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

Bekaa 1 Electoral District: Zahle

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Zahle

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Executive Summary

In the Lebanese parliamentary elections of 2018, the district of Zahle saw a highly competitive race, with candidates from three electoral lists making it to parliament. Each party had its own constituents, with Hezbollah owing its support to the Shia community, the Future Movement to the Sunni community, and the Free Patriotic Movement and the Lebanese Forces to Christian communities. Participation rates in the district were higher than the national average, and varied across confessional groups and gender: Shia voters were the most mobilized, while Armenian voters were the least mobilized, and women were significantly more likely to vote than men. There were large disparities in turnouts across geographical areas among voters from the same sectarian groups, and generally, voters in more homogeneous areas were significantly more likely to vote compared to those in more confessionally fragmented areas. Areas with lower levels of economic development tended to see significantly higher turnout rates, as well. These same factors also affected voters' preferences for candidates from their same confession. The majority of voters in Zahle cast their preferential vote for a co-sectarian candidate, and while there were variations across confessional groups, voters in areas with higher levels of sectarian homogeneity and those in areas with lower levels of economic development were significantly more likely to cast a sectarian vote. Even those who voted for the independent list Kulluna Watani exhibited a sectarian bias, with each of the candidates performing better among their sectarian community. Apart from this, Kulluna Watani's results were negatively affected by high turnouts and high levels of sectarian homogeneity, showing that the list's limited success was partly determined by sectarian parties' capacity to mobilize voters.

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 electoral district levels. Using the official elections results at the polling station level published by the Ministry of Interior,[1] the analysis unpacks the elections results and

examines differing patterns in voting behavior across demographic characteristics and geographical areas. The results at the polling station 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 Zahle (Bekaa 1), which is allocated seven parliamentary seats—two Greek Catholic, one Sunni, one Shia, one Maronite, one Greek Orthodox, and one Armenian Orthodox. The report is divided into seven sections. First, we present the demographic distribution of registered voters in Zahle. The second section analyzes voter turnout, which showed to vary across confessional groups, gender, and cadastral areas. The third section of this report delves into voters' preferences for political parties and candidates. Going beyond the results at the aggregate level, we shed light on the varying preferences for parties and candidates across voters' sect and gender and across geographical areas in Zahle, and how these preferences 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, while the sixth section looks at the performance of the Kulluna Watani list, formed by anti-establishment political actors. The seventh and final section of this report identifies incidents of electoral fraud. Using a number of statistical methods—which include analyzing the distribution of results at the polling station-level, such as turnouts, votes for each list and party, and the share of invalid ballots—we test for voter and vote rigging, such as pressure to vote through vote buying, or manipulations in the vote counting process.

[2]
Note that some polling stations had voters from multiple confessional groups registered to vote. Similarly, some had both men and women registered to vote.

[3]
Obtained from the National Oceanic and Atmospheric Administration.

[4]
Data on National Poverty Targeting Program beneficiaries was obtained from the Ministry of Social Affairs.

[5]
Based on electoral data on the sect of voters per polling station, we constructed an index of homogeneity (IH) = $\sum_{i=1}^{n} Sij^2$, 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.

I   Who are the voters?

In the parliamentary elections of 2018, over 175,000 Lebanese were registered to vote in the electoral district of Zahle (Bekaa 1). Zahle is one of the most diverse electoral districts, as reflected in the composition of its reserved seats. Out of Lebanon's 128 parliamentary seats, seven were at stake in Zahle: Two Greek Catholic seats, one Greek Orthodox, one Maronite, one Armenian Orthodox, one Sunni, and one Shia seat.

About one quarter of Zahle's registered voters are Sunni (26%), with Greek Catholics constituting the second largest group (20%). Maronite, Shia, and Greek Orthodox voters represent between 13% and 15% each, while Armenian Orthodox and Christian minorities represent 5% each, and Armenian Catholics 1%.[7]

7
We calculate the number of registered voters by confession using the official election results published by the Ministry of Interior, as well as the ministry's list of registered voters by confession in each of the polling stations. Our approximation of the confessional composition of each district excludes public employees and diaspora voters, whose confessions were not specified.

Figure 1 **Registered voters and allocated seats by confessional group in Zahle**
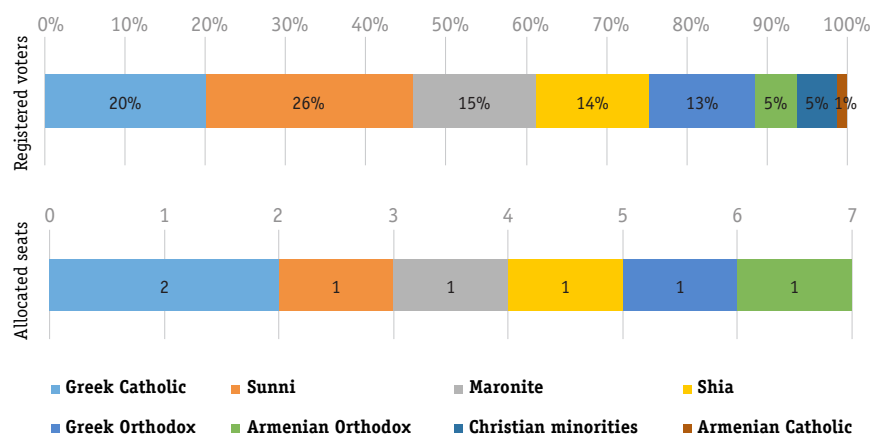
Note **Percentages have been rounded up.**

Given the reservation of parliamentary seats by sect, representation is not the same for each voter, but rather depends on their sect. Armenian Orthodox voters benefit the most from the quota, with the Armenian Orthodox seat representing about 9,300 voters, while Sunni voters benefit the least, with the Sunni seat representing about 45,000 constituents. Representation is similar for Maronite (nearly 27,000 voters), Shia (nearly 25,000 voters), and Greek Orthodox voters (23,000 voters), while it is higher for Greek Catholics, with each Greek Catholic seat representing about 17,300 voters.

Table 1 **Confessional composition of Zahle and allocated seats by confessional group**

Confession	Number of voters	Percentage	Number of seats	Voters per seat
Greek Catholic	34,679	20%	2	17,340
Sunni	45,075	26%	1	45,075
Maronite	26,731	15%	1	26,731
Shia	24,700	14%	1	24,700
Greek Orthodox	22,927	13%	1	22,927
Armenian Orthodox	9,306	5%	1	9,306
Christian minorities	8,664	5%		
Armenian Catholic	2,118	1%		
Total	174,200	100%	7	
Public employees	610			
Diaspora	3,601			
Total	178,411			

Note **Percentages have been rounded up.**

Registered voters are generally divided into electoral centers depending on their gender and sect. However, given the large degree of sectarian fragmentation in Zahle, nearly half of the polling stations in the district had voters from more than one sectarian group registered to vote (45%), thus inhibiting the comprehensive analysis of voter behavior by sect. Among the homogeneous centers, the largest share had Sunni voters registered to vote (22%), followed by Shias, Greek Catholics, and Maronites (between 7% and 10% each), with only a few having Greek Orthodox, Armenian Orthodox, Armenian Catholics, and Christian minorities registered (between 1% and 3% each).

Figure 2 **Confessional composition of polling stations in Zahle**
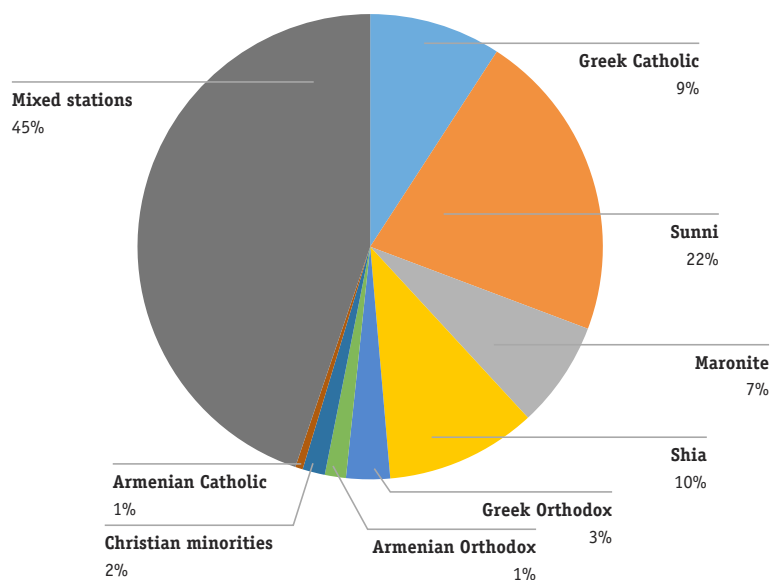
Note **Percentages have been rounded up.**

Comparing the total number of registered voters by confession to the number of voters registered in their own stations shows that the majority of Sunni and Shia voters were registered in their own polling stations (over 80% and 70%, respectively). However, this was the case for slightly less than half of Greek Catholic and Maronite voters (46% and 48%, respectively), as well as about one quarter of Greek Orthodox and Armenian Orthodox voters (23% and 27%). Among the two remaining groups, about one third of Christian minorities (31%) and less than half of Armenian Catholic voters were registered in their own stations (43%). Moreover, among the 78,000 voters registered in mixed polling stations, 24% were Greek Catholic, 23% were Greek Orthodox, 18% were Maronite, and between 8% and 10% were Sunni, Armenian Orthodox, Shia, and Christian minorities, each. The remaining 2% were Armenian Catholic.[8]

II Who voted?

Turnout in Zahle was higher than the national average—53%, compared to 49%. Among the 178,411 constituents registered in Zahle,[9] 94,082 decided to vote while the remaining 84,329 did not. There was a drop in turnout from the 2009 elections, when 56% of voters voted.

Similar to other districts, constituents in the diaspora, who were given the opportunity to vote for the first time in 2018, had higher participation rates. Among the 3,601 Lebanese emigrants who were registered to vote, 58% voted.

Figure 3 **Turnout across residencies in Zahle**

Note **Percentages have been rounded up.**

The Shia community and women voters were the most mobilized

Turnout varied across confessional groups and genders. The Shia community was the most mobilized with a 65% turnout rate, followed by Sunnis, who had a 59% turnout. Christian constituents had much lower participation rates, with 53% of Maronite voters, 51% of Greek Orthodox, 47% of Greek Catholic, and 45% of Christian minority groups voting. The communities with the lowest participation rates

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These percentages are calculated by comparing the total number of registered voters by confession to the number of voters registered in their own stations. On the same basis, it is also possible to calculate the confessional composition of mixed stations.
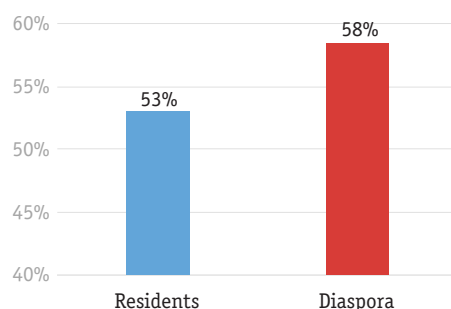
9
Including 3,601 diaspora voters and 610 public employees.

were the Armenian Catholic (32%) and Armenian Orthodox (25%). The much higher turnouts among Shia voters and the lower ones among both Armenian groups reflect a trend observed across the country. These variations across sectarian groups are statistically significant, even after controlling for voters' gender and certain characteristics of the cadasters they were registered in, such as the level of sectarian fragmentation and poverty rates.

By gender, women constituents had a much higher turnout than men: 56% of women voters in Zahle voted compared to 52% of men. Turnout was lower in polling stations that had both genders registered to vote, reaching 47%. These variations across genders were statistically significant, even when controlling for voters' sect and characteristics of the cadasters they were registered in.

Women from all confessional groups voted more than men, with the exception of the Armenian Orthodox community (3% higher turnout among men). The largest variations across genders were among Shia and Greek Orthodox voters: 68% of Shia women voted compared to 60% of Shia men; and 55% of Greek Orthodox women voted compared to 45% of Greek Orthodox men.

