

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

Bekaa 3 Electoral District: Baalbek-Hermel

Georgia Dagher

Hermel

Baalbek

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



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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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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.

The author would like to thank Sami Atallah, Daniel Garrote Sanchez, Ayman Makarem, and Micheline Tobia for their contribution to this report.

Executive Summary

In the Lebanese 2018 parliamentary elections, the district of Baalbek-Hermel remained a stronghold of Hezbollah and Amal, however, the new proportional representation system led to some losses and allowed the Future Movement and the Lebanese Forces to enter parliament. Baalbek-Hermel was among the districts with the highest participation rates, which also varied across confessional groups, genders, and geographical areas within the district. First, the Shia community and women voters were the most likely to vote. Second, voters in cadasters with higher levels of sectarian homogeneity, lower levels of economic development, and higher poverty rates were generally more likely to vote.

Sectarian parties were highly successful at mobilizing their target communities, with the majority of each group voting for parties that have historically represented them. Moreover, the majority of voters, regardless of the specific party they showed support for, also cast their ballot for a co-sectarian candidate, as even independent candidates received their highest level of support from their co-sectarian voters. Among the few voters who did not cast a sectarian vote, Shias voted for non-Shia candidates on the Hezbollah and Amal list, Maronite and Greek Catholic voters voted for each other, but Sunni voters had a highly fragmented vote.

Apart from voters' preferences, there were signs of voter and vote rigging pointing at candidates on the Hezbollah and Amal list. First, Hezbollah was more successful in smaller polling stations and those that had significantly high turnouts, which may suggest voter rigging. Second, the list generally performed better in polling stations that recorded a lower share of invalid votes, and its number of votes across polling stations were distributed in a non-uniform pattern, which may suggest vote rigging.

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 has analyzed voter behavior at the national and district levels. Using the official election results at the polling station level, published by the Ministry of Interior,¹ the analysis unpacks those results and examines differing

¹

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

patterns in voting behavior across demographic characteristics and geographical areas. The results at the polling station 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 in each of the polling stations. 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, approximated by the night-time light intensity;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 Baalbek-Hermel (Bekaa 3), which is allocated 10 parliamentary seats—six Shia seats, two Sunni seats, one Maronite seat, and one Greek Catholic seat. The report is divided into seven sections. First, we present the demographic distribution of registered voters in Baalbek-Hermel. The second section is concerned with voter turnout, which showed to vary 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, and how these were affected by cadaster-level characteristics. In the fourth section, we examine voters' sectarian behavior—i.e. their preferences for candidates of their same sectarian group. The fifth section looks at the performance of women candidates. Similar to the other sections of this report, we identify each woman's constituents and strongholds. In the sixth section, we look at the performance of the independent list in Baalbek-Hermel, and the varying preferences for each of its candidates. 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

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).

6

Data on the refugee population is collected from UNHCR.

for voter and vote rigging, such as pressure to vote through vote buying, or manipulations in the vote counting process.

I Who are the voters?

In the Lebanese parliamentary elections of May 2018, about 319,000 Lebanese were registered to vote in the electoral district of Baalbek-Hermel (Bekaa 3). Among them, 316,060 were registered in Lebanon⁷ and 2,590 registered from abroad. Out of the total 128 parliamentary seats, there were 10 seats at stake in the district: Six Shia, two Sunni, one Maronite, and one Greek Catholic seat.

Compared to other districts, Baalbek-Hermel has a low degree of confessional fragmentation. The largest confessional group in the district were Shias (72%), followed by Sunnis (14%), Maronites (8%) and Greek Catholics (6%) (figure 1).⁸ There were also a few Greek Orthodox, Armenian Orthodox and Catholic, and Christian minority voters (1% of registered voters combined). Although more than 70% of registered voters in Baalbek-Hermel were Shia, they had smaller representation as per the assigned quotas.

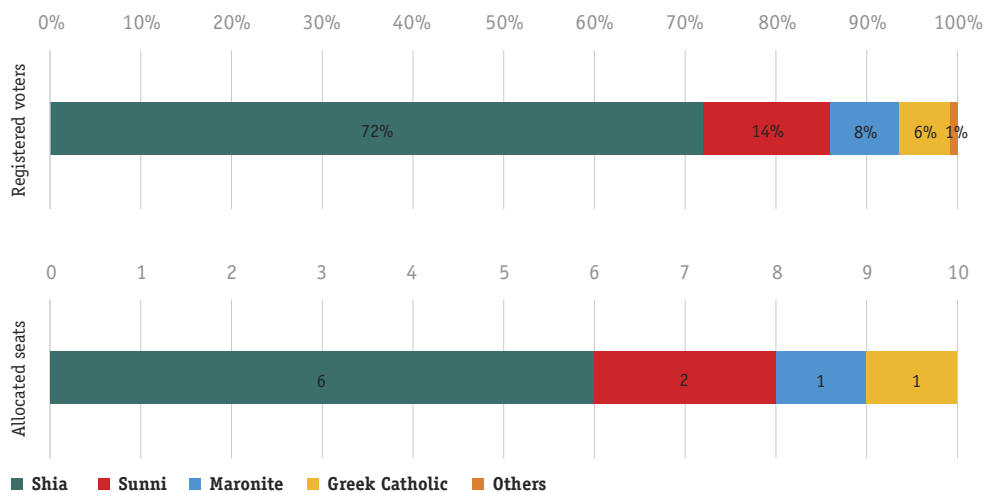
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Including 8,127 public employees.

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 respective confessions were not specified.

Figure 1 Registered voters and allocated seats by confessional group in Baalbek-Hermel



Note Percentages have been rounded up.

Given the confessional allocation of seats, representation is not the same for every voter but rather depends on the confession to which they belong. Greek Catholic voters benefit from the quota over twice as much as Shia voters. While about 17,000 Greek Catholic voters are represented by their seat, each Shia seat represents nearly 37,000 Shia voters. Sunni and Maronite voters also benefit significantly more from the quota than Shia voters, with about 20,000 voters represented by each of their seats (table 1).

Table 1 Confessional composition of Baalbek-Hermel and allocated seats by confessional group

Confession	Number of voters	Percentage	Number of seats	Voters per seat
Shia	221,001	72%	6	36,834
Sunni	43,032	14%	2	21,516
Maronite	23,676	8%	1	23,676
Greek Catholic	17,043	6%	1	17,043
Greek Orthodox	2,894	1%		
Christian minorities	175	0%		
Armenian Orthodox	107	0%		
Armenian Catholic	5	0%		
Total	307,933	100%	10	
Public employees	8,127			
Diaspora	2,590			
Total	318,650			

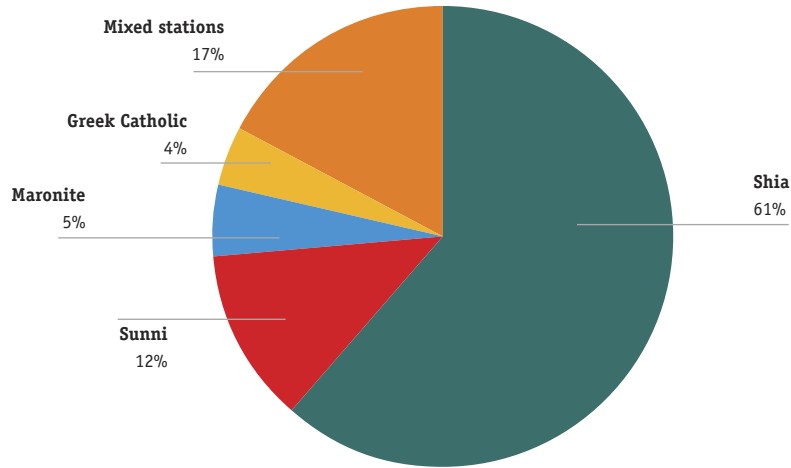
Note Percentages have been rounded up.

Registered voters were generally divided into electoral centers depending on their confession. Polling stations were reserved for specific sectarian groups following a similar distribution of the overall registered voters in the district: Shias (61%), Sunnis (12%), Maronites (5%) and Greek Catholics (4%). The remaining 17% of polling stations had constituents from more than one confessional group registered to vote, representing nearly 53,000 voters. The majority of voters from each represented group were registered in their own polling stations (between 70% and 90% for each), thus enabling a representative analysis of voting behavior. Among the 52,833 voters registered in mixed polling stations, the majority were Shias (about 60%), followed by Maronites (about 14%), Sunnis (about 10%), Greek Catholics (8%), and Greek Orthodox (about 5%).⁹

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All these numbers are calculated by comparing the number of voters registered in single-confession stations with the total number of voters by confession.

Figure 2 Confessional composition of polling stations in Baalbek-Hermel



Note Percentages have been rounded up.

II Who voted?

Turnout in Baalbek-Hermel was significantly higher than the national average—60% compared to 49%. Among the 318,650 Lebanese registered in the district, 190,268 cast a vote while the remaining 128,382 did not. Turnout was also 10% higher than it was in 2009, when 49% of voters in the district voted.

Constituents in the diaspora had a slightly higher participation rate in the elections compared to residents in Lebanon, with 61% of those residing abroad deciding to vote.¹⁰

¹⁰ 1,584 emigrants voted out of a total of 2,590 who registered to vote.

The Shia community and women voters were the most mobilized

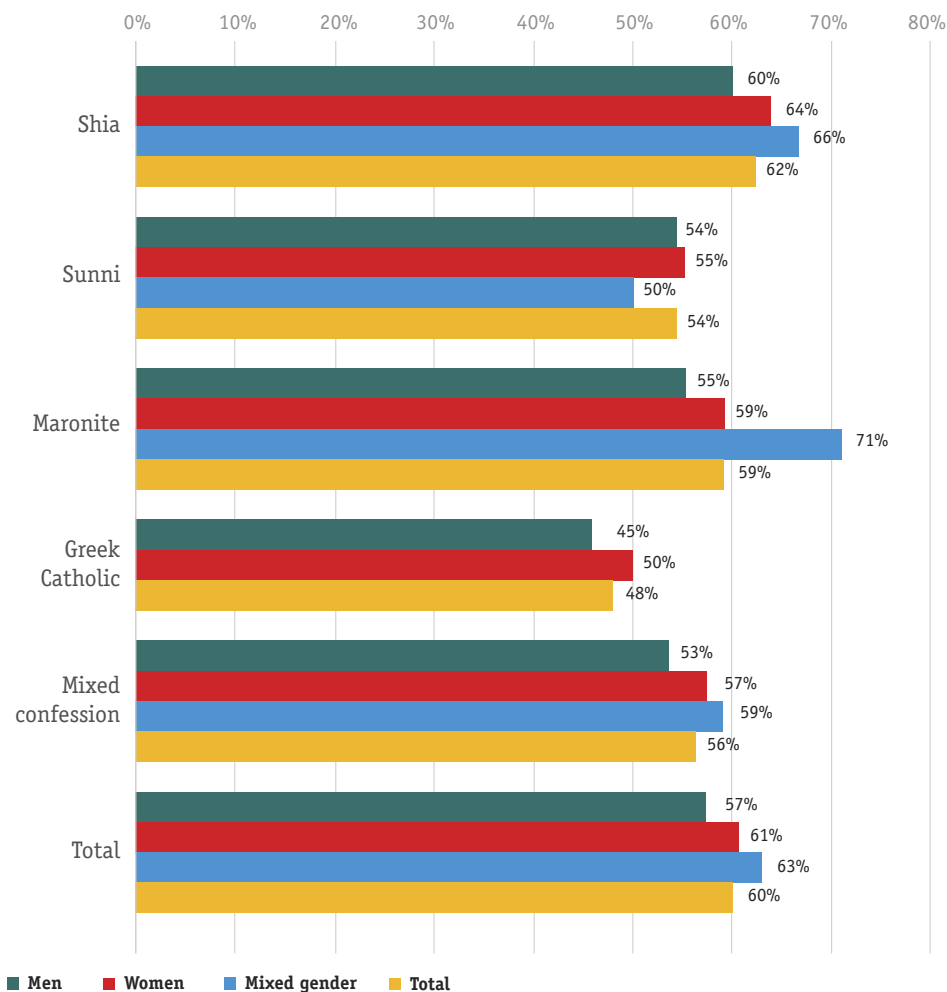
The Shia community was the most mobilized with a turnout of 62%. They were followed by the Maronite and Sunni communities (59% and 54%), while turnout among Greek Catholic voters was at 48% (figure 3). These variations are statistically significant after controlling for voters' gender, as well as characteristics of the cadasters they were registered in, such as level of confessional fragmentation and economic development, among others. In stations that had multiple confessional groups registered, turnout was one of the highest (56%), potentially explained by the higher share of Shia voters registered in these.

Turnout varied across genders, with women constituents having a higher turnout than their male counterparts. In voting centers with only women registered to vote, turnout rates reached nearly 61%, compared to 57% in men-only voting centers. Turnout was even higher in voting centers with both genders registered (63%). All these variations are statistically significant even after controlling for voters' confession, as well

as the characteristics of the cadasters in which they were registered.

Looking at variations across both confessions and genders shows that women across all confessional groups were significantly more mobilized than men. Turnout among women from all groups was, on average, 4% higher than turnout among their male counterparts. Moreover, participation rates in gender-mixed stations were also higher among all confessional groups, with the exception of Sunnis. The differences were particularly high among Maronite voters with, on average, polling stations reserved for Maronite men and women having turnouts that were 12% higher, compared to polling stations reserved for Maronites that serviced only men or women. Generally higher participation rates in polling stations that had both men and women registered could be explained by their smaller size. All the smallest polling stations, or those with less than 300 voters registered to vote, were gender-mixed. When controlling for voters' confession and characteristics of the cadasters they were registered in, voters registered in smaller polling stations were more likely to vote.

Figure 3 Turnout by confessional group and gender in Baalbek-Hermel



Note Percentages have been rounded up.

Participation rates varied across geographical areas, with turnouts across cadasters ranging from below 30% to above 75%

Out of the 80 cadasters voters were registered in, most cadasters saw turnouts that varied between 50% and 70%.

In 12 cadasters, less than the majority of registered voters headed to the polls.¹¹ The lowest participation rates were recorded in Barneya (17%), Taibet Baalbek (28%), Haouche Barada (35%), Talia (40%), Dar El-Ouassaa (43%), and Chlifa (44%).¹² All of these cadasters, with the exception of Dar El-Ouassaa, were almost entirely Christian—often divided between Maronites, Greek Catholics, and Greek Orthodox. Although Maronite voters in their own stations tended to have higher turnouts, it seems that they were less likely to vote if registered in the same stations as other Christian voters. Only Dar El-Ouassaa had Shias registered to vote. Other cadasters with low turnout rates (between 45% and 50%) were Ras Baalbek, Maaraboun, Fekehe, Aain Bourday, Tfail, and Maaysra. Out of these, some had a large proportion of Christian voters, such as Ras Baalbek (Greek Catholic) and Aain Bourday (Greek Catholic and Maronite). Fekehe was divided between Greek Catholics and Sunnis, while others were fully Sunni, such as Maaraboun and Tfail. The last one, Maaysra, was almost entirely Shia.

In contrast, turnout was above 75% in six cadasters. Those were Aamchki (80%), Moqraq—which also includes the village of El-Nouqra (78%)—Barqa (78%), Jebaa (77%), Kneisset Baalbek (75%), and Halbata (75%). Other cadasters with high turnouts (between 70% and 73%) were Ain El-Saouda, Khodor, Nabi Chit, Nabi Osmane, Qarha, Yammouneh, Zabboud, Haouch Snaid, Kharayeb, and Aaynata. All of these high turnout cadasters are fully Shia, with the exception of Barqa and Aaynata, which are fully Maronite. This demonstrates that the confessional composition of voters in a cadaster is also a driving factor in the geographical variations in turnout.

In fact, apart from participation rates in specific cadasters, the higher the percentage of Shia voters in a cadaster, the higher the turnout. On average, turnout rates were much higher in cadasters where over 90% of registered voters were Shias (with turnouts as high as 62%), while the cadasters in which less than half of registered voters were Shia, average turnout rates were 10% lower. The opposite was true among other confessional groups, with a higher share of Maronites, Greek Catholics, or Sunnis in a cadaster being associated with lower turnout rates.

