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The 2018 Lebanese Parliamentary Elections: What Do the Numbers Say? **Beirut 1 Electoral** District

Georgia Dagher

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Executive Summary

Lebanese citizens were finally given the opportunity to renew their political representation in 2018—nine years after the previous parliamentary elections. Despite this, voters in Beirut 1 were weakly mobilized, and the district had the lowest turnout rate across the country. Some voters were more mobilized than others: Greek Orthodox, Maronite, and Sunni voters were the most likely to vote, while Christian minorities, Armenian Orthodox, and Armenian Catholics were the least likely to do so. The race in Beirut 1 was highly competitive: While the Armenian Orthodox and Armenian Catholic vote overwhelmingly went to Tashnag—the main Armenian party—the Maronite, Greek Orthodox, and Greek Catholic votes were highly contested between the three main Christian parties—the Free Patriotic Movement, Lebanese Forces, and Kataeb. Beirut 1 was also the district in which the percentage of votes cast for co-sectarian candidates was lowest, although there were variations. Armenian Orthodox voters were the most likely, and Christian minorities the least likely to vote for a co-sectarian candidate. Rather than voting for candidates of the same sectarian group, Armenian voters in Beirut 1 voted for Armenian candidates, while Greek Orthodox, Maronite, and Greek Catholic voters voted for candidates from each of the three sectarian groups. Although the sectarian bias was low, even Kulluna Watani candidates tended to perform better among their sectarian community. Some diverging voting patterns across genders were also observed: Compared to men voters, women voted much more for women candidates and for the Kulluna Watani list, as well as for each of its candidates. Apart from voters' preferences, there were some minor signs of irregularities on the part of the three main Christian parties. The Free Patriotic Movement and Lebanese Forces received significantly better results in polling stations that recorded very high turnouts, which could suggest voter rigging. In addition, the distribution of votes for these two parties and Kataeb was not uniform, which could 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 the electoral district levels. Using the official elections results from polling stations 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 Beirut 1, which is allocated eight parliamentary seats-three Armenian Orthodox, one Greek Orthodox, one Maronite, one Greek Catholic, one Armenian Catholic, and one seat for Christian minorities. The report is divided into seven sections. First, we present the demographic distribution of registered voters in Beirut 1. The second section analyzes voter turnout which varied across confessional groups and genders. 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 Beirut 1. In the fourth section, we examine voters' sectarian behavior, i.e. their preferences for candidates of their own sectarian group. The fifth section looks at the performance of women candidates. The sixth section looks at the performance of the independent lists that ran for elections in Beirut 1, in particular Kulluna Watani which obtained its only seat in Beirut 1. The seventh and final section of this report

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

2

1

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.

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

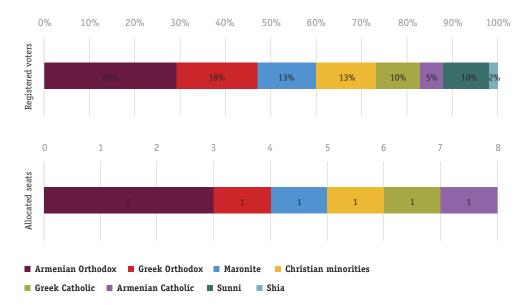
Data on the refugee population was collected from UNHCR.

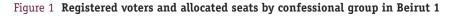
identifies incidents of electoral fraud. Using a number of statistical methods—which include analyzing the distribution of results at the polling station level, such as turnouts, votes for each list and party, and the share of invalid ballots—we test for voter and vote rigging, such as pressure to vote through vote buying, or manipulations in the vote counting process.

I Who are the voters?

In the Lebanese parliamentary election of 2018, over 130,000 Lebanese were registered to vote in the electoral district of Beirut 1. Among these, 134,003 were registered in Lebanon⁷ and 3,730 were registered abroad. Out of the total 128 parliamentary seats, eight seats were at stake in Beirut 1: Three Armenian Orthodox, and one Greek Orthodox, Maronite, Greek Catholic, minority Christian, and Armenian Catholic, each.

Compared to other districts Beirut 1 has a very high degree of confessional fragmentation, with no group representing the majority of registered voters. The Armenian Orthodox community is the largest group in the district (29%), followed by Greek Orthodox (18%), Maronites and Christian minorities (13% each), Greek Catholics and Sunnis (10% each), Armenian Catholics (5%), and Shias (2%). There was also a small number of Druze, Alawite, and Jewish registered voters (less than 500 voters in total).⁸





Note Percentages have been rounded up.

7 Including 85 public employees.

8

We calculate the number of registered voters by confession using the official election results published by the Ministry of Interior, as well as the ministry's list of registered voters by confession in each of the polling stations. Our approximation of the confessional composition of each district excludes public employees and diaspora voters, whose confessions were not specified. Given the confessional allocation of seats, representation is not equal for each voter. Armenian Catholic voters benefit significantly more from the quota compared to others, with the Armenian Catholic seat representing around 6,000 voters. Conversely, the Greek Orthodox seat represents almost four times as many voters (over 24,000 voters). Each Armenian Orthodox and Greek Catholic seat represents around 13,000 voters, and each Maronite and Christian minorities seat represents 17,000 voters.

Confession	Number of voters	Percentage	Number of seats	Voters per seat
Armenian Orthodox	38,675	29%	3	12,892
Greek Orthodox	24,224	18%	1	24,224
Maronite	17,819	13%	1	17,819
Christian minorities	17,354	13%	1	17,354
Greek Catholic	13,109	10%	1	13,109
Armenian Catholic	6,178	5%	1	6,178
Sunni	13,548	10%		
Shia	2,515	2%		
Druze	284	0%		
Alawite	165	0%		
Jewish	47	0%		
Total	133,918	100%	8	
Public employees	85			
Diaspora	3,730			
Total	137,733			

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

Note Percentages have been rounded up.

Registered voters were generally divided into electoral centers depending on their gender and confession. The largest number of polling stations were reserved for Armenian Orthodox voters (28%), followed by Greek Orthodox (18%), Maronites (13%), Greek Catholics (10%), Sunnis and Christian minorities (9% each), Armenian Catholics (4%), and Shias (2%). Around 7% of polling stations had voters from multiple confessional groups and serviced 9,623 voters.

