seats, and four candidates competing for the single Druze seat.

Baabda saw a minor shift in parliamentary representation

Two of the four competing lists in Baabda won seats. The proportional representation law allowed two new parties to make gains in the

district—although the former winning coalition in the district still retained the majority of the votes. In the 2009 elections, which were held under a majoritarian electoral system, the coalition between the Free Patriotic Movement (FPM) and Hezbollah captured nearly 54% of the votes and won all available seats.

The ‘National Consensus’ list, a coalition between the FPM, Hezbollah, the Amal Movement and the Lebanese Democratic Party (LDP), received the majority of the votes. With 52% of the votes (40,669 votes), the list obtained four of the six seats in the district—two Maronite and both Shia seats (figure 7). The Maronite winners were FPM candidates Alain Aoun (10,200 votes) and Hikmat Dib (4,428 votes); and the Shia winners were Hezbollah candidate Ali Ammar (13,692 votes) Amal candidate Fadi Alame (6,348 votes). The other candidates in the list were incumbent Najji Gharios (Maronite, 2,916 votes) from FPM and Sahil Aour (Druze, 2,257 votes) from LDP. Three of the four winners from this list were incumbents representing Baabda. Alain Aoun and Hikmat Dib were elected to parliament in 2009, while Ali Ammar has been an MP since 1992—the first parliamentary elections after the Lebanese civil war.

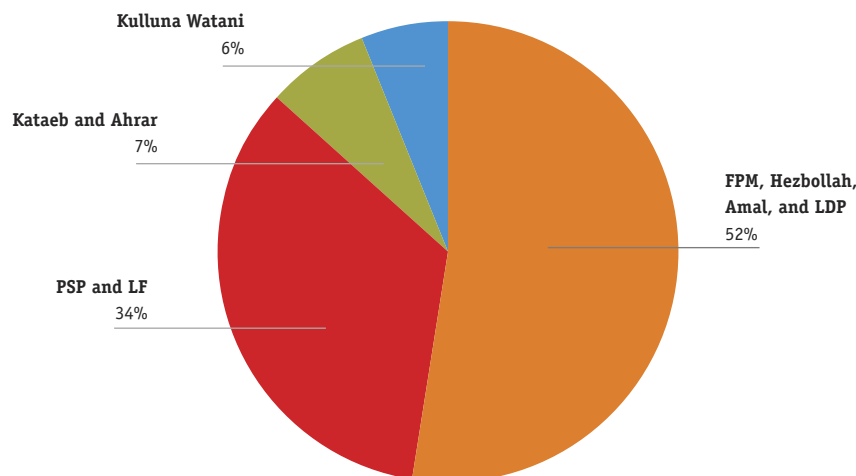
The second winning list, ‘Unity and Development’, formed by the Lebanese Forces (LF) and Progressive Socialist Party (PSP), won the two remaining seats with 34% of the votes (26,500 votes). The third Maronite seat was won by LF candidate Pierre Bou Assi (13,498 votes) and the Druze seat by PSP candidate Hadi Abou Hassan (11,844 votes). Three other candidates, all independents, ran on the list, and barely managed to win a share of the votes. These candidates were Salah Harake (Shia, 468 votes), Cynthia Asmar (Maronite, 200 votes), and Joseph Odeimi (Maronite, 114 votes). Both winners from this list were already known politicians. Pierre Bou Assi was the Minister of Social Affairs at the time of the elections, while Hadi Abou Hassan was PSPS’s commissioner of internal affairs.

The two other lists that ran for the elections were ‘Together for Baabda’, backed by the Kataeb and Ahrar (also known as the National Liberal Party [NLP]) party, and Kulluna Watani, the coalition between independent and emerging groups. ‘Together for Baabda’ won 7% of the votes (5,768 votes) and Kulluna Watani obtained 6% (4,992 votes). Neither of them came close to winning a seat—falling far below the 16.7% threshold required for winning a seat in Baabda.¹²

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This threshold is equal to the total number of valid votes divided by the number of seats in a district—or 1 divided by the number of seats. In the case of Baabda, the threshold was slightly lower than 13,100 votes, or 16.7%.

Figure 7 Percentage of votes for each list in Baabda



Note Percentages have been rounded up.

Among all the candidates in Baabda, the six winners were the most successful and won nearly 80% of the preferential votes. Ali Ammar (Hezbollah) and Pierre Bou Assi (LF) ranked first—obtaining 18% of preferential votes each. They were followed by Hadi Abou Hassan (PSP, 16%) and Alain Aoun (FPM, 13%). These four candidates were the only ones to win over 10% of preferential votes—and over 10,000 votes in general. Fadi Alame (Amal) won 8%, while Hikmat Dib (FPM), the last winner in Baabda, was the least successful with 6%. Only six other candidates in Baabda managed to win over 1,000 votes each. Naji Gharios (FPM, 2,916 votes), Ramzi Bou Khaled (Kataeb, 2,586 votes), Sahil Aour (LDP, 2,257 votes), and Elie Gharios (backed by Ahrar, 1,912 votes) won between 3% and 4% of preferential votes; and Wassef Harake (1,308 votes) and Ziad Akel (1,192 votes), both from Kulluna Watani, won 2% of preferential votes each.

The 11 other candidates in the district won a combined 5% of votes—three of them won 1% of preferential votes each (between 700 and 1,000 votes), and the other eight won less than 0.6% (or less than 500 votes). None of these candidates were members of an established political party.

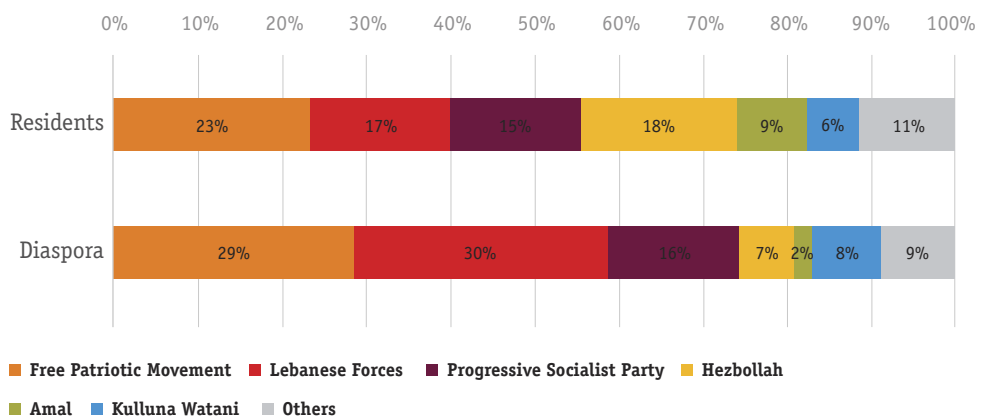
The Lebanese diaspora voted much more for Christian parties

The diaspora's vote largely diverged from that of residents in Baabda.¹³ Most striking was their far larger support for the main Christian parties: Nearly one third of emigrants voted for Pierre Bou Assi (30%), compared to 17% of residents, and Alain Aoun was more successful among the diaspora, winning 19% of compared to 13% of the resident vote. In contrast, emigrants voted significantly less for Ali Ammar and Fadi

¹³ Among the Lebanese emigrants who voted, 2,349 voted for a list and 2,281 cast a preferential vote.

Alame. Ali Ammar obtained 7% of the diaspora vote, compared to 18% of the resident vote, and Fadi Alame won 2% among emigrants, compared to 9% among residents. There were no significant variations regarding other candidates, although Kulluna Watani received slightly higher support from the diaspora (8% compared to 6% of residents' votes).

Figure 8 Percentage of votes for the main parties by residency in Baabda



Note Percentages have been rounded up.

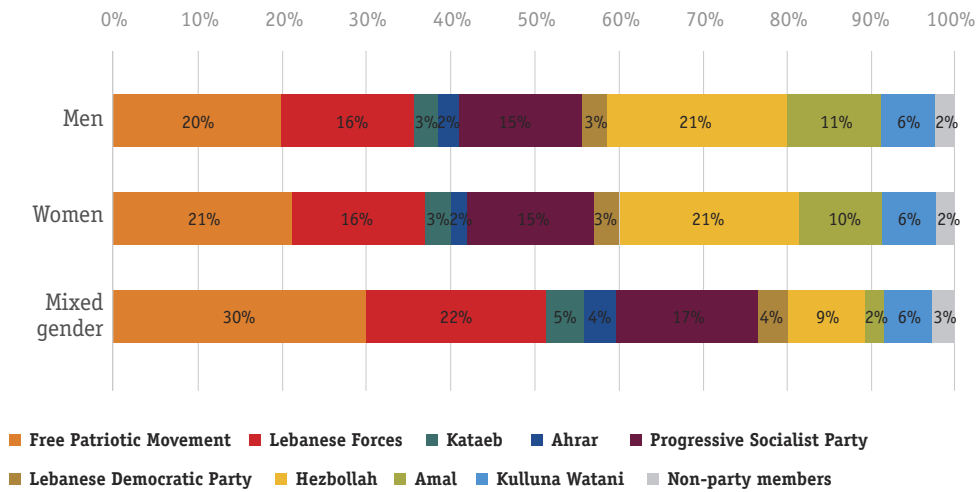
No variations in voters' preferences for political parties across genders

When looking at preferences for different candidates across genders, compared to men, women voted more for Alain Aoun (2% more), while they voted slightly less for Hikmat Dib and Fadi Alame (1% less for each). Regarding other candidates, the differences across genders did not exceed 0.5%. However, the results in polling stations that had both men and women registered were significantly different. Compared to voters in gender-specific polling stations, those in gender-mixed stations gave on average 7% more of their votes to Alain Aoun, and 6% more to Pierre Bou Assi. Voters in gender-mixed stations also gave more of their votes to Hadi Abou Hassan, Naji Gharios, Ramzi Bou Khaled, and Elie Gharios (about 2% more each). However, they voted much less for Ali Ammar (12% less) and Fadi Alame (8% less). This can be explained by the fact that the vast majority of voters in gender-mixed stations were Christian.¹⁴

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In fact, about 42% of voters in gender-mixed stations were Maronite, while other Christian groups, combined, represented 26%. 12% were Druze and Sunni, each, while only 4% were Shia. This was calculated based the number of registered voters in each polling station, using the official election results published by the Ministry of Interior, as well as the Ministry's list of registered voters by confession and gender in each of the polling stations.

Figure 9 Percentage of votes for parties by gender in Baabda

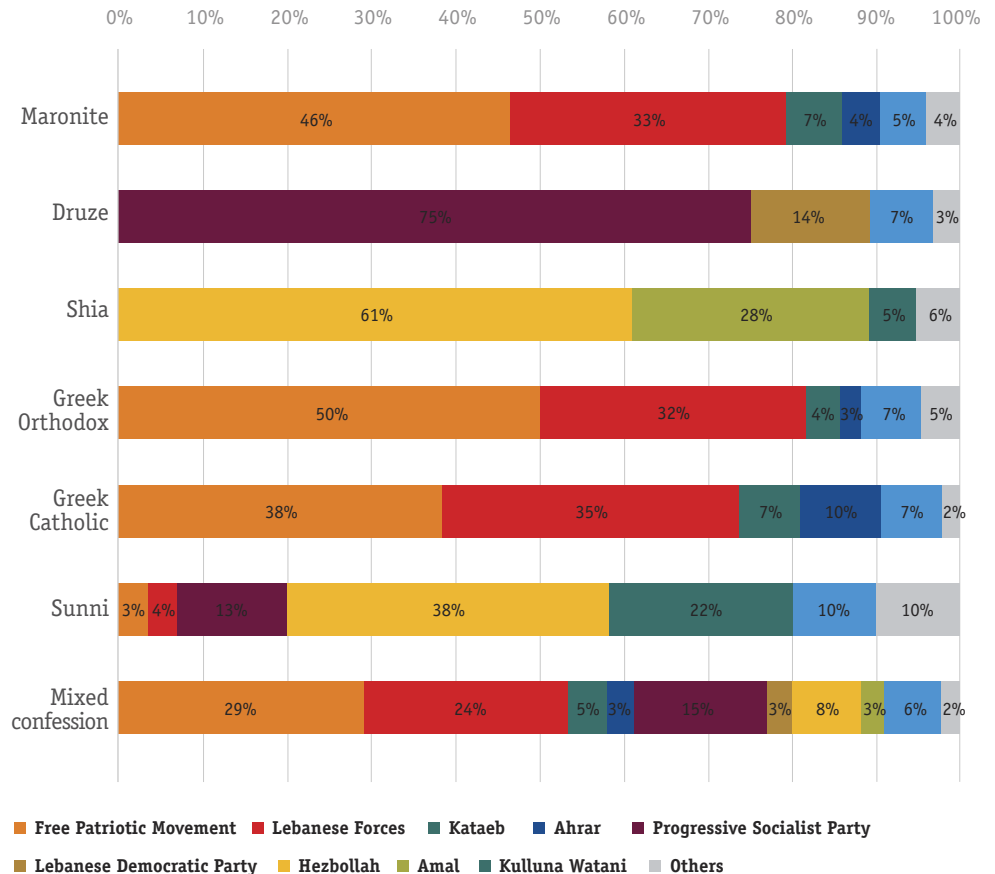


Note Percentages have been rounded up.

Preferences for political parties significantly varied across confessional groups

Nearly 90% of Shia voters cast their votes for one of the two main Shia parties—Hezbollah and Amal. Similarly, nearly 90% of Druze voters voted for one of the main Druze parties—PSP and LDP. About 80% of Maronite voters chose candidates from FPM and LF, with around 10% voting for candidates from the smaller Christian parties, Kataeb and Ahrar. Support for Christian parties was also very strong among other Christian sects, with around 80% of Greek Orthodox and 75% of Greek Catholics voting for FPM and LF. Although support for Kataeb and the Ahrar-affiliated candidate was weak overall—they received around 10% of the Maronite vote and less than 10% of the Greek Orthodox vote—they were both more successful among Greek Catholic voters, winning a combined 17% of their preferential vote. The Sunni vote was the most fragmented, with the majority going to the two Shia parties (61% combined). Among the other candidates in Baabda, non-party members who ran on the PSP-LF or the Kataeb-Ahrar list received very few votes among each confessional group. Finally, Kulluna Watani candidates were able to win over 5% of every confessional group’s vote, and reached their highest level of support among Sunni voters (10%), and their lowest among Shia and Maronite voters (5%).

Figure 10 Percentage of votes for parties by confessional group in Baabda



Note Percentages have been rounded up.