Moreover, apart from the prevalence of a specific confessional group in a cadaster, other geographical factors seem to have affected turnout rates.

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One cadaster, Wadi El-Oss, also saw one of the lowest turnouts (33%). However, this cadaster is not counted as it only had 45 voters registered to vote.

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The cadaster of Chlifa also includes the villages of Mazraat El-Sayed and Mazraat Matar.

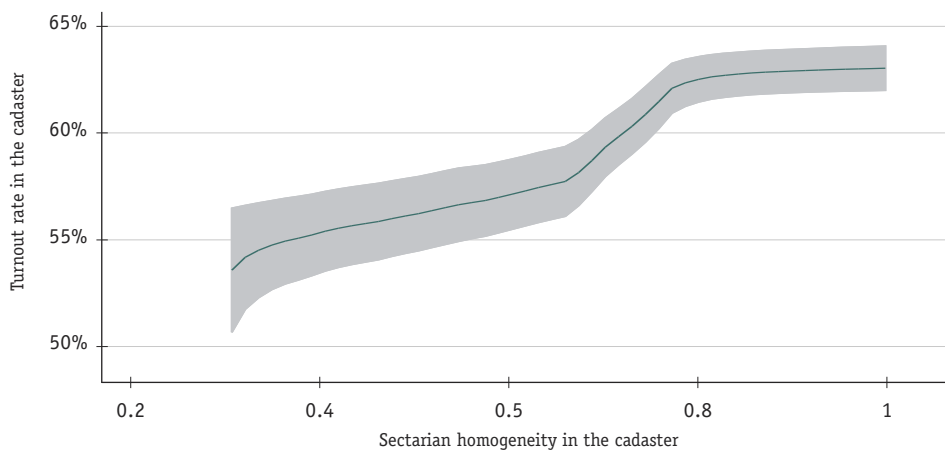
Higher levels of sectarian homogeneity, lower levels of economic development, and higher poverty rates in a cadaster were associated with higher turnout rates

Turnout was largely affected by the level of confessional homogeneity in a cadaster, that is, whether many different confessional groups cohabit or there is a high predominance of one, regardless of which.¹³ In Baalbek-Hermel, the more homogeneous the cadaster is, the higher the participation rate in the elections. Turnout rates steadily increased from less than 55% in the most heterogeneous cadasters to nearly 65% in the most homogeneous ones (figure 4). These variations are statistically significant even after controlling for voters' gender and confession, as well as other characteristics of the cadasters in which they were registered, such as level of economic development and poverty rates. This result points at the higher capacity and interest of sectarian parties in mobilizing voters in more homogeneous localities.

13

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 sectarian group in the total number of registered voters in a cadaster. The index ranges between 0.3 (when the cadaster is fully heterogeneous) and 1 (when the cadaster is fully homogeneous, or only one sectarian group is present).

Figure 4 Sectarian homogeneity by cadaster and turnout rate in Baalbek-Hermel



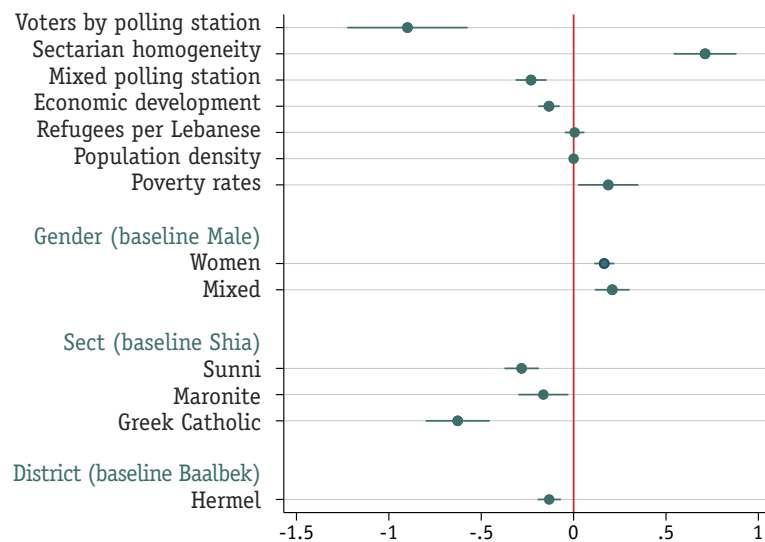
Moreover, lower levels of economic development in a cadaster, as well as higher poverty rates, were associated with higher turnouts. This potentially points at voter rigging, such as vote buying, as political parties may have a higher capacity to mobilize voters in poorer areas by offering benefits in exchange of votes.

What are the drivers of turnout in Baalbek-Hermel?

Overall, after controlling for voters' gender and sect, as well as polling-station characteristics, voters registered in cadasters with higher levels of sectarian homogeneity, higher poverty rates, and lower levels of economic development were more likely to vote. Across polling stations, after controlling for these geographical characteristics, voters registered in smaller polling stations, as well as those in homogeneous polling stations, were significantly more likely to vote. This may point

toward sectarian parties' higher interest in mobilizing votes in polling stations in which the sectarian composition is evident, as well as parties' higher interest in targeting voters in smaller polling stations, where their capacity to monitor votes may be higher. Finally, as mentioned above, women voters were significantly more likely to vote than men. Across sectarian groups, Shia voters were the most likely to vote, while Greek Catholics were the least likely to do so. There was no significant variation between Maronite and Sunni voters, who stood in between.

Figure 5 Drivers of turnout in Baalbek-Hermel



III Who voted for whom?

Five lists competed in Baalbek-Hermel, with a total of 47 candidates. Twenty-seven candidates competed for the six Shia seats, 10 candidates competed for the two Sunni seats, five candidates competed for the Maronite seat, and five candidates competed for the Greek Catholic seat.

There were some changes in parliamentary representation, and two of the five competing lists won seats

The 'Hope and Loyalty' list, formed by Hezbollah and the Amal Movement, overwhelmingly won the highest number of votes and seats in Baalbek-Hermel. The list obtained 76% of votes (140,747 votes) and eight out of the 10 seats. The list won the six Shia seats, which went to Jamil el Sayyed (independent, 33,223 votes), Ihab Hamade (Hezbollah, 18,404 votes), Ghazi Zaiter (Amal, 17,767 votes), Ali Mokdad (Hezbollah, 17,321 votes), Ibrahim Mousawi (Hezbollah,

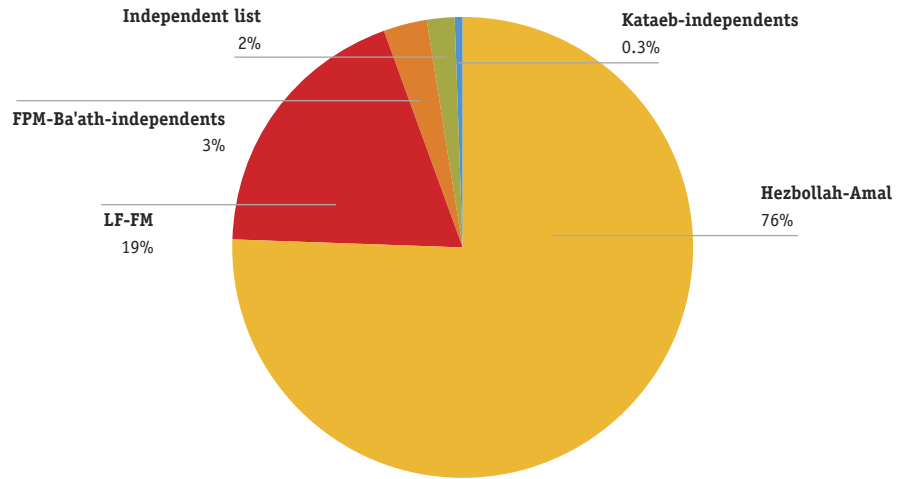
16,942 votes), and Hussein El-Hajj Hassan (Hezbollah, 15,662 votes). The list also won the Greek Catholic seat which was obtained by Albert Mansour (independent backed by the Syrian Social Nationalist Party, 5,881 votes), and one of the two Sunni seats was obtained by Walid Sukkarieh (Hezbollah-affiliated, 6,916 votes). All of these winners were already known faces. Ghazi Zaiter, Ali Mokdad, Hussein El-Hajj Hassan, and Walid Sukkarieh were all the incumbent candidates. In addition, at the time of the elections, Ghazi Zaiter and Hussein El-Hajj Hassan were the Minister of Agriculture and Minister of Industry, respectively. Jamil el Sayyed had previously served as head of the Security Forces. Regarding Ihab Hamade, he is the leader of Hezbollah in Hermel, while Ibrahim Mousawi is one of the spokesmen for the party. Finally, Albert Mansour was elected MP in 1972, but ran and failed in the 2005 and 2009 parliamentary elections.

The second winning list was 'Dignity and Development', formed by the Lebanese Forces (LF), Future Movement (FM), and independent candidates. With 19% of the votes (35,607 votes), the list won the two remaining seats. The Maronite seat was obtained by Antoine Habchi (LF, 14,858 votes), and the remaining Sunni seat by Bakr Al-Hujairi (FM, 5,994 votes).

The new proportional representation electoral system enabled a new alliance to make gains in Baalbek-Hermel. Under the 2009 majoritarian system, the Hezbollah-Amal alliance won all the seats with 86% of the votes. In 2018, it saw a significant decrease in its share of votes, and FM and LF were able to gain one Sunni and the Maronite seat. The LF's winner, Antoine Habchi, defeated and unseated former Maronite MP Emile Rahme (National Solidarity Party leader) who ran on the Hezbollah-Amal list and won a much lower number of votes (3,861 votes, or nearly four times less than Habchi).

Three other lists ran in the 2018 election: The 'Independent' list formed by the Free Patriotic Movement (FPM), Ba'ath Party, and independent candidates, which won 3% of votes (5,470 votes); the 'Development and Change' list, formed by independents, which won 2% of the votes (4,053 votes); and the 'National Cedar' list, formed by the National Cedar Movement, Kataeb, and independent candidates, which won only 0.3% of votes (491 votes).

Figure 6 Percentage of votes for each list in Baalbek-Hermel



Note Percentages have been rounded up.

Among all the competing candidates, the total votes received varied from above 18,000 to below 100 votes. Only 17 out of the 47 candidates managed to win over 1,000 votes, and the Hezbollah-Amal list was the only one in which every candidate won at least 1,000 votes (table 2).

Among the candidates in the Hezbollah-Amal list, Jamil el Sayyed was by far the most successful candidate, winning 18% of preferential votes in Baalbek-Hermel, nearly double what the second-ranking candidate obtained. Ihab Hamade, Ghazi Zaiter, and Ali Mokdad followed, with 10% of preferential votes each. Ibrahim Mousawi and Hussein El-Hajj Hassan each won 9%, while the four other candidates in the list won less than 4% each. Walid Sukkarieh won nearly 4% of preferential votes, and the last winner on the list, Albert Mansour, won 3%. Finally, Emile Rahme (National Solidarity Party, Maronite), and Younis al-Rifai (Al-Ahbash) won 2% and 1%, respectively.

In the LF-FM list, LF winner Antoine Habchi overwhelmingly received the highest number of votes—8% compared to 3% for FM winner, Bakr Al-Hujairi. One candidate in the list, Yahya Chammas (independent, Shia), performed better than Al-Hujairi (4% of preferential votes). The last candidate on the list to win a substantial number of votes was Hussein Solh (independent, Sunni, 3%). The six other candidates in the list, all independents, won slightly more than 1% of preferential votes combined: Salim Kallas (Greek Catholic, 0.4%), Khodr Tlayss (Shia, 0.3%), Rifaat Masri (0.3%), Mohammad Suleiman (Shia, 0.1%), Ghaleb Yaghi (Shia, 0.1%), and Mohammad Hamiat (Shia, 0.01%).

Among the other lists, the FPM-Ba'ath-independents list had two successful candidates: Michel Daher (FPM, Greek Catholic), who won 2%

of preferential votes, and Faiz Shukr (Ba'ath Party, Shia), who won 1%. The eight other candidates, all independents, won less than 1% of preferential votes combined.

In the independent list, Siham Antoun (Greek Catholic) and Samih Ezzeddine (Sunni) won nearly 1% of preferential votes each, while all five other candidates on the list won 1%, combined. Finally, in the Kataeb-independents list, all 10 candidates combined won only 0.3% of preferential votes, with none managing to win over 120 votes.

Table 2 Most successful candidates in Baalbek-Hermel

List	Candidate	Individual affiliation	Number of votes	Percentage of preferential votes
Hezbollah-	Jamil el Sayyed	Independent	33,223	18%
Amal	Ihab Hamade	Hezbollah	18,404	10%
	Ghazi Zaitar	Amal	17,767	10%
	Ali Mokdad	Hezbollah	17,321	10%
	Ibrahim Mousawi	Hezbollah	16,942	9%
	Hussein El-Hajj	Hezbollah	15,662	9%
	Hassan			
	Walid Sukkarieh	Affiliated with Hezbollah	6,916	4%
	Albert Mansour	Backed by the Syrian Social Nationalist Party	5,881	3%
	Emile Rahme	National Solidarity Party	3,861	2%
	Younis al-Rifai	Al-Ahbash	1,589	1%
LF-FM	Antoine Habchi	Lebanese Forces	14,858	8%
	Yahya Chammas	Independent	6,658	4%
	Bakr Al-Hujairi	Future Movement	5,994	3%
	Hussein Solh	Independent	4,974	3%
FPM-Ba'ath-independents	Michel Daher	Free Patriotic Movement	2,742	2%
	Faiz Shukr	Ba'ath Party	1,159	1%
Independent	Siham Antoun	Independent	1,123	1%
All other candidates (30 candidates)			6,875	3%

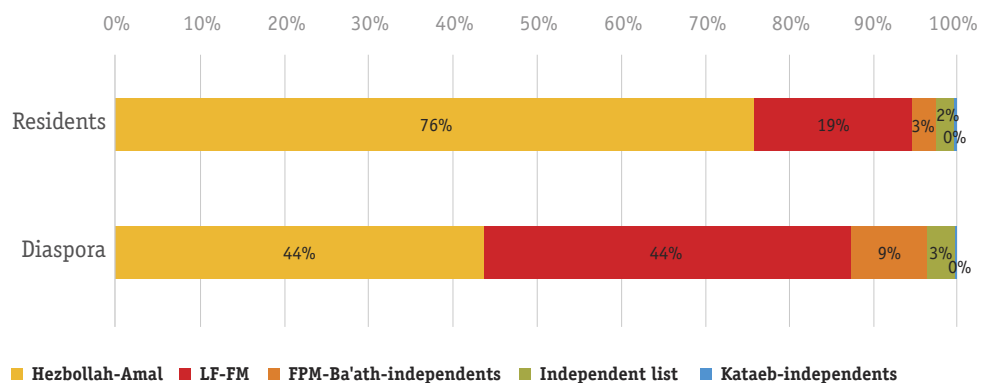
Note Percentages have been rounded up.

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This is measured among the 1,556 emigrants who voted for a list, and the 1,511 who cast a preferential vote.

The diaspora's vote largely diverged from that of residents in Baalbek-Hermel, with diaspora voters showing much higher support for Christian parties, and much lower support for Shia parties.¹⁴ Lebanese residing abroad voted in significantly larger number for Antoine Habchi, who received 39% of their votes compared to 8% of residents' votes. They also voted more for Michel Daher (6% compared to 1% of residents). Conversely, they voted significantly less for Ihab Hamade, Ali Mokdad, and Ibrahim Mousawi (between 8% and 7% less than residents). Other candidates who were less successful among emigrants (by around 2-3%) were Hussein El-Hajj Hassan, Walid Sukkarieh, Ghazi Zaiter, Albert Mansour, Bakr Al-Hujairi, Yahya Chammas, and Hussein Solh. The only exception was Jamil el Sayyed, who received higher support from emigrants (3% more).

Figure 7 Percentage of votes for each list across residencies in Baalbek-Hermel



Note Percentages have been rounded up.