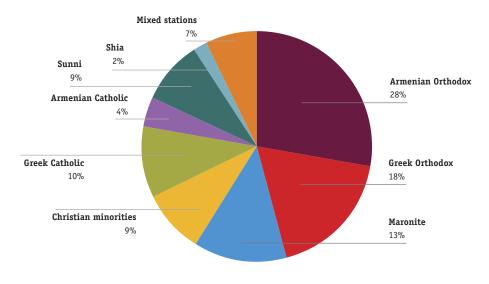


Figure 2 Confessional composition of polling stations in Beirut 1

9 ml

This is 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. Out of the 9,623 voters registered in mixed stations, half were from Christian minority groups (54%) and between 6% and 9% each were Armenian Orthodox and Catholic, Maronite, Greek Orthodox, and Sunni, 4% were Greek Catholic, 3% were Druze, 2% Alawites, 1% Shia, and 0.5% Jewish.

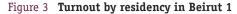
Note Percentages have been rounded up.

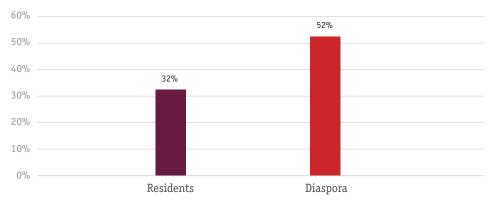
Given the low number of voters registered in mixed stations in Beirut 1, the analysis of voter behavior by confessional group is relatively representative. Over 90% of all confessional groups, except Christian minorities (71%), were registered in their own polling stations, while minority groups (Druze, Alawites, and Jewish) were all registered in mixed stations.⁹

II Who voted?

Turnout in the Beirut 1 electoral district was the lowest across the country: It was 32.5%, compared to the national average of 49%. Among the 137,733 Lebanese registered in the district, 44,714 cast a vote while the remaining 93,019 did not.

Similar to trends in other districts, constituents in the diaspora—who were given the opportunity to vote for the first time in 2018—had a higher participation rate. Among the 3,730 Lebanese emigrants who registered to vote, 52% voted, compared to 32% of residents.





Participation rates significantly varied across confessional groups The Greek Orthodox community was the most mobilized, with a turnout rate of 42% (figure 4). They were followed by Maronite (39%), Sunni (38%), Shia (35%), and Greek Catholic voters (33%). Turnout rates were significantly lower among Armenian Catholics (27%), Armenian Orthodox (24%), and Christian minorities (23%). The few voters registered in mixed centers had a turnout of 30%. The lower turnouts among Christian minorities, Armenian Orthodox, and Armenian Catholics reflect trends observed in most electoral districts. First, minority groups—Christian minorities and Armenian Catholics in this case—were generally less likely to vote. Second, Armenian Orthodox and Armenian Catholic voters in most districts in which they were registered had the lowest turnouts.

These variations in turnout rates across confessional groups are statistically significant, even after controlling for voters' gender, characteristics of the cadaster they were registered in, such as level of economic development and confessional fragmentation, as well as the size of the polling stations.

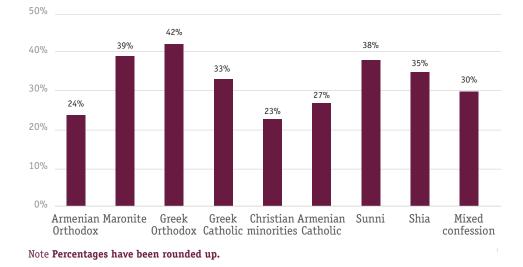


Figure 4 Turnout by confessional group in Beirut 1

Male constituents had a slightly higher turnout than women—32% compared to 31%. Turnout among the few voters registered in gendermixed stations was higher, at 34%.¹⁰ These variations across genders are statistically significant, even after controlling for voters' confession, characteristics of the cadasters in which they were registered, such as level of economic development and confessional fragmentation, as well as polling stations' size.

10 Only 12,525 voters (9%) were registered in gender-mixed polling stations.

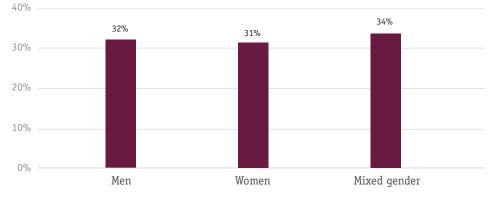


Figure 5 Turnout by gender in Beirut 1

Note Percentages have been rounded up.

There were geographical disparities in turnout

Beirut 1 was the country's smallest electoral district, with only four cadasters—Achrafieh, Saifi, Rmeil, and Medawar. The lowest participation rates were in Medawar (28%), followed by Saifi (29%) and Rmeil (31%). Achrafieh had a much higher turnout (36%). Lower turnouts in Medawar might be explained by the higher prevalence of Armenian Orthodox voters (59%) registered to vote in the cadaster, where they had a 23% turnout rate. Conversely, the largest group of voters in Achrafieh was the Greek Orthodox community (28%), which had a 43% turnout rate in that cadaster. Greek Orthodox voters had higher turnout rates than other groups in all cadasters, except in Medawar.

Participation rates within each sectarian group varied across cadasters. Armenian Orthodox, Christian minorities, and Armenian Catholic voters had their highest turnout in Achrafieh and their lowest in Rmeil. Among Greek Orthodox voters, turnout was also higher in Achrafieh, but was lowest in both Medawar and Saifi. Maronite voters voted more in Medawar, and Greek Catholics in Rmeil. Both Maronites and Greek Catholics had their lowest turnouts in Saifi. Sunnis, who had polling stations in Achrafieh and Medawar, had a similar turnout rate in both, while Shias, who also had polling stations in these two cadasters, voted much more in Medawar than they did in Achrafieh.

n Rmeil	Saifi	Medawar
21%		23%
40%	34%	42%
40%	38%	38%
36%	28%	34%
18%		22%
25%		25%
		38%
		44%
37%	24%	30%
31%	29%	28%
	21% 40% 40% 36% 18% 25%	21% 40% 34% 40% 38% 36% 28% 18% 25% 37% 24%

Table 2 Turnout by confessional group and cadaster in Beirut 1

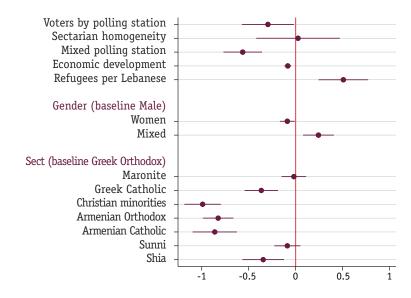
Note Percentages have been rounded up.