Figure 4 **Turnout by confessional group and gender in Zahle**
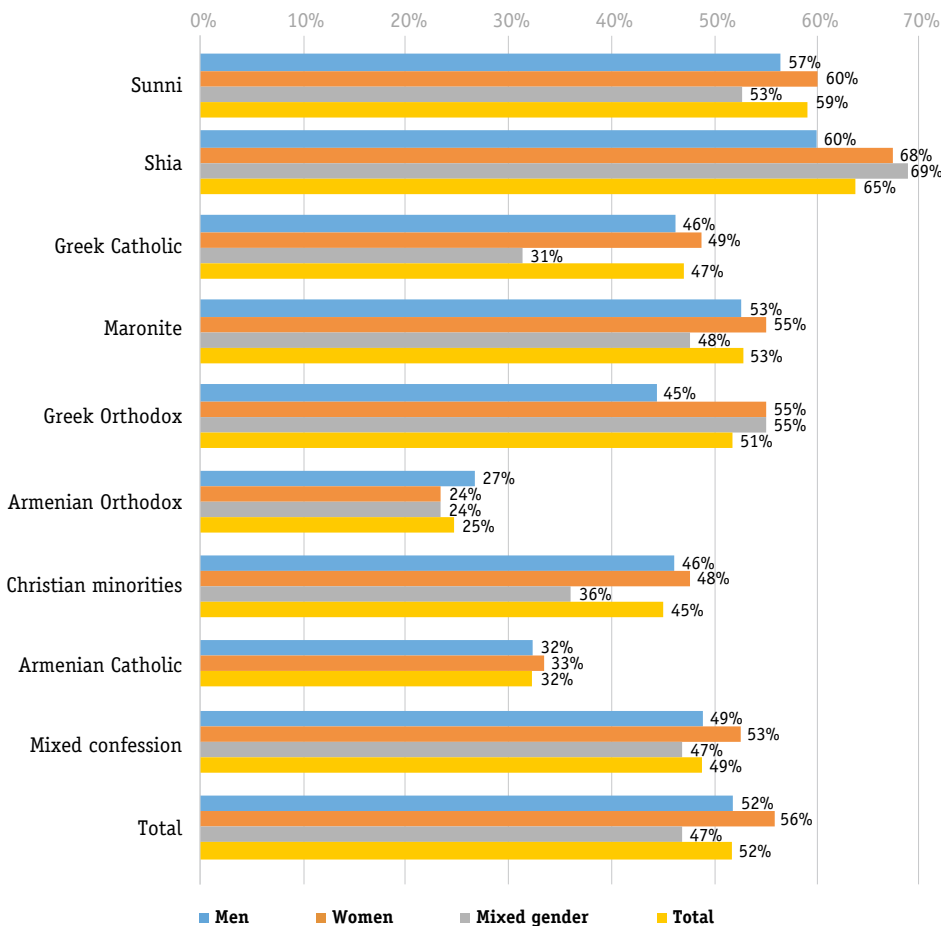
There were geographical variations in participation rates, partly driven by the confessional composition of each cadaster

Participations rates across cadasters varied between below 40% to above 70%. The lowest turnout rates were recorded in the majority Christian and Armenian cadasters of Anjar (27%), followed by Zahle El-Midane (30%) and El-Berbara (38%). Areas neighboring El-Midane and El-Berbara also saw some of the lowest turnouts: Those were Zahle Mar Mkhayel, Haouch El-Zaraane, and El-Rassiyeh (between 40% and 45%). Mar Elias, Chtaura, and Tell El-Akhdar were the three remaining cadasters where less than 45% of voters cast a ballot (between 44% and 45%).

Cadasters with the highest turnout were Massa (77%) and the neighboring ones of Raait (71%), Haouch El-Ghanam (75%), as well as Hazerta, which also saw a high participation rate (70%).

Geographical variations in turnouts are partly driven by the confessional composition of cadasters. In line with the higher turnouts among Shia voters, cadasters with a higher share of Shias tended to see higher turnouts. For example, Massa and Hazerta are nearly fully Shia, while in Raait—mostly divided between Shias and Greek Orthodox—the town of Haret El-Fikani, where Shias were registered to vote, had a much higher turnout than the town of Raite, which is mostly Greek Orthodox (83% compared to 61%). The low turnout cadasters, in comparison, were mostly Christian, and had a particularly high share of Armenian Orthodox and Armenian Catholics registered to vote.

There were also geographical variations in turnouts among voters from the same confessional group

In all cadasters where Shia voters had their own polling stations, the majority of them voted. The lowest turnout among Shias was in Haouch El-Oumara (55%), El-Maallaqa, and Nabi Ayla (58% each), while the highest was in the town of Haret El-Fikani in the cadaster of Raait (83%), with Shia voters also having a high participation rate in Hay El-Sellom, Hazerta, and Haouch Hala (69% each).

Sunni voters, who had the second highest turnout in Zahle, voted much less in Tell El-Akhdar (45%) and Shehabiyet El-Faour (50%), while they voted much more in Kfarzabad (68%), as well as Bar Elias and Majdel Anjar (61% each).

Maronite voters voted much less in Qabb Elias, El-Maallaqa, and Mrayjat (between 46% and 48%), and much more in Terbol, Bouarej (64% each), and Ouadi El-Aarayech (62%). Similar to Shia voters, Greek Orthodox had their highest turnout in Raait (65%), and also voted in high numbers in El-Maallaqa (60%). Conversely, their participation rate was significantly lower in El-Midane (28%), followed by far by Haouch El-Zaraane (44%).

Greek Catholic voters had a significantly higher turnout than their average across Zahle in the cadaster of Fourzol (67%), with a high share also voting in Ablah (56%). Their lowest participation rates were in El-Berbara, Haouch Hala, and Haouch El-Zaraane (between 38% and 39%).

Armenian Orthodox voters, who only had their own polling stations in El-Midane, El-Berbara, and Khodr Beik in Anjar, voted significantly less in El-Midane (13%), and much more in Khodr Beik (39%), with El-Berbara standing in between (24%).

There were some common patterns across confessional groups in some of the cadasters mentioned above. Raait was the cadaster in which both Shia and Greek Orthodox voters had their highest participation rate (83% and 65%). In El-Midane, Greek Orthodox, Armenian Orthodox, and Christian minorities had their lowest turnout (28%, 13%, and 35%). Haouch El-Zaraane also saw some of the lowest turnouts among Greek Orthodox and Greek Catholics (44% and 39%). El-Berbara had the lowest turnout among Greek Catholic voters (38%), as well as low turnout among Armenian Orthodox (24%) and Maronite voters (50%).

There were also some diverging patterns. El-Maallaqa, which had multiple sectarian groups registered to vote, saw large variations between them: Shias, Sunnis, and Maronites had some of their lowest turnouts in this cadaster (58%, 51%, and 47%), while Greek Orthodox had one of their highest (60%), and Greek Catholics also had a higher turnout than they did in the majority of cadasters in which they had their own polling stations (45%). In Haouch Hala, Shias had one of their highest participation rates (69%), while Greek Catholics had one of their lowest (38%); Maronites, who also had their own polling stations in Haouch Hala, had a relatively low turnout (51%).

Beyond these variations in turnouts across cadasters and the variations in turnouts within each confessional group, turnout was affected by the level of confessional homogeneity in the cadaster—that is, whether many different groups cohabit or there is a high predominance of one, regardless of which.[10] In Zahle, the more homogenous the cadaster was, the higher the participation rate in the elections. Turnout rates on average increased from 50% in the most heterogeneous cadasters to over 60% in the most homogeneous ones. This factor is statistically significant, even when controlling for voters' gender and sect. This result can point to a higher capacity and interest of sectarian parties to mobilize the vote in more homogeneous localities.

10
We use an index of confessional homogeneity (IH) = $\sum_{i=1}^{n} Sij^2$, where Sij2 is the sum of the square root of the share of each confessional group in the total number of registered voters in a cadaster. The index goes from 0.2 (most heterogeneous) to 1 (full homogeneous—only one confessional group is present in the cadaster).

Figure 5 **Sectarian homogeneity by cadaster and turnout rate in Zahle**
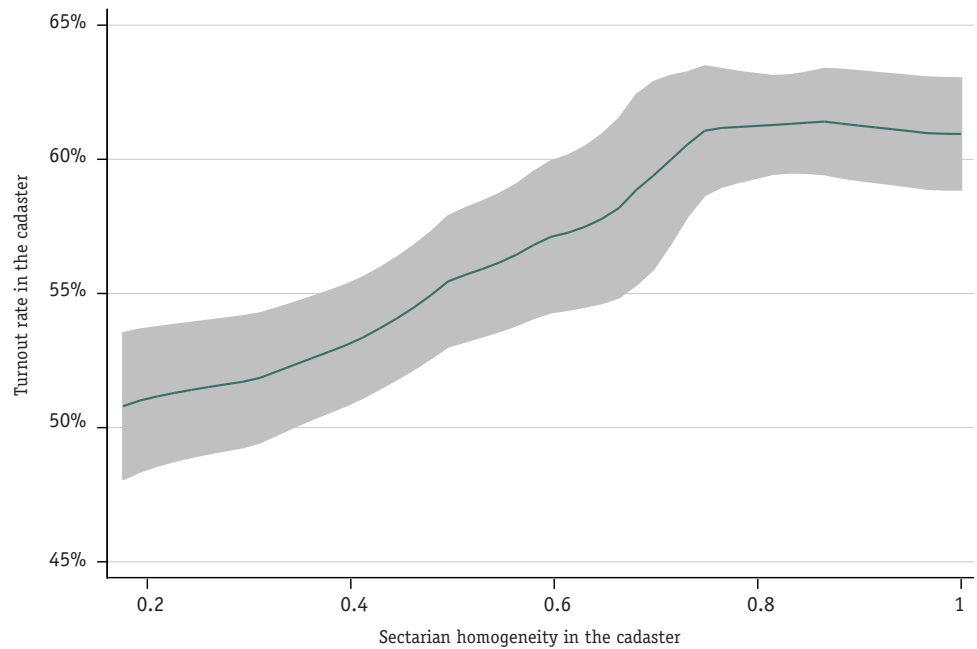
What are the drivers of turnout?

A multivariate analysis highlights the relevant impact of different individual and geographic characteristics on turnout rates.

In Zahle, as mentioned above, turnouts tended to increase as the level of sectarian homogeneity in a cadaster increased. Moreover, voters represented by a seat were generally more likely to vote compared to those from sectarian groups not represented by a seat. This result suggests that voters are less motivated to vote when they do not have a direct stake in the elections results in terms of representation. Both of these results may also point at sectarian parties' higher interest in mobilizing voters from the represented sects. Across geographical areas, cadasters with lower levels of economic development tended to see higher turnouts. This result could suggest that political parties may have higher interest in mobilizing voters in less urbanized areas.

As for the characteristics of voters, Shias were the most mobilized, followed by Sunnis and Maronites, while Armenian Orthodox voters were particularly less likely to vote compared to others. Finally, across genders, women were much more likely to vote compared to men.

Figure 6 **Drivers of turnout in Zahle**
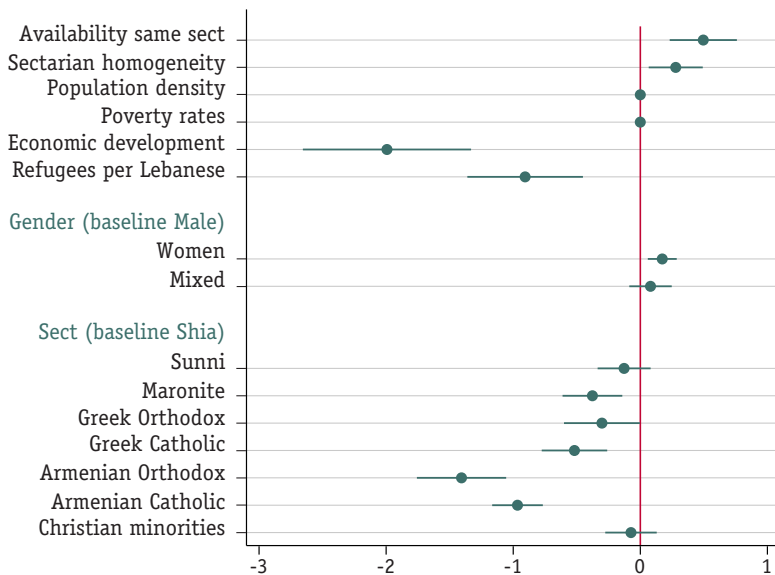
III Who voted for whom?

Five lists ran in Zahle, with a total of 32 candidates. There were eight Greek Catholic candidates competing for the two Greek Catholic seats, five Sunni, Maronite, Shia, and Greek Orthodox candidates, each, competing for each of their seats, and four Armenian Orthodox candidates competing for the Armenian Orthodox seat.