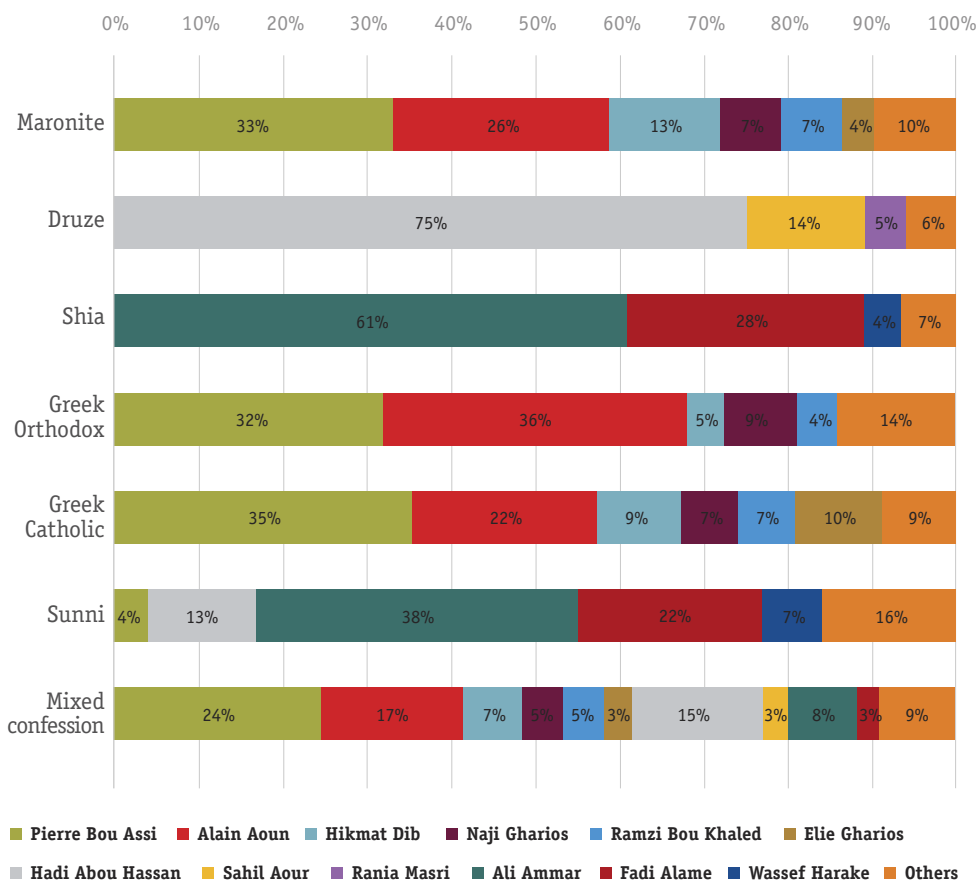
Only six candidates, at most, were able to win over 3% of any represented group's preferential vote. The Druze vote overwhelmingly went to Hadi Abou Hassan (75%). Sahil Aour (14%) was the only other candidate who managed to win over 5% of the Druze community's preferential vote. Rania Masri, from Kulluna Watani, obtained almost 5%, while each of the other candidates won less than 1% among Druze voters. The Shia vote overwhelmingly went to Ali Ammar (61%) and Fadi Alame won most of the remaining votes (28%). One other candidate, Wassef Harake from Kulluna Watani, won 4%. Each of the other candidates in Baabda won less than 2% of the Shia preferential vote. Among Maronite voters, Pierre Bou Assi was the main candidate—receiving 33% of their votes. He was followed by Alain Aoun (26%) and Hikmat Dib (13%). Most of the remaining Maronite votes went to Naji Gharios and Ramzi Bou Khaled (7% each). The only other candidate in the district who managed to win over 3% of the Maronite vote was Elie Gharios. Overall, the confessional groups represented by a seat in Baabda voted for the candidates from their main sectarian parties.

Regarding the non-represented groups, Greek Orthodox and Greek Catholic voters voted similar to Maronite voters.¹⁵ Pierre Bou Assi and Alain Aoun ranked first among Greek Orthodox (32% and 36% of their vote, respectively) and Greek Catholic voters by a significant margin (35% and 22%, respectively). Hikmat Dib, Naji Gharios, and Ramzi Bou Khaled followed, while Elie Gharios received high support from Greek Catholics (10%), but few votes from Greek Orthodox voters. Sunni voters, in comparison, voted similar to Shia voters and barely voted for FPM candidates.¹⁶ The highest share chose Ali Ammar (38%), followed by Fadi Alame (22%) and Hadi Abou Hassan (13%), while Wassef Harake also won a share of their vote (7%). The preferences of voters registered in mixed stations were closer to Christians' and Druze's preferences. The majority of the preferential vote in mixed stations went to Pierre Bou Assi, Alain Aoun, and Hadi Abou Hassan. Each of the main other candidates (Hikmat Dib, Naji Gharios, Ramzi Bou Khaled, Elie Gharios, Ali Ammar, Fadi Alame, and Sahil Aour) received between 3% and 10% of the vote in mixed stations.

15 Slightly under 1,600 of voters in Greek Orthodox polling stations cast a preferential vote, while slightly over 1,000 of those in Greek Catholic stations did so.

16 Slightly less than 1,200 voters registered in Sunni stations cast a preferential vote.

Figure 11 Main candidates among each confessional group in Baabda



Note Percentages have been rounded up.

Political parties had different strongholds depending on the confessional composition of the cadasters

LF and FPM candidates were most successful in Christian majority cadasters, PSP and LDP in Druze majority ones, and Hezbollah and Amal in Shia majority ones.

Hadi Abou Hassan from PSP was generally most successful in the central part of Baabda and obtained above 80% of votes in five cadasters, all of which had Druze voters constituting all, or nearly all, registered voters. He won almost all of the votes in Btekhmay (97%), followed by Khalouat Baabda (93%). He also received between 80% and 90% of preferential votes in Btebyat, Qalaat Baabda, and Ras El-Matn. He was also successful in Qobbayaa, Khreibet Baabda, Rouisset El-Ballout, and Baalchmay—where he received between 60% and 70% of votes—all of which are majority Druze (over 80% in all, and over 95% in most). Sahil Aour from LDP, Hadi Abou Hassan's main competitor, generally found his highest level of support in the same cadasters. But in contrast to Abou Hassan, Aour barely captured 30% of votes in any cadaster. Aour was most successful in Qornayel (32% of the votes, with Abou Hassan obtaining 47%) and won between 20% and 30% of the preferential votes in Baalchmay, Khreibet Baabda, El-Halaliyeh, Rouisset El-Ballout, and Kfar Selouane. In these cadasters, he tended to obtain most of the votes that were not received by Abou Hassan. Aour was able to get more votes than Abou Hassan in the areas of Hazmiye, Hadace, and Sibnay, although both candidates were highly unsuccessful there. The higher success of Aour in those areas could be explained by the higher prevalence of Christian voters. Moreover, while Aour received a higher share of votes than Rania Masri, the third main Druze candidate, she beat him in several cadasters—particularly Ghobeire, El-Khraye, El-Tahouita (Furn El-Chebbak), and Ras El-Matn. In the remaining cadasters, Aour received less than 10% of the votes and, more often, less than 5%. All Druze majority cadasters voted overwhelmingly for the candidates representing the two main Druze parties, showing that these two parties relied on their sectarian community's votes.

Both the PSP and LDP candidates were unsuccessful in capturing a significant share of votes in the western area of Baabda, which did not have a high share of registered Druze voters. Voters in this area showed more support for the Christian parties, FPM and LF.

In contrast to the PSP candidate, FPM and LF candidates were not able to capture more than 80% of the votes in any cadaster. In line with the high support these candidates received from Maronite and other Christian voters, the cadasters that showed high levels of support for them were majority Christian. Across the district, votes tended to be highly contested between the LF candidate Pierre Bou Assi and all of the FPM candidates—particularly Alain Aoun.

Pierre Bou Assi from LF, the most successful Maronite candidate, obtained over 60% of the vote in Haret Hamze and Bsaba Dlab, and won the majority in Ras El-Harf. He received a higher number of votes than Alain Aoun in 40 of the 55 cadasters in Baabda, as well as a higher number of votes than all of the other main Maronite candidates—Hikmat Dib, Naji Gharios, Ramzi Bou Khaled, and Elie Gharios—in all cadasters but two. The vast majority of the votes received by Bou Assi were cast in six cadasters: Hadace, El-Tahouita (in Furn El-Chebbak), Chiyah (all over 1,000 votes), Kfarchima, Aabadiyeh, Hazmiye, and Hammana (all over 500)—which altogether represents over 6,600 votes. In all of these, he received over 30% of the preferential votes and a higher share of votes than all of the other main Christian candidates.

In a few of these cadasters, votes were highly contested between the main Maronite candidates. For example, in El-Tahouita (in Furn El-Chebbak), Bou Assi won 39% (1,453 votes), while Alain Aoun won 28% (1,026 votes); in Chiyah, Bou Assi won 30% (1,176 votes), while Elie Gharios won 23% (897) and Naji Gharios 20% (768 votes). In Aabadiyeh, however, Bou Assi was much more successful than the other candidates. He received 32% of the preferential vote (673 out of a total 2,082 preferential votes), while the other major Maronite candidates won less than 8% of the votes each.

Among the FPM candidates, Alain Aoun only won the majority of votes in Zandouqa (74%) and Dlaibe (51%)—these however are equivalent to a very low number of votes (174 in total). Aoun was particularly successful, in comparison to Bou Assi, in Aarbaniye (145 votes, 42%), El-Ksaibeh (200 votes, 43%), and Ouadi Chahrour El-Olia (491 votes, 36%). Aoun's highest share of votes came from voters in Haret Hreik (1,379 votes, 27% in the cadaster) where his Maronite competitors were unable to obtain more than 8%. Most of the votes Aoun obtained in this cadaster came from the Christian neighborhoods (Hayy El-Knesset and Hayy El-Rouess), while most of the votes in the Shia neighborhood of El-Karanoue went to Ali Ammar or Fadi Alame. Apart from Harek Hreik, Aoun received a high number of his votes from El-Tahouita (Furn El-Chebbak), Hadace, and Kfarchima (over 1,000 in each)—although he did not perform better than Bou Assi in these cadasters. The second candidate, Hikmat Dib, won his highest share of preferential votes in Hadace (1,519 votes, 34%). He also won over 15% of preferential votes in Lailake (263 votes) and Merdache (only 11 votes). Apart from these, Dib won over 100 votes in five cadasters: Haret Hreik, El-Tahouita (Furn El-Chebbak), Kfarchima, the municipality of Baabda, and Chiyah. The third FPM candidate, Naji Gharios, won over 10% of preferential votes in only three cadasters. The highest share was in Aain Mouaffaq (33 votes, 25%), Chiyah (768 votes, 20%), and Ouadi Chahrour El-Olia (175

votes, 13%). He won less votes than all other FPM and LF candidates in all cadasters except for Chiyah (where he beat Aoun, but not Bou Assi or Elie Gharios) and Aain Mouaffaq (where he beat other FPM candidates, but not Bou Assi). He won over 100 votes in only nine cadasters—Chiyah, Ouadi Chahrour El-Olia, Hadace, Hazmiye, Lailake, Baabda, El-Tahouita (Furn El-Chebbak), Haret Hreik, and Kfarchima, for a total of nearly 1,900 votes in all of these.

While Ramzi Bou Khaled and Elie Gharios, the Kataeb and Ahrar-backed candidates, were much less successful than the other candidates from the main Christian parties, they still managed to perform better than some in a few cadasters. Kataeb candidate Ramzi Bou Khaled received less than 10% of votes in the majority of cadasters—winning over 20% in only three: Tarchich (274 votes, 29%), Ktale (21 votes, 24%), and Hammana (390 votes, 21%), in which the majority of registered voters were Maronite. Tarchich was the only cadaster in which Bou Khaled was able to beat both Pierre Bou Assi and Alain Aoun—although the margin of victory was small (Bou Khaled won 274 preferential votes and Bou Assi 235). He also came ahead of Aoun in Hammana (Bou Khaled received 390 votes compared to Aoun's 369 votes). Overall, the candidate received over 100 votes in seven cadasters: Hadace, El-Tahouita (Furn El-Chebbak), Kfarchima, Aaraiya, Chiyah, and the previously mentioned Hammana and Tarchich (for a total of nearly 1,500 votes in these seven cadasters). Elie Gharios backed by Ahrar won less than 10% of preferential votes in all cadasters but Chiyah (897 votes, 23%). In Chiyah, Gharios beat all of the other main Maronite candidates except Bou Assi. Apart from Chiyah, he only won over 100 votes in Ghobeire and Kfarchima.

Both Shia parties' strongholds were the neighboring cadasters of Bourj El-Brajneh, Haret Hreik, and Ghobeire. Ali Ammar from Hezbollah was much more popular than Amal candidate Fadi Alame in all three cadasters. In Bourj El-Brajneh, Ammar received 76% of votes, while Alame received 11%. In Haret Hreik Ammar received 36%, while Alame received 14%. In Ghobeire, however, votes were highly contested between the two, with each candidate receiving 44%. In addition, over 90% of the total votes Ammar and Alame won in the elections came from voters in these three cadasters only: Out of the 13,470 votes Ammar received from residents, 12,759 were cast in these cadasters, and out of the 6,275 votes Alame received from residents, 5,896 were cast in these three cadasters. In all other cadasters, both candidates received below 10% of votes, with the exception of Mrayjeh where Ammar won 11%. Similar to other parties, Hezbollah and Amal performed well in cadasters that have a higher prevalence of the confessional group they represent. Both Bourj El-Brajneh and Ghobeire are almost fully Shia. In Haret Hreik, where the two candi-

dates won 50% of votes combined, Maronite and Shia voters each constituted half of registered voters. The majority of the votes cast for the two Shia candidates in this cadaster came from the neighborhood of El-Karanoue, where nearly 90% of registered voters were Shia, while in the other Maronite neighborhoods of El-Knesset and El-Rouess, most of the votes were received by Alain Aoun.

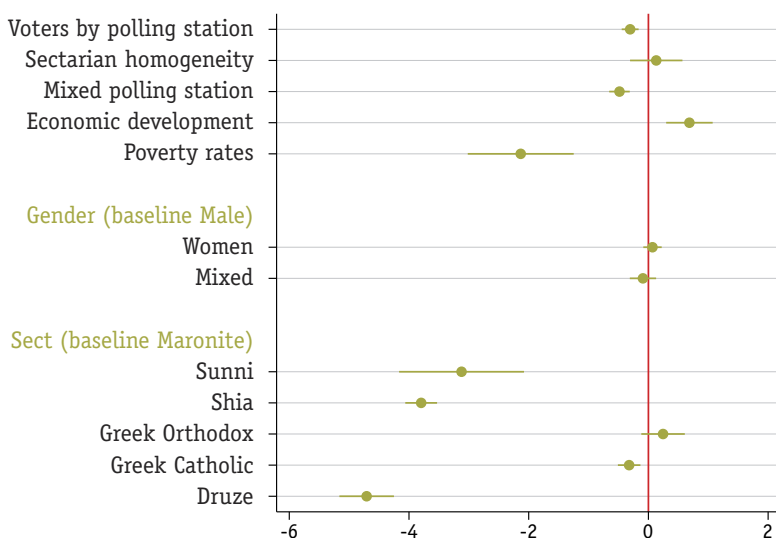
What are the drivers of votes for each party?