What are the main drivers of turnout in Beirut 1?

A multivariate analysis highlights the relevant impact of different factors on turnout rates. In Beirut 1, polling stations with a smaller number of registered voters recorded significantly higher turnout rates. This could suggest voter rigging, such as parties exerting pressure on voters to vote in a certain manner. As previous evidence shows, this tends to happen more often in smaller polling stations where it is easier to monitor voters' behavior. Polling stations that had multiple confessional groups registered to vote saw significantly lower turnout rates.

Regarding the characteristics of individual voters, men were slightly more likely to vote than women, while voters in gender-mixed stations were the most likely to do so. Greek Orthodox, Maronite, and Sunni voters were the most likely to vote, and were followed by Shia and Greek Catholic voters. Christian minorities were the least likely to vote, followed by Armenian Catholics and Armenian Orthodox.

Figure 6 Drivers of turnout in Beirut 1



III Who voted for whom?

Five lists competed in Beirut 1—three of them were complete, and two had less than eight candidates—with a total of 33 candidates. There were 10 candidates competing for the three Armenian Orthodox seats, five candidates competing for each of the Greek Orthodox, Maronite, Christian minorities, and Armenian Catholic seats, and three candidates competing for the Greek Catholic seat.

The race in Beirut 1 was highly competitive, with three of the five lists winning seats

The new proportional representation system, as well as the redistricting of Beirut's electoral districts, resulted in a shift in power.

There were three winning lists: 'Strong Beirut', formed by the Free Patriotic Movement (FPM) and Tashnag; 'Beirut 1', formed by the Lebanese Forces (LF) and Kataeb party; and Kulluna Watani, the coalition between anti-establishment and emerging political groups.

The first list, 'Strong Beirut', won 42% of the vote (18,373 votes) and four seats. Tashnag candidates Hagop Terzian (3,451 votes) and Alexandre Matossian (2,376 votes) each won an Armenian Orthodox seat, and FPM candidates Nicolas Sehnaoui (4,788 votes) and Antoine Pano (539 votes) won the Greek Catholic and minority Christian seats, respectively. Both parties made gains in 2018. FPM won for the first time, while Tashnag retained one of its seats and won a second one. On the same list, incumbent candidate Sebouh Kalpakian from the Social Democrat Hunchakian Party (known as the Hunchak party) lost his seat (1,566 votes), while he ran unopposed in 2009. The second winning list, 'Beirut 1', won 39% of the vote (16,772 votes) and three seats. Kataeb candidate Nadim Gemayel won the Maronite seat (4,096 votes), Imad Wakim from LF won the Greek Orthodox seat (3,936 votes), and Jean Talouzian, independent candidate backed by LF, won the Armenian Catholic seat (4,166 votes). In 2009, under the previous majoritarian electoral system, the list backed by these parties won all the seats in the former Beirut 1 electoral district.¹¹ The new proportional representation system, as well as the redistricting of Beirut may have played a part in the losses incurred by this coalition. The coalition retained the Maronite seat, one of the most competitive ones in the district, which was contested between Gemayel and Massoud Achkar (FPM-Tashnag list) who also ran in 2009. However, it lost the Greek Catholic seat, another highly competitive one, to FPM: Incumbent Michel Pharaon lost to Nicolas Sehnaoui, who also competed in 2009.

Finally, Kulluna Watani, the coalition between emerging independent groups, won the remaining seat. The list obtained its highest percentage of votes across the country in Beirut 1 (6,842 votes, 16%), where it won its only seat, which went to Armenian Orthodox candidate Paula Yacoubian (2,500 votes).

The two remaining lists, that did not win any seats, were 'We are Beirut' and 'Loyalty to Beirut', both composed of non-partisan and independent candidates. 'We Are Beirut' fielded five candidates¹² and obtained only 3% of votes (1,272 votes), despite including known candidates. The list included Michelle Tueni, who failed to win the Greek Orthodox seat previously occupied by her sister Nayla Tueni (2009-2018) and by her father Gebran Tueni (2005-until his assassination on December 12, 2005). Another candidate on the list, Serge Torsarkissian, was the incumbent Armenian Catholic MP from the Hunchak party. Both Michelle Tueni and Serge Torsarkissian won a very low number of votes (428 and 43, respectively). 'Loyalty to Beirut' had four candidates¹³ and obtained only 0.2% of the votes (94 votes).

Most of the winners had previous political experience. Tashnag winner Hagop Terzian was a member of the Beirut City Council (from 2010 to 2018) at the time of the elections. FPM winner Nicolas Sehnaoui ran in the 2009 elections but failed to win under the previous majoritarian electoral system. He is a high-ranking member of his party, and was appointed as Minister of Telecommunications in Najib Mikati's 2011-2014 government. Antoine Pano, the second FPM winner, was a former general of the Lebanese Armed Forces. The winner from Kataeb, Nadim Gemayel, was elected as a member of parliament in the 2009 elections. He also comes from one of the most notable Lebanese political families, being the son of former President-elect Bashir Gemayel, assassinated in 1982, and of Solange Gemayel who served as an MP in the 2005-2009 parliament. Imad Wakim from LF is a former 11

In the 2009 elections, Beirut was divided into three electoral districts. The previous Beirut 1 district included one Maronite, Greek Orthodox, Greek Catholic, Armenian Catholic, and Armenian Orthodox seat, each. These had previously been won by the March 14 coalition. In the 2018 elections, two Armenian Orthodox seats were moved to Beirut 1 from the previous Beirut 2 electoral district, and the seat representing Christian minorities was moved from the previous Beirut 3 district.