The process of seat allocation—after ballots were counted—determined who made it to parliament

Under the new proportional representation system, combined with the option to cast a preferential vote, the sectarian allocation of seats, and the introduction of high electoral thresholds, candidates who receive the highest number of preferential votes do not necessarily win. However, in contrast to many districts, all winning candidates in Baalbek-Hermel from each sectarian community were the most successful. Although the electoral system was proportional, the selected process of seat allocation—i.e. the selection of candidates from each winning list that would make it to parliament—created competition across and within lists: Candidates were competing not just against those on opposing lists, but also against candidates on their own lists. This means that significant weight was given to the preferential vote, rather than the list or party vote.

The process of seat allocation in the 2018 elections followed a ‘vertical’ distribution. Once the results were counted and the number of seats obtained by each list determined, all candidates from the winning lists in the district were ranked from highest to lowest, regardless of their respective lists. The candidate with the most votes would then win their seat, regardless of the list they belonged to. With the sectarian allocation of seats, this means that one sectarian seat has already been filled; and with the number of seats won by each list, the list this candidate belonged to would have one less remaining seat to win. In the case of Baalbek-Hermel, Jamil el Sayyed ranked first, thus winning his seat. This means that the Hezbollah-Amal list, which won eight seats, now had seven remaining seats to obtain. In addition, since el Sayyed is Shia, five of the six Shia seats in the district were left to fill. All seats are allocated following the same method, i.e. based on rank, but constrained by the number of seats allocated to each sect and the number of seats won by each list. This process of distributing seats was not specified in the electoral law—an alternative one could have been used instead.

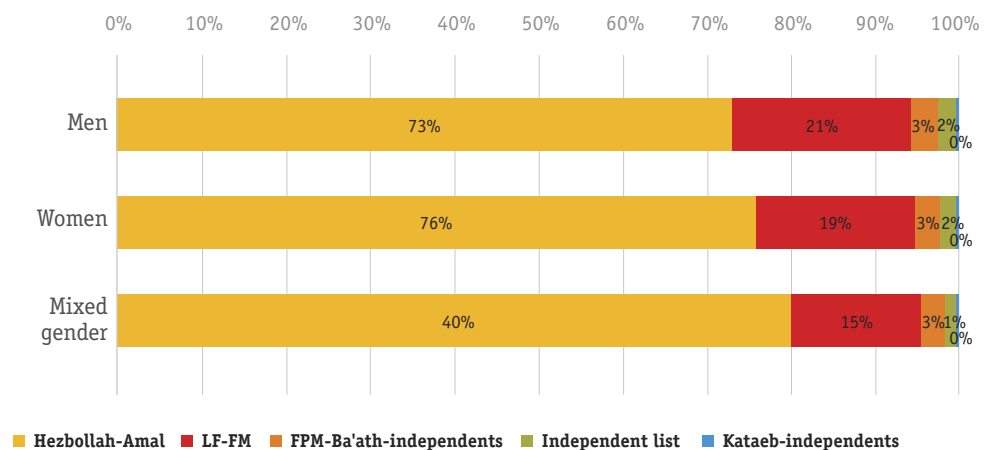
Another process of seat allocation that could have been used under the same electoral system is a ‘horizontal’ distribution of seats. Under such a distribution, candidates within each list—rather than across all lists—are ranked, with seats won by the most successful candidates in each winning list, but again constrained by the sectarian quota. The first seat would then go to the most successful candidate from the most successful list—in Baalbek-Hermel, that would be Jamil el Sayyed. The second winner would be the most successful candidate from the second most successful list—in this case, Habchi from LF; and the third would be the second-ranking candidate from the first winning list—Ihab Hamade. The second-ranking candidate from the LF-FM list, which won two seats in Baalbek-Hermel, would then win the fourth seat. This was losing candidate Yahya Chammas (Shia, nearly 6,700 votes). Instead of Chammas, the winner from the LF-FM list was Bakr Al-Hujairi (Sunni, nearly 6,000 votes) who won despite receiving a lower number of preferential votes.

Since one of the Shia seats would have been won by the LF-FM list, the worst performing Shia candidate on the Hezbollah-Amal list would have lost. While one of the Sunni seats would have been lost by the LF-FM list, both Sunni seats would have been won by candidates on the Hezbollah-Amal list. Overall, had seats been distributed in that way in 2018, the following changes would have occurred: Hussein El-Hajj Hassan would lose his Shia seat to Yahya Chammas; and Bakr Al-Hujairi would lose his Sunni seat to Younis al-Rifai.

There were only minor variations in voters' preferences across genders Compared to men, women voters voted slightly less for the LF-FM list (19%, compared to 21% of men), and slightly more for the Hezbollah-Amal list (76%, compared to 73% of men). This discrepancy was mostly driven by women's lower support for Yahya Chammas (who obtained 3% of their preferential vote, compared to 4% of men's vote) and their higher support for Ihab Hamade (who won 11% of women's vote, compared to slightly less than 10% of men's preferential vote).

In stations that had both genders registered to vote, however, results significantly differed. Voters in gender-mixed stations voted less for LF-FM (15%), and much more for Hezbollah-Amal (80%). There were also much larger variations in support for specific candidates. Compared to voters in gender-specific stations, those in mixed stations voted less for Bakr Al-Hujairi (less than 1%, compared to 4% in gender-specific stations), Jamil el Sayyed (15%, compared to 19%), and Ali Mokdad (7%, compared to 10%), but more for Ibrahim Mousawi (13% compared to 9%), Hussein El-Hajj Hassan (11%, compared to 7%), and Ghazi Zaiter (12%, compared to 9%).

Figure 8 Percentage of votes for each list by gender in Baalbek-Hermel



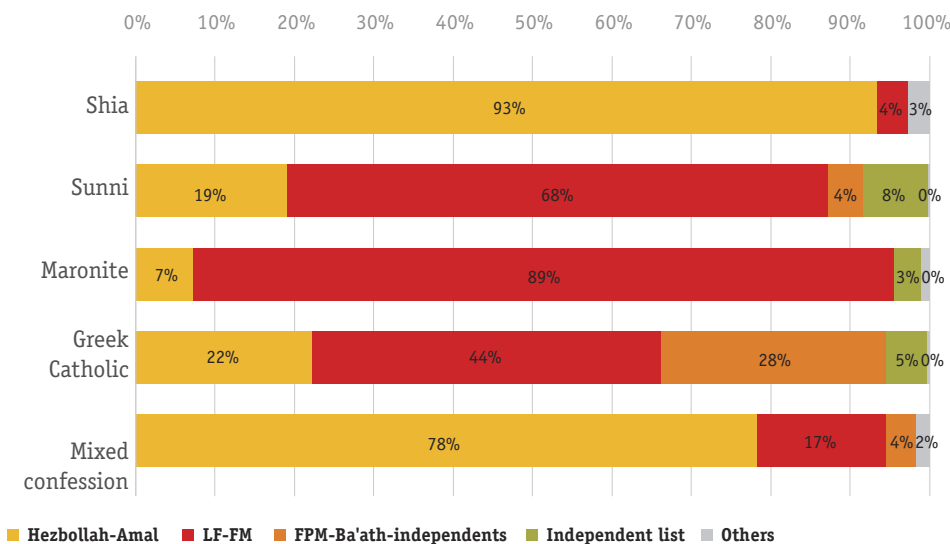
Note Percentages have been rounded up.

There were large variations in preferences across confessional groups, highlighting the sectarian character of Lebanese politics

In Baalbek-Hermel, most Shia voters voted for the candidates backed by Hezbollah and Amal, Sunni voters for candidates backed by FM, while the LF candidate was the main one among Maronite voters. Conversely, Greek Catholic voters were divided between LF, FPM, and SSNP candidates—the three main Christian parties.

Shia voters overwhelmingly voted for the Hezbollah-Amal list (93%), Maronite voters likewise mostly voted for LF-FM (89%), while Sunni voters largely voted for LF-FM (68%). Greek Catholics voters had a more fragmented vote, with the highest share voting for LF-FM (44%), followed by the FPM-Ba'ath-independents list (28%). Moreover, among the two winning lists, the votes received by Hezbollah-Amal predominantly came from Shia voters (79%), while votes received by LF-FM were more distributed across confessions: Sunnis (39%), Maronites (25%), and Greek Catholics (8%)—showing that Hezbollah-Amal heavily relied on mobilizing the Shia community, while LF-FM relied on mobilizing the Sunni and Christian communities.

Figure 9 Percentage of votes for each list by confessional group in Baalbek-Hermel



Note Percentages have been rounded up.

Among candidates, Shia voters gave almost 85% of their vote to the six Shia candidates in the Hezbollah-Amal list. Jamil el Sayyed received the highest share of their vote (24%), while the remainder was mostly split between Ihab Hamade, Ali Mokdad, Ghazi Zaiter, Ibrahim Mousawi, and Hussein El-Hajj Hassan, with each receiving between 11% and 14% of the vote. All of these candidates obtained over 75% of their total votes from Shia polling stations, showing that they relied on their sectarian constituents. None of the 41 other candidates managed to win over 5% of the Shia preferential vote, and only four candidates won over 1%: Walid Sukkarieh (4%), Yahya Chammas (3%)—with in fact nearly all Shia voters who voted for the LF-FM list casting their preferential vote for Chammas—Albert Mansour (nearly 3%), and Emile Rahme (1%).¹⁵

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The 10th candidate on the Hezbollah-Amal list, Younis al-Rifai, was much less successful (0.3% of the Shia preferential vote).

Sunnis, who gave the majority of their votes to the LF-FM list (68%), voted mostly for FM candidate Bakr Al-Hujairi (30%), followed by Hussein Solh (23%), who was backed by the party. Both candidates also received most of their votes from Sunni voters (97% and 89%). The only other candidate who managed to obtain a significant share of the Sunni vote was Yahya Chammas (10%). The remainder of the Sunni vote was highly fragmented, and the most successful of the remaining candidates were Younis al-Rifai, Walid Sukkarieh, Samih Ezzeddine (independent list), Mohammad Failayta (independent on the FPM-Ba'ath-independents list), Antoine Habchi, and Jamil el Sayyed (between 3% and 5% each).

Only three candidates won over 1% of the Maronite vote. They gave an overwhelming majority of their vote to Antoine Habchi (88%). In fact, over half of the total votes he won came from Maronite polling stations (58%). Only two other candidates won over 1% of their vote: Emile Rahme (6%) and Michel Daher (3%). Nearly all of the Maronite vote that went to Hezbollah-Amal (7%) was received by Rahme, while nearly all of their vote that went to the FPM-Ba'ath-independents list (3%) went to Daher.

Among Greek Catholic voters, the two main candidates were Antoine Habchi (37%) and Michel Daher (28%), followed by Albert Mansour (18%). Compared to other candidates, the three received a significantly high share of their votes from Greek Catholic polling stations: 63% of the total votes won by Michel Daher, 20% of the total votes received by Albert Mansour, and 16% of those received by Antoine Habchi came from voters in Greek Catholic polling stations.¹⁶ Most of the remaining Greek Catholic vote was cast for Salim Kallas (independent on the LF-FM list) and Siham Antoun (independent list), who received 5% each.

Overall in Baalbek-Hermel, each party and candidate was most successful among their target communities. In other words, each tended to receive support from their sectarian communities, rather than more widespread support. Candidates from Hezbollah and Amal barely received any votes from non-Shia voters; candidates from or backed by FM barely any votes from non-Sunni voters; the LF candidate barely any support from non-Christian voters; and the SSNP-backed and FPM candidates barely any support from non-Greek Catholic voters.

There were variations in the success of each list and candidate across districts and cadasters, based on the confessional composition of each

There were variations in the success of each candidate between Baalbek and Hermel. As Baalbek had a much higher degree of sectarian fragmentation, with less than 70% of registered voters being Shia, compared to over 95% in Hermel, the main Christian and Sunni

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These shares are significant, given that out of all the preferential votes that were cast in Baalbek-Hermel, only 3% came from voters in Greek Catholic polling stations.

candidates were generally more successful in Baalbek than they were in Hermel. The variations were particularly large in the votes for LF, FM, and FPM. In Baalbek, Antoine Habchi received 10% of votes compared to less than 1% in Hermel; Bakr Al-Hujairi and Hussein Solh received 4% and 3%, respectively, compared to less than 0.2% in Hermel; and Michel Daher received 2%, compared to 0.1% in Hermel. Some of the main Shia candidates were nevertheless also more successful in Baalbek: Jamil el Sayyed won 19% in Baalbek, compared to 13% in Hermel, Ali Mokdad 12% compared to less than 1%; and Ibrahim Mousawi 12% compared to 3% in Hermel. The other Shia candidates on the Hezbollah-Amal list received better results in Hermel. The most notable difference was in votes for Ihab Hamade: The candidate won 50% of votes in Hermel, compared to only 2% in Baalbek.

In contrast to other lists, the Hezbollah-Amal list was more successful in Hermel—winning 91% of votes compared to 72% in Baalbek. Among candidates in the list, Hussein El-Hajj Hassan, who won 14,028 votes among residents,¹⁷ obtained over 1,000 votes in Brital (2,717 votes, 46% of preferential votes), Chmistar (2,459 votes, 42%), and Nabha (1,276 votes, 47%). He also won a high number of votes in Hadath (926 votes, 29%), Chouaghir (745 votes, 52%), Beit Mchik (568 votes, 69%), and Haouch El-Nabi (416 votes, 81%).

The Amal candidate Ghazi Zaiter obtained over 80% of preferential votes in the Shia areas of Knaisse (1,461 votes, 84%) and Riha (807 votes, 82%), winning less than 50% of votes in all other cadasters. A high number of the votes garnered by Zaiter came from the city of Hermel (773 votes, 6%), Qasr (681 votes, 15%), Hadath (648 votes, 20%), Bouday (622 votes, 12%), the city of Baalbek (614 votes, 4%), Taraiya (598 votes, 15%), Temnine El-Tahta (597 votes, 18%), Laboueh (569 votes, 12%), and Chmistar (517 votes, 9%).

Ali Mokdad, who won 16,993 votes among residents, was much more successful in Baalbek (16,822 votes, 12%) than he was in Hermel (171 votes, 1%). He received the vast majority of these votes from voters in seven neighboring cadasters alone, where he won over 1,000 votes. The largest share came from voters in Younine (3,199 votes, 64%), followed by Laboueh, which also includes Toufiqiye (2,843 votes, 61%), Bouday (2,260 votes, 63%), Maqneh (2,041 votes, or 69%), Ain (1,414 votes, 36%), Chaat (1,217 votes, 39%), and Iaate (1,110 votes, 48%).

Similarly, Ibrahim Mousawi, who won 16,574 votes among residents, performed better in Baalbek (15,700 votes, 11%) than he did in Hermel (874 votes, 3%). He was significantly more successful than other candidates in the southern part of Baalbek, where most of his votes came from. The highest number he obtained was in Nabi Chit (3,576 votes, 65%), followed by Temnine El-Tahta and Faouqa (2,530 votes in

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This excludes the number of votes Hussein El-Hajj Hassan won among public employees. All of the votes won among residents mentioned throughout this section also exclude those obtained from public employees.

total, 50%) and the neighboring areas. He won between 1,000 and 2,000 votes in Bednayel (43%), Khodor (70%), and Saraain El-Faouqa (54%); and between 800 and 1,000 votes in Houch El-Rafqa (54%), Kharayeb (63%), Haour Taala (53%), and Qsarnaba (45%). This totals to slightly over 13,500 votes.

Ihab Hamade won 18,246 votes among residents, and was the most successful candidate in Hermel. He won 50% of votes in Hermel (15,238 votes), compared to 2% in Baalbek (3,008 votes), and was one of the very few victorious candidates who won a higher share of his total votes from Hermel than from Baalbek. Over a third of his votes were cast in the city of Hermel, where he was the most successful candidate by far (7,477 votes, 59% of preferential votes). He also won a large number of votes in Qasr (2,842 votes, 61%), Yammouneh (1,033 votes, 76%), Kouakh (957 votes, 75%), Charbine (650 votes, 42%), Jouar El-Hachich (475 votes, 58%), and Ouadi El-Tourkmane (425 votes, 52%)—all of these represent nearly 14,000 votes.