The race in Zahle was highly competitive, with three of the five competing lists winning seats

The 'Zahle for Everyone' list, formed by the Free Patriotic Movement (FPM) and the Future Movement (FM) won the highest number of votes and seats in Zahle. With 40% of the votes (36,391 votes), the list obtained three out of the seven seats at stake. The seats were won by independent candidate backed by FPM Michel Daher (Greek Catholic, 9,742 votes), FPM candidate Salim Aoun (Maronite, 5,567 votes), and former MP and FM candidate Assem Araji (Sunni, 7,224 votes).

The second winning list was 'Zahle is the Choice and the Decision', formed by Hezbollah, the Syrian Social Nationalist Party (SSNP), and independent candidates. The list won 26% of the votes (23,546 votes) and two seats, which went to Hezbollah candidate Anwar Jomaa (Shia, 15,601 votes) and independent candidate Eddy Demerjian (Armenian Orthodox, 77 votes).

Finally, the third winning list, 'Zahle is our Cause,' formed by the Lebanese Forces (LF) and Kataeb, obtained 21% of the votes (18,702 votes) and the two remaining seats. The winners were George Okais

from LF (Greek Catholic, 11,363 votes), and Cesar Maalouf, affiliated with LF (Greek Orthodox, 3,554 votes).

The two losing lists were Kulluna Watani and the one formed by the Popular Bloc. The Popular Bloc—led by Myriam Skaff—obtained 12% of votes (10,885 votes), and fell short of slightly over 2,200 votes to obtain a seat, given the 14% threshold in the district derived from the electoral law.[11] Finally, Kulluna Watani, the list formed by independents and emerging groups, obtained 2% of the votes (1,599 votes).

Figure 7 **Percentage of votes for each list in Zahle**
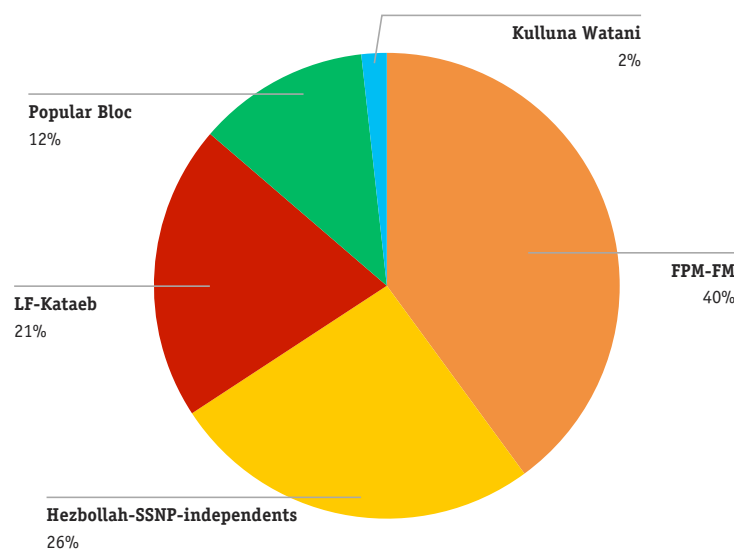
Note **Percentages have been rounded up.**

The diaspora's vote largely diverged from that of residents in Zahle.[12] The LF-Kataeb list received significantly higher support among the diaspora, winning 46% of their votes compared to 20% among residents. This was mostly driven by higher support for George Okais, who was by far the most successful candidate among the diaspora, receiving 36% of their vote. Conversely, the list formed by Hezbollah-SSNP-independents received significantly lower support among the diaspora, winning 8% of their vote compared to 26% of votes among residents. This was particularly driven by lower support for Anwar Jomaa (6% of their vote, compared to 18% among residents), as well as lower support for Nicolas Fattouch (1%, compared to 7% among residents).

Emigrants also voted less for the FPM-FM list (5% less), driven by lower support for all candidates, with the exception of Salim Aoun who received a much higher share of votes among emigrants (16%, compared to the 6% he won in the country). The Popular Bloc list was also slightly less successful (3% less), while emigrants voted more for Kulluna Watani (2% more).

Figure 8 **Percentage of votes for each list across residencies in Zahle**
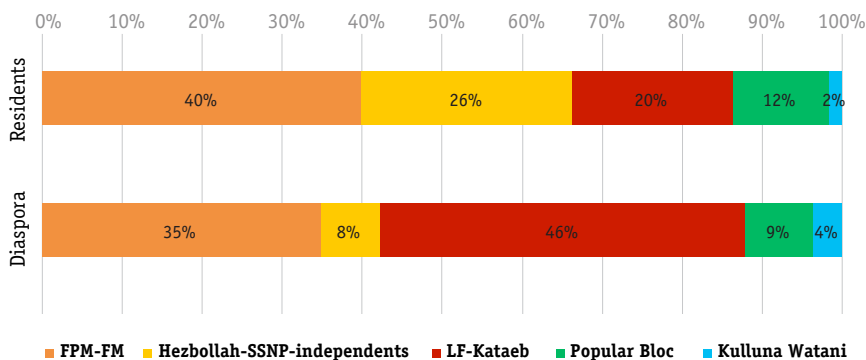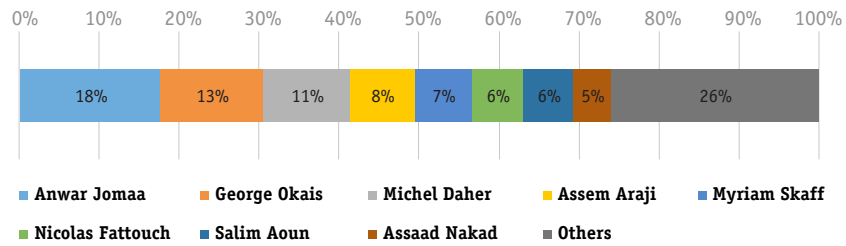
Only eight of the 32 candidates in Zahle managed to win over 5% of preferential votes each, and combined, they won three quarter of the votes.

Hezbollah's only candidate, winner Anwar Jomaa, won 18% of the votes by himself. The second most successful candidate was LF winner George Okais (13%), followed by FPM-backed Michel Daher (11%). Sunni FM winner Assem Araji won 8% of the votes, while Myriam Skaff, former MP Nicolas Fattouch, who ran on the same list as Hezbollah, and FPM winner Salim Aoun each won between 6% and 7% of votes. Only independent candidate Assaad Nakad, who ran with FPM and FM, received 5% of the votes.

Among the other candidates on the FPM-FM list, FM-backed Nizar Dalloul and Marie-Jeanne Bilezikjian each won 4% of the votes, while independent candidate Michel Skaff won 1%. On the Hezbollah list, SSNP candidate Nassif Al-Tini won less than 1%, while winner Eddy Demerjian only obtained 0.1% of the votes, and was in fact the candidate who ranked second to last in Zahle, and the MP who won the lowest number of votes across the country. The two remaining candidates on the list, independent candidates Wajih Araji and Khalil Hrawi, won less than 1% each. On the LF-Kataeb list, apart from George Okais, the LF-backed candidate Cesar Maalouf won 4% of votes, while Kataeb candidate, former MP Elie Marouni, won slightly more than 1%. All of the other candidates in the list, all independents, won 2% of preferential votes combined.

On the Popular Bloc list, as mentioned, Myriam Skaff won 7% of preferential votes, while the second most successful candidate on the list was independent George Bushikian (2%), with all the remaining five candidates winning slightly less than 3% of votes combined. Finally, the five Kulluna Watani candidates together won less than 2% of the votes, with the highest share being won by Ghassan Maalouf (0.7%).

Figure 9 **Main candidates in Zahle**

| 18% | 13% | 11% | 8% | 7% | 6% | 6% | 5% | 26% |

- Anwar Jomaa
- George Okais
- Michel Daher
- Assem Araji
- Myriam Skaff
- Nicolas Fattouch
- Salim Aoun
- Assaad Nakad
- Others

Note **Percentages have been rounded up.**

Under the proportional representation system, combined with the option to cast a preferential vote and the sectarian allocation of seats, the candidates who received the highest number of preferential votes in Zahle did not all win. Had seats been obtained by the most successful candidates representing each sectarian group in Zahle, both the LF-Kataeb and Hezbollah-SSNP-independent lists would win one instead of two seats each, while the FPM-FM list would win five instead of three seats. Cesar Maalouf (LF-affiliated, LF-Kataeb list, 3,554 votes) would lose the Greek Orthodox seat to Assaad Nakad (independent, FPM-FM list, 4,138 votes), while Eddy Demerjian (independent, Hezbollah-SSNP list, 77 votes) would lose the Armenian Orthodox seat to Marie-Jeanne Bilezikjian (independent, FPM-FM list, 3,851 votes). While these results are based on who would win under a non-list system, even the process of seat allocation under the proportional representation system—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—after ballots were counted—determined who made it to parliament

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 list. The most voted for candidate would then win their seat, regardless of the list they belong 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 belongs to has one less remaining seat to win. In Zahle, Anwar Jomaa from Hezbollah ranked first, thus winning the Shia seat—meaning that all other Shia candidates were then eliminated. And because Jomaa's list won two seats in total, it now only had

one remaining seat to win. 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: It was a method that was actively chosen and an alternative one could have been used. It prioritized the preferential vote—the candidate— over the proportional vote—the support for a party or list. Indeed, Jomaa's list won less than the FPM-FM one, but was the first one to win a seat.

Another process of seat allocation that could have been followed 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 Zahle that would be Michel Daher from the FPM-FM list. The second winner would be the most successful candidate from the second winning list—Jomaa from Hezbollah; and the third would be the most successful candidate from the third winning list—George Okais from LF. The fourth seat would then go to the second-ranking candidate in the FPM-FM list; with the remaining seats being distributed following the same method. Combined with the sectarian quota, this process of seat allocation would have yielded significantly different results than the one that was opted for in 2018.

Had seats been allocated this way in the 2018 elections, three out of the seven winners would change: Elie Marouni (Kataeb, LF-Kataeb list) would win the Maronite seat instead of Salim Aoun (FPM, FPM-FM list); Nassif Al-Tini (SSNP, Hezbollah-SSNP list) would win the Greek Orthodox seat instead of Cesar Maalouf (LF-affiliated, LF-Kataeb list); and Marie-Jeanne Bilezikjian (independent, FPM-FM list) would win the Armenian Orthodox seat instead of Eddy Demerjian (independent, Hezbollah-SSNP list).

Minor variations in voters' preferences across genders, but large ones across confessional groups

There were no large variations in voters' preferences for lists across genders, with differences between the share of votes given to each list never exceeding 1%. However, two candidates performed much better among women voters: Anwar Jomaa's share of votes was over 3% higher among women voters (21% compared to 17% among men; or 7,430 compared to 5,376 votes), and Michel Daher received more support from women as well (12% compared to 11%; or 4,300 compared to 3,263 votes).

Polling stations that had both men and women registered to vote

saw significantly different results: Voters in mixed stations voted less for the FPM-FM and Hezbollah-SSNP-independents lists (on average 6% and 3% less, respectively, compared to voters in gender-specific stations), while they voted much more for the LF-Kataeb and Popular Bloc lists (6% and 3% more, respectively). All of these variations were driven by votes for specific candidates. Lower support for the FPM-FM list in gender-mixed stations was driven by lower support for Assem Araji (FM) and Marie-Jeanne Bilezikjian (independent), while Salim Aoun (FPM) still performed better. In the Hezbollah-SSNP-independents list, voters in gender-mixed stations voted much less for Anwar Jomaa, compared to voters in gender-specific stations, but still voted more for Nicolas Fattouch. In both the LF-Kataeb and Popular Bloc lists, voters in gender-mixed stations showed higher support for nearly all candidates, but particularly for George Okais (LF) and Myriam Skaff (Popular Bloc). Overall, Christian candidates tended to receive a higher share of votes in gender-mixed stations, likely driven by the high share of Christian voters registered in these stations.