12

The list had one Armenian Orthodox, Greek Orthodox, Maronite, minority Christian, and Armenian Catholic candidate, each.

13

The list had one Greek Orthodox, Maronite, minority Christian, and Armenian Catholic candidate. Secretary General of his party, and the last winner on the list, Jean Talouzian, is a former general of the Lebanese Armed Forces. Even Paula Yacoubian, the Kulluna Watani winner, is a well-known public figure: She is a journalist and a former television host on Future TV, which was one of the country's main television channels, affiliated with the Future Movement party, and shut down in September 2019. She was also a member of the newly formed Saba'a party at the time of the elections.

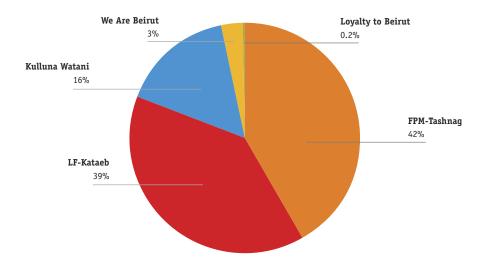


Figure 7 Percentage of votes for each list in Beirut 1

Note Percentages have been rounded up.

The performance of each party varied, driven by support for specific candidates

In the FPM-Tashnag list, Tashnag, which had three candidates, won 15% of preferential votes. The majority of these votes went to the first winner Hagop Terzian (8%), followed by Alexandre Matossian (nearly 6%), while the third candidate from the party, Serg Gukhadarian, won slightly less than 2% (717 votes). FPM, whose two candidates won, received 12% of preferential votes, with most of these going to Nicolas Sehnaoui (11%); Antoine Pano, the second FPM candidate, won only 1% of preferential votes. The final member of a political party on the list was former Hunchak MP Sebouh Kalpakian who won slightly less than 4% of preferential votes (1,566 votes). The list's two remaining candidates were non-party members Massoud Achkar, who was one of the most successful candidates in Beirut 1 (3,762 votes, 9%), and Nicolas Chammas (851 votes, 2%).

In the LF-Kataeb list, LF was the most successful party, with its two candidates receiving a combined 10% of preferential votes. Nearly all of these went to Imad Wakim alone (9%), with the second candidate Riad

Akel receiving only 1% of preferential votes (428 votes). The single Kataeb candidate, winner Nadim Gemayel, ranked second in the list with slightly less than 10% of preferential votes. Armenian party Ramgavar ran on the same list and fielded two candidates, who obtained 1% of preferential votes, with Avedis Dakessian receiving nearly all of these (437 votes, 1%) and Elena Cloxian barely receiving any votes (23 votes). The three other candidates on the list were not members of political parties, and two of them were among the most successful in Beirut 1. Winner Jean Talouzian ranked first in the list with 10% of preferential votes, and previous MP and minister Michel Pharaon won 8% (3,214 votes). The final candidate, Carole Babikian only received 0.3% of preferential votes (124 votes).

Candidates on the non-party affiliated lists won 19% of votes combined. However, nearly 16% of these went to Kulluna Watani candidates. Moreover, in this list, three candidates won most of the votes: Paula Yacoubian (6%), Ziad Abs (1,525, 4%), and Gilbert Doumit (1,046 votes, 2%).

The five candidates on the 'We Are Beirut' list won 3% of preferential votes, with the majority going to Seybou Makhjian (564 votes, 1%) and Michelle Tueni (428 votes, 1%). Finally, the four candidates on 'Loyalty to Beirut' won only 0.2% of preferential votes, with Gina Chammas ranking first with 31 votes.

Overall, 12 of the 33 candidates received over 1,000 votes (table 3), for a total of 86% of all preferential votes. In contrast to many districts, there was a high level of competition between candidates in Beirut 1, with the Maronite and Greek Catholic seats being particularly competitive.

Candidate	Affiliation	Number of votes	Share of preferential votes	Confession
Nicolas Sehnaoui	FPM	4,788	11%	Greek Catholic
Jean Talouzian	Independent	4,166	10%	Armenian Catholic
	(LF-affiliated)			
Nadim Gemayel	Kataeb	4,096	10%	Maronite
Imad Wakim	LF	3,936	9%	Greek Orthodox
Massoud Achkar	Independent	3,762	9%	Maronite
	(FPM-Tashnag list)			
Hagop Terzian	Tashnag	3,451	8%	Armenian Orthodox
Michel Pharaon	Independent	3,214	8%	Greek Catholic
	(LF-Kataeb list)			
Paula Yacoubian	Kulluna Watani	2,500	6%	Armenian Orthodox
Alexandre Matossian	Tashnag	2,376	6%	Armenian Orthodox
Sebouh Kalpakian	Hunchak	1,566	4%	Armenian Orthodox
Ziad Abs	Kulluna Watani	1,525	4%	Greek Orthodox
Gilbert Doumit	Kulluna Watani	1,046	2%	Maronite

Table 3 Most successful candidates in Beirut 1

Note Percentages have been rounded up.

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

Under the 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. In contrast to many districts, all winning candidates from each sectarian community in Beirut 1 were also the most successful.

Although the electoral system was proportional, the process of seat allocation that was opted for—i.e. the selection of candidates from each winning list that would make it to parliament—created competition both 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 list. The most voted for candidate then won their seat, regardless of the list to which they belonged. Accordingly, the list to which this candidate belonged then had one less seat left to win; and with the sectarian allocation of seats, one of the sectarian seats would be filled.

In the case of Beirut 1, Nicolas Sehnaoui ranked first, thus filling one of the four seats obtained by the FPM-Tashnag list, as well as the Greek Catholic seat. 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, meaning the method was actively selected and that an alternative one could have been used. The vertical distribution of seats prioritized the preferential vote—i.e. the candidate—over the proportional vote, which would be the support for a party or list.