A multivariate analysis can highlight the relevant impact of geographical, polling station, and individual characteristics on the performance of each party. In Baabda, support for the main Christian parties was generally affected by similar factors, just as the performance of the main Shia parties, and that of the main Druze parties, were each often driven by similar factors.

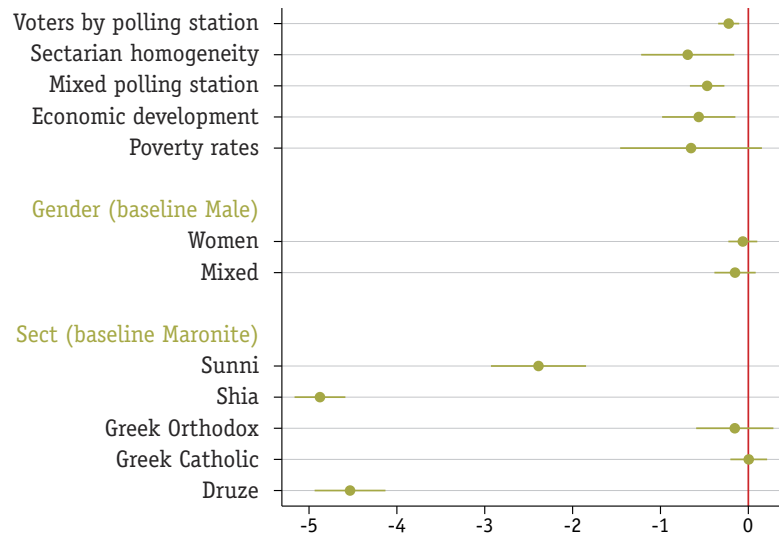
The two main Christian parties, FPM and LF, generally received significantly better results in smaller polling stations, as well as those that had only one sectarian group registered to vote. Across geographical areas, higher levels of economic development in a cadaster, as well as lower poverty rates, were associated with a higher share of votes for FPM. On the other hand, LF tended to receive better results in cadasters with lower levels of economic development. LF also generally performed better in more heterogeneous cadasters. Regarding the characteristics of voters, Maronite, Greek Orthodox, and Greek Catholic voters were the most likely to vote for the FPM and LF—a result that is statistically significant even after controlling for geographical factors.

Figure 12 Drivers of votes for the Free Patriotic Movement and Lebanese Forces in Baabda

a Drivers of votes for the Free Patriotic Movement



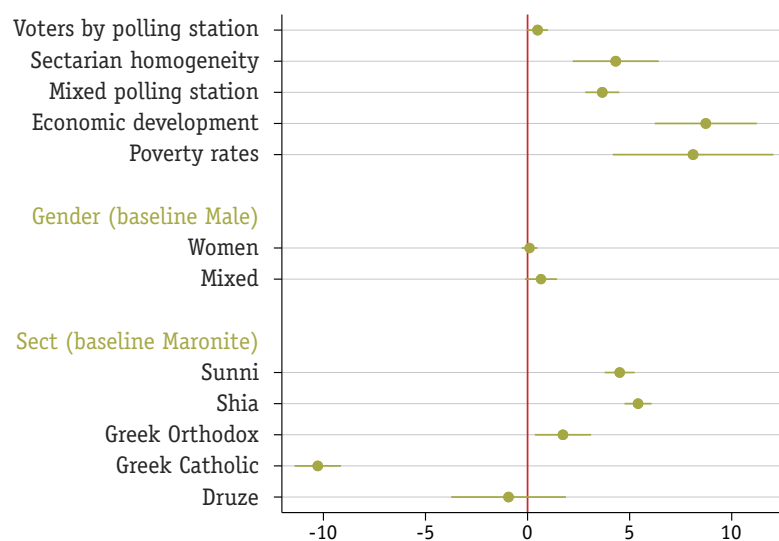
b Drivers of votes for the Lebanese Forces



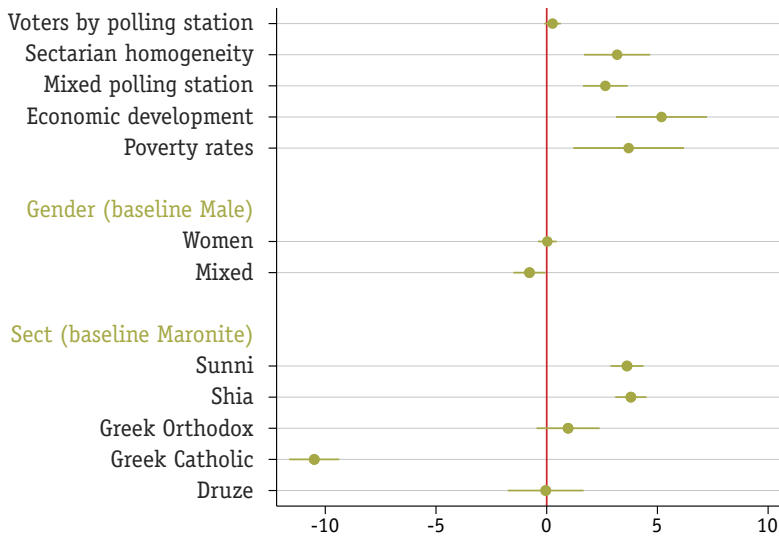
The main Shia parties, Hezbollah and Amal, performed better in bigger polling stations and mixed ones. Moreover, across cadasters, higher levels of sectarian homogeneity, economic development, and higher poverty rates were all associated with a higher share of votes for the two parties. As expected, Shias were the most likely to vote for these parties and were closely followed by Sunnis.

Figure 13 Drivers of votes for Hezbollah and Amal in Baabda

a Drivers of votes for Hezbollah



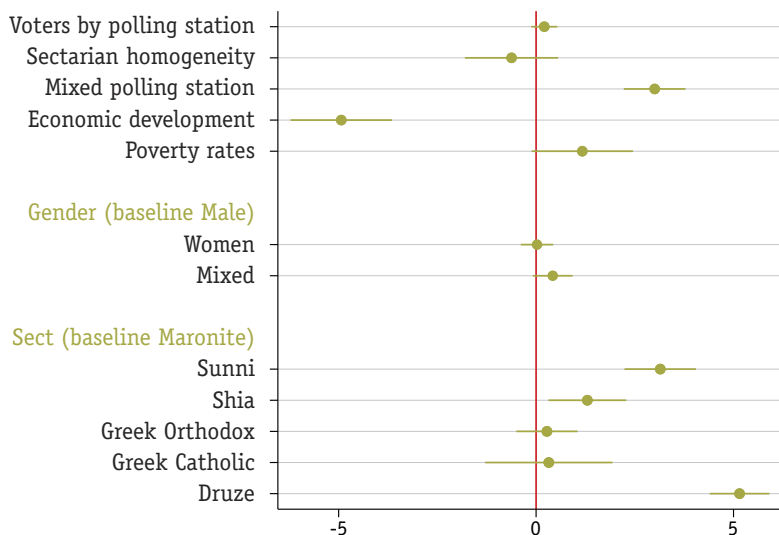
b Drivers of votes for Amal



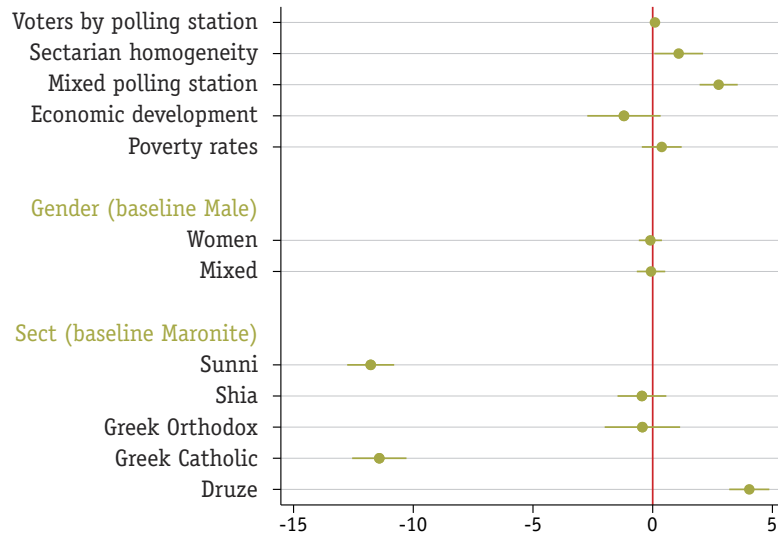
Among the Druze parties, both PSP and LDP were more successful in mixed polling stations than they were in homogeneous ones. This could be due to the relatively lower number of polling stations that serviced Druze voters, compared to the number of stations that had Maronite and Shia voters registered to vote. Across geographical areas, PSP was generally more successful in cadasters with lower levels of economic development, and those with higher poverty rates. These factors did not have a significant effect on LDP’s results. LDP generally received better results in cadasters with higher levels of sectarian homogeneity. Across confessional groups, Druze voters were the most likely to vote for either the PSP or LDP.

Figure 14 Drivers of votes for the Progressive Socialist Party and Lebanese Democratic Party in Baabda

a Drivers of votes for the Progressive Socialist Party



b Drivers of votes for the Lebanese Democratic Party



Overall, across confessional groups, Christian voters were those most likely to vote for FPM and LF, Shia and Sunni voters for Hezbollah and Amal, and Druze voters for PSP and LDP. Across geographical areas, constituents in more homogeneous cadasters were more likely to vote for Hezbollah, Amal, and LDP, while they voted much less for LF. This factor had no effect on votes for FPM and PSP. The level of economic development in a cadaster was a significant factor in most cases. Voters in cadasters with higher levels of economic development were much more likely to vote for Hezbollah, Amal, and FPM, while they were less likely to vote for PSP and LF, compared to those in cadasters with lower levels of economic development. Finally, higher poverty rates in a cadaster were associated with a higher share of votes for Hezbollah, Amal, and PSP, and a lower one for FPM.

Across polling stations, voters registered in bigger polling stations tended to vote slightly less for FPM and LF, while they voted more for Hezbollah. Voters in confessionally mixed polling stations, compared to those in homogeneous stations, were more likely to vote for Hezbollah, Amal, PSP, and LDP, while those in homogeneous stations were more likely to vote for FPM and LF.

IV Do citizens cast preferential votes for candidates from their own confession?

In Baabda, 98% of voters who are represented by a seat gave a preferential vote to one candidate within their selected list. Among those, 96% chose a candidate from their own confessional group.

Minor variations in co-confessional preferences across geographical areas and confessional groups

In contrast to most electoral districts, preferences for co-sectarian candidates did not significantly vary from one cadaster to another. Across the district of Baabda, voters showed a very strong sectarian bias, with the percentage of votes given to co-confessional candidates never falling below 85%. In fact, in all cadasters but three, over 90% of voters represented by a seat voted for a candidate from their own confession.

Across confessional groups and genders, Maronite voters were only slightly more likely than others to cast their ballot for a co-sectarian candidate, with 97% of them voting for a Maronite candidate. They were followed by Shias (96%) and Druze voters (94%). Similarly, there were no large variations in co-confessional preferences across genders, although women voters gave a slightly higher share of their votes to co-confessional candidates (97% compared to 96% of men voters). This was the case among the three represented confessional groups (table 2).

Table 2 Percentage of votes for co-sectarian candidates by confessional group and gender in Baabda

	Men	Women	Mixed gender	Total
Maronite	97%	98%	97%	97%
Druze	94%	94%	96%	94%
Shia	96%	97%		96%
Total	96%	97%	97%	96%

Note Percentages have been rounded up.

Among other confessional groups in Baabda, voters from the other Christian sects also showed a very strong bias toward Maronite candidates: 95% of Greek Orthodox voters and 98% of Greek Catholic voters gave their preferential vote to a Maronite candidate. Sunnis showed a strong bias toward Shia candidates (74% of their preferential vote), with a high share of them also voting for Druze PSP candidate Hadi Abou Hassan (13%).

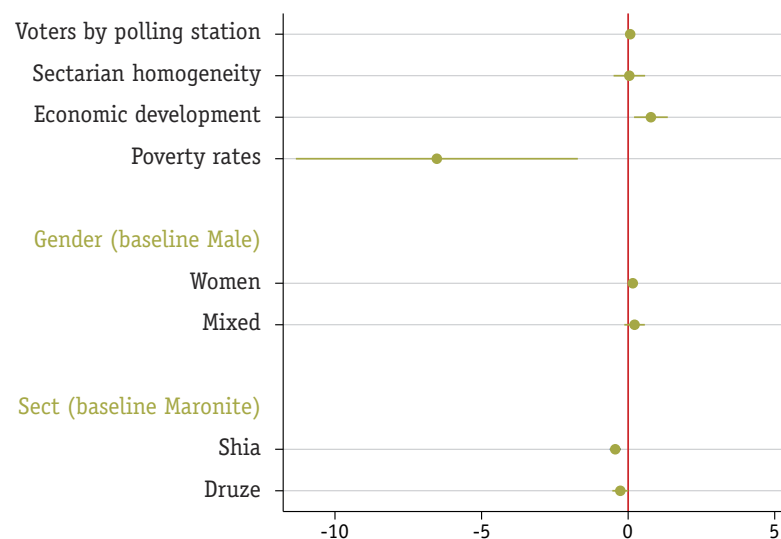
Although most of the votes went to a few candidates, with only a few managing to receive a significant share of any group's vote, even

candidates who received a very low percentage of votes performed best among the sect they represent. Among the 10 candidates who managed to win over 1% of Maronite voters' preferential votes, all were Maronite. All five candidates who managed to win over 1% of the Shia preferential votes were Shia; and all three candidates who won over 1% of the Druze preferential votes were Druze. Moreover, the majority of the total votes received by each candidate—regardless of how successful they were—were cast in polling stations that serviced their co-confessional voters, and in some cases mixed polling stations as a high number of voters were registered in these. For example, focusing on the homogeneous stations, the majority of votes obtained by each Shia candidate came from Shia-only polling stations. Similarly, the majority of the votes received by each Druze candidate were cast in Druze-only stations, and the majority of the votes received by Maronite candidates were cast in polling stations reserved for Christians.

What are the drivers of votes for co-sectarian candidates?

Across the district of Baabda, voters registered in cadasters with higher levels of economic development, and those in cadasters with lower poverty rates, were generally more likely to vote for a co-sectarian candidate. Regarding voters' characteristics, although there were only minor variations across genders and sectarian groups, women were slightly more likely to cast a confessional vote than men. Maronite voters, compared to others, were also slightly more likely to cast a confessional vote.