Figure 10 **Percentage of votes for each list by gender in Zahle**
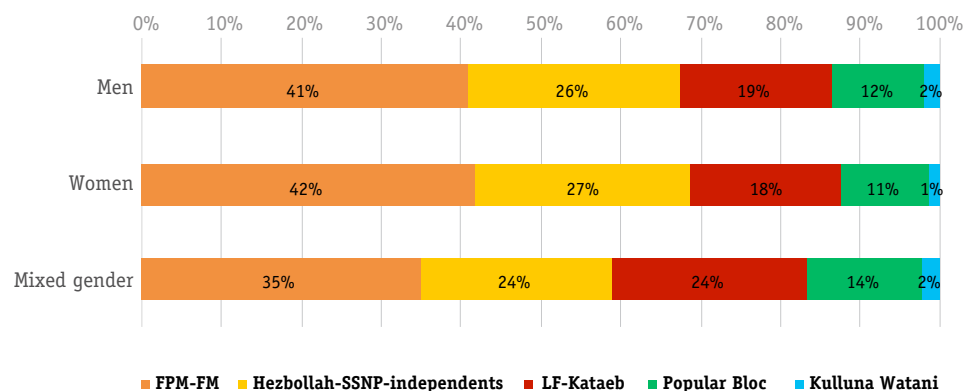
Note **Percentages have been rounded up.**

Support for lists, parties, and candidates largely varied across confessional groups

The majority of Sunni voters (72%) voted for the FPM-FM list, with most of these votes going to candidates from or backed by the FM. The majority of Shia voters (85%) voted for the list formed by Hezbollah, casting a ballot mostly for the Hezbollah candidate rather than others. Christian groups' votes were fragmented between the LF-Kataeb list and the FPM-FM one, and mostly between the candidates from and backed by the Christian parties FPM and LF: Greek Catholics, Maronites, Greek Orthodox, and Christian minorities gave between 20% and 40% of their votes to each of FPM and LF. The Popular Bloc list came in third among each of the Christian groups. The majority of Armenian Orthodox and Catholic voters (about 70% each) voted

for the Popular Bloc list, driven by support for George Bushikian, an independent candidate on the list.

Figure 11 **Percentage of votes for each list by confessional group in Zahle**

FPM-FM **Hezbollah-SSNP-independents** **LF-Kataeb** **Popular Bloc** **Kulluna Watani**
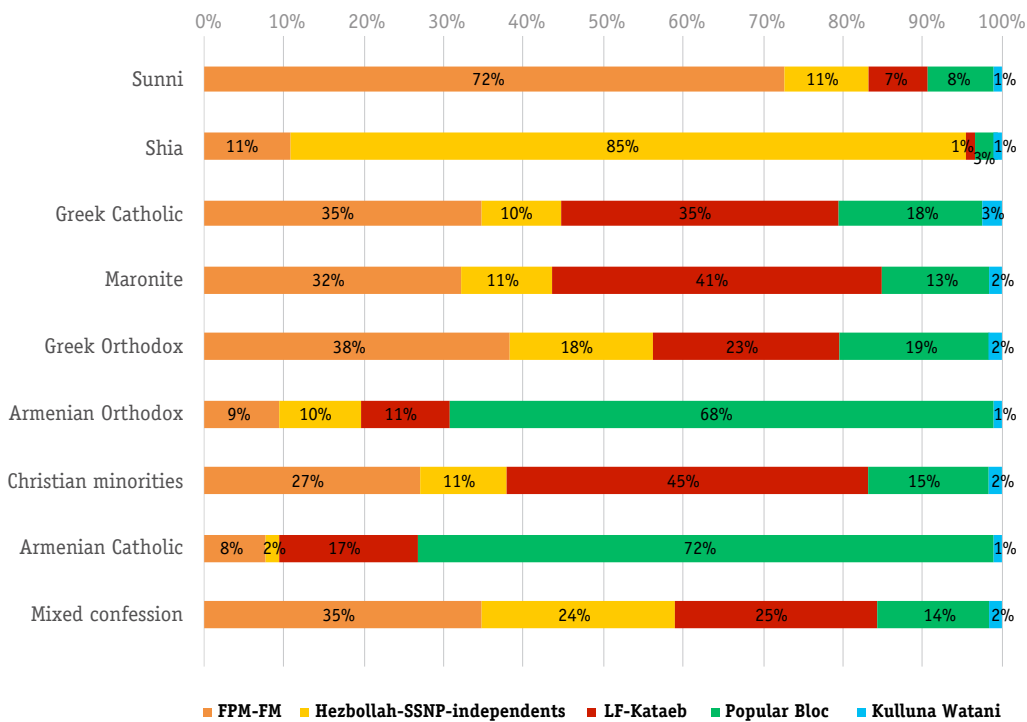
Note **Percentages have been rounded up.**

Apart from the support for electoral lists, very few candidates managed to win over 5% of each confessional group's vote. Among Sunnis, the most successful candidate was Assem Araji from FM (28% of Sunnis' preferential vote), who received 80% of his total votes from Sunni polling stations but won less than 1% of every other confessional group's vote. The second candidate among Sunni voters was Michel Daher (FPM-backed, 15%), followed by Marie-Jeanne Bilezikjian (FM-backed, 14%), and Nizar Dalloul (FM-backed, 11%). Other candidates who received 5% of the Sunni vote or more were Nicolas Fattouch (6%) Mohammad Mayta (Sunni candidate running on the LF-Kataeb list, 5%), and Ahmad Ajami (Sunni candidate on the Popular Bloc list, 5%).

While both Michel Daher and Nicolas Fattouch were successful among most confessional groups, Marie-Jeanne Bilezikjian and Mohammad Mayta only received support from the Sunni community, with in fact 75% of each of their total votes coming from Sunni polling stations. Nizar Dalloul also received support mostly from the Sunni community, although he received a share of the Shia vote as well.

Shia voters gave 82% of their preferential vote to Anwar Jomaa, with most of the remaining being cast for Nizar Dalloul (6%). Jomaa

barely received support from other confessional groups, winning less than 2% of every other group's preferential vote, with the exception of that of the Greek Orthodox community.

The Christian vote was highly fragmented, partly explained by the much higher number of Christian candidates in Zahle. George Okais was most successful among Greek Catholic and Maronite voters (26% and 29% of their vote), while also obtaining support from Greek Orthodox (13%) and Christian minorities (32%). The three Christian groups represented by a seat in Zahle also gave a high share of their votes to Michel Daher, Salim Aoun, and Myriam Skaff, who each won between 10% and 16% of the Greek Catholic, Maronite, and Greek Orthodox vote. Both Nicolas Fattouch and Assaad Nakad received support from the Christian community (between 6% and 10% of each group's vote), while Cesar Maalouf obtained votes mostly from the Maronite and Greek Orthodox communities. Greek Orthodox voters were the only among the Christian groups to show support for Anwar Jomaa.

The majority of the Armenian Orthodox and Armenian Catholic vote was cast for independent candidate George Bushikian, who was running with the Popular Bloc. He won 62% of the Armenian Orthodox and 70% of the Armenian Catholic vote. Boughos Kordian (Armenian Orthodox candidate on the LF-Kataeb list) also received support from the Armenian community (5% of the Armenian Orthodox and 11% of the Armenian Catholic preferential vote), and both Bushikian and Kordian won less than 1% of all other sectarian groups' votes. Nicolas Fattouch and Myriam Skaff were the last ones to win a share of the Armenian Orthodox vote (6% and 5%, respectively).

Figure 12 **Main candidates by confessional group in Zahle**
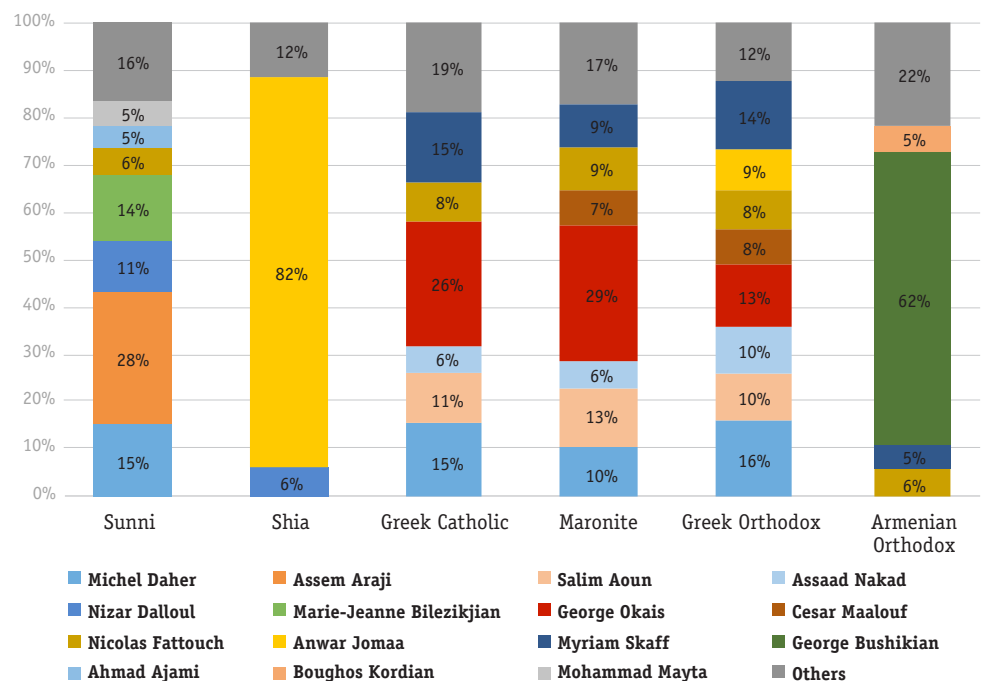
Political parties and candidates had different strongholds depending on the sectarian composition of each cadaster

Result for each list and candidate varied depending the sectarian composition of the cadasters. Concerning the Hezbollah-SSNP-independents list, Hezbollah winner Anwar Jomaa won 90% of the votes in the mostly Shia cadasters of Massa, and over 80% of votes in Nasriyet Zahle (88%), Hazerta and Nabi Ayla (86% in each), and Aali El-Nahri (83%). Both Aali El-Nahri and Hazerta were the two cadasters from which he received the highest number of his total votes (3,793 votes and 1,997 votes, respectively). He also won a high number of votes in Zahle El-Maallaqa, Maallaqa Aradi, and Haouch Hala (about 1,200 votes in each of the three cadasters). On the same list, Nicolas Fattouch won a high share of preferential votes, but a low number of votes, in El-Karma (93 votes, 39%) and Touaite (29 votes, 25%). While he had no specific stronghold, a high number of his votes came from El-Midane (416 votes, 14%), El-Maallaqa (337 votes, 7%), and Haouch El-Oumara (301 votes, 8%). SSNP candidate Nassif Al-Tini's highest share of votes was 6% in Bouarej (54 votes), followed by 3% in Fourzol (71 votes), while he won 2% or less in all other cadasters. Bouarej and Fourzol, with the addition of Bar Elias, were the only cadasters where he managed to win at least 50 votes (he won 50 votes in Bar Elias, 1%). Armenian Orthodox winner Eddy Demerjian won less than 1% of preferential votes in all cadasters but El-Berbara (1%), where he received over one fourth of his total votes from (22 out of his 77 votes).

On the FPM-FM list, the highest share of votes Michel Daher obtained was in Fourzol (1,042 votes, 43%), followed by Makseh (228 votes, 30%). Fourzol in addition to Bar Elias (1,069 votes, 18%) were the only two cadasters where he won over 1,000 votes. Salim Aoun won over 20% of preferential votes only in Qaa El-Rim (293 votes, 26%) and Ouadi El-Delm (82 votes, 21%). He obtained over 400 votes in two cadasters: El-Rassiyeh (468 votes, 15%) and Qabb Elias (428 votes, 8%).

FM winner Assem Araji was most successful in Bar Elias (2,275 votes, 39%), Saadnayel (1,038 votes, 37%), and Majdel Anjar (1,342 votes, 32%). More than half of the votes he won in the elections (66%) came from these three cadasters alone (4,655 votes, out of the 7,087 votes he won among residents). The highest share of preferential votes Nizar Dalloul managed to obtain was in Dalhamiye (281 votes, 19%), followed by Taalbaya (435 votes, 13%). He was never able to obtain more than 500 votes in any cadaster, with his highest number being in Qabb Elias (492 votes, 10%) and Aali El-Nahri (471 votes, 10%). A much higher number of votes in Qabb Elias were given to Marie-Jeanne Bilezikjian (1,802 votes, 36%). Nearly half of Bilezikjian's total votes (3,803 votes among residents) came from this cadaster. She also won the vast majority of the votes in Tell El-

Akhdar (65%, however, this only represents 28 votes), and was highly successful in Bouarej (350 votes, 39%). Assaad Nakad won over 10% of preferential votes in only three cadasters: Taanayel (73 votes, 14%), Qaa El-Rim (121 votes, 11%), and Zahle Mar Antonios (74 votes, 10%). He did not win a high number of his votes from one specific area in Zahle, as he did not obtain more than 270 votes in any cadaster.