Jamil el Sayyed was by far the most successful candidate in Baalbek-Hermel (31,833 votes among residents). He was the first-ranking candidate in Baalbek (28,047 votes, 19%) receiving more votes than in Hermel (3,786 votes, 13%). A high share of his votes came from the city of Baalbek (8,695 votes), where he was particularly successful in the neighborhoods of Al-Reesh (5,205 votes, 75%), and Nabi Naam (3,222 votes, 81%). He also won a high number of votes in Taraiya (2,980 votes, 74%), and compared to other candidates, he received a large share of votes in many more cadasters. Nevertheless, he was outperformed by certain candidates in some cadasters. Ali Mokdad won a much higher share of votes than el Sayyed in Younine (where el Sayyed won 899 votes, or 18%, compared to 64% for Ali Mokdad), Qasr, Ain, and Bouday (where, in each of the three, el Sayyed won less than 560 votes, and less than 15%). Ibrahim Mousawi received a much higher number of votes than el Sayyed in Temnine El-Tahta (50%, compared to 24% for el Sayyed) and Nabi Chit (65%, compared to 11% for el Sayyed). Hussein El-Hajj Hassan was more successful than el Sayyed in Chmistar (41%, compared to 32% for el Sayyed)—even though a high number of el Sayyed's total votes were cast in Chimstar (1,923 votes)—and Brital (46%, compared to 16% of votes for el Sayyed). Finally, in the city of Hermel, Ihab Hamade was significantly more successful than el Sayyed, receiving 59% of votes (7,477 votes), compared to 14% for el Sayyed (1,744 votes).

Greek Catholic SSNP-affiliated Albert Mansour, who won 5,574 votes among residents, was more successful in Baalbek (5,179 votes, 4%) than in Hermel (395 votes, 1%). He was by far the most successful candidate in Nabi Osmane (1,196 votes, 63%) where he won nearly four times as much as the second candidate, Jamil el Sayyed, despite

that nearly all voters in Nabi Osmane were Shia. Mansour was also highly successful in Ras Baalbek (960 votes, 41%), a Greek Catholic cadaster, and Harabta (899 votes, 54%), a Shia cadaster.

The Maronite candidate Emile Rahme, who won 3,754 votes among residents, also received a higher share of votes in Baalbek (3,574 votes, 2%) than Hermel (180 votes, 1%). Out of the votes he obtained, 801 were won in Douris (50% of preferential votes). All the areas he was successful in were majority Maronite or Greek Catholic. He was also successful in Majdaloun (234 votes, 40%), and received between 100 and 200 votes in Deir El-Ahmar (190 votes, 5%), Ainata (144 votes, 16%), El-Qiddam (140 votes, 16%), and Aain Bourday (139 votes, 42%).

Regarding the Sunni candidates, Walid Sukkarieh, who won 6,813 votes among residents, was slightly more successful in Baalbek (5,785 votes, 4%) than he was in Hermel (1,028 votes, 3%). He received a much higher share of his votes from Shia cadasters rather than Sunni ones. He won 1,408 votes in Nahle (58%), and a very high share in Halbata (862 votes, 84%). Other cadasters he was successful in were Zighrine (591 votes, 58%), Zabboud (479 votes, 66%), Beit Chama (404 votes, 52%), and Fekehe (525 votes, 16%)—the only one that was majority Sunni. Finally, Younis al-Rifai, who only won 1,552 votes among residents, was also more successful in Baalbek (1,486 votes, 1%) than he was in Hermel (66 votes, 0.2%). He obtained over 100 only in Ghafra (576 votes, 30%) and Qalaa (186 votes, 11%)—the two Sunni neighborhoods in the city of Baalbek.

The second winning list, the LF-FM one, was much more successful in Baalbek—winning nearly 22% of votes compared to less than 7% in Hermel. LF candidate Antoine Habchi won almost all of his 14,157 votes among residents from voters in Baalbek (13,982 votes, 10% of preferential votes) compared to 175 votes in Hermel (1%). He won over 90% of votes in Bechouat (97%), Barqa (93%), Deir El-Ahmar (92%), and Btedaai (90%). All of these were fully Maronite, explaining his success. Deir El-Ahmar was also the cadaster from where he obtained his highest number of votes (3,941 votes). In addition, he won the majority of votes, as well as over 500 votes, in Ainata (83%), Zrazir (67%), and Chlifa (69%), which were also fully Christian. All areas where Habchi obtained a significant share of votes were fully or nearly fully Christian.

Similar to Habchi, nearly all of the votes obtained by the FM candidate Bakr Al-Hujairi came from voters in Baalbek (5,873 votes, 4%), much more than in Hermel (55 votes, 0.2%). He was unsuccessful in capturing a large share of votes across the district. However, he won 61% of votes in the fully Sunni cadaster of Aarsal—representing 86% of his total votes (5,113 votes). He won over 100 votes only in Fekehe (358 votes, 11%) and Ain (219 votes, 6%). While some of these

areas had Shia and Christian voters registered to vote, nearly all of the votes obtained by Al-Hujairi came from Sunni polling stations.

Hussein Solh won a quarter of his 4,823 votes among residents in Hay El-Solh (1,467 votes), where he also won 71% of preferential votes. He performed particularly better than other candidates in Qalaa (945 votes, 58%) and Maarboun (308 votes, 45%). A high share of his votes also came from voters in Ghafra (585 votes) and Aarsal (461 votes).

Yahya Chammas, who won 6,529 votes among residents, was much more successful in Hermel (4,839 votes, 6%) than he was in Baalbek (1,690 votes, 3%). He received a significant share from voters in the city of Hermel (838 votes, 7%). He also won a large share of votes in Aarsal (490 votes, 6%), Ain (455 votes, 12%), Chaat (434 votes, 14%), and Ghafra (246 votes, 13%).

The other, much less successful, candidates on the list (less than 1,000 votes) tended to receive the majority of their votes from one or two cadasters. Salim Kallas won all of his 661 votes among residents from voters in Baalbek (0.5% of preferential votes), and over half of these came from voters in Fekehe (419 votes, 13%). Khodor Taleis, who won 604 votes among residents, obtained 513 votes from voters in Brital (9%). The majority of the votes won by Refeat Masri came from Haour Taala (248 votes, 15%, out of the 491 he won among residents), and the majority of those won by Mohammad Suleiman came from voters in Bednayel (191 votes, 5%, out of the 245 he received among residents). Ghaleb Yaghi received over a third of his votes from voters in the neighborhood of Al-Reesh (52 votes, out of the 136 he received from residents). All of these candidates won nearly all of their votes from voters in Baalbek, receiving 10 votes or less in Hermel.

The FPM-Ba'ath-independents list was more successful in Baalbek (3%) than it was in Hermel (1%). Although the main candidates in the list were relatively unsuccessful, they found high levels of support in certain geographical areas. Michel Daher was far more successful in Baalbek (2,614 votes, 2% of preferential votes) than he was in Hermel (22 votes, 0.1%). He won 42% of preferential votes in El-Qaa (slightly less than Habchi) which represents over half of his total votes among residents (1,342 out of 2,636 votes). While he also obtained a significant share of preferential votes (over 10%) in the Christian areas of Haouche Barada, Sarine El-Tahta, Jdaide, Chlifa, and Talia, most of the remaining his votes came from voters in Jdaide (281 votes, 27%) and Ras Baalbek (207 votes).

The second relatively successful candidate in the list was Faiz Shukr from the Ba'ath Party. Shukr was also more successful in Baalbek (1,054 votes, 1%) than he was in Hermel (61 votes, 0.2%). He won his highest level of support in the Shia cadaster of Nabi Chit (10% of preferential votes), where half of his votes came from (516 votes). He

also won a large share of his votes from voters in Sarine (117 votes, 5%).

Most other candidates also tended to receive half of their votes from one cadaster. Mohamed Fleeti obtained nearly all of his votes from voters in Aarsal (646, out of the 656 votes he won among residents). Fadi Younis received half of his votes from Brital (77 votes, out of the 155 he won among residents); Faisal Husseini most of his from voters in Chmistar (63 votes, out of the 95 he obtained from residents); Saad Hamade from the city of Hermel (35 out of the 66 votes received from residents); Mahdi Zogheib received nearly all of his votes from voters in Younine alone (51 votes out of the total 58 he received among residents); and Ahmad Bayan from voters in Qalaa (37 votes, out of the 51 he received among residents). The two other candidates in the list, Sandrella Merhej and Ghada Assaf, received a low number of votes across all cadasters. Ghada Assaf only received a maximum of 20 votes in Tamnine (out of her 145 votes received among residents), and Sandrella Merhej a maximum of 13 votes in Fekehe (out of the 114 she received from residents).

In the Kataeb-independents list, three quarters of the votes Hamad Dib won came from Bednayel (73, out of the 107 votes received among residents). The list's second candidate, Leila Tannoury received a quarter of her votes from voters in Chlifa (23 out of the 108 votes she received among residents), but won less than 10 votes in all other cadasters. Regarding the other candidates in the list, among the votes they received from residents, Adel Bayan received nearly half of his from voters in Qalaa (23 votes out of 50); Fouad Maoula from voters in Harabta (28 votes out of 44); Khaldoun Charif from voters in Yammouneh (17 votes out of 41); Abbas Assaf his largest share from voters in Bouday (18 votes out of 37); and Waad Soukarieh from voters in Fekehe (18 votes out of 35). The three other candidates in the list, Mohammad Raad, Mohammad al-Chall, and Saadallah Ardo, won less than 10 votes each.

What are the drivers of votes for each party?

A multivariate analysis highlights the relevant impact of different geographical factors, polling station characteristics, as well as voters' individual characteristics, on voter's attitude toward each party.

In the first winning list, Hezbollah candidates were generally significantly more successful in cadasters with higher levels of sectarian homogeneity. They also tended to receive better results in cadasters with lower levels of economic development, as well as those with higher poverty rates. By contrast, Amal was generally more successful in cadasters with lower poverty rates. Both parties received a larger share of votes in cadasters with a lower concentration of refugees. Regarding variations across specific polling stations, both Hezbollah and Amal performed significantly better in polling stations that had only one

sectarian group registered to vote, which may indicate their targeted mobilization of voters. This is in contrast to the other parties which tended to perform better in mixed stations. Across confessional groups, even after controlling for geographical characteristics, Shia voters were the most likely to vote for Hezbollah and Amal, while Maronite voters were the least likely to do so.

Figure 10 Drivers of votes for Hezbollah in Baalbek-Hermel

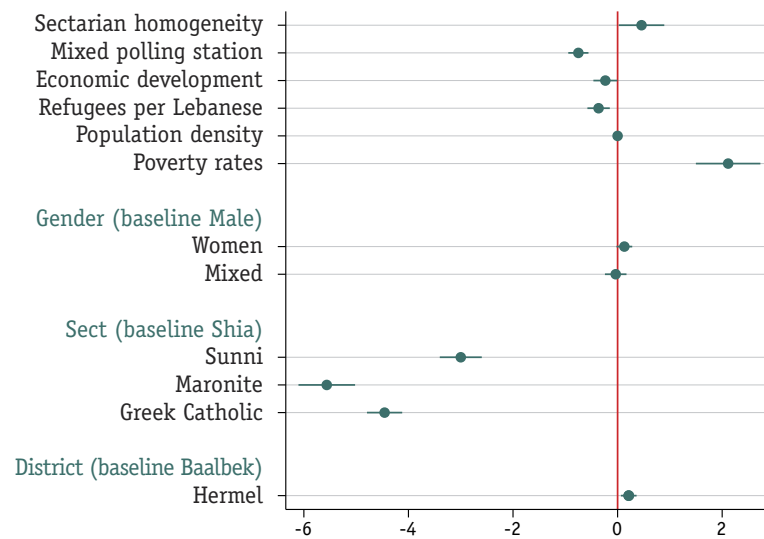
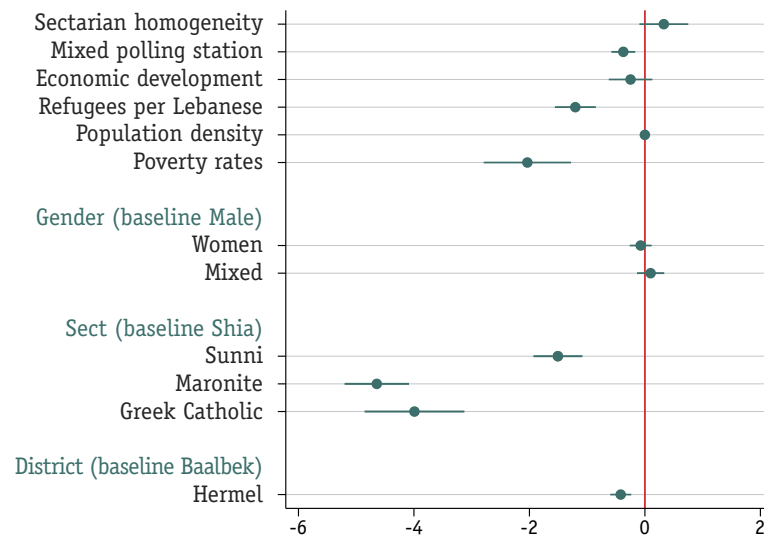


Figure 11 Drivers of votes for Amal in Baalbek-Hermel



In the second winning list, formed by the Lebanese Forces and Future Movement, the LF performed better in mixed polling stations, which might be because these had a larger share of Christians. The party also received a significantly larger share of votes in cadasters with a higher

ratio of refugees per Lebanese. Voters in cadasters with lower poverty rates tended to vote slightly more for the party. Across confessional groups, Maronite voters were significantly more likely to vote for LF compared to others, while Shias were the least likely to do so.

The FM performed significantly better in more homogeneous cadasters, as well as those with lower levels of economic development. Similar to LF, a higher concentration of refugees in a cadaster was associated with a higher share of votes for FM. Across polling stations, voters in mixed polling stations were significantly more likely to vote for the party, and after controlling for all these factors, Sunni voters were the most likely to vote for FM, while there were no significant variations among other sects.