Figure 15 Drivers of votes for co-sectarian candidates in Baabda



V How did women candidates perform?

Only four women ran in Baabda, out of the 23 candidates, and none of them were members of an established political party. The four women received a combined 3% of preferential votes (2,129 votes). The low share of votes they obtained could partly be due to the failure of traditional parties to put forward any women candidates, as well as the high competition they faced from the main political party candidates.

Three of the four lists in the district included at least one woman candidate. The candidates who ran were Cynthia El Asmar (Maronite, 200 votes) on the PSP-LF list, Olfat El Sabeh (Shia, 216 votes) on the Kataeb-Ahrar list, and Rania Masri (Druze, 958 votes) and Marie-Claude El Helou (Maronite, 755 votes) in Kulluna Watani. The only list that failed to nominate a woman was the FPM-Hezbollah-Amal list. Some of the candidates were successful among the Lebanese diaspora, which overall gave 4% of their total preferential votes to women candidates. Among emigrants who voted, 49 cast their preferential vote for Rania Masri, 29 for Marie-Claude El Helou, but only six for Cynthia El Asmar and three for Olfat El Sabeh.¹⁷

Women voters were slightly more likely to vote for women candidates

Across genders, women voters gave a higher share of their preferential vote to women candidates (3%, compared to 2% of men). This higher percentage also translated into a higher number—with 844 voters in women-only polling stations casting their vote for a woman candidate, compared to 646 in men-only stations. This was statistically significant even after controlling for voters' confession and characteristics of the cadasters they were registered in, such as the level of confessional fragmentation and economic development. Three of the four women candidates performed better among women voters. Cynthia El Asmar was the only one to receive slightly higher support from men voters (61 preferential votes, compared to 53 in women-only stations), and, in contrast to the other women candidates, a higher number of her votes came from polling stations that had both men and women registered to vote (80 votes). Marie-Claude El Helou was particularly more successful among women voters, receiving over 300 votes in women-only stations, compared to less than 200 in men-only stations. She also outperformed the other women candidates in polling stations that had both genders registered to vote. Nevertheless, Rania Masri overall received a higher number of votes than the other women in both gender-specific polling stations. Finally, Olfat El Sabeh also received a higher number of votes in women-only stations (105 votes) than she did in men-only stations (71), but was much less successful in mixed polling stations (37 votes).

17

Rania Masri also received nine votes from polling stations that serviced public employees, and Marie-Claude El Helou received one. None of the voters in these stations cast their preferential vote for Olfat El Sabeh or Cynthia El Asmar.

Table 3 Number of votes for each woman candidate across genders in Baabda

	Rania Masri	Marie-Claude El Helou	Olfat El Sabeh	Cynthia El Asmar
Men	323	191	71	61
Women	379	307	105	53
Mixed gender	198	227	37	80

Each woman candidate performed best among her co-sectarian voters

The share of votes given to women candidates varied across confessional groups (table 4). The highest percentages of preferential votes for women candidates was among Druze voters (5%) followed by Sunnis (4%). It varied between 2% and 3% among all Christian groups, while the percentage was lowest among Shias (1%). In terms of number of votes, the highest share of the total votes received by women was cast in mixed stations (723 votes), followed by Druze and Maronite stations (531 and 402 votes, respectively). A much lower number came from Shia voters (245 votes), and Sunni, Greek Orthodox, and Greek Catholics (131 votes in total).

Table 4 Votes for women candidates by confessional group in Baabda

	Number of votes	Share of preferential votes
Maronite	402	2%
Druze	531	5%
Shia	245	1%
Greek Orthodox	48	3%
Greek Catholic	30	3%
Sunni	53	4%
Mixed confession	723	3%

Note Percentages have been rounded up.

Support for each woman candidate varied across confessional groups, and sectarian considerations seem to have affected the relative success of each woman candidate. Half of the votes Rania Masri won among residents came from Druze polling stations (460 votes out of the 900 she obtained from residents), and she was the only candidate in Baabda after Hadi Abou Hassan and Sahil Aour—the candidates from the main Druze political parties—to win 5% of the Druze preferential vote. By contrast, she received less than 1% of every other confessional group's vote. Moreover, although Masri was not the most successful candidate in her list, Kulluna Watani, the vast majority of Druze Kulluna Watani voters chose her. Marie-Claude El Helou, one of the two Maronite women candidates, was most successful among Maronite voters, followed

by Greek Orthodox and Catholics. Over a third of her votes came from Maronite polling stations (251 out of the 725 she won among residents), with the highest share overall coming from mixed stations (294 votes)—likely driven by the higher prevalence of Christian voters registered in these. The second Maronite candidate, Cynthia El Asmar, also performed best among her co-sectarian voters, with 77 out of the 194 votes she obtained from residents coming from Maronite polling stations; and similar to El Helou, El Asmar won a high share in mixed stations (88 votes). Each of their lists included other Maronite candidates, and while the highest share of Maronites who voted for their respective lists cast their preferential vote for a male Maronite candidate, they both came in second. The fourth woman candidate, Olfat El Sabeh, won over 60% of her votes from Shia polling stations—141 out of the 213 she obtained among resident voters. Interestingly, most Shia voters who voted for El Sabeh’s list—the one formed by Kataeb and Ahrar—chose her. This is despite the fact that her list also included a male Shia candidate.

Table 5 Number and percentage of preferential votes for each woman candidate by confessional group in Baabda

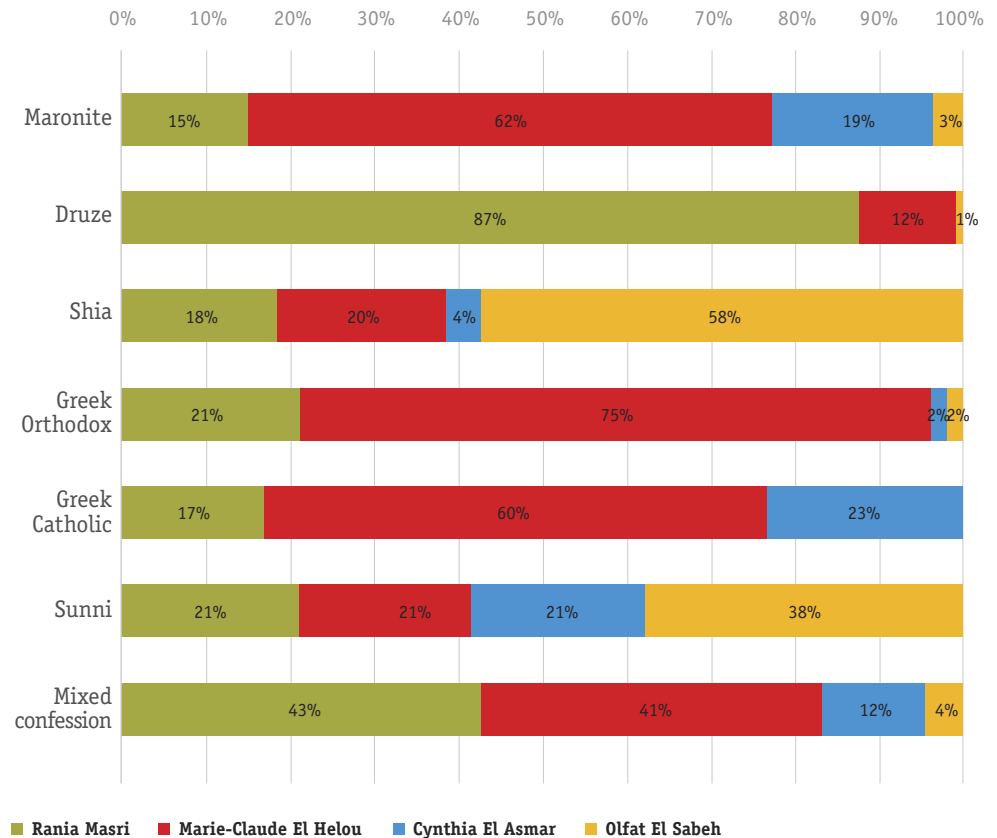
	Rania Masri		Marie-Claude El Helou		Olfat El Sabeh		Cynthia El Asmar	
	Number of votes	Share of votes	Number of votes	Share of votes	Number of votes	Share of votes	Number of votes	Share of votes
Maronite	60	0.3%	251	1%	14	0.1%	77	0.4%
Druze	460	5%	66	1%	5	0.1%	0	0%
Shia	45	0.2%	49	0.3%	141	1%	10	0.1%
Greek Orthodox	10	1%	36	2%	1	0.1%	1	0.1%
Greek Catholic	5	0.5%	18	2%	0	0%	7	1%
Sunni	11	1%	11	1%	20	2%	11	1%
Mixed confession	309	1%	294	1%	32	0.1%	88	0.4%

Note Percentages have been rounded up.

Overall, in Baabda, 87% of Druze voters who cast their preferential vote for a woman candidate gave it to Rania Masri (460 out of 531) (figure 16), with most of the remainder voting for Marie-Claude El Helou (12%, 66 voters in Druze polling stations). Among Maronite voters, 62% of those who voted for a woman chose Marie-Claude El Helou (251 out of 402), with Cynthia El Asmar coming in second (19% of Maronite voters who voted for a woman). Marie-Claude El Helou also received most of the Greek Orthodox and Catholic votes for women (75% and 60%, respectively). Finally, 58% of Shias who cast their preferential vote for a woman chose Olfat El Sabeh (141 out of the 245 voters in Shia polling stations). Sunnis had more fragmented preferences, although Olfat El Sabeh was the most successful (38%). In all cases,

voters who did not vote for a co-confessional woman candidate gave their preferential vote to Rania Masri or Marie-Claude El Helou, while barely any Druze or Maronite voters voted for Olfat El Sabeh, and barely any Druze or Shia voters chose Cynthia El Asmar.

Figure 16 Share of votes given to each woman candidate among those who voted for a woman



Note Percentages have been rounded up.

Geographical variations in the performance of each woman candidate were also apparent

Across the district of Baabda, Rania Masri was much more successful in some cadasters than others: She won slightly over 14% of preferential votes in the cadaster of Qrayet Baabda (equivalent to 62 votes) and over 5% in Salima Baabda (91 votes), Ras El-Matn (119 votes, or the highest number across all cadasters), and Rouisset El-Ballout (equivalent to only 27 votes). Beyond this, other cadasters where she obtained over 50 votes were Aabadiyeh, Ghobeire and Bourj El-Brajneh, Qornayel, and Kfar Selouane. In total, over half of her votes (526 votes) came from voters in these cadasters alone.

Marie-Claude El Helou did not win over 80 preferential votes, or over 3%, in any cadaster. The highest share of preferential votes she obtained was 3% in El-Halaliyeh and Rouisset El-Ballout (only equivalent to 13 and 16 votes, respectively). She obtained her highest number of votes from voters in El-Tahouita in Furn El-Chebbak (77 votes), and between 50-60 votes in each of Chiyah, and Ghobeire and Bourj El-Brajneh. She also won between 25 and 40 votes in Haret Hreik, Baabda, Ouadi Chahrour El-Olia and El-Soufla, Kfarchima, Hazmiye, Hadace, and Aaraiya—equal to over 450 votes.

The third woman candidate, Olfat El Sabeh, received the majority of her votes from one cadaster. In line with the high share of votes she won among Shias, most of her votes came from the majority Shia cadaster of Ghobeire and Bourj El-Brajneh (171 votes, representing 1% of preferential votes, her highest share across all cadasters), winning less than 10 votes in all others (less than 0.4%).

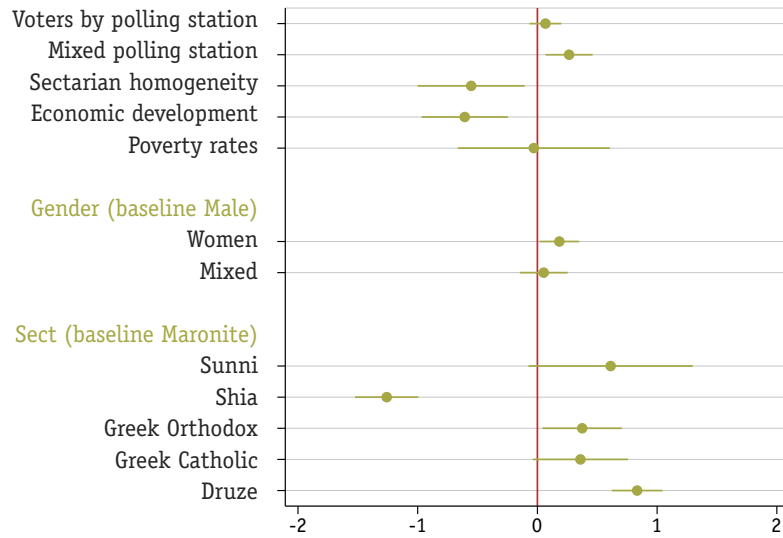
Finally, Cynthia El Asmar's highest percentage of preferential votes were won in Bsaba Dlab (13 votes, 4%), while she also won 2% in the cadaster of Baabda (53 votes) and Faiyadiye (only 10 votes). Overall, most of her votes came from the cadasters of Baabda (53 votes) and Kfarchima (30 votes).

What are the drivers of votes for women candidates?

In Baabda, factors that affected the votes for women candidates include geographical and polling stations characteristics.

Across the district, voters in cadasters with lower levels of sectarian homogeneity were generally more likely to vote for a woman candidate. This could be due to the higher capacity of the main political party candidates—all males—to mobilize the vote in more homogeneous areas. Related to this, voters in polling stations that had multiple confessional groups registered were more likely to vote for a woman, which could be explained by parties' higher interest in targeting voters with identifiable characteristics. Women also tended to receive better results in cadasters with comparatively lower levels of economic development. Regarding voters' characteristics, women voters were more likely to vote for women candidates compared to male voters, even after controlling for geographical factors. Across confessional groups, Druze voters were the most likely to vote for a woman candidate, while Shia voters were the least likely to do so. There were no large variations among Maronite, Greek Orthodox, Catholic, and Sunni voters, although Maronites were slightly less likely to vote for a woman compared to others.

Figure 17 Drivers of votes for women candidates in Baabda



VI How did emerging political groups perform?

Kulluna Watani, the coalition between independent and emerging groups, obtained 6% of votes in Baabda (4,992 votes). Similar limited results were observed in other districts where the coalition ran, with the exception of Beirut 1, where it obtained one seat. Kulluna Watani was more successful among diaspora voters, receiving 8% of their votes (199 votes).