On the LF-Kataeb list, first winner George Okais's highest share of votes was in Ouadi El-Aarayech (413 votes, 41%), Ablah (428 votes, 37%), Haouch El-Sayade (342 votes, 37%), and Riyaq (487 votes, 33%). Cesar Maalouf's highest share of votes came from Qoussaya (82 votes, 15%), followed by Saydet El-Najat (170 votes, 13%), Ouadi El-Delm (51 votes, 13%), and Jdita (235 votes, 11%). Elie Marouni, former Kataeb MP who was not re-elected in 2018, won his highest share of votes in Haouch El-Sayade (51 votes, 6%) and Ouadi El-Aarayech (50 votes, 5%). A high number of his votes also came from El-Maallaqa, Haouch El-Oumara, and El-Rassiyeh where he won between 3% and 4% (between 100 and 140 votes in each). Mohammad Mayta, Sunni candidate on the LF-Kataeb list, also won the highest share of his votes from Bar Elias, which represented over half of his total votes, or 807 out of the 1,364 votes he obtained among residents (14% of preferential votes in Bar Elias). The Armenian Orthodox candidate Boughos Kordian also won well over half of his votes from Anjar (110 votes, out of the 140 he won among residents; representing 7% in Anjar).

In the Popular Bloc list, the highest share of preferential votes Myriam Skaff was able to obtain in any cadaster was 20% in Mar Elias (404 votes) and Mar Mkhayel (Mar Gerges, 359 votes). She also won over 400 votes in El-Rassiyeh (461 votes, 14%) and El-Midane (408 votes, 14%). George Bushikian won 78% of the votes in Anjar—1,188 votes, out of the 1,780 he won among residents. Sunni candidate Ahmad Ajami won 23% of votes in the Sunni cadaster of Majdel Anjar, which represent 957 votes, out of 991 votes he won among residents. Maronite candidate Paul Charbel also won a high share of his votes from one cadaster, Haouch El-Oumara, where he obtained 5% of preferential votes (211 votes, out of the 802 votes he won among residents).

What are the drivers of votes for each winning party?

A multivariate analysis highlights different factors' impact on the votes received by the winning parties in Zahle.

Across geographical areas, voters in more homogenous cadasters tended to vote more for FM and less for LF. Moreover, those in cadasters with lower levels of economic development were significantly more likely to vote for FM, while LF generally performed better in cadasters with higher levels of economic development. Municipalities with a

higher presence of refugees per capita saw a higher share of votes for FPM and FM, and a significantly lower one for Hezbollah and LF.

Across polling stations, higher turnouts were associated with a significantly higher share of votes for Hezbollah, FM, and FPM, which points at all of these parties' successful mobilization of their voters.

Finally, across confessional groups, even after controlling for all these geographical characteristics, Shia voters were the most likely to vote for Hezbollah, Sunni voters for FM, Greek Orthodox and Greek Catholics for FPM, and Maronites and Christian minorities for LF.

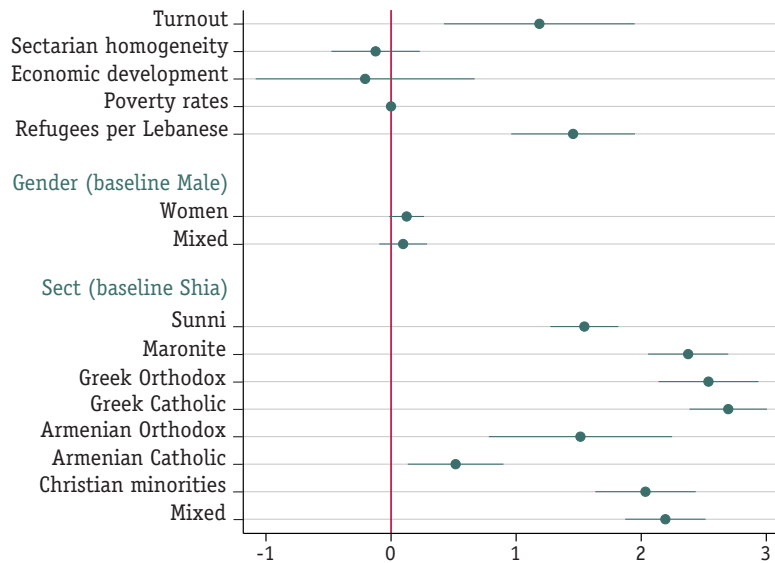Figure 13 **Drivers of votes for the winning parties in Zahle**
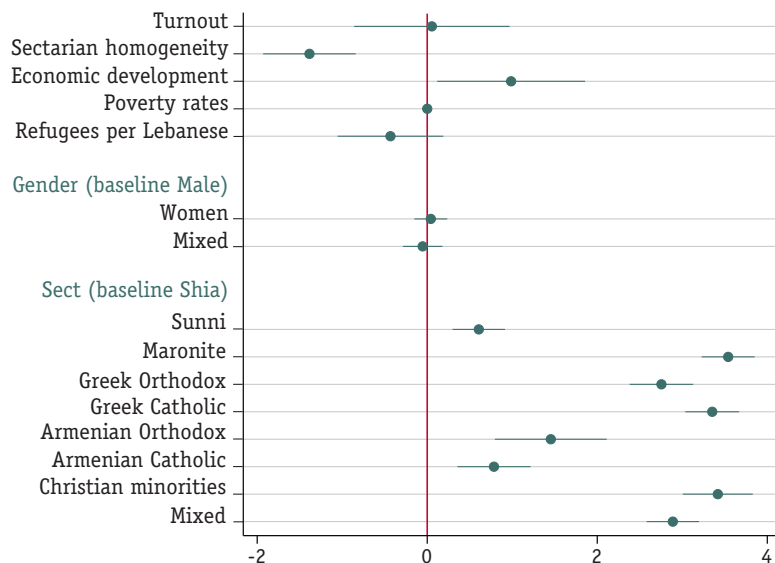
a   **Drivers of votes for Hezbollah in Zahle**
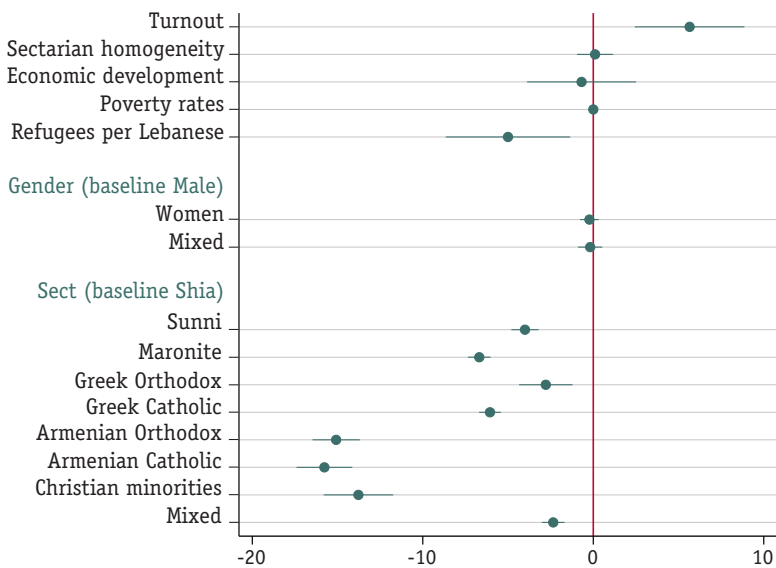
b   **Drivers of votes for FM in Zahle**
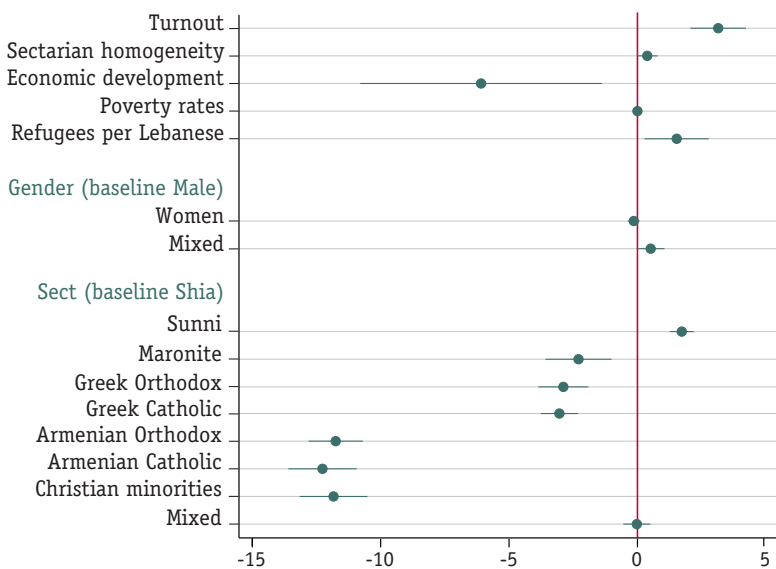
c   **Drivers of votes for FPM in Zahle**

d   **Drivers of votes for LF in Zahle**

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

In Zahle, 97% of voters gave a preferential vote for one candidate within their selected list. Among those represented by a seat in the district, 53% chose a candidate from their same confession. This is one of the lowest shares observed across districts in the country.

Shia voters were the most likely to vote for a co-sectarian candidate
Sectarian biases varied across sectarian groups. Close to 90% of Shias voted for a co-sectarian candidate, compared to 72% of Armenian

Orthodox, 70% of Greek Catholic, 41% of Sunni, 21% of Maronite, and 20% of Greek Orthodox voters. This highlights the high success of the Hezbollah candidate Anwar Jomaa in mobilizing the Shia community in Zahle, his co-sectarian voters. Conversely, FM was much less successful in mobilizing its community's vote, with the candidates from and backed by the party receiving 53% of the Sunni preferential vote, and the Sunni candidate from the party winning less than a third of the Sunni vote. Regarding Maronite and Greek Orthodox voters, who had a very low sectarian bias, they mostly voted for Greek Catholic candidates. In fact, more than 90% of Greek Catholic, Maronite, and Greek Orthodox voters chose a Christian candidate, therefore still showing a sectarian bias. Generally, the majority of the votes that did not go to co-sectarian candidates among Sunni, Shia, and Armenian Orthodox voters went to Greek Catholic candidates.

Among voters who are not represented by a seat in Zahle, Christian minorities voted mostly for Greek Catholic candidates (67%), while Armenian Catholics for Armenian Orthodox candidates (84%).

Table 2 **Percentage of votes for candidates from each sect by confessional group in Zahle**

| | | Candidates' sect | | | | | |
		Sunni	Shia	Greek Catholic	Maronite	Greek Orthodox	Armenian Orthodox
Voters' sect	Sunni	41%	13%	25%	1%	5%	14%
	Shia	0%	89%	7%	1%	3%	0%
	Greek Catholic	0%	1%	70%	16%	12%	1%
	Maronite	0%	1%	61%	21%	15%	3%
	Greek Orthodox	1%	9%	56%	14%	20%	0%
	Armenian Orthodox	0%	0%	20%	4%	3%	72%
	Christian minorities	0%	1%	67%	14%	17%	1%
	Armenian Catholic	2%	1%	8%	2%	3%	84%
	Mixed confession	5%	18%	47%	12%	13%	5%

Note **Percentages have been rounded up.**

Preferences for co-sectarian candidates varied across cadasters even within each sectarian group

Sectarian biases in Zahle varied from over 80% in Hazerta, Fourzol, Aain Kfar Zabad, and Aali El-Nahri, to below 10% in Bouarej, Jdita, and Tell El-Akhdar.

Among each confessional group, in all the cadasters where Shia voters had their own polling stations, over 80% of them cast their preferential vote for a Shia candidate. The share was lowest in Haouch El-Oumara (81%), while over 90% of Shia voters voted for a Shia candidate in Haouch Hala, Aali El-Nahri, and Raait. Sunni voters showed large variations: While the share of Sunnis voting for a co-

sectarian candidate was highest in Bar Elias (64%) and Majdel Anjar (56%), it was very low in Jdita and Tell El-Akhdar (5% in both), as well as in Qabb Elias (11%). In these three cadasters, Sunnis gave a particularly high share of their vote to Armenian Orthodox candidates, with Marie-Jeanne Bilezikjian winning 65% of the Sunni preferential vote in Tell El-Akhdar, and half of their vote in Jdita (49%) and Qabb Elias (50%).