Figure 12 Drivers of votes for the Lebanese Forces in Baalbek-Hermel

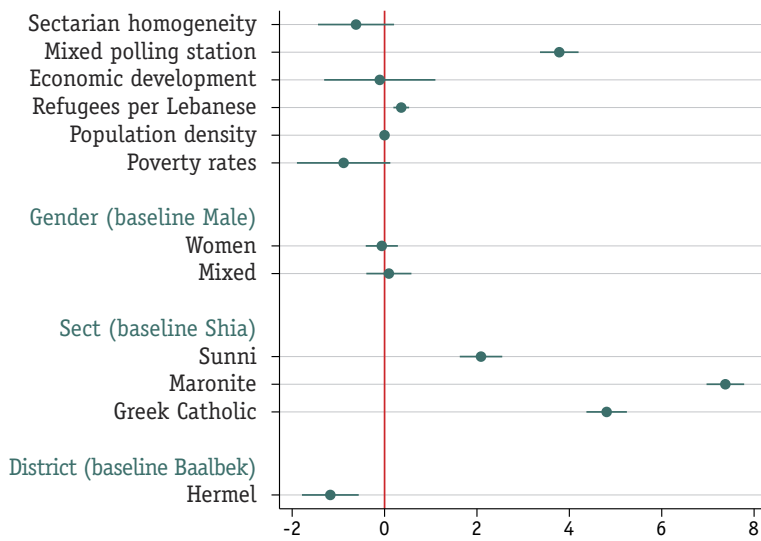
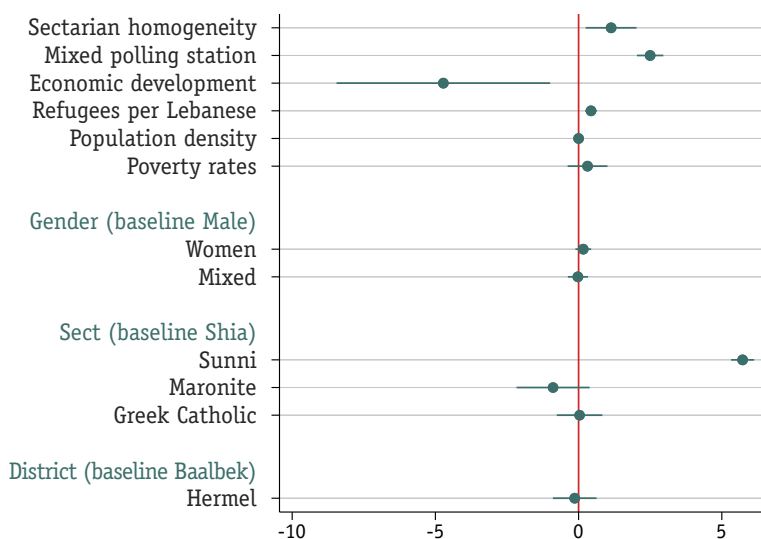
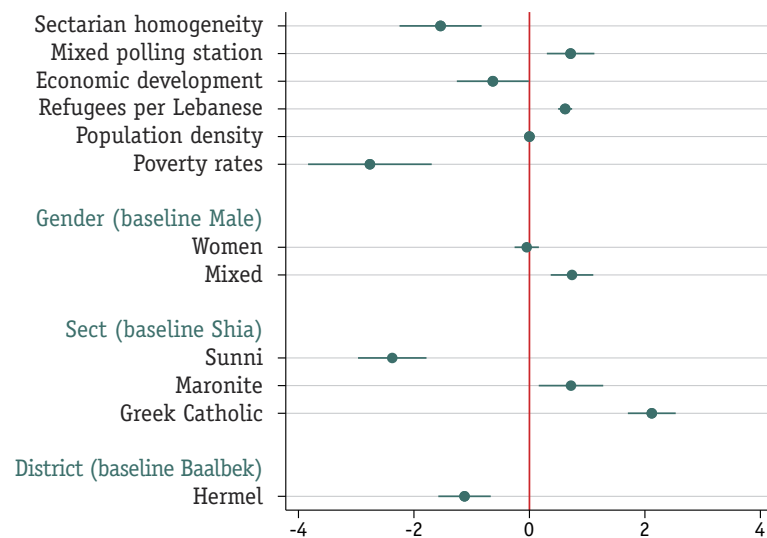


Figure 13 Drivers of votes for the Future Movement in Baalbek-Hermel



The list that came in third in Baalbek-Hermel, the FPM-Ba'ath-independents one was generally more successful in more heterogeneous cadasters, which might be due to the higher prevalence of Christian voters in these cadasters. Both the list and the candidate from the FPM also received a significantly larger share of votes in mixed polling stations, which could be related to these having a significant share of Christian voters. Similar to LF and FM, a higher concentration of refugees in a cadaster was associated with a higher share of votes for FPM. Moreover, voters in cadasters with lower poverty rates, as well as those in cadasters with lower levels of economic development, tended to vote more for FPM. Across sectarian groups, Greek Catholic voters were the most likely to vote for FPM, followed by Maronites, while Sunnis were the least likely to do so.

Figure 14 Drivers of votes for the Free Patriotic Movement in Baalbek-Hermel



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

In Baalbek-Hermel, 98% of voters represented by a seat gave a preferential vote for one candidate within their selected list. Among those who cast a preferential vote, 87% selected a co-confessional candidate.

There were significant variations in confessional biases, although the majority of voters from each community voted for a co-sectarian candidate

The percentage of votes cast for co-sectarian candidates was highest among Maronites (95%), followed by Shias (91%), and Sunnis (73%),

while it was lowest among Greek Catholics (56%), who had a high preference for Maronite candidates (39%) (table 3). These variations across confessional groups are statistically significant even after controlling for voters' gender, as well as characteristics of the cadasters they were registered in, such as levels of confessional homogeneity and economic development. Shia voters, who were the only ones to have their own polling stations in both Baalbek and Hermel, had a much higher confessional bias in the latter. In Baalbek, 89% of Shia voters voted for a co-confessional candidate, while in Hermel, 94% of them did so.

Table 3 Percentage of votes for candidates from each confession by confessional group in Baalbek-Hermel

Voters' sect	Candidate's sect			
	Shia	Sunni	Maronite	Greek Catholic
Shia	91%	5%	1%	3%
Sunni	19%	73%	5%	4%
Maronite	1%	0%	95%	3%
Greek Catholic	4%	0%	39%	56%

Note Percentages have been rounded up.

Most of the votes for co-confessional candidates, just as those for candidates from other groups, tended to go to a selected few candidates. Among Shias who voted for a Shia candidate, 85% cast their preferential vote for the Shia candidates from the Hezbollah-Amal list. Moreover, among the 5% who chose a Sunni candidate, nearly all voted for Hezbollah-affiliated Walid Sukkarieh. Similarly, nearly all of the Shia voters who voted for a Maronite candidate (1%) cast their vote for Emile Rahme, and nearly all of those who voted for a Greek Catholic candidate chose Albert Mansour, both on the Hezbollah-Amal list. This shows that the few Shia voters who did not have a bias toward co-confessional candidates still had preferences for the candidates on the same list as the main Shia parties.

Among the 73% of Sunni voters who casted a confessional vote, 53% chose either the FM candidate Bakr Al-Hujairi or the FM-backed candidate Hussein Solh. The remainder was mostly split between four Sunni candidates: Younis al-Rifai, Walid Sukkarieh (both on the Hezbollah-Amal list), Samih Ezzeddine (independent list), and Mohamed Fletti (FPM-Ba'ath-independents), who each received between 3% and 6% of the Sunni preferential vote. Among the Sunnis who voted for a Shia or Maronite candidate, the majority chose candidates on the LF-FM list. Among the 19% who voted for Shia candidates, 10% chose Yahya Chammas, while among the 5% who voted for a Maronite candidate,

3% chose Antoine Habchi. Their votes for Greek Catholic candidates, however, were highly fragmented.

As for Maronite voters, 88% voted for their co-confessional candidate Antoine Habchi. Regarding the remaining votes for Maronite candidates, the highest share went to Emile Rahme (6%, Hezbollah-Amal list). Nearly all Maronite voters who voted for a Greek Catholic candidate (3%) cast their preferential vote for FPM candidate Michel Daher. Finally, among the 56% of Greek Catholic voters who cast a confessional vote, the votes were divided between Michel Daher (28%) and Albert Mansour (18%). While 39% of Greek Catholic voters chose a Maronite candidate, 37% voted for Antoine Habchi.

A confessional bias is furthermore apparent when looking at the confessional group each candidate obtained their support from (table 4). In total, Shia candidates obtained 81% of their votes from Shia voters, Sunni candidates obtained 65% of their votes from Sunni voters, Maronite candidates 49% from Maronite voters, and Greek Catholic candidates 34% from Greek Catholic voters. These numbers are significant given the much larger share of Shia votes cast in the district, relative to the share of Sunni, Maronite, and Greek Catholic votes. In other words, while 3% of the total preferential votes were cast in Greek Catholic stations, 34% of the votes received by Greek Catholic candidates came from these stations.¹⁸

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Regarding other groups, 64% of total preferential votes were cast in Shia stations, 11% were cast in Sunni stations, and 5% were cast in Maronite stations. In addition, 16% came from mixed stations.

Table 4 Share of votes received by candidates from each type of polling stations

Voters' sect	Candidate's sect			
	Shia	Sunni	Maronite	Greek Catholic
Shia	81%	27%	8%	34%
Sunni	3%	65%	5%	7%
Maronite	0%	0%	49%	3%
Greek Catholic	0%	0%	13%	34%
Mixed confession	16%	8%	24%	22%

Note Percentages have been rounded up.

There were no large variations across genders, although Sunni and Greek Catholic women were slightly more sectarian than men. In gender-mixed stations, however, Sunnis voters, and Shias to some extent, voted much less for a co-sectarian candidate, whereas Maronite voters slightly more.

Table 5 Percentage of votes for co-sectarian candidates by confessional group and gender in Baalbek-Hermel

Voters' confession	Voters' gender		
	Men	Women	Mixed gender
Shia	91%	91%	88%
Sunni	72%	75%	63%
Maronite	95%	95%	97%
Greek Catholic	56%	57%	

Note Percentages have been rounded up.

There were geographical variations in the votes given to co-confessional candidate across and within each confessional group

Seven cadasters had more than one confessional group registered to vote. Those were Fekehe, Ain, Chaat, Al-Reesh, Sirine, Nabha, and Douris. All of them, with the exception of Douris, saw the majority of votes go to co-confessional candidates. Within all of these cadasters, large variations across confessional groups were apparent.

In all of Fekehe, Ain, Chaat, and Al-Reesh, there were large variations in the share of votes given to co-sectarian candidates across confessional groups, with Sunnis voting the least for co-sectarian candidates. In Fekehe, where 62% of voters cast a sectarian vote, 61% of Sunni voters and 68% of Greek Catholic voters voted for a co-confessional candidate. In Ain, where 67% of voters voted for a co-confessional candidate, 89% of Shia voters chose a Shia candidate and only 31% of Sunni voters voted for a Sunni candidate; and in Chaat, where 77% of voters voted for a co-sectarian candidate, 97% of Shia and only 23% of Sunni voters voted for a co-sectarian candidate—the Sunni vote in both Ain and Chaat was highly fragmented between candidates from different confessional groups. Finally, in Al-Reesh, where 90% of voters voted for a co-sectarian candidate, 94% of Shias chose a co-sectarian candidate, and only 4% of Sunnis did so. Instead, 78% of Sunni voters in Al-Reesh cast their vote for Shia candidate Jamil el Sayyed.

Among the other cadasters, 92% of voters in Sirine voted for a co-sectarian candidate, with the share being much higher among Shias (99%) and much lower among Maronites (70%). Most of the Maronite voters who did not vote for a co-sectarian candidate chose Greek Catholic candidate Michel Daher (17%), revealing a general bias toward Christian candidates. In Nabha, where 95% of voters chose a co-sectarian candidate, there were only slight variations, with 95% of Shias and 92% of Maronites voting for a co-sectarian candidate.

The last cadaster that had polling stations reserved for multiple groups was Douris, where only 37% of voters voted for a co-confessional candidate. However, even in Douris there were large variations across confessional groups. While 10% of Sunni and 19% of Shia voters chose

a co-confessional candidate, 75% of Maronites did so. Most Sunni and Shia voters who cast a preferential vote in Douris voted for the Maronite candidate Emile Rahme from the Hezbollah-Amal list (70% and 74%, respectively). Maronite voters, on the other hand, had a much higher preference for Antoine Habchi, who received 64% of their vote, while Emile Rahme only received 10%. The remaining Maronite votes in the cadaster went to Michel Daher (17%).

There were geographical variations in votes given to co-confessional candidates even among voters from the same confessional group. Among Shias, over 90% of voters voted for a co-sectarian candidate in 42 cadasters, out of which only four were heterogeneous. In those, Shias had a higher sectarian bias compared to other groups. Fourteen of the cadasters in Baalbek-Hermel saw less than 50% of Shia voters' preferential votes go to co-confessional candidates, and in all of these, the Shia vote tended to go to non-Shia candidates on the Hezbollah-Amal list. The lowest share of vote Shias cast for co-confessional candidates was in Halabta (13%), where they mostly voted for Sunni candidate Walid Sukkarieh (85%), followed by Douris (19%), where Maronite candidate Emile Rahme received most of the Shia vote (74%).

Among the other cadasters in which Shia voters showed a low confessional bias, Walid Sukkarieh was most successful in Zabboud, Al-Akadiya (he received 70% of the Shia vote in both), Wadi Faara, Al-Sawaniyeh, Nahle (Sukkarieh won over 60% of the Shia vote in all three), Beit Chama, and Kfar Dabach (where Sukkarieh also received the highest share of the Shia vote). In addition to Douris, Maronite candidate Emile Rahme won the majority of the Shia vote in Haouch El-Dahab (72%). Finally, Shia voters also had a low confessional bias in Nabi Osmane, Harabta, and Sbouba, where the majority voted for Greek Catholic candidate Albert Mansour.

Among Sunnis, who had their own polling stations in eight cadasters, the highest confessional bias was in Aarsal (86%) and Tfail (81%). In the city of Baalbek, the total share of votes Sunnis cast for Sunni candidates was also high (74%). However, there were large variations across different neighborhoods: Sunni voters were significantly more sectarian in Hay El-Solh (88%), Qalaa (78%) and Ghafra (73%), while they were much less so in Al-Reesh (4%), where most of them cast their preferential vote for Shia candidate Jamil el Sayyed (78%).

Sunni voters had a low confessional bias in Ain (31%) and Chaat (23%), where their vote was highly fragmented between candidates from different confessional groups, and no single candidate received the majority of their vote. However, Shia candidate Yahya Chammas was the most successful in both. The share of votes Sunnis cast for Sunni candidates was also low in Douris (10%), where they mostly voted for Maronite candidate Emile Rahme (70%). Ain, Chaat, and

Douris were highly heterogeneous cadasters, or had a very low share of Sunni voters registered, which may explain the lower confessional bias among this group.

Among Maronite voters, confessional biases were never below 70%. In the areas where less than 90% voted for a co-sectarian candidate, most of those who voted for a candidate of another sect chose Michel Daher (Greek Catholic), further revealing a bias toward Christian candidates. The lowest were in Sarine (70%), Douris (75%), and Chlifa (78%), where most of those who did not vote for a Maronite candidate voted for Michel Daher (17% in each). Less than 90% of Maronite voters also cast a confessional vote in Mazraat El-Sayed (83%).

There were larger geographical variations among Greek Catholic voters, and when they did not choose a co-confessional candidate, they mostly voted for Maronite candidate Antoine Habchi. Among the four cadasters in which polling stations were reserved for Greek Catholics, the lowest confessional bias was in Barbara, where only 17% voted for a co-sectarian candidate, and 59% voted for Habchi. The cadaster in which Greek Catholics gave the highest share of their votes to Greek Catholic candidates was Ras Baalbek (67%), followed by Fekehe (58%), where Habchi still ranked first. Finally, in El Qaa, 50% of voters voted for a co-sectarian candidate, and similarly, Habchi was most successful.

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

Apart from these variations in specific cadasters, some factors seem to have affected voters' decisions to vote for co-sectarian candidates.

In Baalbek-Hermel, the percentage of votes given to co-sectarian candidates significantly increased as the level of sectarian homogeneity in a cadaster increased—from an average of 60% in the most heterogeneous cadasters to 90% in the most homogeneous ones. This factor is statistically significant even after controlling for voters' gender and confession. This may point to candidates' higher capacity to mobilize their main constituents in more homogeneous areas, where they can rely on support from a higher number of voters.

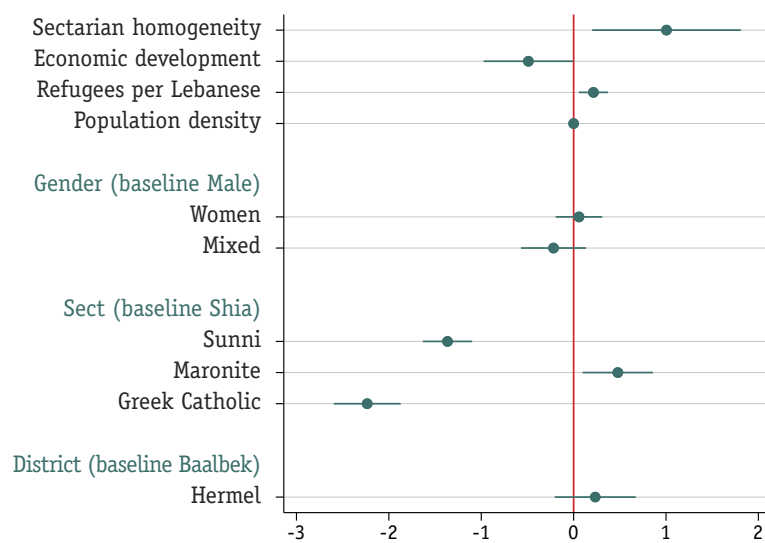
Figure 15 Sectarian homogeneity by cadaster and percentage of votes for co-sectarian candidates



Another significant factor was the level of economic development in a cadaster: Voters registered in cadasters with lower levels of economic development were more likely to vote for a co-sectarian candidate. In addition, voters registered in cadasters with a higher concentration of refugees were significantly more likely to vote for a co-sectarian candidate.