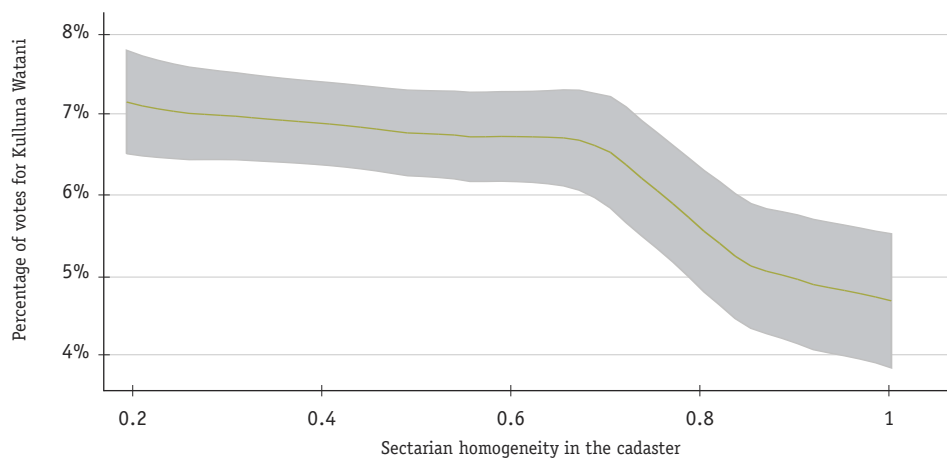
Kulluna Watani put forward six candidates—one for each seat in the district. The candidates were Wassef Harake (Shia, 1,308 votes), member of the group ‘al-Marsad al-Cha’abi li Mukafahat al-Fasaad’, Ziad Akel (Maronite, 1,192 votes), member of ‘Sahh’, Rania Masri (Druze, 958 votes) from ‘Mouwatinoun wa Mouwatinat fi Dawla’, Marie-Claude El Helou (Maronite, 755 votes) from the ‘Saba’a Party’, Joseph Wannous (Maronite, 394 votes), and Ali Darwish (Shia, 118 votes), also from ‘Mouwatinoun wa Mouwatinat fi Dawla’.

Kulluna Watani performed better in more confessionally mixed cadasters Votes for Kulluna Watani largely varied across cadasters in Baabda. Kulluna Watani received 16% of votes in the cadaster of Qrayet Baabda (equivalent to 69 votes), performing better than the FPM-Hezbollah-Amal list (13%), and 12% in El-Ksaibeh (57 votes). The list also won 10% of votes in Ras El-Matn (252 votes), Rouisset El-Ballout (54 votes), El-Halaliyeh (39 votes), and Deir El-Harf (24 votes). Although Kulluna Watani performed much worse in other cadasters, it obtained over 2% of votes in all of them but two—Merdache and Deir Khouna. Apart

from Ras El-Matn, Kulluna Watani won over 200 votes in six cadasters. Almost a quarter of the votes received by the list were cast in Ghobeire (1,107 votes), where the list performed better than both PSP-LF and Kataeb-Ahrar. Other cadasters where the list was successful were Hadace, Furn El-Chebbak, Chiyah, and Haret Hreik (between 200 and 300 votes each). Overall, nearly half of the votes received by the list came from voters in these six cadasters (2,648 votes).

Beyond the list's performance in specific cadasters, the share of votes obtained by Kulluna Watani tended to decrease as the level of sectarian homogeneity in a cadaster increased. On average, the share of votes obtained by the list decreased from 7% in the most heterogeneous cadasters to 5% in the most homogeneous ones. This factor is statistically significant even after controlling for voters' gender and sect. This points toward sectarian parties' higher capacity and interest in mobilizing constituents in more homogeneous areas, where their target group may be more prevalent.

Figure 18 Sectarian homogeneity by cadaster and votes for Kulluna Watani in Baabda



There were minor variations in support for Kulluna Watani and for each of its candidates across genders

Across genders, women voted only slightly more for Kulluna Watani, compared to male voters, with nearly 7% of them voting for the list (1,896 votes), compared to 6% of men (1,713 votes) (table 6). Polling stations that had both genders registered to vote also saw 6% of the votes go to Kulluna Watani (1,152 votes).

There were some variations in support for specific candidates: All candidates in the list received a higher number of votes from women-only stations, with the exception of Wassef Harake who was much more successful among male voters, and Ali Darwish, whose votes were only slightly higher in men-only stations. Wassef Harake received a higher

number of votes than all other candidates in both men-only and women-only stations; however, he beat the second candidate, Ziad Akel, by a large margin in men-only stations (582 votes, compared to 361 for Akel), while Akel won only a slightly lower number of votes than him in women-only stations (457 votes, compared to 483 for Harake). The largest difference across genders was in support for Marie-Claude El Helou: She won 307 votes from women, while she received 191 votes from male voters registered in their own stations. Rania Masri received slightly higher support from women (379 votes in women-only stations, compared to 323 in men-only stations), while the differences in votes for Joseph Wannous and Ali Darwish were minor.

In stations that had both genders registered to vote, Maronite Kulluna Watani candidates received much higher support compared to the Shia and Druze candidates. Voters in gender-mixed polling stations voted much more for Ziad Akel and Marie-Claude El Helou than they did for other candidates; and significantly less for Wassef Harake, Rania Masri, and Ali Darwish, compared to voters in gender-specific stations. This is likely explained by the higher share of Christian voters in mixed stations.

Table 6 Number of votes for Kulluna Watani and its candidates by gender in Baabda

		Kulluna Watani	Wassef Harake	Ziad Akel	Rania Masri	Marie-Claude El Helou	Joseph Wannous	Ali Darwish
Number of votes	Men	1,713	582	361	323	191	118	53
	Women	1,896	483	457	379	307	128	49
	Mixed gender	1,152	192	319	198	227	136	10
Share of votes	Men	6%	2%	1%	1%	1%	0%	0%
	Women	7%	2%	2%	1%	1%	0%	0%
	Mixed gender	6%	1%	2%	1%	1%	1%	0%

Note Percentages have been rounded up.

Support for Kulluna Watani significantly varied across confessional groups, and each candidate performed best among their co-sectarian voters

There were variations in the percentage of votes received by the list across confessional groups, although, in contrast to many other districts, the percentage was high in all cases (above 5%) (table 7). Among the confessional groups represented by a seat, the percentage of votes for Kulluna Watani was highest among Druze voters (nearly 8%), followed by Maronites (6%) and Shias (5%). Among other groups, support for Kulluna Watani was highest among Sunnis (10%), while Greek Orthodox, Greek Catholics, and voters registered in mixed stations gave a similar share of their votes to the list (between 7% and 8%). Given the unequal share of votes cast across different types of polling stations, these

variations in the percentage of votes for the list do not translate in terms of the number of votes. Kulluna Watani won 1,043 votes from Maronite polling stations, 996 votes from Shia stations, and 791 votes from Druze stations. The highest share came from voters in mixed stations (1,613 votes). A total of 318 votes for the list were cast in Sunni, Greek Orthodox, and Greek Catholic stations.

Table 7 Number and share of votes for Kulluna Watani by confessional group in Baabda

	Number of votes	Share of votes
Maronite	1,043	6%
Druze	791	8%
Shia	996	5%
Greek Orthodox	114	7%
Greek Catholic	80	8%
Sunni	124	10%
Mixed confession	1,613	7%

Note Percentages have been rounded up.

Apart from overall support for the list, preferences for Kulluna Watani candidates varied across confessional groups: Even the list's voters had a confessional bias, with a large majority of Maronites (84%), Shias (84%), and Druze (62%) Kulluna Watani voters casting their vote for their co-sectarian candidates. Among confessional groups that are not represented by a seat, Christians also gave the highest share of their preferential vote to a Maronite candidate, while Sunnis tended to vote more for the Shia candidates.

Maronite Kulluna Watani voters voted mostly for Ziad Akel (437 votes, 44%), followed by Marie-Claude El Helou (251 votes, 25%), and Joseph Wanouss (139 votes, 14%). These preferences were similar among Greek Orthodox and Greek Catholic voters. The majority of Druze voters who voted for Kulluna Watani cast their ballot for Rania Masri (460 votes, 62%), while most Shia voters chose Wassef Harake (743 votes, 78%), with the second Shia candidate, Ali Darwish, coming in second (59 votes, 6%). Sunni Kulluna Watani voters also showed a preference for Wassef Harake (78 votes, 69%). Voters in mixed stations voted much less for Wassef Harake and Ali Darwish—likely due to the much lower share of Shia voters registered in these.

Table 8 Number of votes for each Kulluna Watani candidate by confessional group in Baabda

		Wassef Harake	Ziad Akel	Rania Masri	Marie-Claude El Helou	Joseph Wanouss	Ali Darwish
Number of votes	Maronite	90	437	60	251	139	13
	Druze	97	73	460	66	38	6
	Shia	743	49	45	49	5	59
	Greek Orthodox	7	37	10	36	18	0
	Greek Catholic	9	33	5	18	7	1
	Sunni	78	4	11	11	1	8
	Mixed confession	233	504	309	294	174	25
Share of votes among Kulluna Watani voters	Maronite	9%	44%	6%	25%	14%	1%
	Druze	13%	10%	62%	9%	5%	1%
	Shia	78%	5%	5%	5%	1%	6%
	Greek Orthodox	6%	34%	9%	33%	17%	0%
	Greek Catholic	12%	45%	7%	25%	10%	1%
	Sunni	69%	4%	10%	10%	1%	7%
	Mixed confession	15%	33%	20%	19%	11%	2%

Note Percentages have been rounded up.

Moreover, all candidates on the list received their highest share of votes from their co-confessional voters. Over half of the votes received by Wassef Harake and Ali Darwish were cast in Shia polling stations, over half the votes received by Rania Masri were cast in Druze stations, and the highest share of votes, although not the majority, received by Maronite candidates came from Maronite stations. Between 30% and 40% of the votes received by Ziad Akel, Marie-Claude El Helou, and Joseph Wanouss came from voters in Maronite stations, while most of the remainder of their votes came from mixed stations (between 40% and 45% each)—the high share among the latter can be explained by the higher prevalence of Christians in mixed stations.

There were also geographical variations in the performance of each Kulluna Watani candidate

Each Kulluna Watani candidate found different levels of support across cadasters in Baabda. Wassef Harake received 5% of preferential votes in Ghobeire (488 votes) and 4% in Bourj El-Brajneh (303 votes). While these numbers do not compare to the share obtained by Ali Ammar (Hezbollah) and Fadi Alame (Amal), the main Shia candidates in these cadasters (almost 90% combined in each), Harake still performed better than all of the other candidates in this area. In total, over half of his votes came from these cadasters alone, reflecting the support he received from Shia voters. In fact, Harake was the third-most voted

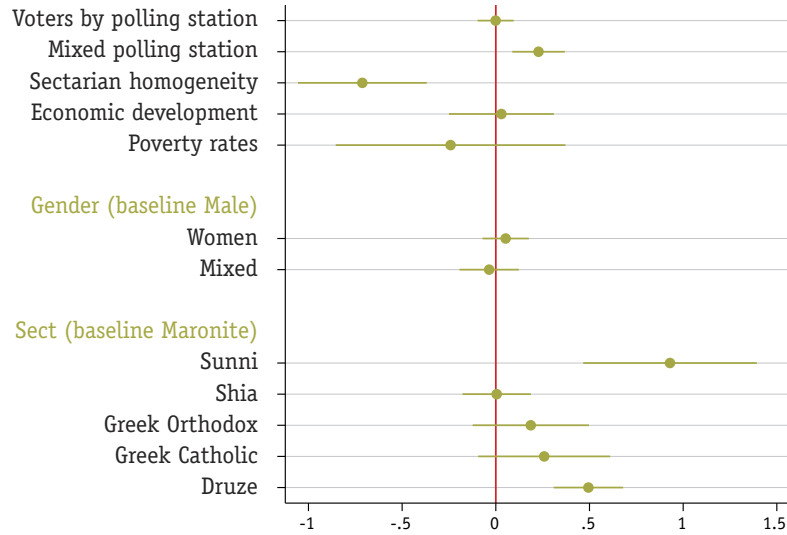
for candidate among Shia voters, coming after Ammar and Alame. The other Shia candidate in the Kulluna Watani list, Ali Darwish, won only 112 votes among residents and received most of these from voters in Bourj El-Brajneh (58 votes) and Ghobeire (20 votes). In all other cadasters, he won four votes or less. Regarding the Maronite candidates, Ziad Akel won 9% of preferential votes in El-Ksaibeh (40 votes) and 8% in Hazmiye (110 votes). A high number of his votes also came from voters in El-Tahouita in Furn El-Chebbak (110 votes, 3%). The second Maronite candidate Marie-Claude El Helou's highest share of preferential votes was in El-Halaliyeh and Rouisset El-Ballout (3% each, which totals however less than 20 votes in each). Similar to Ziad Akel, the highest number of votes she won was in El-Tahouita in Furn El-Chebbak (77 votes), while she also received a sizable number of her votes in the cadasters of Hazmiye, Chiyah, and Ghobeire and Bourj El-Brajneh (between 50 and 60 votes in each). The third Maronite candidate, Joseph Wannous, won almost half of his votes from voters in Hazmiye (169 out of the 382 he won among residents, 2% of preferential votes). Finally, Rania Masri won slightly over 14% of preferential votes in the cadaster of Qrayet Baabda (equivalent to 62 votes) and over 5% in Salima Baabda (91 votes) and Ras El-Matn (119 votes; her highest number across all cadasters), and Rouisset El-Ballout (equivalent to only 27 votes). Rania Masri was able to win a higher number of votes than the two main Druze candidates, Hadi Abou Hassan and Sahil Aour, in a few cadasters, such as Ghobeire, Qrayet Baabda, Haret Hreik, Ras El-Matn, and El-Tahouita in Furn El-Chebbak.

What are the drivers of votes for Kulluna Watani?

A multivariate analysis highlights the relevant impact of different geographical and polling stations characteristics on the results for Kulluna Watani.

In Baabda, voters in cadasters with lower levels of sectarian homogeneity were significantly more likely to vote for Kulluna Watani—a statistically significant relationship even after controlling for voters' sect. The level of economic development or poverty rates in a cadaster did not have any effect on the list's performance. Across polling stations, voters in polling stations that had multiple groups registered to vote were significantly more likely to choose Kulluna Watani. The relatively higher success of Kulluna Watani in more heterogeneous cadasters and mixed polling stations highlights sectarian parties' higher interest in mobilizing voters in these areas and polling stations, where they may have been able to target specific constituents. Regarding the characteristics of specific voters, Sunnis, followed by Druze, were more likely to vote for Kulluna Watani compared to other confessional groups, while there were no significant variations among others.

Figure 19 Drivers of votes for Kulluna Watani in Baabda



VII Were there any signs of irregularities?