In all cadasters in which Greek Catholics had their own polling stations, over 60% voted for a co-sectarian candidate. Haouch El-Oumara saw the lowest sectarian bias among Greek Catholics (61%), followed by El-Rassiyeh, El-Maallaqa, and Haouch Hala (64% in each), while the share of Greek Catholics voting for a co-sectarian candidate was highest in Fourzol (85%), where half of their vote went to Michel Daher. It was also high in the cadasters Ablah (74%), driven by high support for George Okais, and Zahle Mar Mkhayel (70%), where Myriam Tawk was the most successful among Greek Catholic voters. Apart from this, in all cadasters where they had their own polling stations, over 96% of Greek Catholic voters voted for a Christian candidate, regardless of the specific denomination.

In no cadaster did the majority of Greek Orthodox or Maronite voters vote for a co-sectarian candidate. Both Christian groups tended to vote for Greek Catholic candidates or for each other. The lowest sectarian bias among Maronites was in Bouarej, where 4% voted for a Maronite candidate, and 43% voted for Armenian Orthodox candidate Marie-Jeanne Bilezikjian. Among Greek Orthodox voters, the lowest sectarian bias was in El-Maallaqa (9%), where 64% cast their preferential vote for Anwar Jomaa.

Voters in more homogeneous cadasters were more likely to vote for a co-sectarian candidate

Geographical variations in co-sectarian preferences are partially explained by the level of sectarian homogeneity in the cadaster. Variations in co-sectarian preferences across sects and within each sectarian group might be due to geographical factors that affect the ability and willingness of political parties to mobilize the sectarian vote, such as the level of sectarian homogeneity, economic development, poverty rates or urbanization. In Zahle, the percentage of votes for co-sectarian candidates tended to increase as the level of sectarian homogeneity in a cadaster increased. While on average, only 40% of votes in the most heterogeneous cadasters went to co-sectarian candidates, that share increased until reaching 60% in the most homogeneous cadasters. This variation is statistically significant even when controlling for voters' gender, sect, and other characteristics of the cadasters in which they were registered. Two possible explanations are either the higher capacity

to mobilize voters, or a stronger sectarian identity of voters in more homogeneous areas.

Figure 14 **Sectarian homogeneity by cadaster and votes for co-sectarian candidates in Zahle**
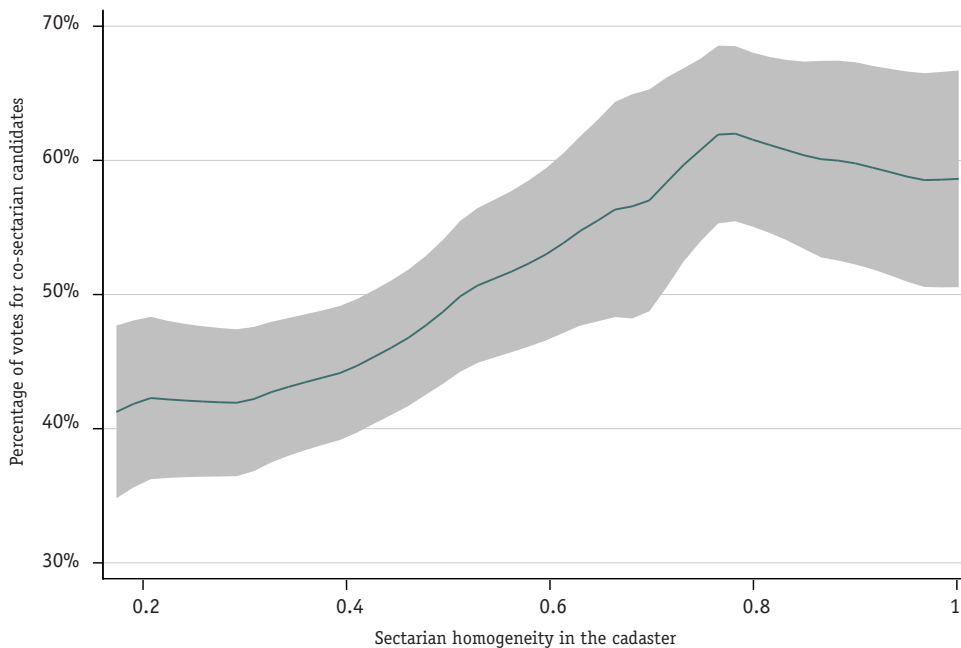

What are the drivers of votes for co-sectarian candidates?
In Zahle, different individual and geographical characteristics affected voters' preferences for co-sectarian candidates.

As mentioned above, the higher the level of sectarian homogeneity in a cadaster, the higher the percentage of votes for co-sectarian candidates. Another geographical-level factor that affected voters' sectarian preferences was the level of economic development, with voters in less developed areas being more likely to vote for a co-sectarian candidate.

Across voters' characteristics, there was no significant difference across genders. Shia voters were significantly more likely to vote for a co-sectarian candidate compared to the other main sects, followed by Greek Catholic and Armenian Orthodox voters. Conversely, Sunni, Greek Orthodox, and Maronite voters were the least likely to cast a sectarian vote.

Figure 15 **Drivers of votes for co-sectarian candidates in Zahle**
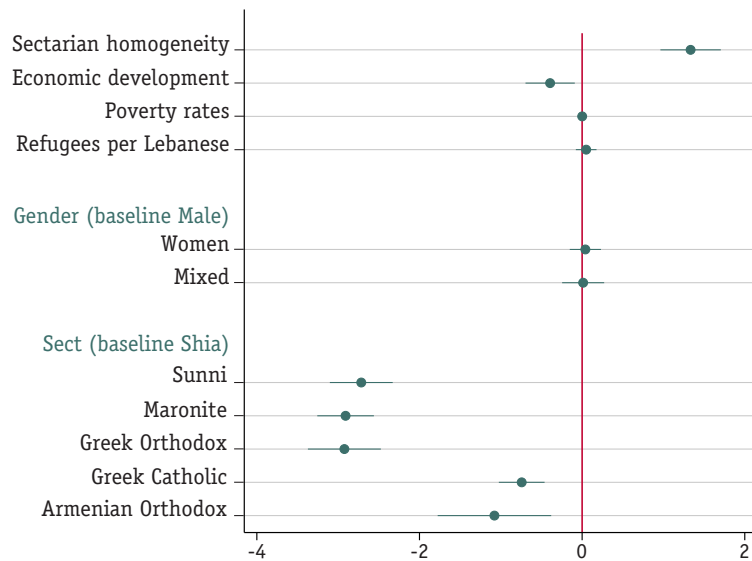
V   How did women candidates perform?

Three women candidates ran in Zahle, and overall obtained 12% of preferential votes (10,467 votes). This ratio is one of the highest across all electoral districts in Lebanon.

The candidates were Myriam Skaff, president of the Popular Bloc, who won 7% of votes (6,348 votes), ranking fifth in Zahle; Marie-Jeanne Bilezikjian, backed by the FM, who won 4% of votes (3,851 votes), ranking 10th; and Vanda Chedid from Kulluna Watani, who only won 0.3% (268 votes), ranking 25th.

There were variations in support for each woman candidate across genders and sectarian groups, with each candidate having her own constituents

In total, the share of votes cast for women candidates did not vary across voters' gender, with the share among men voters being only 0.4% higher than the share among women voters (both around 12%). However, given the higher number of women who voted, women candidates received a higher number of votes from women-only polling stations (4,215 votes) than they did from men-only stations (3,784 votes). In polling stations that had both genders registered to vote, women candidates obtained 12% of preferential votes as well (2,272 votes).

Variations were much more apparent across sectarian groups. Sunni voters were the most likely to vote for a woman candidate (17%), followed by Greek Catholic and Greek Orthodox voters (15%), with the share being much lower among Armenian Orthodox (6%) and Armenian Catholics (5%), and lowest among Shias (2%). These

variations across sectarian groups are statistically significant, even after controlling for voters' gender and geographical characteristics.

The votes obtained by each woman candidate also varied across sectarian groups. Myriam Skaff was more successful than the two other candidates among all confessional groups but Sunnis and Armenian Catholics, although the total number of votes Armenian Catholics cast for women candidates was 12 votes only. Skaff obtained 80% or more of the total votes each Christian group and Shias cast for women candidates. Sunnis voted significantly more for Marie-Jeanne Bilezikjian, with 80% of those who voted for a woman casting their preferential vote for her. In addition, most of the votes Bilezikjian won came from Sunni voters (2,842 votes, out of the 3,803 she obtained among residents).

Table 3 **Number and percentage of votes given to each woman candidate across confessional groups in Zahle**

	Votes for women candidates		Myriam Skaff		Marie-Jeanne Bilezikjian		Vanda Chedid	
	Number of votes	Share of votes	Number of votes	Share of votes	Number of votes	Share of votes	Number of votes	Share of votes
Sunni	3,395	17%	524	3%	2,842	14%	29	0%
Shia	230	2%	212	2%	17	0%	1	0%
Greek Catholic	1,122	15%	1,076	15%	11	0%	35	0%
Maronite	759	12%	597	9%	141	2%	21	0%
Greek Orthodox	386	15%	372	14%	1	0%	13	1%
Armenian Orthodox	34	6%	30	5%	4	1%	0	0%
Christian minorities	149	13%	140	12%	2	0%	7	1%
Armenian Catholic	12	5%	4	2%	8	3%	0	0%
Mixed confession	4,184	12%	3,270	9%	777	2%	137	0%

Note **Percentages have been rounded up.**

Although the total share of votes cast for women candidates did not significantly vary across genders, women voters showed slightly higher support for Myriam Skaff (2,352 votes among women in their own polling stations compared to 1,983 among men) and Vanda Chedid (115 compared to 62). Conversely, votes for Marie-Jeanne Bilezikjian did not vary across genders (about 1,740 votes each). Moreover, among voters who voted for the Popular Bloc list, 61% of those in women-only stations gave their preferential vote to Skaff, compared to 54% of men who voted for the list; 23% of women who

voted for a Kulluna Watani candidate cast their preferential vote for Chedid, compared to 12% of men; while there was only a slight variation in votes for Bilezikjian, with 14% of men who voted for the FPM-FM list choosing her, compared to 12% of women.

Table 4 **Number and percentage of votes given to each woman candidate across genders in Zahle**

	Votes for women candidates		Myriam Skaff		Marie-Jeanne Bilezikjian		Vanda Chedid	
	Number of votes	Share of votes	Number of votes	Share of votes	Number of votes	Share of votes	Number of votes	Share of votes
Men	3,784	12%	1,983	6%	1,739	6%	62	0.2%
Women	4,215	12%	2,352	7%	1,748	5%	115	0.3%
Mixed gender	2,272	12%	1,890	10%	316	2%	66	0.3%

Note **Percentages have been rounded up.**

What are the drivers of votes for women candidates in Zahle?

A multivariate regression analysis shows that across geographical areas, voters in cadasters with higher levels of economic development were significantly more likely to vote for a woman candidate. Moreover, those in more heterogeneous cadasters were more likely to vote for women candidates, which could suggest that it is in areas where political parties are less able to mobilize the sectarian vote that women have more chances of succeeding. Across sectarian groups, Sunni voters were more likely to vote for women candidates compared to others, a result that holds even after taking into consideration geographical characteristics. Shia voters, on the other hand, were significantly less likely to vote for a woman.

Figure 16 **Drivers of votes for women candidates in Zahle**
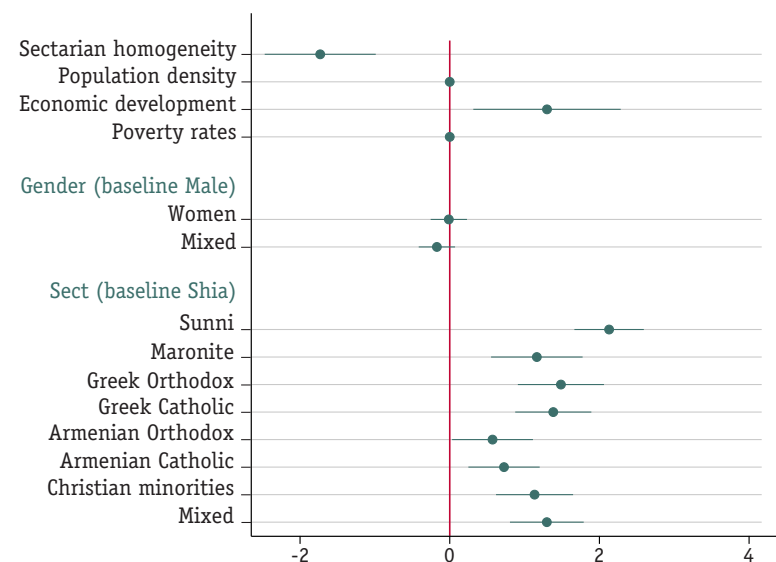
VI How did emerging political groups perform?