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 first winning list—in Beirut 1, that would be Nicolas Sehnaoui from the FPM-Tashnag list. The second winner would be the most successful candidate from the second winning list—Jean Talouzian from the LF-Kataeb list—and the third would be the most successful candidate from the third winning list—Paula Yacoubian from Kulluna Watani. The fourth seat would then go to the second-ranking candidate in the FPM-Tashnag list, and in this case, Massoud Achkar (Maronite). While the fifth seat should go to the second candidate in the second winning list, Nadim Gemayel from the LF-Kataeb list, he would not win because the Maronite seat would have already been filled by Massoud Achkar.

Had seats been allocated this way in the 2018 elections, two of the winners would change: Massoud Achkar would win the Maronite seat instead of Nadim Gemayel, and Avedis Dekassian (Ramgavar, LF-Kataeb list) would win one of the Armenian Orthodox seats instead of Alexandre Matossian (Tashnag).

The diaspora's vote diverged from that of local residents in Beirut 1

Compared to residents, Lebanese residing abroad¹⁴ voted more for the FPM-Tashnag list (5% more) and Kulluna Watani (2% more), while they voted less for the LF-Kataeb list (6% less), as well as the two other independent lists (1% less, combined). Preferences for specific candidates within lists, however, followed a different pattern. The candidates who were significantly more successful among the diaspora were Imad Wakim (6% higher), Hagop Terzian (5% higher), Alexandre Matossian, Nicolas Sehnaoui, and Nadim Gemayel (between 3% and 1% higher each). Conversely, compared to resident voters, emigrants voted significantly less for Jean Talouzian (nearly 8% less), Michel Pharaon (5% less), Massoud Achkar (3% less), and Sebouh Kalpakian (nearly 2% less).

Beyond these differences for specific candidates, there was a common pattern in diaspora voters' behavior: Compared to resident voters, emigrants who voted for a party-affiliated list tended to vote more for candidates from political parties than they did for independent candidates. This was the case among all of the most successful candidates on party-affiliated lists, or those who received over 1,000 votes in Beirut 1. On the party-affiliated lists, FPM-Tashnag and LF-Kataeb, political party members received a higher share of the diaspora's than the resident's vote, while the opposite was true for independents. The only exception was Hunchak member Sebouh Kalpakian (FPM-Tashnag list), who received a higher share of votes among residents.

Regarding the other candidates on the FPM-Tashnag and LF-Kataeb lists who received less than 1,000 votes, the share of votes they obtained among residents and diaspora voters did not significantly vary (less than 1% less or more).

As for emigrants who voted for independent lists, they gave a higher share of their votes to the better-known one, Kulluna Watani. All candidates in Kulluna Watani received a higher share of votes from diaspora 14

Among voters who voted from abroad, 1,892 voted for a list and 1,833 cast a preferential vote. voters than they did from residents, with the exception of Ziad Abs.

Overall, emigrants' higher support for political party members could be due to these parties' higher capacity in mobilizing the Lebanese diaspora, while independents on their lists may not have had the ability or the resources to do so.

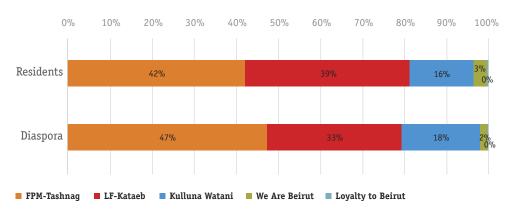


Figure 8 Percentage of votes for each list by residency in Beirut 1

There were slight variations in voters' preferences across genders

Compared to male voters, women voted slightly less for the FPM-Tashnag and LF-Kataeb lists (1% and 2% lower). Regarding candidates in FPM-Tashnag, the biggest differences were in votes for Massoud Achkar (1% lower among women compared to men) and Nicolas Sehnaoui (2% higher among women). In the LF-Kataeb list, most of the variation was driven by women voters' lower support for Imad Wakim (1.5% lower). Conversely, women gave a much higher percentage of their vote to Kulluna Watani (3% higher), with all candidates in the list performing better among women than they did among men. In particular, Paula Yacoubian's votes were 1.5% higher among women voters compared to men.

Much larger variations existed between voters in gender-mixed and gender-specific stations. Compared to voters in gender-specific stations, those in mixed ones voted much less for FPM-Tashnag (6% less), while they voted more for the LF-Kataeb list (6% more). The lower support for FPM-Tashnag was driven by lower support for Hagop Terzian (3% less), Alexandre Matossian (4% less), and Sebouh Kalpakian (2% less). Nicolas Sehnaoui, however, received a higher share of the votes in gender-mixed stations than he did in gender-specific ones (3% more). The higher support for the LF-Kataeb list in mixed stations was mostly driven by the higher share of votes for Jean Talouzian (3% higher), Nadim Gemayel (2% higher), and Imad Wakim (1% higher).

Note Percentages have been rounded up.



Figure 9 Percentage of votes for each list by gender in Beirut 1

Preferences for lists and candidates significantly varied across confessional groups

There were variations in preferences for lists across confessional group: Armenian Orthodox and Armenian Catholic voters gave the majority of their votes to the FPM-Tashnag list, while all other Christian voters had a preference for LF-Kataeb—although the list failed to win the majority of their votes. Shias gave the majority of their vote to FPM-Tashnag, and Sunnis to LF-Kataeb.

Variations were much more pronounced in preferences for political parties and candidates. Political parties have different constituents depending on their confession: Tashnag was the main party among Armenian Orthodox and Armenian Catholic voters; and FPM, LF, and Kataeb were the main parties among Maronite, Greek Orthodox, Greek Catholic, and Christian minorities voters.

Note Percentages have been rounded up.