Irregularities can occur during the election process, through ballot stuffing that either increases the total number of votes or adds votes for one party at the expense of another one. Fraud can also happen during the vote aggregation process when there is collusion between certain candidates—usually more politically connected ones—and election officials. Voter rigging, or pressuring voters to vote in a certain manner, tends to occur more in smaller polling stations, where it is easier to monitor voters' behavior. Therefore, testing whether turnout was abnormally higher in smaller voting centers can help approximate whether there was a presence of voter rigging or not. Another method for detecting signals of election fraud is to observe the distribution of turnout and vote numbers and test whether they have a 'normal' shape. For example, an abnormally high number of voting centers with close to 100% turnout could suggest either voter or vote rigging at any stage of the election process. Other lines of research focus on statistical tests that examine the random nature of numbers to test whether numbers were manipulated in a non-random manner.

There are irregular patterns in turnout

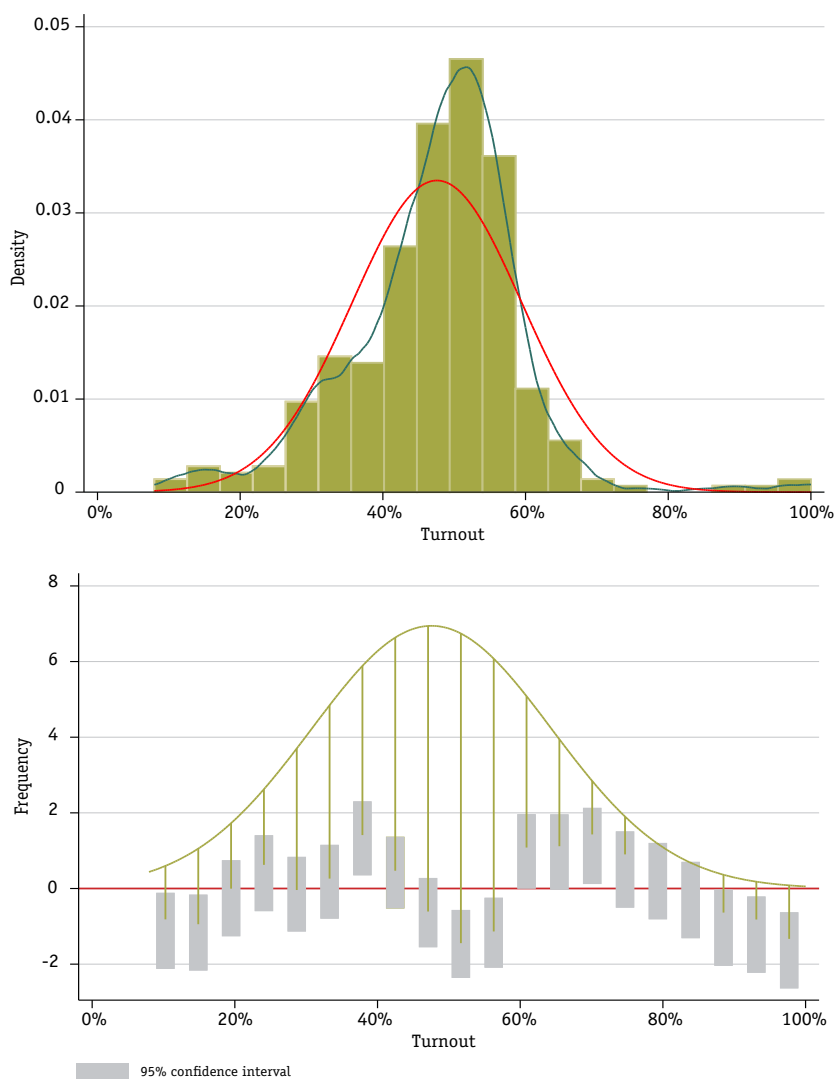
The distribution of turnout by polling station usually has a normal shape, with the majority of electoral centers having turnouts close to the average and a low number of centers having very high or very low turnout rates. In Baabda, turnouts across polling stations ranged between 8% and 100%.¹⁸

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Here we exclude polling stations that had public employees registered to vote, as well as those abroad.

Turnout in Baabda diverged from the normal distribution. There was a higher number of polling stations with very low or very high turnouts than expected (below 20% and above 80% turnouts). There was also a higher number of mid-turnout stations (45%-60%), and a lower number of mid-low and mid-high turnout stations than expected (around 40% and 70%). These were statistically significant and may provide some initial evidence of irregularities.

Figure 20 Distribution of turnout rates by polling station in Baabda



There are signs of voter rigging in Baabda

Voter rigging entails political parties pressuring or coercing voters with the intended aim of affecting turnout through, for example, vote buying. The literature on election irregularities distinguishes vote rigging from voter rigging, as coercion is not apparent in the latter

case. However, there are some ways to detect potential instances of voter rigging through statistical tests.

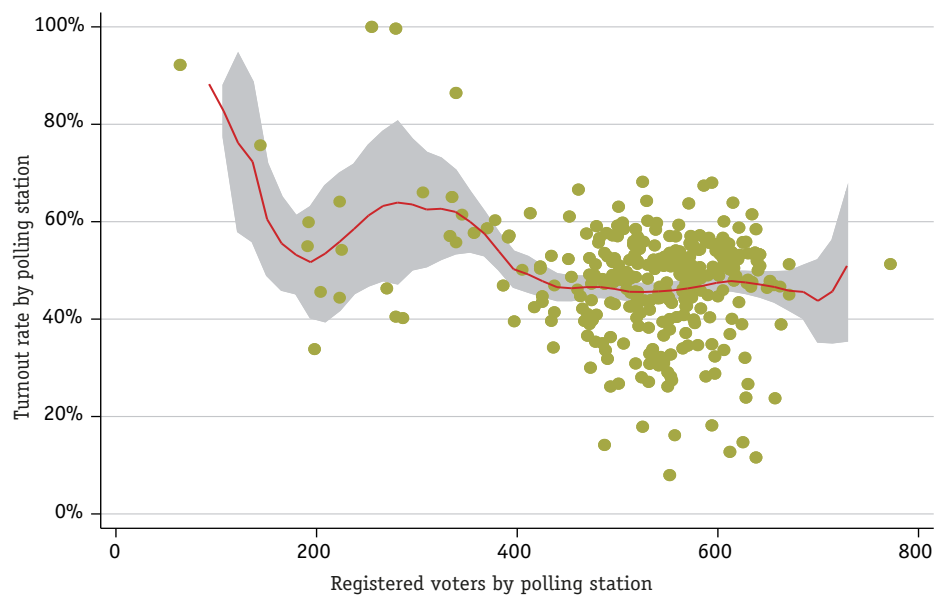
One way to test for voter rigging is by examining the correlation between turnouts and the size of a polling station. Previous evidence shows that polling stations with fewer voters are more attractive among politicians buying votes, or exerting some kind of pressure on voters, because smaller groups of voters in a polling station facilitate aggregate monitoring of whether voters cast their ballots, and for whom.¹⁹ High turnouts in polling stations with fewer voters may therefore point toward fraud in those stations. In Baabda, the very few centers with smaller numbers of registered voters had much higher turnout rates. While polling stations with over 400 registered voters had a relatively constant turnout rate of 45%-50%, turnout was significantly higher in the smaller polling stations with 400 potential voters or less—starting on average at 80% and reaching 60% as the polling station gets bigger. In addition, comparing the turnouts in small polling stations—or those whose size was at least one standard deviation below mean polling station size—to turnouts in stations whose size were closer to or larger than the mean polling station size, shows that turnout in small polling stations stood at 54%, compared to 46% in other ones (figure 21). Such a discrepancy might suggest higher and more effective mobilization of voters in those stations, potentially through vote buying.

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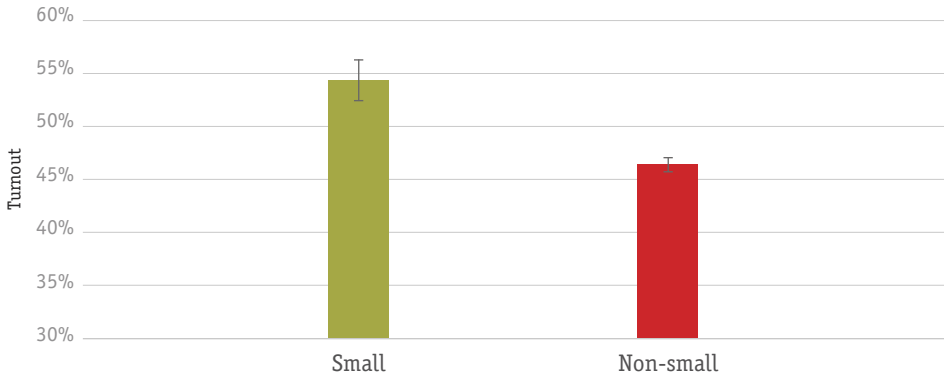
Rueda, M. R. 2016. 'Small Aggregates, Big Manipulation: Vote Buying Enforcement and Collective Monitoring.' *American Journal of Political Science*, 61(1): 163-177.

Figure 21 Polling station size and turnout rates in Baabda

a Correlation between the size of a polling station and turnouts



b Turnout in small polling stations compared to non-small ones²⁰



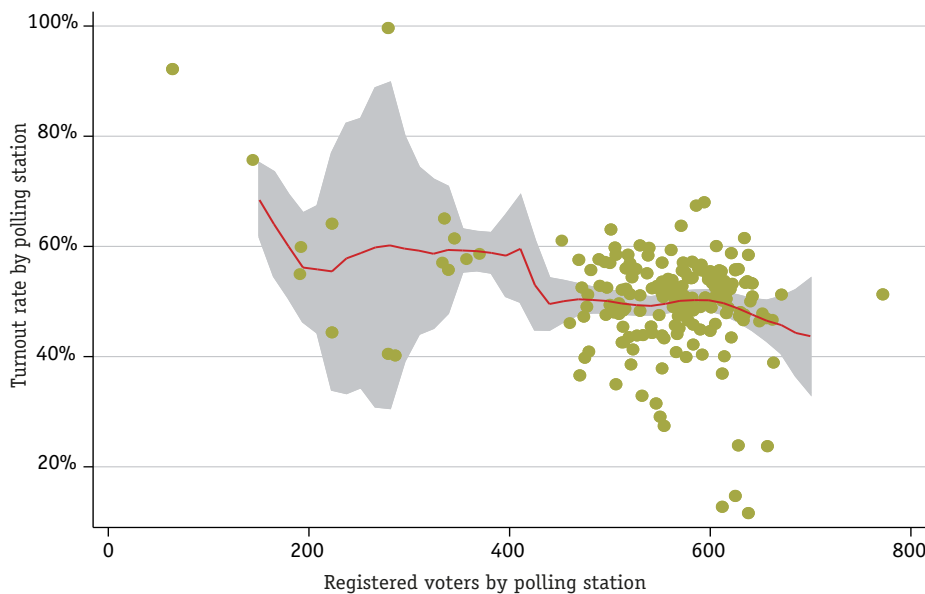
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Small polling stations are those that are one standard deviation below the mean polling station size.

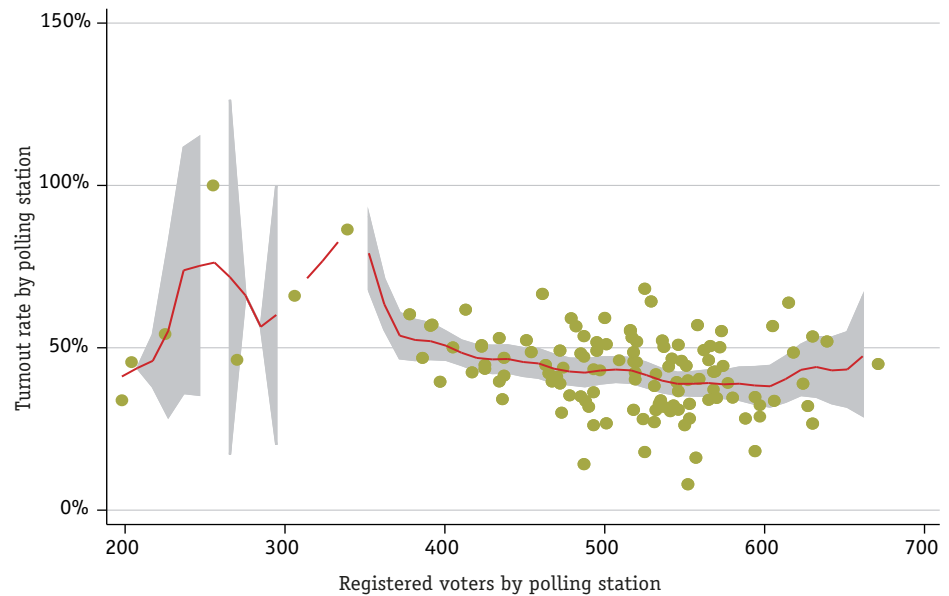
Given that registered voters were segregated by confession and gender, political parties may have had a higher interest in targeting voters in specific polling stations where their constituents were registered to vote. Comparing the relationship between the size of the polling station and turnouts in homogeneous versus mixed stations shows a much clearer negative correlation in the former. In homogeneous centers, turnouts on average decreased from over 70% in the smallest stations to below 45% in the largest ones. In mixed polling stations, turnouts did not significantly vary, although one station had a very high turnout rate. This relationship in homogeneous polling stations may suggest that parties targeted specific constituents.

Figure 22 Polling station size and turnout rates by type of polling station

a Homogeneous stations

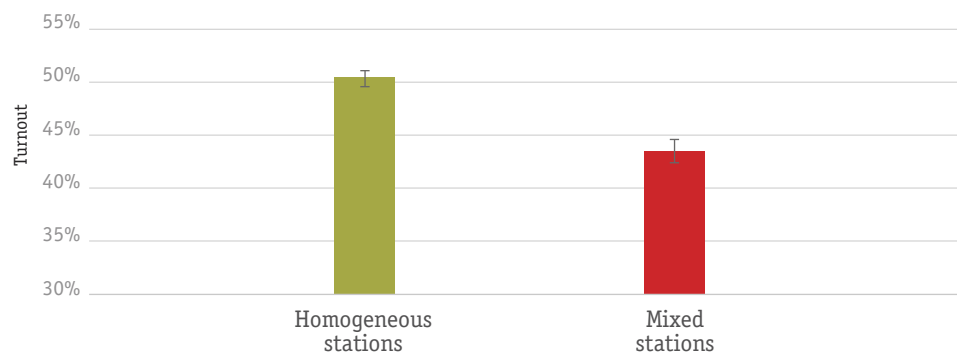


b Mixed stations



Regardless of the size of the polling station, those with only one confessional group registered to vote showed significantly higher turnout rates than those where more than one confessional group was registered (50% compared to 43%).