Across sectarian groups, Shia and Maronite voters were the most likely to vote for a co-sectarian candidate, while Greek Catholics were the least likely to do so.

Figure 16 Drivers of votes for co-sectarian candidates in Baalbek-Hermel



V How did women candidates perform?

Five women candidates ran in Baalbek-Hermel, who altogether obtained less than 1% of the preferential votes (1,556 votes), with one candidate, Siham Antoun, receiving most of these.

None of the women candidates belonged to or were affiliated to a party. The Kataeb-independents list had two women: Waad Soukarieh (Sunni, 37 votes) and Leila Tannoury (Maronite, 109 votes). The Independent list had one woman candidate, Siham Antoun (Greek Catholic, 1,123 votes), and the FPM-Ba'ath-independents list had two: Sandrella Merhej (Maronite, 128 votes) and Ghada Assaf (Shia, 159 votes).

Across the district of Baalbek-Hermel, the votes received by Siham Antoun were mostly spread between Ras Baalbek (275 votes), Ain (179 votes), and Aarsal (53 votes). She won less than 50 votes in all other cadasters. Ghada Assaf's highest score was only 20 votes in Tamnine, followed by 17 in Hadath; while Sandrella Merhej's highest was 13 votes in Fekehe, followed by 12 in Hizzine. Half of the votes Waad Soukarieh won came from voters in Fekehe (26 votes), while a quarter of Leila Tannoury's votes were cast in Chlifa (25 votes).

There were no variations in the performance of women candidates across genders, however, voters who cast their ballot for a woman showed a confessional bias

Both men and women voters gave slightly less than 1% of their preferential votes to women candidates—and an equal number of men and women voted for a woman candidate (626 each). The share was also similar in polling stations that had both genders registered to vote (slightly less than 1% of preferential votes, equivalent to 192 votes). There were some variations in the votes cast for each of the women candidates, with Siham Antoun and Ghada Assaf being slightly more successful among women voters, and Sandrella Merhej, Leila Tannoury, and Waad Soukarieh slightly more successful among men voters.

Table 6 Number of votes for each woman candidate by gender in Baalbek-Hermel

Voters' gender	Siham Antoun	Ghada Assaf	Sandrella Merhej	Leila Tannoury	Waad Soukarieh
Men	446	51	60	49	20
Women	471	67	39	34	15
Mixed gender	125	27	15	25	0

There were variations in support for women candidates across confessional groups. The highest level of support was among Greek Catholic voters (318 votes, 5%). Sunni voters followed (279 votes, 1.5%), while the shares were much lower among Maronite (56 votes, 0.6%) and Shia voters (567 votes, 0.5%). These variations are statistically significant even when controlling for voters' gender and characteristics of the cadasters they were registered in, such as level of confessional fragmentation and economic development.

Most of those who voted for a woman candidate chose Siham Antoun, except Maronites who had a preference for Leila Tannoury, their co-confessional candidate. Despite the generally higher support for Antoun, all voters who voted for a woman candidate showed a confessional bias. For example, the Sunni woman candidate Waad Soukariah received her highest share of votes from Sunni voters (20 out of the 35 votes she won among residents). Shia woman candidate Ghada Assaf received the highest share of her votes from Shia voters (95 out of the 145 votes she won among residents), and Maronite candidates Leila Tannoury and Sandrella Merhej, despite receiving a slightly larger share of votes from Shia voters, were much more successful among Maronites than the other women candidates. Greek Catholic voters who voted for a woman overwhelmingly voted for Siham Antoun (293 out of 318 votes).

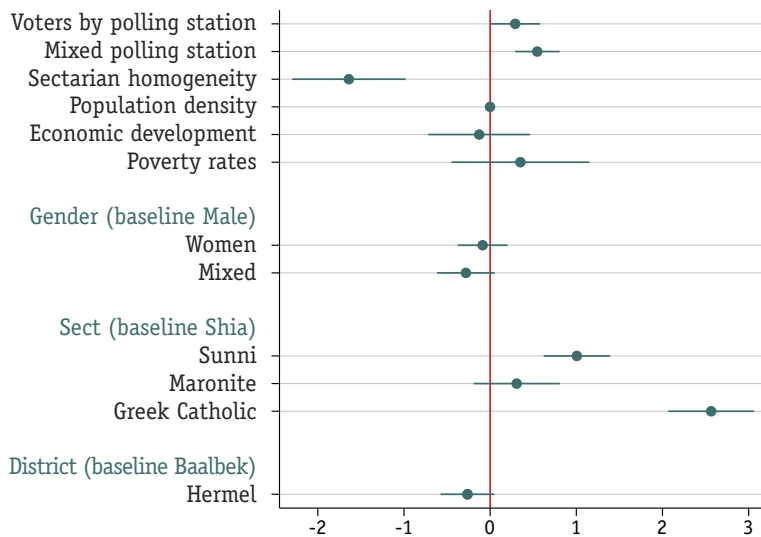
Table 7 Number of votes for each woman candidate by confessional group in Baalbek-Hermel

Voters' sect	Siham Antoun	Ghada Assaf	Sandrella Merhej	Leila Tannoury	Waad Soukariah
Shia	383	95	50	33	6
Sunni	236	7	6	10	20
Maronite	8	4	15	29	0
Greek Catholic	293	5	13	4	3
Mixed confession	122	34	30	32	6

What are the drivers of votes for women candidates?

Although women candidates were highly unsuccessful in Baalbek-Hermel, some factors seem to have affected their results. Women candidates generally received better results in more heterogeneous cadasters. Across specific polling stations, larger and confessionally-mixed polling stations saw a larger share of votes cast for women candidates. When controlling for these factors, Greek Catholic voters were the most likely to vote for a woman, while Shias were the least likely to do so.

Figure 17 Drivers of votes for women candidates in Baalbek-Hermel



VI How did emerging political groups perform?

The independent list in Baalbek-Hermel had seven candidates and received 4,053 votes, or 2% of the vote. The list was slightly more successful among diaspora voters, receiving 3% of their vote.¹⁹

The candidates in the list were Siham Antoun (Greek Catholic, 1,123 votes), Samih Ezzeddine (Sunni, 927 votes), Ali Hamade (Shia, 780 votes), Abdallah al-Chall (Sunni, 416 votes), Ali Zaiter (backed by the Communist party, Shia, 336 votes), Abbas Yaghi (Shia, 193 votes), and Chawki al-Fakhri (Maronite, 131 votes).

Similar to other lists, there were geographical variations in the success of the independent list across cadasters. It won a large share of votes in Ras Baalbek (290 votes, 12%), Aarsal (872 votes, 10%), and Ghafra (185 votes, 9%). It won its highest share in Wadi Safa Sharki (16%), although that is equivalent to only 48 votes. The list also won between 5% and 6% of votes in Ain (221 votes), Fekehe (120 votes), and the smaller towns of Hizzine, Al-Ansar, Al-Taybe, Ouadi El-Nayra, and Kobbit Dors (between six and 41 votes, for a total of 83 votes).

Minor variations in support for the list across genders

Across genders, both male and women voters gave 2% of their votes for the independent list, with the share among men being only 0.3% higher. Overall, the list received a higher number of its votes from polling stations that had men registered to vote (1,739 votes) than from those that were reserved for women (1,669 votes). In polling stations that serviced both genders, 1% of voters voted for the list (465 votes). Support for each of the candidates in the list varied slightly across

¹⁹

Note that these votes among emigrants only represent 50 votes.

genders. Siham Antoun, Ali Hamade, and Ali Zaiter were more successful among women voters, while Samih Ezzeddine, Abdallah al-Chall, Abbas Yaghi, and Chawki al-Fakhri received a higher number of votes from men voters. The differences in the number of votes for each candidate were not significantly large with the exception of those for Samih Ezzeddine: 480 men cast their preferential vote for Ezzeddine, compared to 354 women.

Table 8 Number of votes for the independent list and each of its candidates by gender in Baalbek-Hermel

Voters' gender	Independent list	Siham Antoun	Samih Ezzeddine	Ali Hamade	Abdallah al-Chall	Ali Zaiter	Abbas Yaghi	Chawki al-Fakhri
Men	1,739	446	480	309	179	117	89	60
Women	1,669	471	354	338	153	157	83	50
Mixed gender	465	125	76	102	65	54	14	14

There were significant variations across confessional groups, and candidates performed best among their sectarian communities

There were much larger variations in the support for the independent list across confessional groups. Sunni voters voted for the independent list the most (8%), and were followed by Greek Catholics (5%), while Shia and Maronite voters voted far less for the list (1%). In mixed stations, 1% of voters voted for the list. Variations across confessional groups are statistically significant: Sunni and Greek Catholic voters were more likely to vote for the list compared to Shia and Maronite voters, even when controlling for geographical-level characteristics.

Out of the 3,873 votes received among residents,²⁰ the highest share came from Sunni stations (1,559 votes, 40% of the list's votes), followed by Shia stations (1,511 votes, 39%). The list received 8% of its votes from Greek Catholic stations (314 votes), but only 2% from Maronite ones (95 votes). The remaining 10% came from voters in mixed stations (394 votes).

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The list also won 130 votes in stations that had public employees registered to vote.

Table 9 Number and percentage of votes for the independent list by confessional group in Baalbek-Hermel

	Number of votes	Share of votes
Shia	1,511	1%
Sunni	1,559	8%
Maronite	95	1%
Greek Catholic	314	5%
Mixed confession	394	1%

Note Percentages have been rounded up.

Apart from these variations in support for the list overall, voters were generally more supportive of their co-sectarian candidates. The most successful candidate in the list, Siham Antoun, received a high share of votes among most confessional groups, except for Maronites. She was by far the most successful among Greek Catholic voters, her co-confessional voters, receiving nearly 5% of their preferential vote and ranking fifth among this group out of all the candidates in the district. Nearly all Greek Catholic voters who voted for the list cast their preferential vote for Antoun (293 votes), and nearly a third of her votes came from Greek Catholic stations (in contrast to less than 1% for other candidates). Among other confessional groups, Antoun was the second most successful candidate, therefore generally enjoying more widespread support than the other candidates on her list. A high number of Shia and Sunni voters cast their ballot for her (383 and 236, respectively), but a very low number of Maronites did so (eight votes). In mixed polling stations, she also won a high number of votes (122 votes).

Antoun's performance varied across geographical areas. Out of the 1,042 votes she won among residents,²¹ a quarter came from voters in Ras Baalbek (275 votes, 12% of preferential votes). She was able to obtain votes in Ain (179 votes, 5%), and in Aarsal (53 votes, 1%).

The candidate who ranked second on the list was Samih Ezzeddine. He was only successful among Sunni voters—his co-confessional constituents—and won nearly 5% of their preferential vote. Nearly all of the votes Ezzeddine received were cast in polling stations that serviced Sunni voters (895 votes), and nearly 60% of Sunni voters who voted for the independent list cast their preferential vote for him. By contrast, he was the least successful candidate on the list among other confessional groups.

Most of Ezzeddine's votes came from voters in Aarsal, where he won 761 of the 910 votes he won among residents, representing 9% of preferential votes in the cadaster. Among all the candidates in Baalbek-Hermel, only Bakr Al-Hujairi won a higher number of votes than Ezzeddine in Aarsal. Ezzeddine was only able to win over 50 votes in Fekehe (58 votes).

Similar to Samih Ezzeddine, the second Sunni candidate Abdallah al-Chall was more successful among the Sunni community, receiving 1% of their preferential vote (218 votes). He also won a substantial share of his votes from Shia voters (123 votes), as well as voters in mixed stations (53 votes), with only three votes being cast for him in Maronite and Greek Catholic stations. Out of the 397 votes al-Chall obtained among residents, nearly one third were cast in Ghafra (124 votes, 6%).

The Shia candidate Ali Hamade was significantly more successful

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This excludes the number of votes Siham Antoun won among public employees. All of the votes won among residents mentioned throughout this section also exclude those obtained from public employees.

than others in capturing the Shia vote. Nearly 70% of the votes he won among residents were cast by Shia voters (518 votes, 0.5% of their preferential vote). He also ranked first among voters in mixed stations who voted for the list (130 votes), and received a high number from Sunni voters (96 votes). Out of the 749 votes he won among residents, the largest share came from voters in Chaat (113 votes, 4%), followed by those in the city of Hermel (107 votes). He also won over 50 votes in Brital (72 votes) and Hadath (53 votes).

The second Shia candidate Ali Zaiter also received the highest share of his votes from Shia voters: Out of the 328 votes he won among residents, 266 came from Shia stations (0.2% of their preferential vote). He barely received any votes from other groups, with most of the remainder of his votes coming from voters in mixed stations (44 votes). The highest share of his votes came from voters in Qasr alone (114 votes, 3%) and the city of Hermel (71 votes).

Similarly, the third Shia candidate Abbas Yaghi was most successful among the Shia community, receiving 130 of his 186 votes among residents from Shia voters (0.1% of their preferential vote). He won a few votes from Sunnis (42 votes), and barely any from all other polling stations. Across neighborhoods, he won his highest number of votes in Al-Reesh (83 votes).

Finally, the last candidate in the list, Maronite Chawki al-Fakhri, received an overwhelming majority of his votes from Maronite voters. Among the 88 Maronite voters who chose a candidate in the independent list, 75 voted for him (1% of their preferential votes). He was also the fourth most voted for candidate among Maronite voters. Most of the remaining votes he obtained were cast by Shia voters (35 votes), while winning less than 15 votes from voters in all other polling stations. Out of the 124 votes he won among residents, 53 were cast in Deir El-Ahmar (1% of their preferential votes).

Overall, each of the candidates in the independent list performed best and obtained the majority of their votes from their co-confessional voters. Siham Antoun, however, had the most diverse voter base and received a high level of support from all confessional groups. While she ranked first only among Greek Catholics who voted for the list, she ranked second among all other confessional groups.

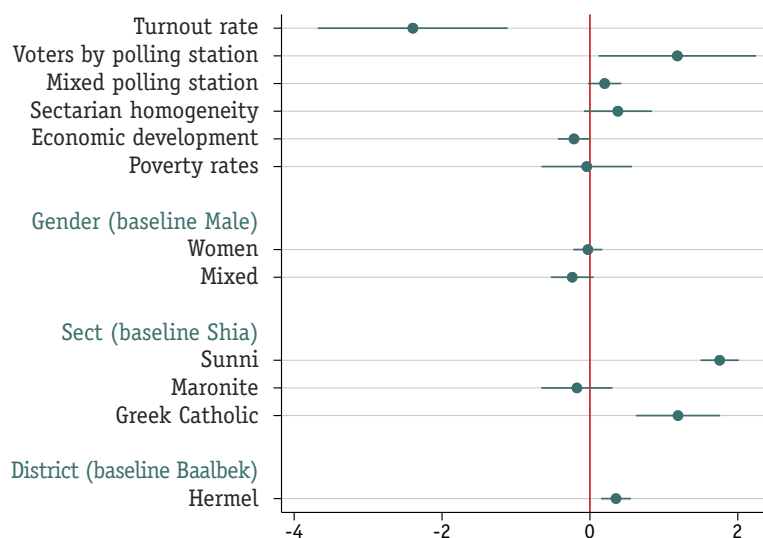
Table 10 Number of votes for each candidate on the independent list by confessional group in Baalbek-Hermel

	Siham Antoun	Samih Ezzeddine	Ali Hamade	Abdallah al-Chall	Ali Zaiter	Abbas Yaghi	Chawki al-Fakhri
Shia	383	5	518	123	266	130	35
Sunni	236	895	96	218	15	42	5
Maronite	8	0	2	2	0	1	75
Greek Catholic	293	0	3	1	3	1	1
Mixed confession	122	10	130	53	44	12	8

What are the drivers of votes for the independent list?