Kulluna Watani, the coalition between emerging political actors, obtained 2% of votes in Zahle (1,599 votes). Similar limited results were observed in other districts, with the exception of Beirut 1, where Kulluna Watani obtained one seat. As in other districts, Kulluna Watani was more successful among the diaspora: Nearly 4% of emigrants voted for Kulluna Watani (representing, however, only 73 votes), while slightly less than 2% of residents did so (1,526 votes). Across the district of Zahle, Kulluna Watani won 1% of votes or less in the majority of cadasters. The highest share of votes the list was able to obtain was in Hay El-Sellom (8%, representing only 19 votes), while it won 4% in Kfarzabad (89 votes), Haouch El-Zaraane (73 votes), Dalhamiye (63 votes), and Saydet El-Najat (49 votes).

Kulluna Watani had five candidates: Ghassan Maalouf (Greek Catholic, 651 votes), Hanna Habib (Maronite, 287 votes), Vanda Chedid (Greek Orthodox, 268 votes), Houd Touaymi (Sunni, 201 votes), and Mohammad Hassan (Shia, 71 votes).

The preferential vote among women and men who voted for Kulluna Watani varied

There were no variations in support for the Kulluna Watani list across genders, with the list receiving about 540 votes from each of the gender-specific polling stations and 437 from mixed ones. However, not all candidates in the list were equally successful across genders. Ghassan Maalouf was the most successful among both, but Hanna Habib and Houd Touaymi received more votes from men voters, and Kulluna Watani's only woman candidate, Vanda Chedid, was more successful among women voters. The last Kulluna Watani candidate, Mohammad Hassan, received a higher number of votes from women voters.

Table 5 **Number of votes for Kulluna Watani and its candidates by gender in Zahle**

	Kulluna Watani	Ghassan Maalouf	Hanna Habib	Vanda Chedid	Houd Touaymi	Mohammad Hassan
Men	536	225	102	62	102	14
Women	547	199	94	115	64	23
Mixed gender	437	202	76	66	33	29

Kulluna Watani candidates performed better among their own sectarian communities

Across confessional groups, the share of votes for the list was highest among Greek Catholic voters (3%, representing 213 votes), followed by Maronite and Greek Orthodox voters (2% each, representing 139 and 56 votes, respectively). It varied between 1% and 2% among all other

groups, except Shias who gave only 0.5% of their vote to Kulluna Watani (60 votes).

Apart from these variations in support for the list, even those who voted for Kulluna Watani tended to vote for their co-sectarian candidate. The majority of Sunni, Shia, and Greek Catholic voters who cast a preferential vote for a Kulluna Watani candidate chose their co-sectarian one. Conversely, Maronite and Greek Orthodox voters voted more for the Greek Catholic candidate, with their co-sectarian one coming in second, showing a bias toward Christian candidates. Sunni candidate Houd Touaymi won over 60% of his total votes from Sunni polling stations, where he received 136 votes, out of the 243 votes cast for Kulluna Watani candidates in these polling stations. Less than 10 voters in other sect-specific polling stations gave him their preferential vote. Shia candidate Mohammad Hassan also won the majority of his total votes from his co-sectarian voters, with 32 voters in Shia polling stations voting for him, out of the 46 who cast a preferential vote for a Kulluna Watani candidate. All Christian groups voted mostly for the Greek Catholic candidate Ghassan Maalouf, who also ranked second among Sunnis and Shias. The majority of Greek Catholic voters who cast their ballot for a Kulluna Watani candidate gave it to Maalouf (119 out of 198 votes), who also received the highest share of votes among Greek Orthodox (32 out of 56 votes) and Maronite voters (54 out of 131 votes) who voted for a Kulluna Watani candidate. Among each of these groups, their co-sectarian candidates followed, with Maronite candidate Hanna Habib winning 50 votes from Maronite polling stations, and Greek Orthodox candidate Vanda Chedid winning 13 from Greek Orthodox ones. Barely any Christian voter cast a preferential vote for a Muslim Kulluna Watani candidate.

Table 6 **Number of votes for Kulluna Watani and its candidates by confessional group in Zahle**

	Kulluna Watani	Ghassan Maalouf	Hanna Habib	Vanda Chedid	Houd Touaymi	Mohammad Hassan
Sunni	267	49	21	29	136	8
Shia	60	7	3	1	3	32
Greek Catholic	213	119	44	35	0	0
Maronite	139	54	50	21	4	2
Greek Orthodox	56	32	9	13	1	1
Armenian Orthodox	8	3	2	0	0	0
Christian minorities	20	5	4	7	0	1
Armenian Catholic	4	1	1	0	0	0
Mixed confession	753	356	138	137	55	22

Across geographical areas, Kulluna Watani performed better in more heterogeneous cadasters

In Zahle, the share of votes received by Kulluna Watani tended to decrease as the level of sectarian homogeneity in a cadaster increased. The share of votes obtained by the list decreased on average from over 2% in the most heterogeneous cadasters to 1% in the most homogeneous ones. This factor is statistically significant after controlling for voters' confession, as well as other characteristics of the cadasters. This relationship highlights sectarian parties' higher ability to mobilize the vote in more homogeneous areas, where their main constituents are located.

Figure 17 **Sectarian homogeneity by cadaster and votes for Kulluna Watani in Zahle**
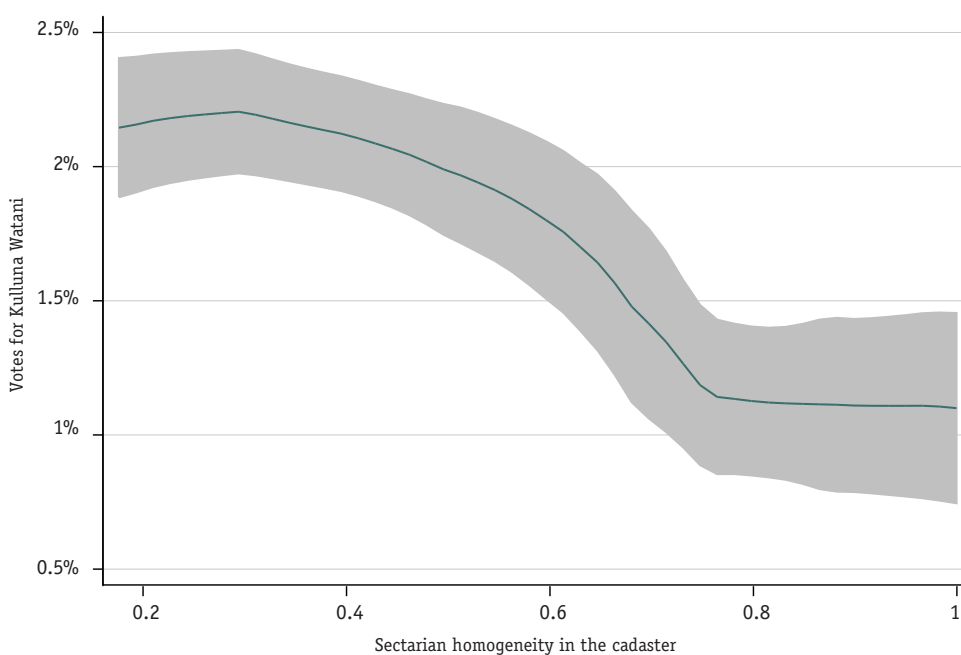
One other factor that affected the votes for Kulluna Watani was the turnout in a polling station. Higher turnouts were associated with a lower share of votes for Kulluna Watani, which highlights the large capacity of sectarian parties to mobilize their constituents. This factor is statistically significant even after controlling for voters' gender and confession, as well as cadaster-level characteristics.

Figure 18 **Drivers of votes for Kulluna Watani in Zahle**
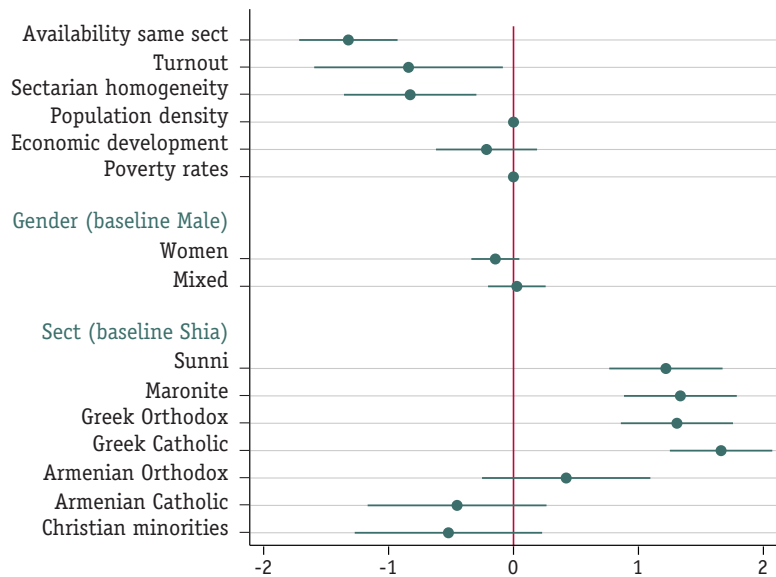

VII Were there any signs of irregularities?

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. Irregularities can also happen before voters cast their ballots, by pressuring voters to vote in a certain way. 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 voter rigging. Another method of detecting signs of election fraud is examining the distribution of turnout and vote numbers, and testing whether they have a 'normal' shape. For example, an abnormally high number of voting centers with close to 100% turnouts could suggest either voter or vote rigging at any stage of the election process. Other lines of research focus on statistical tests that examine the random nature of numbers to test whether numbers were manipulated in a non-random manner.

The distribution of turnouts across polling stations in Zahle differs from what would be expected in clean elections
The distribution of turnout by polling station usually has a normal shape, with the majority of electoral centers having turnouts close to the average and a small number of centers having a very high or

very low turnout rate. Compared to a normal distribution, there was a higher number than expected of high turnout centers (90% to 100% turnouts) and very low turnout centers (20% or less). Zahle also had an abnormally low number of centers with lower-mid turnout (40%-50% turnouts). When comparing the actual distribution with a normal distribution, the differences are statistically significant. These results may provide some initial evidence of irregularities.

Figure 19 **Distribution of turnout rates by polling station in Zahle**
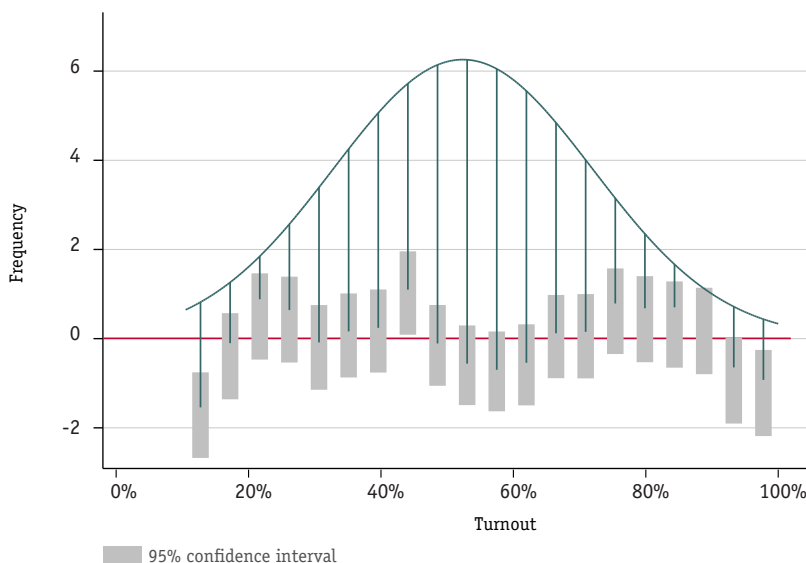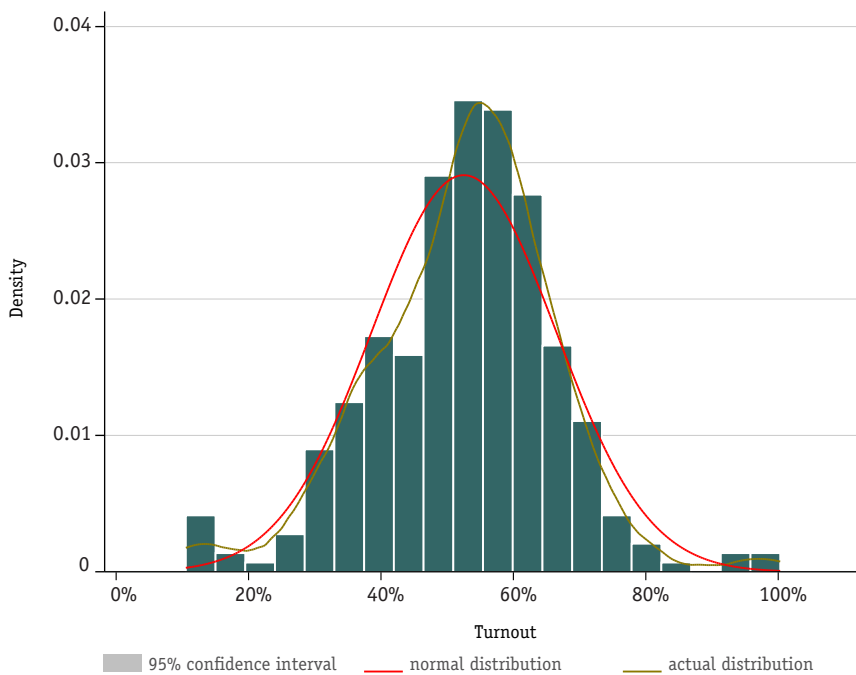
## There is no clear evidence of voter rigging in Zahle

Voter rigging entails political parties pressuring or coercing voters with the intended aim of affecting turnout through, for example, vote buying. The literature on election irregularities distinguishes vote rigging from voter rigging, as coercion is not apparent in the latter case. However, there are some ways to detect potential instances of voter rigging through statistical tests.