Figure 23 Turnout in homogeneous versus mixed polling stations

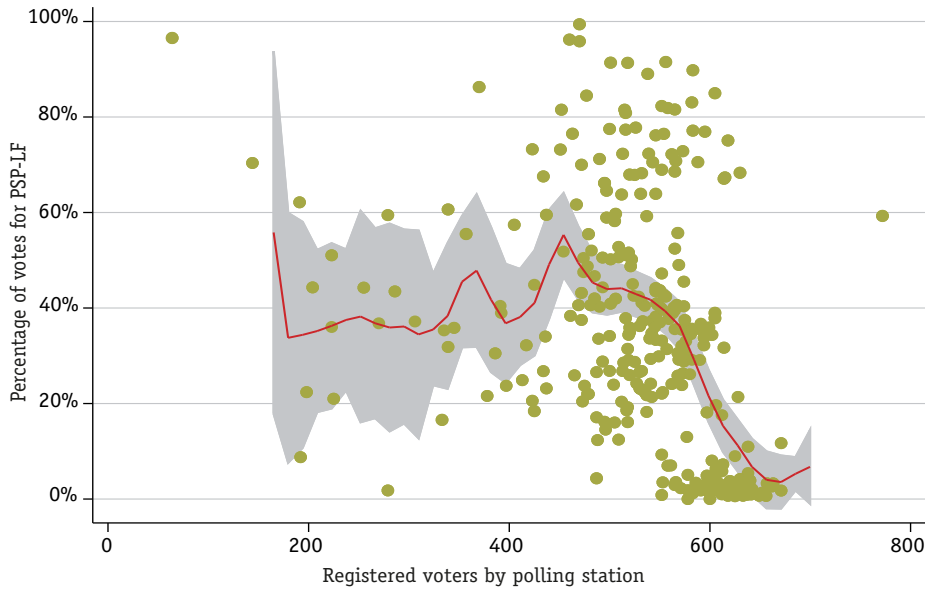


Given this correlation between polling station size and turnout, looking at the performance of each list and party across polling stations can show whether one benefited from smaller stations and/or higher turnouts. This can highlight whether one specific party or list committed acts of electoral fraud.

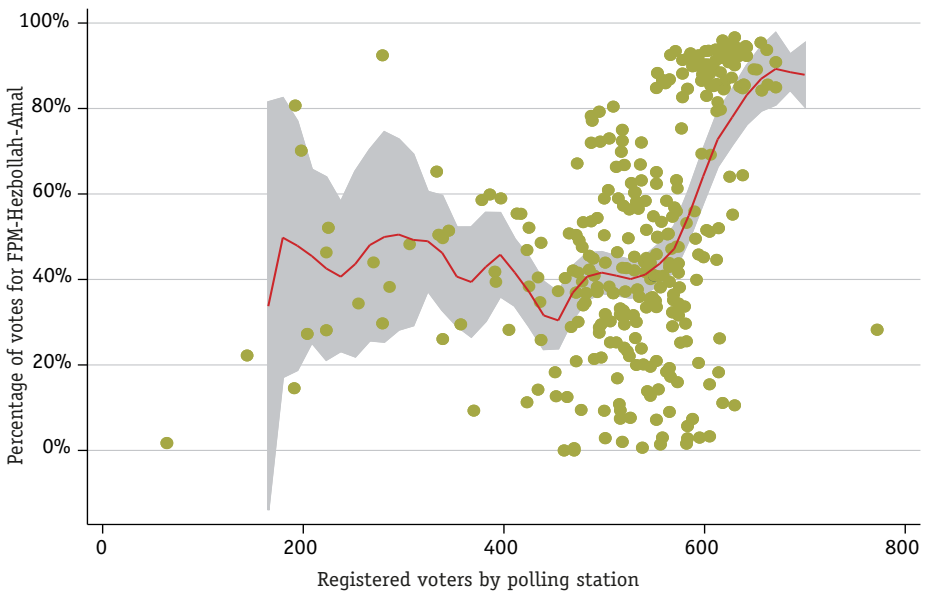
Results for the main lists first show that candidates on the PSP-LF list seem to have benefited from smaller polling stations, while those on the FPM-Hezbollah-Amal list did not.

Figure 24 Polling station size and percentage of votes for the PSP-LF list and the FPM-Hezbollah-Amal list

a Polling station size and percentage of votes for the PSP-LF list



b Polling station size and percentage of votes for the FPM-Hezbollah-Amal list

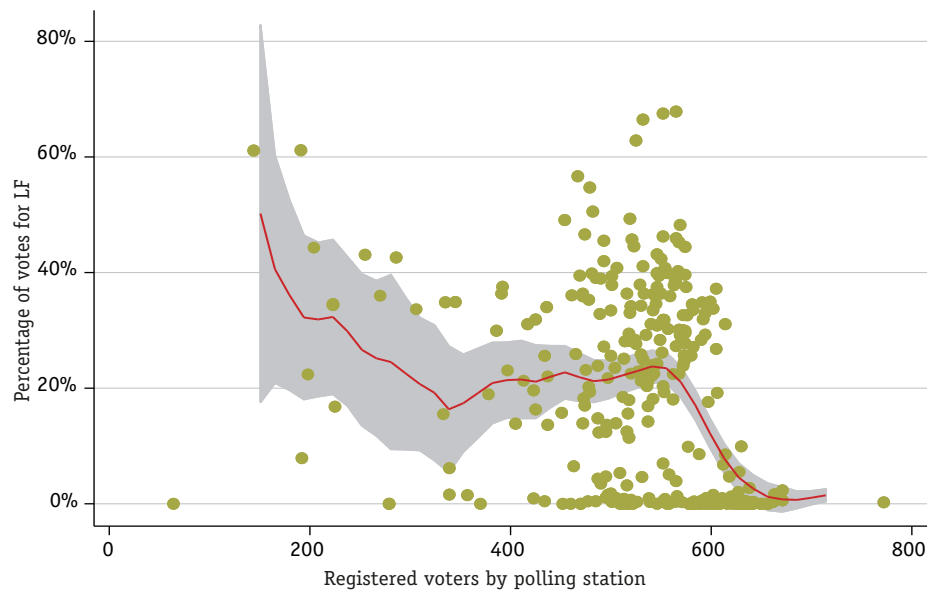


By party, there is evidence that the LF candidate performed better in smaller polling stations. His votes tended to decrease from over 50% on average in the smallest polling stations to 20% in stations that had 400 voters or more, and further decreased to less than 10% in the largest polling stations (600 voters or more).

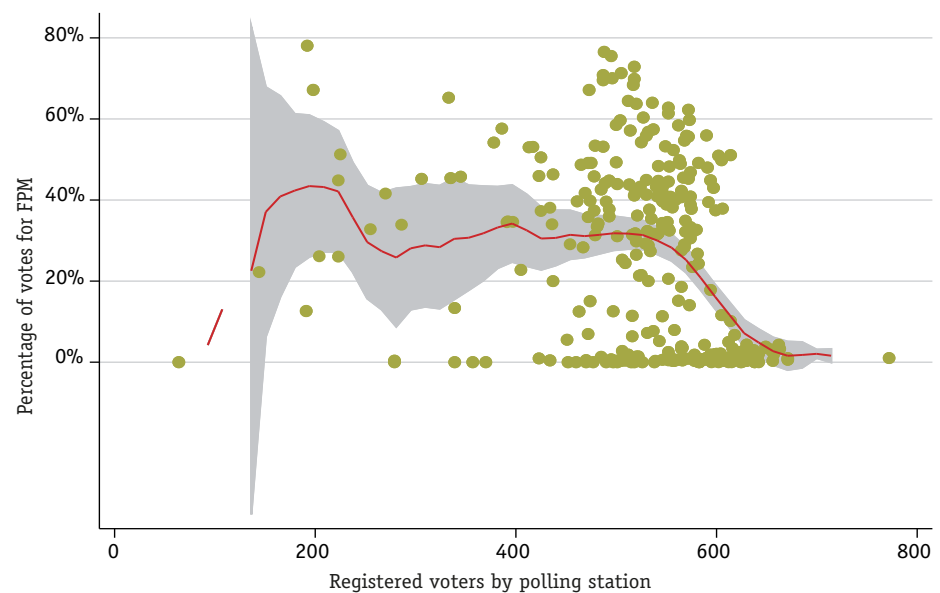
Regarding FPM candidates, overall, the share of votes they obtained across polling stations that had 400 voters or less was relatively constant (30%) but decreased until reaching nearly 0% on average in the largest polling stations. No such relationships were observed in the votes for other parties. The votes for the PSP candidate tended to increase and decrease in a random manner, while those for Hezbollah and Amal generally increased as the size of the polling stations increased.

Figure 25 Polling station size and percentage of votes for LF and FPM

a Polling station size and percentage of votes for LF



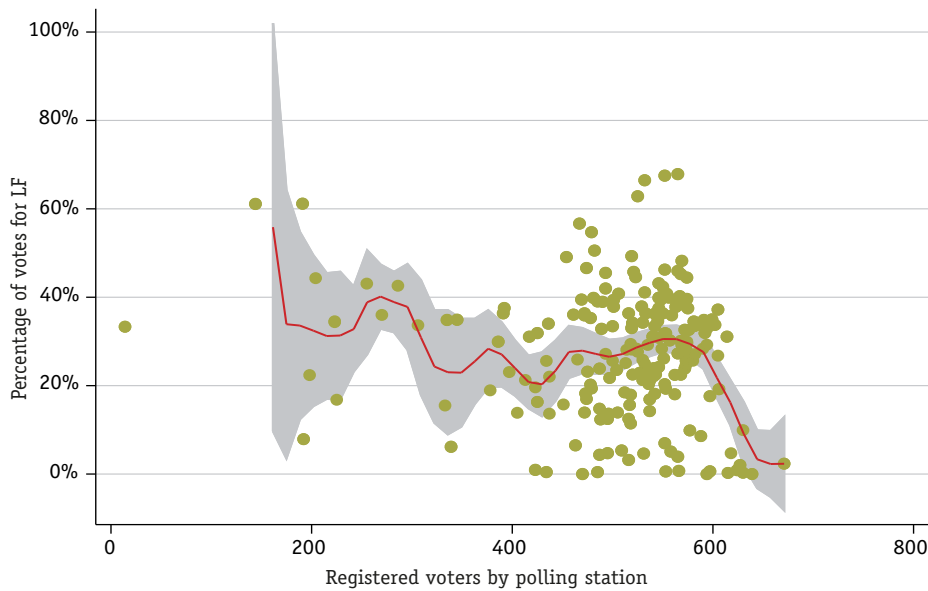
b Polling station size and percentage of votes for FPM



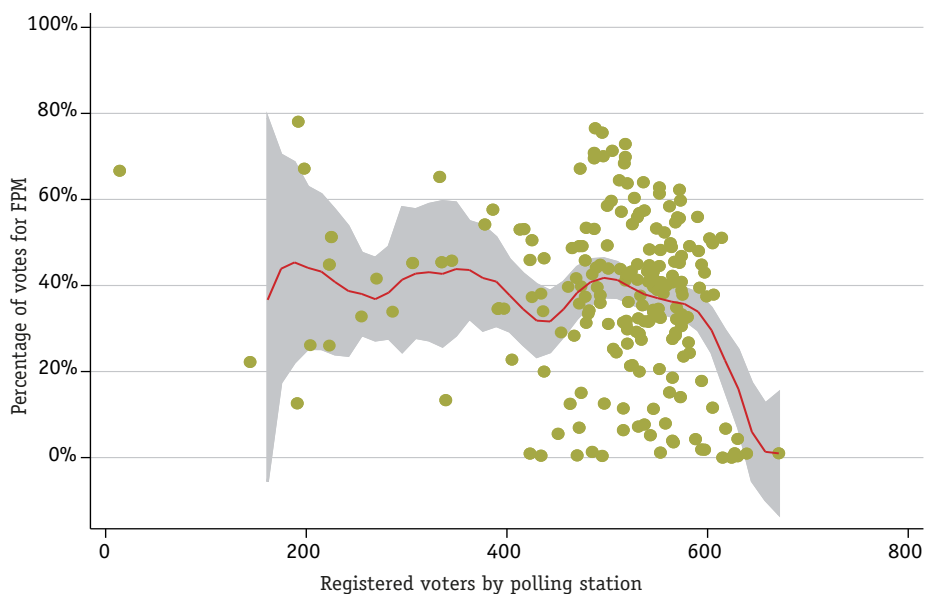
However, the smallest polling stations generally had voters from Christian sects registered, or were mixed, meaning that the better performance of LF and FPM in those stations could simply be due to the overall support they received from Christian voters. When looking at the relationship between the size of the polling stations and votes for each of these parties in Christian-only and mixed stations in which the vast majority of voters were Christian, the same pattern was present, with the share of votes obtained by LF and FPM generally decreasing as the size of the polling station increased. This could point toward voter rigging on the part of both Christian parties and, in particular, LF.

Figure 26 Polling station size and percentage of votes for LF and FPM in Christian stations

a Polling station size and percentage of votes for LF in Christian stations



b Polling station size and percentage of votes for FPM in Christian stations



As seen above, turnout rates in small polling stations were generally higher, and the main Christian parties seem to have performed relatively better in the smallest stations, which could suggest voter rigging on their part. Beyond the performance of parties across polling station size, a party benefiting from higher turnouts can further indicate whether fraud can be suspected or not—as pressure to vote for a given party would increase both turnout and votes for the same party in a polling station.

LF and Kataeb benefited from very high turnouts, suggesting incidents of fraud

Normally, if there was a lack of pressure on voters to cast their ballots in a certain way, votes for each list or party should be more or less similar regardless of whether centers had very low, normal, or very high turnouts.²¹ Given the different turnouts and preferences for parties across confessional groups, examining whether variations in the votes for each party across turnouts may be due to fraud requires taking into consideration these differences in voting behavior across sects. To test this, we created standardized variables of turnout rates and percentage of votes for each list or party. For any polling station, the standardized turnout rate would be the turnout rate in the specific polling station minus the average turnout rate of all polling stations in its district with registered voters from the same sect, all of it divided by the variability (standard deviation) of the turnout rates in those stations. This measures how abnormally low or high the turnout in a polling station is compared to all other stations within the same sect. The standardized measures of share of votes for lists and parties follow the same procedure. As previous studies have found, no clear relation should be observed between turnouts and number of votes for a particular list or party in 'clean' elections.²²

Accounting for the differences in votes for each list and party and turnouts among each confessional group shows some variations in the percentage of votes obtained by each list between polling stations that had abnormally low (1 standard deviation below the mean turnout by polling station), normal, and abnormally high turnouts (1 standard deviation above the mean). The FPM-Hezbollah-Amal list tended to perform better, on average, in polling stations that had normal turnout rates than in those that had very low or very high turnouts. On the other hand, the PSP-LF list received slightly better results in stations that had very low or very high turnouts. The Kataeb-Ahrar list also performed slightly better in stations that had very high turnout rates, while Kulluna Watani performed better in those that had very low turnout rates. Focusing on the results for each party, rather than lists, shows significant deviations within each list. Higher

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Myagkov, M., P.C. Ordeshook, and D. Shakin. 2009. 'The Forensics of Election Fraud.' Cambridge University Press.