When controlling for voters' confession, the independent list tended to do better in polling stations with lower turnouts. This may suggest that those who voted more for them were those who were not specifically targeted by parties, thus showing that the list's results were partly affected by the failure of parties to mobilize voters. Voters in bigger polling stations also tended to vote more for the list, which could indicate traditional parties' lower interest in mobilizing voters registered in larger polling stations. As previous evidence suggests, political parties have a higher interest in mobilizing voters registered in smaller polling stations, as the lower number of voters facilitates monitoring. The potential lack of pressure to vote for specific political parties may therefore have driven the votes for the independent list in the larger polling stations. Across confessional groups, when controlling for geographical-level characteristics, Sunnis and Greek Catholics were more likely to vote for the list compared to Shia and Maronite voters.

Figure 18 Drivers of votes for the independent list in Baalbek-Hermel



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. Fraud can also occur during the vote aggregation process when there is collusion between certain candidates—usually the more connected ones—and election officials. Voter rigging, or pressuring voters to cast ballots in a certain manner, tends to occur more in small 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 they were manipulated in a non-random manner.

The distribution of turnouts followed an irregular pattern

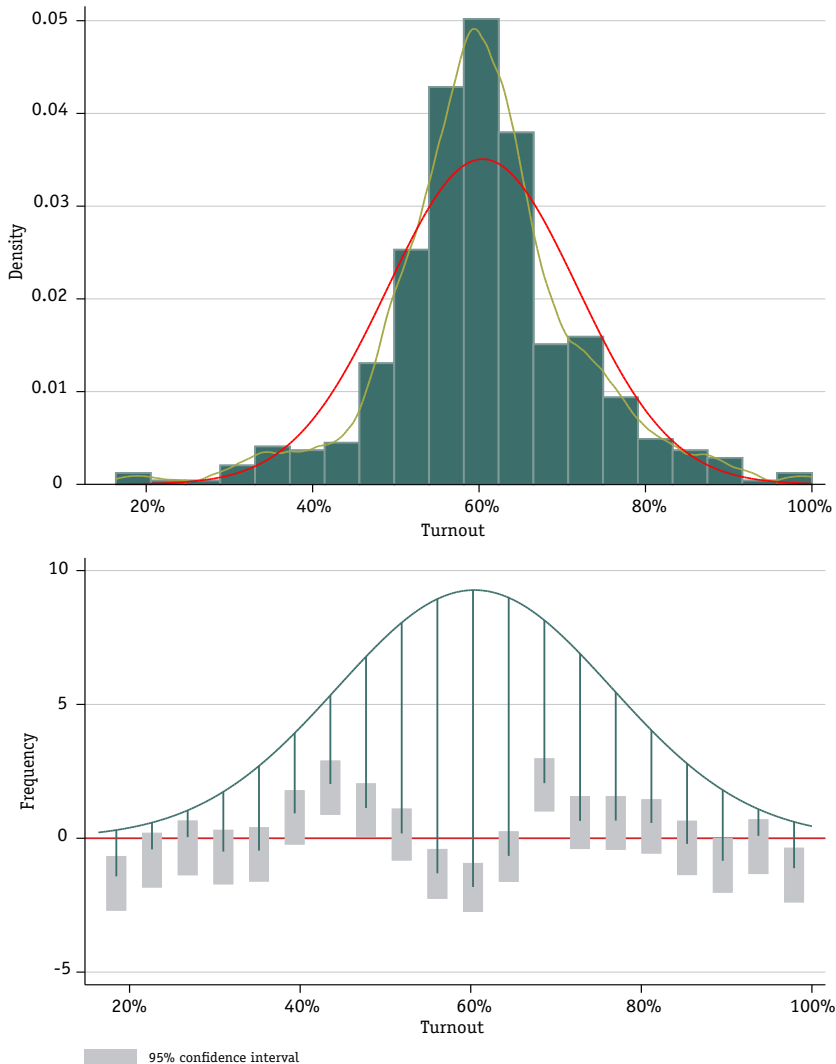
Turnout usually has a normal bell-shape curve, with the majority of polling stations having turnouts close the average and with few stations in the extreme ends. The average turnout across the 570 polling stations in Bekaa 3 was 60%, ranging from 16% to 100%.²² In Bekaa 3, there was a higher number than expected of polling stations with very low and very high turnouts (below 20% and above 80%), as well as an abnormally higher number of stations with mid-turnouts. The number of centers with mid-high and mid-low turnouts was much lower than expected. When comparing the actual distribution with the normal bell-shape curve, the differences are statistically significant.

Behind this irregular pattern, potential irregularities could have taken place—such as pressure to vote or ballot stuffing.

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

Figure 19 Distribution of turnout rates by polling station in Baalbek-Hermel



There are signs of voter rigging

Voter rigging occurs when political parties use coercive measures to influence voters' behavior. The literature on election irregularities distinguishes vote rigging from vote buying, when coercion is not evident in the latter case. 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 for politicians buying votes or exerting some kind of pressure on voters because smaller groups of voters facilitates aggregate monitoring of whether voters cast their ballots, and for whom.²³

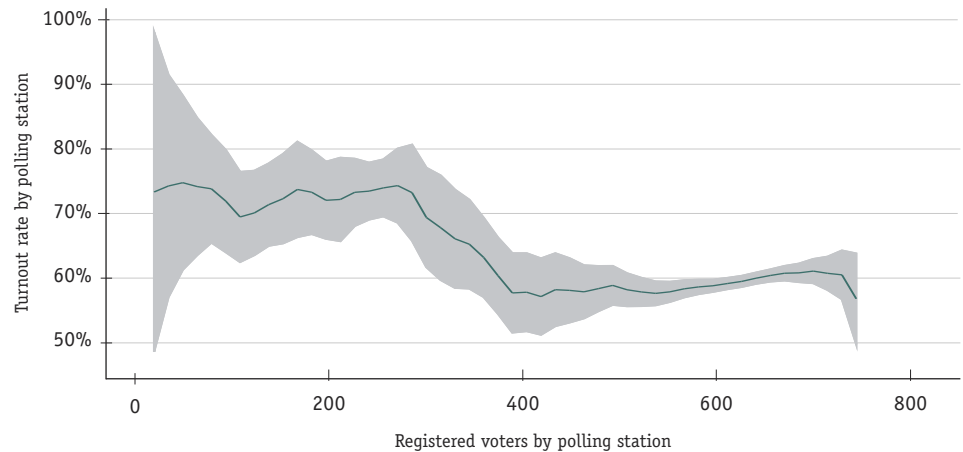
In Baalbek-Hermel, turnout rates tended to decrease as the size of polling stations increased. While polling stations with 400 or more registered voters had a relatively constant turnout rate of 58%-60%, in the 45 small polling centers, that had 300 registered voters or less,

23

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

average turnouts were significantly higher, from 70% to 75% on average. The clear correlation between the size of the polling station and turnout rates in Baalbek-Hermel might suggest higher voter mobilization through external pressure to vote, such as vote buying.

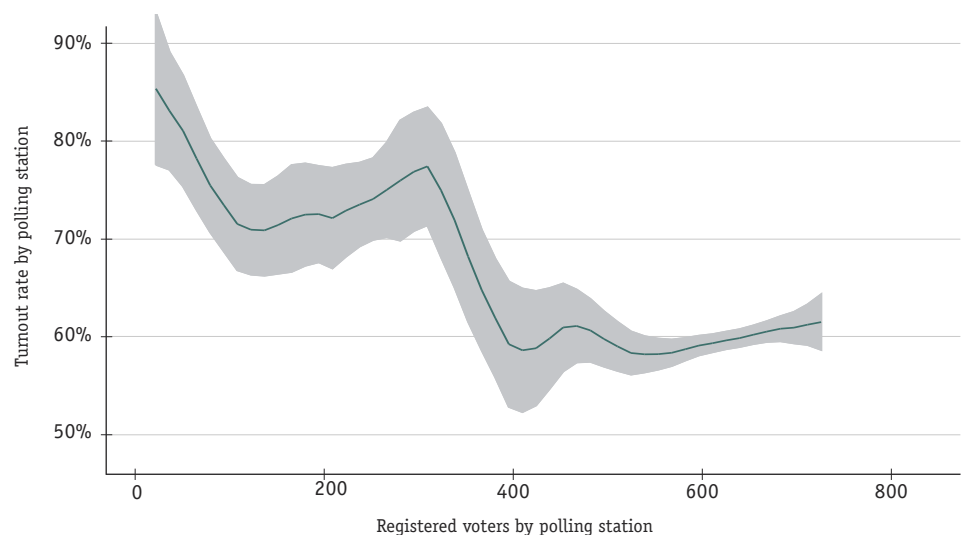
Figure 20 Polling station size and turnout rates in Baalbek-Hermel



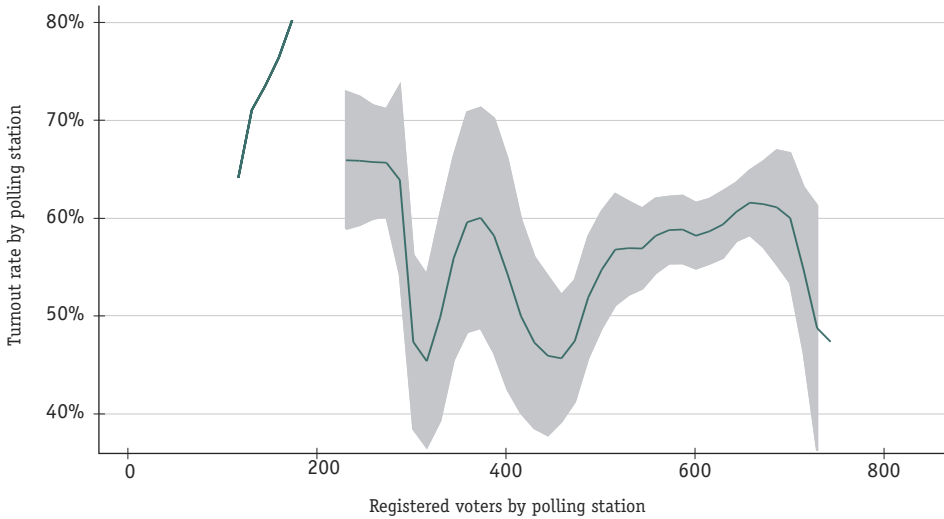
Moreover, given that registered voters are mostly segregated by confession and gender, political parties may have higher interest in targeting voters in specific polling stations where their constituents are registered to vote. Comparing the relationship between the size of the polling station and turnouts between homogeneous and mixed stations shows that the relationship was clearer in homogeneous stations. While this relationship existed in both homogeneous and mixed centers, it was much more pronounced in homogeneous ones, which may suggest that parties targeted specific constituents.

Figure 21 Polling station size and turnout rates by type of polling station

a Homogeneous stations

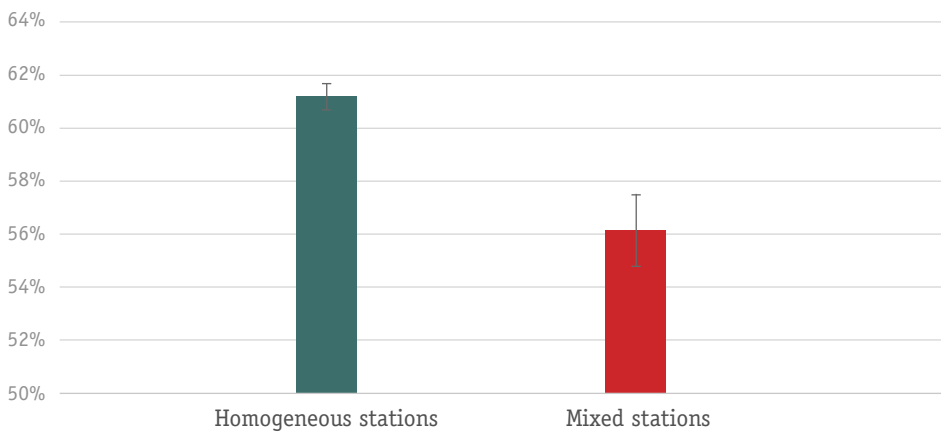


b Mixed stations



Regardless of the size of the polling station, on average, polling stations with more than one sect registered to vote had significantly lower turnouts: 56% compared to 61% in homogeneous stations.

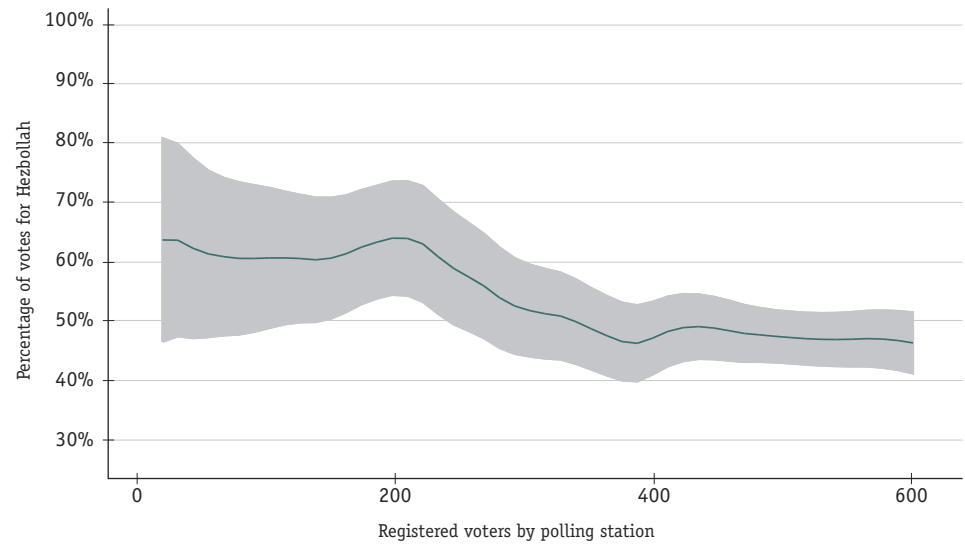
Figure 22 Turnout in homogeneous versus mixed polling stations



Given this correlation between polling station size and turnout, looking at the performance of each 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. Hezbollah candidates benefited the most from smaller polling stations, as the percentage of votes cast for the party's candidates steadily decreased as the size of the polling station increased. As voter behavior in smaller stations is easier to monitor, the relationship between the size of the polling station and

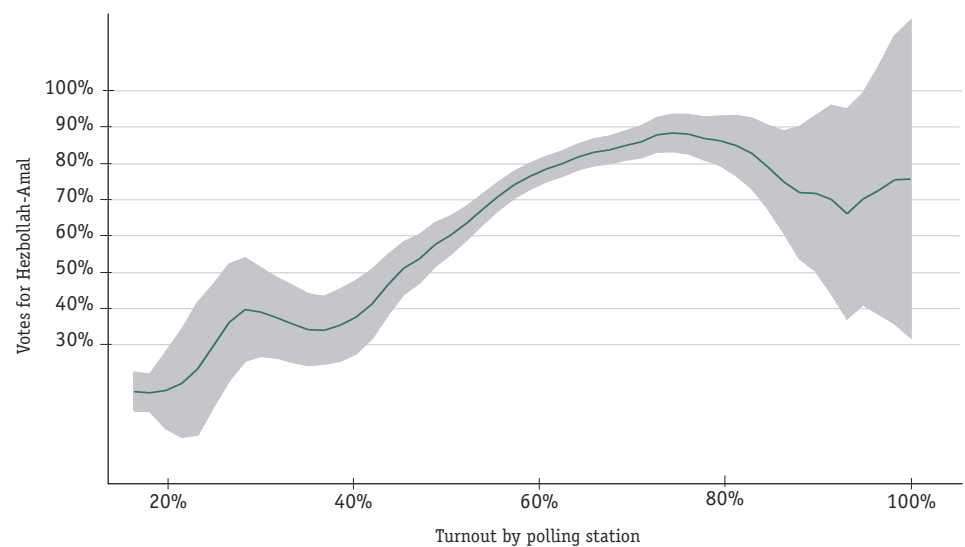
votes for Hezbollah candidates may suggest that they exerted pressure on voters in these stations to influence their behavior.

Figure 23 Polling station size and percentage of votes for Hezbollah



The Hezbollah-Amal list also seems to have benefited from higher turnouts by polling station. This could be due to its more effective mobilization of voters, possibly through voter rigging. A positive relationship between turnouts and votes for a list could also be due to ballot stuffing, since adding ballots for a list would increase turnouts in a polling station.