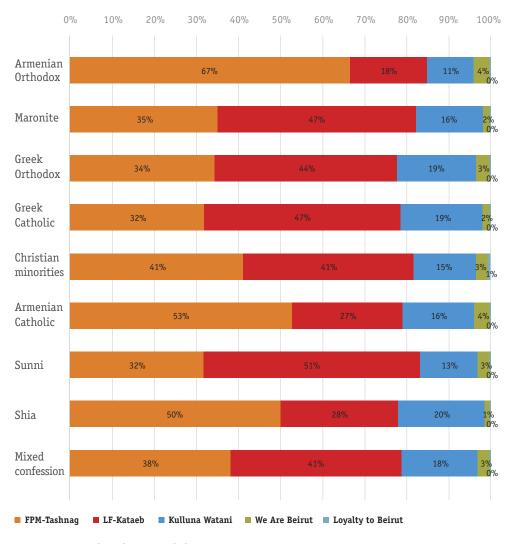


Figure 10 Percentage of votes for each list by confessional group in Beirut 1

The three Tashnag candidates combined received the majority of the Armenian Orthodox vote (55%) and the largest share of the Armenian Catholic vote (38%). Two of the party's three candidates, Hagop Terzian and Alexandre Matossian, ranked first and second among both groups. Armenian Orthodox voters gave 29% of their vote to Hagop Terzian and 21% to Alexandre Matossian. These two candidates also mostly relied on the Armenian Orthodox vote, receiving about 80% of their votes from them. The third candidate from the party, Serg Gukhadarian, managed to win 5% of Armenian Orthodox's preferential votes, and overall obtained 67% of his votes from this group. Other candidates who were relatively successful among Armenian Orthodox voters were Paula Yacoubian (Kulluna Watani, 8%), Sebouh Kalpakian (Hunchak, 6%), and Jean Talouzian (LF-Kataeb list, 5%).

Note Percentages have been rounded up.

Among Armenian Catholic voters, Hagop Terzian ranked first (18%), followed by Alexandre Matossian (11%). Armenian Catholic voters who voted for FPM-Tashnag also gave a significant share of their vote to Serg Gukhadarian (8%), Nicolas Sehnaoui (7%), and Massoud Achkar (5%). They gave a high share of their vote to the LF-Katab list (27%), and in particular Jean Talouzian (9%) and Nadim Gemayel (7%). Kulluna Watani received 16% of their vote, with the majority going to Paula Yacoubian (8%).

Ramgavar (LF-Kataeb list), a party that represents the Armenian community, was highly unsuccessful in capturing the community's votes compared to Tashnag. Combined, the two candidates from the party obtained less than 4% of the Armenian Orthodox and 2% of the Armenian Catholic vote. However, the majority of the votes obtained by each of the two candidates came from Armenian voters: Avedis Dakessian obtained 75% of his votes from Armenian Orthodox and 6% from Armenian Catholic voters; and Elena Cloxian obtained 67% of her votes from Armenian Orthodox voters, although she failed to receive any votes from Armenian Catholics.¹⁵

The LF-Kataeb list ranked first among Maronite, Greek Orthodox, Greek Catholic, and Christian minorities voters, receiving between 41% and 47% of each group's vote. Most of these votes were cast for Nadim Gemayel, Imad Wakim, and Jean Talouzian. The FPM-Tashnag list ranked second among the four groups, receiving between 32% and 41% of each of their votes.

Maronite voters gave 47% of their votes to the LF-Kataeb list, choosing mostly Nadim Gemayel (18%) and Imad Wakim (15%), followed by Jean Talouzian (7%) and Michel Pharaon (6%). Among the 35% of Maronite voters who voted for FPM-Tashnag, Massoud Achkar (17%) and Nicolas Sehnaoui (15%) obtained most of the votes.

Greek Orthodox voters gave 44% of their vote to LF-Kataeb, with Imad Wakim being most successful (14%), closely followed by Nadim Gemayel (12%), Jean Talouzian (10%), and Michel Pharaon (7%). Among the 34% of Greek Orthodox voters who voted for FPM-Tashnag, most chose Nicolas Sehnaoui (15%)—who was the candidate that received the highest number of votes among this sect—and Massoud Achkar (13%). Ziad Abs from Kulluna Watani also received a significant share of the sect's vote (6%).

Among Greek Catholic voters, 47% voted for LF-Kataeb, with between 10% and 13% of the votes going to Nadim Gemayel, Imad Wakim, Jean Talouzian, and Michel Pharaon, each. Similar to Greek Orthodox voters, the candidate that ranked first among Greek Catholics was Nicolas Sehnaoui (16%) from the FPM-Tashnag list, which received 32% of their votes. On the same list, Massoud Achkar also received a significant share (12%). **15** Note that Elena Cloxian only won 21 votes among resident voters. Finally, Christian minorities' vote was divided between LF-Kataeb and FPM-Tashnag, with each receiving 41% of their vote. Among the Christian minorities' votes cast for LF-Kataeb, between 10% and 11% voted for Jean Talouzian, Nadim Gemayel, and Imad Wakim, each. In contrast to other Christian groups, minority Christians who voted for the FPM-Tashnag list gave a high share to Tashnag candidates: Each of Tashnag and FPM obtained 14% of their vote. The preferred candidate in the list was Nicolas Sehnaoui (11%), followed by Massoud Achkar (9%), and Hagop Terzian (8%).

Among confessional groups not represented by a seat, Shia voters gave the majority of their vote to FPM-Tashnag (50%), with most voting for Nicolas Sehnaoui (39%). Among the 28% who voted for LF-Kataeb, most chose Jean Talouzian or Michel Pharaon (12% and 11%). A high share of Shias voted for Kulluna Watani (20%), with most choosing Ziad Abs (10%) and Paula Yacoubian (7%). Finally, the majority of Sunni constituents voted for LF-Kataeb (51%), almost all of which went to Jean Talouzian (23%) and Michel Pharaon (20%). Among the Sunnis who voted for FPM-Tashnag (32%), the majority chose Sebouh Kalpakian (19%), with Nicolas Sehnaoui also receiving a significant share (7%).

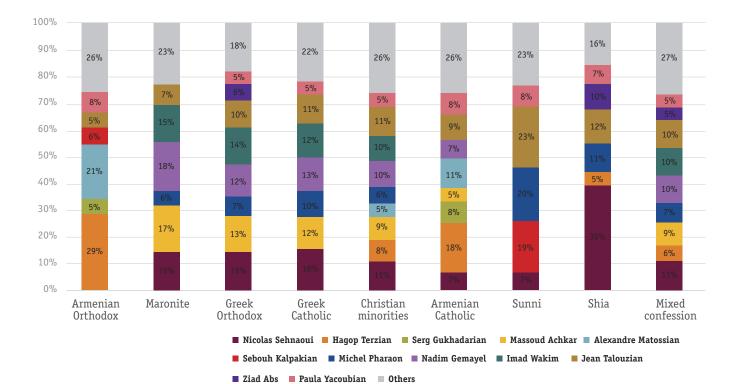


Figure 11 Main candidates by confessional group in Beirut 1

Note Percentages have been rounded up.