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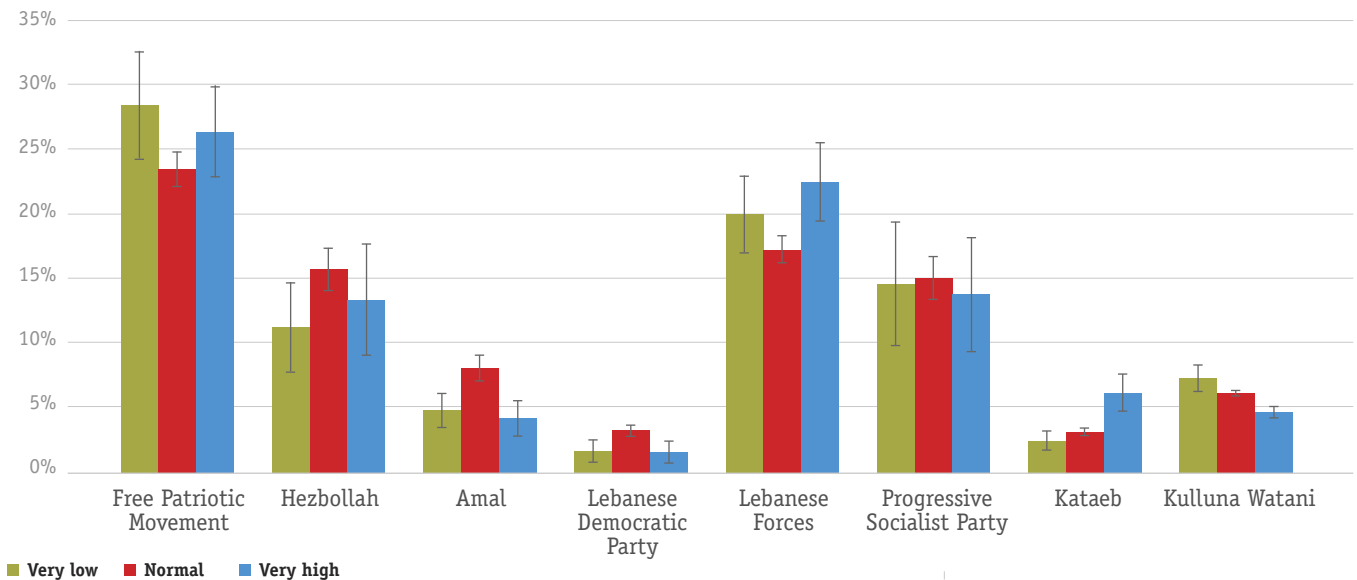
Ibid.

turnouts seem to have benefited the LF and Kataeb candidates, while most other parties tended to receive better results in polling stations that had turnouts closer to the average. FPM candidates, however, performed slightly better in stations with very low turnouts (figure 27).

The LF candidate Pierre Bou Assi’s share of votes in polling stations with very high turnouts was on average 5% higher than his share in stations with normal turnout rates (22% compared to 17%). Regarding the Kataeb candidate Ramzi Bou Khaled, the percentage of votes he received in very high turnout stations was twice his percentage in normal turnout stations (6% compared to 3%). FPM candidates, comparatively, performed better in polling stations with low turnouts, where their average share of votes was 5% higher than it was in polling stations with normal turnout rates (28% compared to 23%).²³ Kulluna Watani candidates’ share of votes was also higher in centers that had very low turnouts (7% compared to 6% in centers that had normal turnouts), and lower in very high turnout centers (less than 5%). Regarding Hezbollah, Amal, and LDP candidates, all performed better in polling stations that recorded average turnouts than they did in those that had abnormal turnout rates.

²³ Although on average FPM candidates also won a higher share of votes in very high turnout centers, these variations were not statistically significant.

Figure 27 Percentage of votes for each party and standardized turnout rate in Baabda



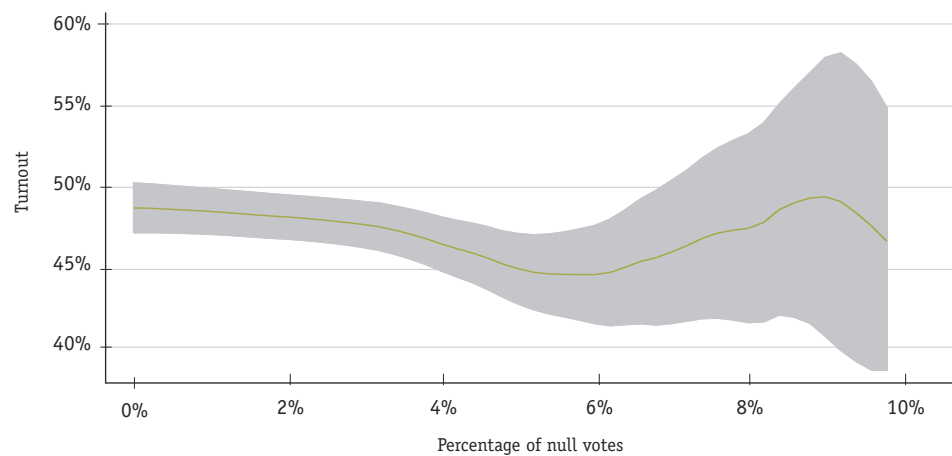
We have so far seen that there is a negative relationship between polling stations' sizes and votes for LF, and that LF tended to perform better in polling stations that had abnormally high turnouts, providing potential evidence of voter rigging. FPM candidates overall seem to have benefited only from smaller stations that had Christian voters registered or were mixed, while the Kataeb candidate performed better in polling stations that had very high turnouts. A party benefiting from very high turnouts could also point at ballot stuffing, as adding ballots for a party would increase both turnouts and votes for this party in a polling station.

No strong evidence of vote rigging

One way of detecting signs of ballot stuffing is by examining the relationship between the percentage of null votes, turnout, and votes for each list or party. Previous evidence shows that when political parties add ballots, they tend to forget to include a similar proportion of invalid votes.²⁴ A lower percentage of invalid votes in a polling station, associated with a higher turnout and a higher percentage of votes for a list or party would suggest manipulations in the vote count. However, a negative correlation is not enough to suggest ballot stuffing—as null votes could be 'protest' votes. Stronger evidence of ballot stuffing would be apparent in cases where the increase in the share of null votes is smaller than the decrease in the percentage of votes for a list or party.

In Baabda, there was no clear relationship between turnouts and the share of null votes by polling station.

Figure 28 Turnout and percentage of null votes by polling station in Baabda

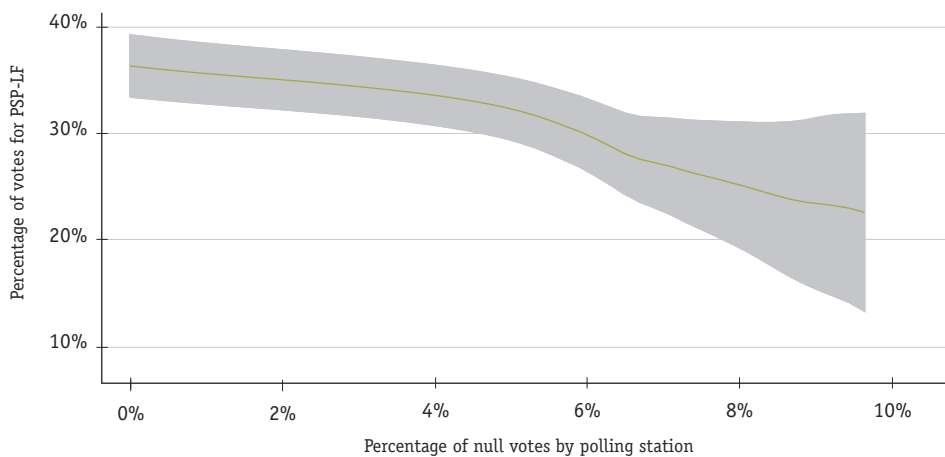


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Friesen, P. 2019. 'Strategic Ballot Removal: An Unexplored Form of Electoral Manipulation in Hybrid Regimes.' *Democratization*, 26(4): 709-729.

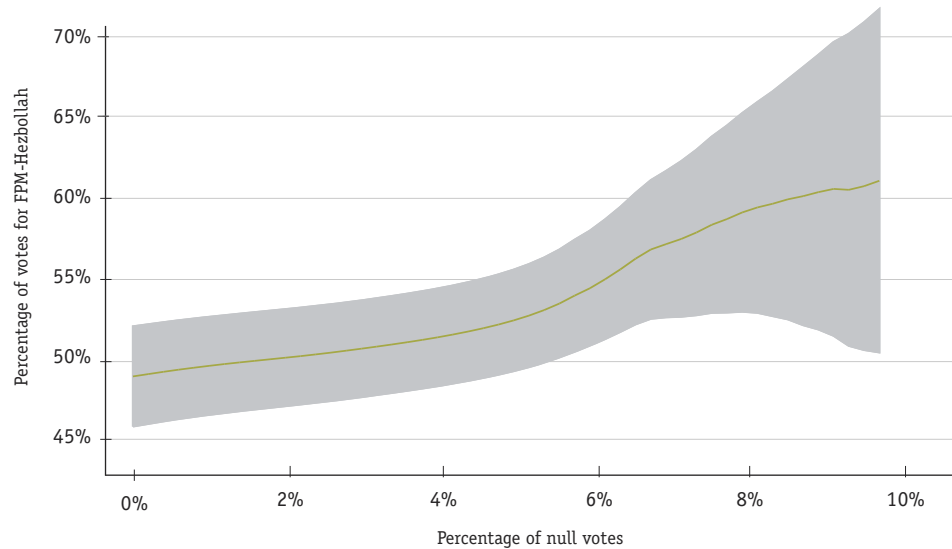
We can also look at the relationship between the percentage of null votes and votes for each party in a polling station. If one party manipulated the vote count or ‘cooked’ numbers by adding votes for its candidates, then we would need to see that the lower the percentage of null votes, the higher the percentage of votes for that party. Such a relationship was observed in the votes for the PSP-LF list, and particularly for the PSP rather than LF. The share of votes received by the list decreased from an average of 35% in polling stations where less than 2% of votes were null, to 22% in polling stations that recorded the highest share of null votes (10%) (figure 29). In other words, a 10% increase in the percentage of null votes in a polling station was associated with a 13% decrease in the votes received by the list. Such a difference could suggest that ballots for the list may have been added.

Figure 29 Votes for the PSP-LF list and percentage of null votes by polling station in Baabda



Regarding the FPM-Hezbollah-Amal list, the relationship moved in the opposite direction. The list’s percentage of votes actually increased as the percentage of null votes in a polling station increased—from 50% in stations that had practically no null votes to 60% in those that had the highest share of null votes. This could suggest that potential ballot stuffing that benefited the PSP-LF list was done at the expense of the FPM-Hezbollah-Amal list.

Figure 30 Votes for the FPM-Hezbollah-Amal list and percentage of null votes by polling station in Baabda



While the 13% decrease in the share of votes for PSP-LF associated with the 10% increase in the share of null votes is larger than what would be expected in regular elections, it is not a strong enough difference to provide evidence of vote rigging. Further methods of testing for vote rigging would need to provide similar results in order to confirm whether this observed association may be due to electoral fraud.

Another form of vote rigging would entail parties ‘cooking’ the numbers, i.e. parties manipulating the vote count either by adding or subtracting votes for a list, or ‘re-shuffling’ votes within their list from one candidate to another. One way of detecting manipulations in the vote counting process is to look at the distribution of the last digits in the number of valid votes, as well as those in the number of votes for a list or party.²⁵ The last-digits test is based on the hypothesis that humans tend to be poor at making up numbers, which would result in an abnormal distribution of numbers at the aggregate level. In ‘clean’ elections, last digits in votes for a party should be uniformly distributed, with an equal chance of every number (from 0 to 9) to appear (10% chance).

Restricting the sample of voting centers where at least 50 votes were cast, as a small vote count may lead to an oversample of zeros and ones, shows no evidence of vote rigging. The last digits in the number of votes per polling station did not deviate from the uniform line. Looking at the distribution of last digits in votes for each list and party also shows no significant deviations from the uniform line, therefore providing no evidence of vote counting manipulations.

²⁵

Beber, B. and A. Scacco. 2012. ‘What the Numbers Say: A Digit-Based Test for Election Fraud.’ *Political Analysis*, 20(2): 211-234.

There are some signs of voter rigging from LF in Baabda

There are some signs of voter rigging in Baabda, but no strong evidence of vote rigging.

Turnout by polling station tended to decrease as the size of the polling station increased. Previous evidence shows that polling stations with fewer voters are more attractive for politicians buying votes as the smaller number of registered voters facilitates aggregate monitoring of their behavior—i.e. whether they turned out to vote, and for whom. Looking at each party in Baabda shows that the LF candidate significantly benefited from small polling stations, which could suggest pressure to vote for him. This relationship to some extent also existed in votes for FPM candidates; however, further methods of testing for fraud did not provide evidence of voter rigging that benefited FPM. Another method of testing for voter rigging is to look at the relationship between turnout and the share of votes obtained by each party, which, in regular elections, should not significantly vary between polling stations that had very low, normal, or very high turnouts. However, the LF candidate performed significantly better in polling stations that recorded very high turnouts. This again provides further suggestive evidence of voter rigging that benefited LF.

A party benefiting from very high turnouts could also suggest ballot stuffing, as this would increase both turnouts and votes for this party in a polling station. Signs of ballot stuffing can be detected when observing a negative relationship between the share of null votes and votes for a list or party in a polling station. Across lists and parties, the PSP-LF list's share of votes, and in particular the PSP candidate's votes, decreased as the share of null votes in a polling station increased, which could suggest that ballots for the candidate were added. One other way to detect signs of ballot stuffing or vote counting manipulations more generally is to look at the distribution in the last digits of votes for a list or party. Normally, if there was a lack of fraud, this distribution should be uniform. This was the case in Baabda, as the last digits in the number of votes were uniformly distributed, thus providing no evidence of vote rigging.

All of these different methods of testing for fraud provide some suggestive evidence of voter rigging from LF, as the candidate performed better in smaller polling stations and in those that recorded very high turnout rates. Some tests also suggested irregularities to the benefit of FPM, Kataeb, and PSP; however, the various tests conducted did not provide the same results, meaning that no consistent evidence of irregularities was found.