One way to test for voter rigging is by examining the correlation between turnouts and the size of a polling station. Previous evidence shows that polling stations with fewer voters are more attractive among politicians buying votes or exerting some kind of pressure on voters, because smaller groups of voters in a polling station facilitate aggregate monitoring of whether voters cast their ballots, and for whom.[13] High turnouts in polling stations with fewer voters may therefore point at fraud in those stations.

In Zahle, there was a slightly higher turnout in smaller polling stations (figure 20). However, when comparing turnouts in small centers—defined as those whose size was one standard deviation below the mean polling station size—to other centers, the differences are not significant.

Figure 20 **Polling station size and turnout rates in Zahle**
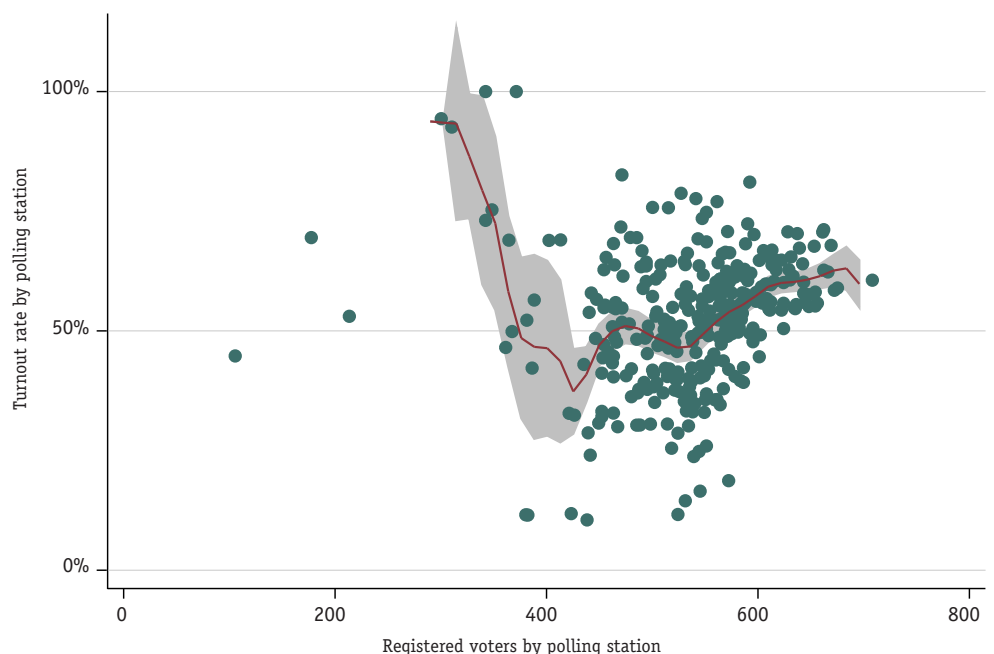
No evidence of voter rigging appears even when looking at the relationship between polling station size and the share of votes for each party in Zahle.

13
Rueda, M. R. 2016. 'Small Aggregates, Big Manipulation: Vote Buying Enforcement and Collective Monitoring.' *American Journal of Political Science*, 61(1): 163-177.

Abnormally high turnouts benefited Hezbollah

Apart from the distribution of turnouts, fraud can be detected by looking at the relationship between turnouts and votes for a party. Normally, if there was a lack of pressure on voters to cast their ballots in a certain way, votes for each list or party should be more or less similar regardless of the turnouts across polling stations.[14] A party receiving a significantly higher share of votes in polling stations with very high turnouts could suggest pressure to vote or even ballot stuffing, as adding ballots would increase both turnouts and votes for this party in a polling station.

As each party had its own constituents—for example Hezbollah which received support from the Shia community and the FM from the Sunni community—and turnouts varied across confessional group, a party benefiting from very high turnouts could be due to the higher turnouts among their constituents and not necessarily through pressure to vote.

In order to see whether variations in turnouts and votes for each party by polling station were not driven by one specific confessional group, we create standardized variables of turnout rates and percentage of votes for each party. For any polling station, the standardized turnout rate would be the turnout rate in the specific polling station minus the average turnout rate of all polling stations in the 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 parties follow the same procedure. As previous studies have found, no clear relation should be observed between turnouts and number of votes for a particular list or party in 'clean' elections.[15]

In Zahle, abnormally high turnouts benefited Hezbollah. Its share of votes in polling stations with very high turnouts was 26% on average—over 10% higher than it was in polling stations with normal turnouts (13%).

Conversely, abnormally high turnout rates were associated with a lower share of votes for the FM and Popular Bloc. FM's votes in stations with high turnouts were 5% lower on average than they were in stations with normal turnouts (7% compared to 12%); and the Popular Bloc's share of votes in very high turnout stations was 2% lower than it was in normal turnout stations (6% compared to 8%). No other party's results were significantly affected by turnout rates.

14
Myagkov, M., P.C. Ordeshook, and D. Shakin. 2009. 'The Forensics of Election Fraud.' Cambridge University Press.

15
Ibid.

Figure 21 **Percentage of votes for each party and standardized turnout rate in Zahle**
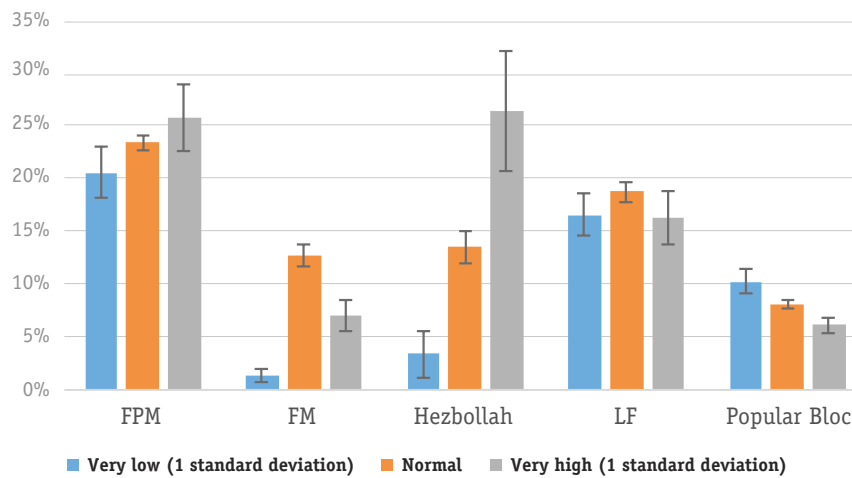
These results point at Hezbollah's effective mobilization of voters and could suggest pressure to vote for the party's candidate. However, other ways of testing for voter rigging, such as looking at the relationship between the size of a polling station and votes for each party, did not show any signs of it. Abnormally high turnouts benefiting Hezbollah could also be due to ballot stuffing, as adding ballots for a party would increase both turnouts and votes for this party.

No evidence of vote rigging in Zahle

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 shows that when political parties add ballots they tend to forget to include a similar proportion of invalid votes.[16] 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 be 'protest' votes. Stronger evidence of ballot stuffing would be apparent in cases where the increase in the share of null votes is smaller than the decrease in the percentage of votes for a list or party.

In Zahle, there is no irregular relationship between the share of null votes and turnouts in a polling station. Even looking at the relationship between null votes and votes for each list and party in a given polling station shows no evidence of ballot stuffing on the part of any party.

16
Friesen, P. 2019. 'Strategic Ballot Removal: An Unexplored Form of Electoral Manipulation in Hybrid Regimes.' *Democratization*, 26(4): 709-729.

Figure 22 **Turnout and percentage of null votes by polling station in Zahle**
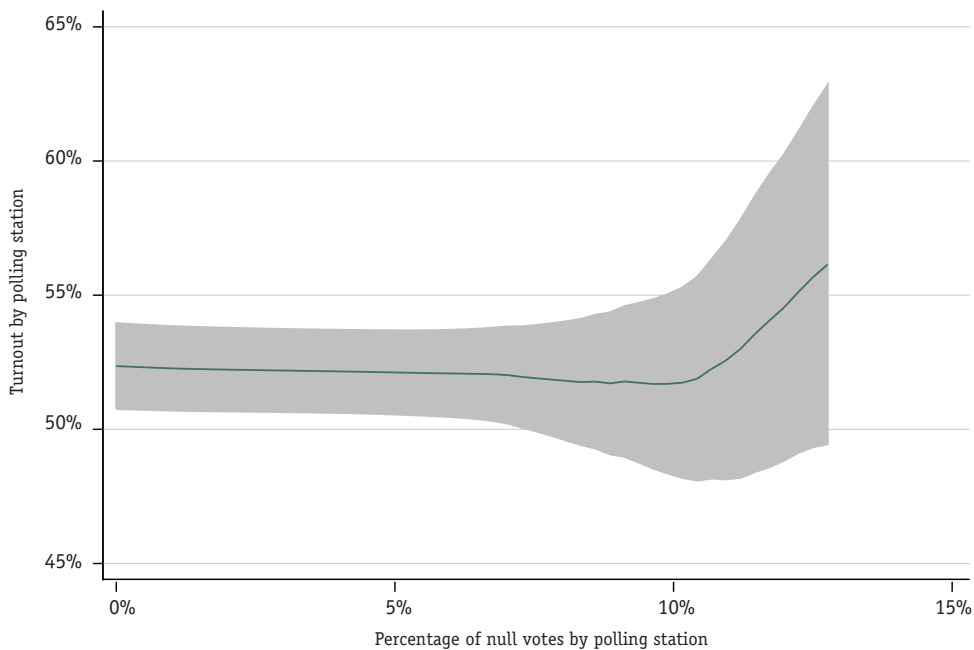
Another form of vote rigging would entail parties 'cooking' the numbers, i.e. parties manipulating the vote count either by adding or subtracting votes for a list, or 're-shuffling' votes within their list from one candidate to another. One way of detecting manipulations in the vote counting process is to look at the distribution of the last digits in the number of valid votes, as well as those in the number of votes for a list or party.[17] 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).

Comparing the frequency of last digits in the number of votes by polling station to the uniform distribution shows no evidence of vote rigging. Moreover, the distribution of last digits in the number of votes for each party also did not significantly deviate from the uniform line. There is therefore no evidence of vote rigging, such as ballot stuffing or vote counting manipulations.

Overall in Zahle, there is no consistent evidence of fraud. While the distribution of turnouts by polling stations deviated from the normal distribution (figure 19), no evidence of voter or vote rigging was detected. There was no significant relationship between the size of a polling station and both turnouts and votes for each party, no relationship between the share of null votes and turnouts, as well as the share of null votes and votes for each party in a polling station, and no irregular distribution in the last digits of the number of

17
Beber, B. and A. Scacco. 2012. 'What the Numbers Say: A Digit-Based Test for Election Fraud.' *Political Analysis*, 20(2): 211-234.

votes across polling stations. Hezbollah benefited from abnormally high turnouts (figure 21), but the lack of evidence of irregularities through other methods could point at the party's much more effective mobilization of constituents in Zahle.