Figure 24 Turnout by polling station and percentage of votes for the Hezbollah-Amal list



Higher turnouts in a polling station associated with an increase in votes for a specific list could be due to its higher successful mobilization of its specific constituents—in the case of Hezbollah-Amal, Shia voters, who had the highest turnout in Baalbek-Hermel. In order to take into consideration that variations in turnouts and votes for each list by polling station are not driven by one specific confessional group, we create standardized variables of turnout rates and percentage of votes for each list. 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 centers. This measures how abnormally low or high the turnout in a polling station is compared to all other centers within the same sect. The standardized measures of share of votes for lists and parties would 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.²⁴

Hezbollah benefited from very high turnouts, which could suggest fraudulent behavior

Accounting for the differences in the share of votes for each party and turnouts among each confessional group shows significant variations in the percentage of votes obtained by each party between polling stations that had abnormally low (one standard deviation below the mean turnout by polling station), normal, and abnormally high turnout centers (one standard deviation above the mean).

Both Hezbollah and Amal obtained a significantly higher share of votes in polling stations that had abnormally high turnouts, and a significantly lower one in stations that had abnormally low turnouts. Compared to Hezbollah’s share of votes obtained in polling stations that saw normal turnouts (57%), its share of votes was 5% higher in centers with abnormally high turnouts (62%), and 18% lower in centers with abnormally low turnouts (38%). Amal’s share of votes was 2% higher in centers with very high turnouts (11%), and nearly 4% lower in those with very low turnouts (6%), compared to the share it obtained in centers with normal turnouts (9%).

On the other hand, LF and FPM candidates performed significantly better in polling stations with abnormally low turnouts, where the share of votes received by LF were 15% higher than they were in centers with normal turnouts (23% compared to 8%), and those for FPM were 3% higher.

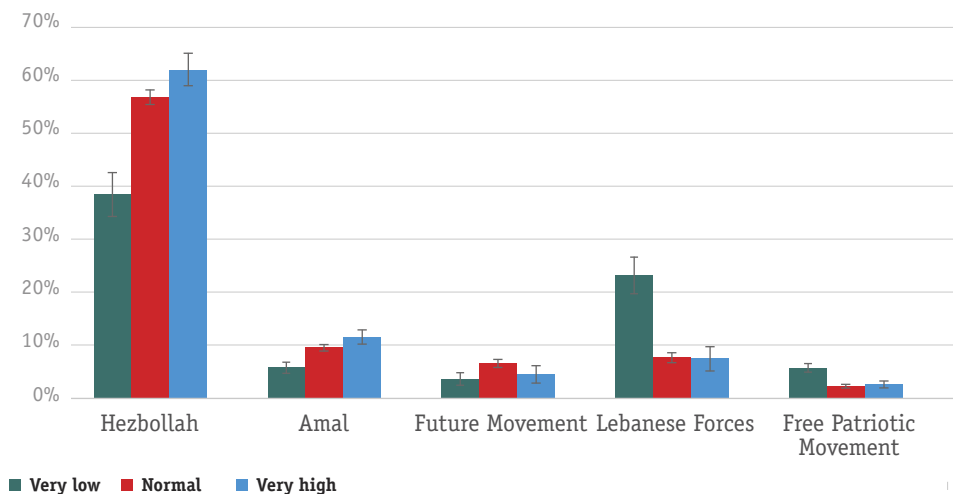
This may suggest that Hezbollah and Amal may have exerted some form of pressure on their supporters to vote, or were involved in ballot stuffing. It could also suggest that LF and FPM performed better

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

among constituents who were not specifically targeted by Hezbollah and Amal. However, this could also simply be due to their weaker mobilization of voters.

Figure 25 Percentage of votes for parties and standardized turnout rates in Baalbek-Hermel



Higher turnouts being associated with a higher share of votes for a party could also suggest ballot stuffing, as adding ballots for a party would increase both turnouts and votes for this specific party in a polling station.

There are signs of ballot stuffing that benefited candidates on the Hezbollah-Amal list

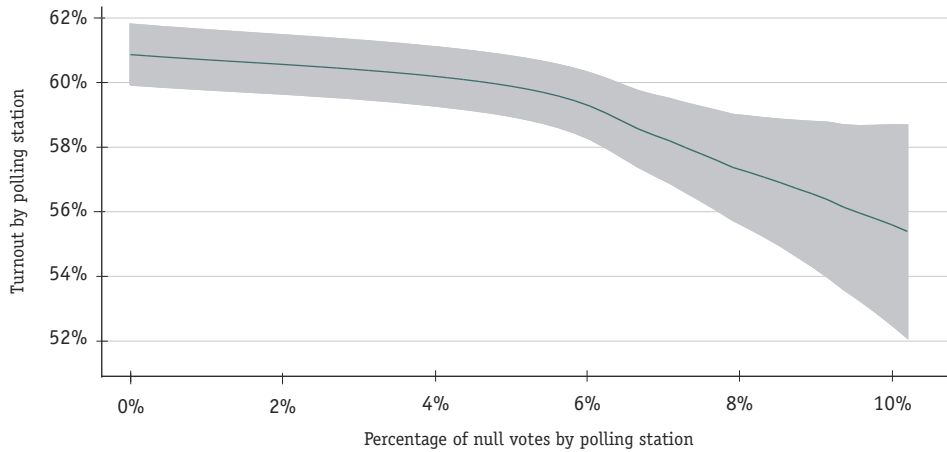
One method of testing for signs of ballot stuffing is determining how the percentage of null votes in a polling station correlates with the turnout, as well as the percentage of votes that a party obtained. Previous evidence has shown that when political parties add ballots they tend to forget to include a similar proportion of invalid votes.²⁵ Potential irregular behaviors can be identified by looking at the correlation between the percentage of null votes, turnouts, and votes for a list or party. 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 rather be ‘protest’ votes. Stronger evidence of ballot stuffing would be apparent in cases where the increase in the percentage of null votes is smaller than the decrease in the percentage of votes for a list or party.

In Baalbek-Hermel, there is a weak negative relationship between turnout and the percentage of null votes by polling station, as a 10% increase in the percentage of null votes was associated with a 5% decrease in turnouts (from 61% to 56%).

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

Figure 26 Turnout and percentage of null votes by polling station in Baalbek-Hermel

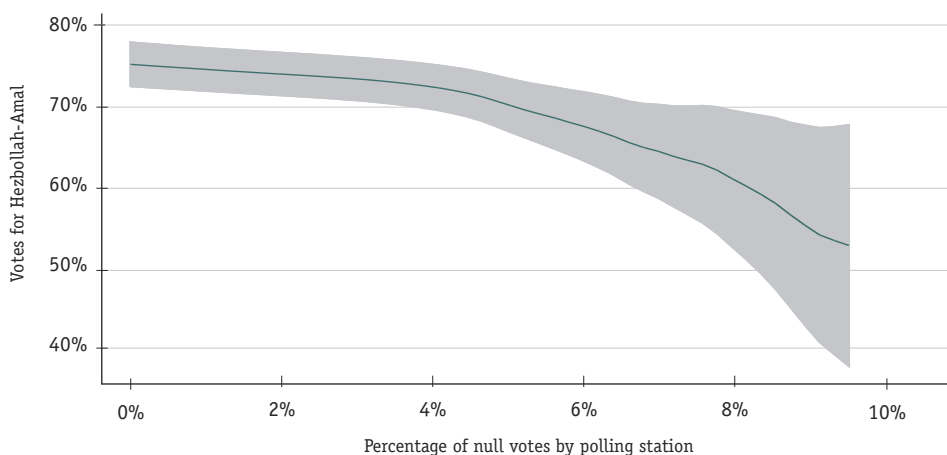


Comparing the relationship between the percentage of null votes and votes for each party in a polling station can also reveal voting irregularities. The Hezbollah-Amal list received a much higher percentage of votes in polling stations that saw a low percentage of null votes. In stations where less than 5% of votes were null, the list obtained over 70% of votes, while its share of votes steadily decreased, reaching an average of 53% of votes in polling stations where nearly 10% of votes were null. A 10% increase in the share of null votes was therefore associated with a 17% decrease in votes for the Hezbollah-Amal list, suggesting ballot stuffing. These relationships were observed for both parties.

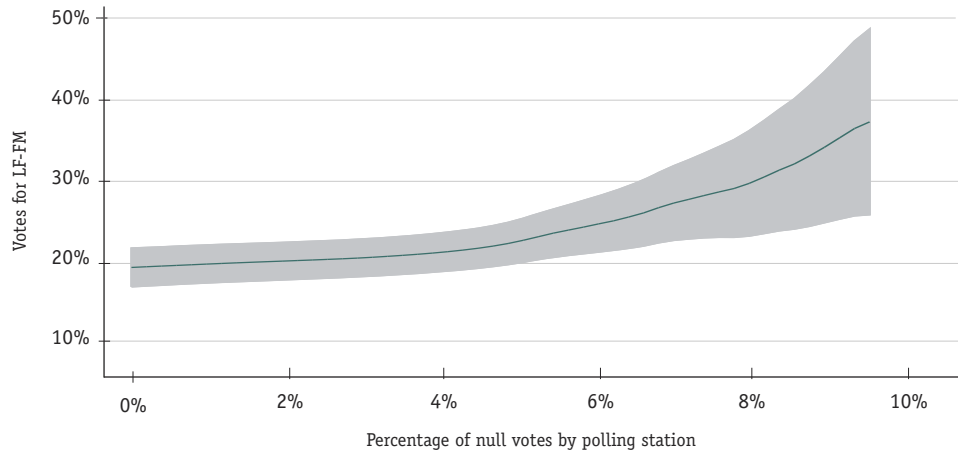
On the other hand, the relationship was the exact opposite for the LF-FM list, whereby the list tended to receive 20% of votes in stations that had a low share of null votes, and 37% in those that had a high share of null votes. A 10% increase in the share of null votes was therefore associated with a 17% increase in votes for the LF-FM list.

Figure 27 Percentage of null votes and votes for the winning lists in Baalbek-Hermel

a Percentage of null votes and votes for the Hezbollah-Amal list in Baalbek-Hermel



b Percentage of null votes and votes for the LF-FM list in Baalbek-Hermel



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 votes for a party.²⁶ 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 valid, as a small vote count may lead to an oversample of zeros and ones, shows that there is no strong evidence of vote re-shuffling. However, the last digits in the number of votes for the Hezbollah-Amal list diverged from the uniform distribution. This was particularly the case in homogeneous polling stations, where there was a lower number of votes ending in zero and four, and a higher number of votes ending in five than expected.²⁷

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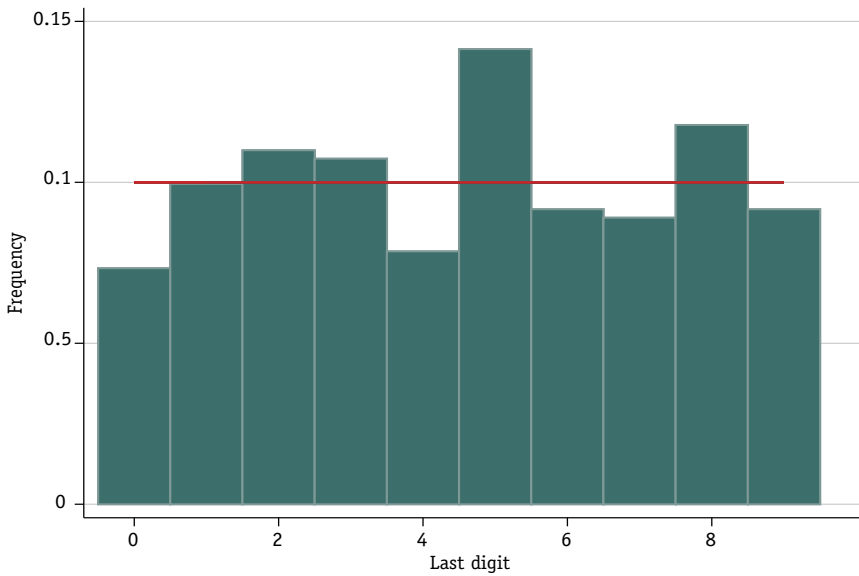
Beber, B. and A. Scacco. 2012. ‘What the Numbers Say: A Digit-Based Test for Election Fraud.’ *Political Analysis*, 20(2): 211-234.

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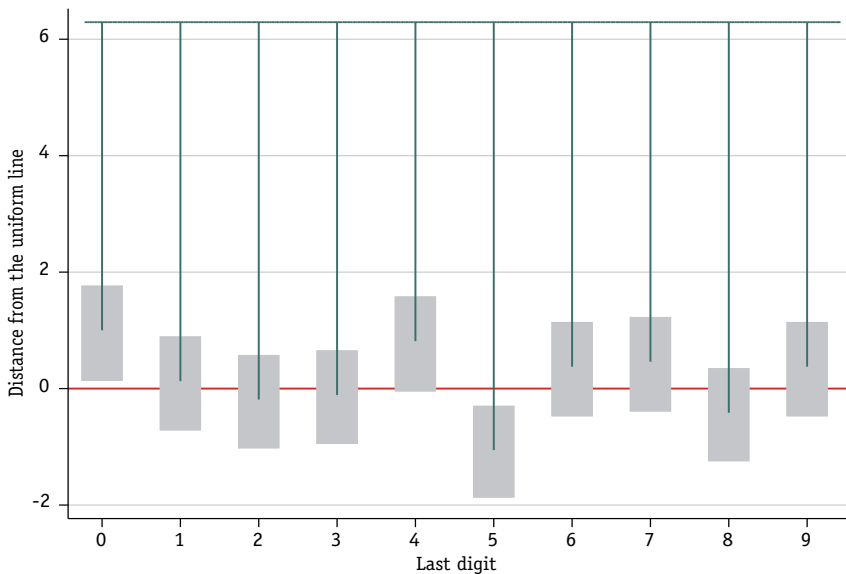
P-value of 0.08.

Figure 28 Distribution of last digits in the number of votes for the Hezbollah-Amal list in homogeneous polling stations

a Frequency of last digits



b Distribution of last digits compared to a uniform distribution



Overall, in Baalbek-Hermel, there are some signs of fraud on the part of Hezbollah-Amal

There are some signs of irregularities that benefited candidates on the Hezbollah-Amal list. Different tests suggest incidents of vote buying, ballot stuffing, as well as vote counting manipulations.

First, turnout tended to decrease as the size of a polling station increased. Previous evidence has shown that polling stations with

fewer voters are more attractive for politicians since the smaller number of voters facilitates aggregate monitoring of their behavior. This relationship therefore suggests that politicians may have exerted pressure on voters to vote.

Looking at each party in Baalbek-Hermel shows that Hezbollah candidates benefited from small polling stations, suggesting that they may have exerted pressure on voters to vote for them, potentially through vote buying and monitoring.

Second, in regular elections, votes for a party should not significantly differ between polling stations with varying turnouts. However, Hezbollah and Amal candidates performed significantly better in very high turnout centers. This could suggest pressure to vote through, for example, vote buying, or ballot stuffing on the part of the two parties. The opposite relationship was observed in votes for LF, FM, and FPM, which could suggest that these parties performed better when constituents were not specifically targeted by Hezbollah and Amal, although it may simply be due to their lower mobilization of voters.

One way to test for ballot stuffing is to look at the correlation between the percentage of null votes and votes for a party. Previous evidence has shown that when political parties add ballots, they tend to forget to include a similar share of invalid votes. Seeing a significant decrease in votes for a party associated with an increase in the share of null votes in a polling station would provide some evidence of ballot stuffing. Looking at the relationship between the percentage of null votes and votes for each list by polling station shows that the Hezbollah-Amal list's votes significantly decreased as the percentage of null votes increased, suggesting ballot stuffing.

Another way to test for ballot stuffing, or vote rigging 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, the distribution of last digits in votes for a list or party should be uniform, i.e. each last digit should have an equal chance to appear. In Baalbek-Hermel, the last digits in the number of votes for the Hezbollah-Amal list diverged from the uniform line, providing further evidence of ballot in stuffing.