Overall, each confessional group's vote—in particular the Christian one—was highly contested between different candidates. The least fragmented were the Armenian Orthodox and Armenian Catholic votes, which mostly went to Tashnag candidates Hagop Terzian and Alexandre Matossian, and the Shia vote, which mostly went to Nicolas Sehnaoui. Nadim Gemayel received the highest share of the Maronite vote, although he was closely followed by Massoud Achkar. Nicolas Sehnaoui ranked first among Greek Orthodox, Greek Catholic, and Christian minorities voters. He was closely followed by Imad Wakim among Greek Orthodox voters, and by Jean Talouzian among Christian minorities. Talouzian, in turn, received the highest share of the Sunni vote.

Candidates in Beirut 1 relied on some specific confessional groups. This can be determined by looking at the percentage of votes each confessional group gave to each candidate, as well as the share of votes received by each candidate that came from each confessional group.

Among the preferred candidates by confessional group, Nicolas Sehnaoui, Massoud Achkar, Nadim Gemayel, and Imad Wakim relied significantly on the Greek Orthodox, Maronite, and Greek Catholic vote. The other main Christian candidate Michel Pharaon received a significantly high share of his votes from Sunni stations (27%), and to some extent, Greek Catholic ones (12%).

The main Armenian candidates, as expected, tended to rely significantly on the Armenian Orthodox and Armenian Catholic vote. Hagop Terzian, Alexandre Matossian, and Serg Gukhadarian received over 80% of their votes from voters in Armenian Orthodox and Armenian Catholic stations—and Gukhadarian received much higher support from Armenian Catholics. Conversely, while Sebouh Kalpakian relied on the Armenian Orthodox vote to some extent (35% of his votes), over half of his votes came from Sunni polling stations (55%). Jean Talouzian, although successful among most confessional groups, also received significantly high support from voters in Sunni stations (24% of his votes).

Regarding the last two main candidates, Paula Yacoubian also relied more on the Armenian Orthodox vote, followed by the Sunni one, while Ziad Abs relied significantly more on the Greek Orthodox vote.

There were variations in the votes received by each list and candidate across cadasters

In Achrafieh, the list that ranked first was the LF-Kataeb one (8,135 votes, 43%), with Jean Talouzian being the most successful candidate in it (2,239 votes, 12%). Achrafieh was the cadaster in which Talouzian won his highest share of votes in Beirut 1. Nicolas Sehnaoui on the FPM-Tashnag list, however, performed slightly better (2,389 votes, almost 13% of preferential votes) than Talouzian in Achrafieh—which was also the cadaster where he managed to win his highest share of votes.

In Rmeil, the FPM-Tashnag and LF-Kataeb lists received a similar share of votes (3,533 and 3,461 votes, or 40% each), and the two most successful candidates were Massoud Achkar (1,852 votes, 13%) and Nadim Gemayel (1,850 votes, 13%).

In Saifi, the LF-Kataeb list was significantly more successful (1,217 votes, 46%) than FPM-Tashnag (822 votes, 31%), with Nadim Gemayel receiving the highest share of votes (432 votes, 17%). Saifi was the cadaster in Beirut in which he managed to win his highest share of preferential votes, while also outperforming all other candidates. The success of the list was also driven by the high share of votes for Imad Wakim (304 votes, 12%) and Michel Pharaon (250 votes, 10%), who also won their highest percentages of preferential votes in Saifi.

Finally, in Medawar, FPM-Tashnag won the majority of the votes (5,903 votes, 54%), driven significantly by the success of Hagop Terzian (1,864 votes, 17%) and Alexandre Matossian (1,286 votes, 6%). Medawar was the only cadaster where both of these candidates managed to win a significant share of votes.

Kulluna Watani found high levels of support in Saifi (532 votes, 20%), Rmeil (1,470 votes, 17%), and Achrafieh (3,102 votes, 16%). However, it was much less successful in Medawar (1,381 votes, 13%), even though Paula Yacoubian, the list's most successful candidate, won her highest share of preferential votes there (812 votes, nearly 8%, while she obtained less than 6% in all other cadasters).

Overall, Armenian candidates were most successful in Medawar, and were generally highly unsuccessful in capturing a significant share of votes in other cadasters. Conversely, candidates from the other sectarian groups—Maronite, Greek Orthodox, Greek Catholic, and Christian minorities—were generally less successful in Medawar than they were in other cadasters.

What are the main drivers of votes for each party?

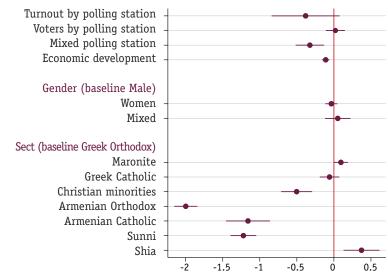
A multivariate analysis can highlight the relevant impact of factors that may have influenced the votes received by each of the winning political parties.

Across polling stations, higher turnout rates in a polling station were associated with a higher share of votes for LF candidates, while they were associated with a lower share of votes for Kataeb. Voters in bigger polling stations tended to vote less for Tashnag and more for LF candidates. Moreover, those registered in mixed polling stations were significantly less likely to vote for FPM and Kataeb candidates, while they were significantly more likely to vote for Tashnag.

Among the voters in sect-specific polling stations, the main Christian groups (Maronites, Greek Orthodox, and Greek Catholics) tended to have similar preferences, which was also the case among Armenian Orthodox

and Armenian Catholics. The main Christian groups were the most likely to vote for FPM, LF, and Kataeb candidates, and the least likely to vote for Tashnag, while the exact opposite was true for the two Armenian groups. Compared to the other Christian groups, Christian minorities tended to vote less for FPM and Kataeb, while they voted more for Tashnag, and as much for LF candidates. Among the groups not represented by a seat, Shias were more likely to vote for both FPM and Tashnag, while they were less likely to vote for LF and Kataeb. Sunnis were most likely to vote for Tashnag and less likely to vote for Kataeb and FPM candidates. There was no significant difference in votes for LF candidates between Sunni, Maronite, Greek Orthodox, and Greek Catholic voters.

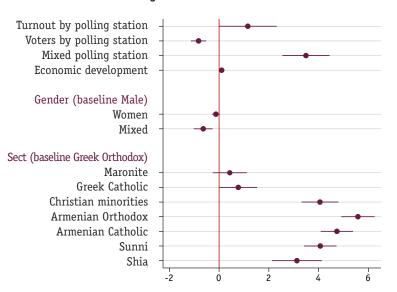
Figure 12 Drivers of votes for the winning parties in Beirut 1



Drivers of votes for the Free Patriotic Movement

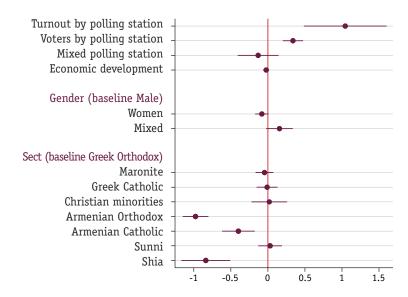
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b Drivers of votes for Tashnag

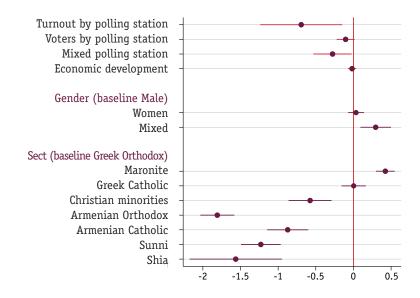


LCPS Report

C Drivers of votes for the Lebanese Forces



d Drivers of votes for Kataeb



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

In Beirut 1, 98% of voters represented by a seat gave a preferential vote for a candidate in their selected list. Among those represented by a seat, 39% chose a candidate from their own confession. This is the lowest percentage observed across the country.

Confessional biases varied across confessional groups

The confessional bias was significantly higher among Armenian Orthodox voters than it was among other groups, with 72% of them voting for a co-sectarian candidate, compared to less than 40% of other confessional groups. Armenian Orthodox candidates were also highly popular among Armenian Catholic voters, and received 46% of their preferential vote, compared to the 20% received by Armenian Catholic candidates. Among the Armenian Orthodox who did not cast a sectarian vote, the highest share voted for Armenian Catholic candidates (12%). Both Armenian groups therefore had a bias toward Armenian candidates.

Among the other confessional groups, the confessional bias was higher among Maronites (39%) and much lower among Greek Catholic (27%) and Greek Orthodox voters (26%). However, when these groups did not cast a confessional vote, they mostly voted for each other. Most of the remaining Maronite vote was split between Greek Catholic (21%) and Greek Orthodox candidates (20%), and the highest share of both the Greek Orthodox and Greek Catholic votes went to Maronite candidates (29% among each). The remainder of the Greek Orthodox vote went to Greek Catholic candidates (23%), and the remainder of the Greek Catholic vote went mostly to Greek Orthodox candidates (19%). In total, Maronite, Greek Orthodox, and Greek Catholic candidates received 81% of the Maronite, 77% of the Greek Orthodox, and 75% of the Greek Catholic preferential vote.

Christian minorities had by far the lowest sectarian bias, with only 10% voting for a co-confessional candidate. Their vote was highly fragmented, with between 14% and 23% going to candidates from each of the other confessional groups, the highest being for Armenian Orthodox candidates (23%) and the lowest for Armenian Catholic candidates (14%).

Overall, after controlling for voters' gender, as well as characteristics of the cadasters in which they were registered, Armenian Orthodox, followed by Maronite voters, were the most likely to vote for a coconfessional candidate, while Christian minorities were significantly less likely to do so. There were no variations between Armenian Catholic, Greek Orthodox and Greek Catholic voters, who stood in between.

Among the confessional groups not represented by a seat in Beirut 1, Shias gave the majority of their vote to Greek Catholic candidates (51%). Sunni voters were divided between Armenian Orthodox, Greek Catholic, and Armenian Catholic candidates, with between 23% and 30% voting for each. In mixed stations, votes were divided between Maronite (23%), Armenian Orthodox (20%), Greek Orthodox and Catholic candidates (19% each).

	Armenian Orthodox	Maronite	Greek Orthodox	Greek Catholic	Christian minorities	Armenian Catholic
Armenian Orthodox	72%	4%	4%	7%	1%	12%
Maronite	6%	39%	20%	21%	4%	9%
Greek Orthodox	7%	29%	26%	23%	4%	12%
Greek Catholic	7%	29%	19%	27%	4%	14%
Christian minorities	23%	20%	15%	18%	10%	14%
Armenian Catholic	46%	14%	6%	11%	2%	20%
Sunni	30%	7%	9%	28%	3%	23%
Shia	15%	7%	12%	51%	2%	13%
Mixed confession	20%	23%	19%	19%	6%	13%

Table 4 Percentage of votes for candidates from each confession by confessional group in Beirut 1

Note Percentages have been rounded up.

Male voters had a higher confessional bias than women, with 42% of them casting their ballot for a co-sectarian candidate, compared to 39% of women. In polling stations which had voters from both genders registered to vote, 24% cast a confessional vote. Men from all confessional groups had a higher confessional bias than their women counterparts. This was particularly the case among Greek Orthodox men (28% compared to 24% among women) and Armenian Catholic men (22% compared to 18% among Armenian Catholic women).

	Men	Women	Mixed gender
Armenian Orthodox	73%	72%	56%
Maronite	40%	38%	42%
Greek Orthodox	28%	24%	24%
Greek Catholic	28%	28%	19%
Christian minorities	11%	9%	11%
Armenian Catholic	22%	18%	22%
Total	42%	39%	24%

Table 5Percentage of votes for co-sectarian candidates by confessional group andgender in Beirut 1

Note Percentages have been rounded up.

A stronger confessional bias was observed when looking at the percentage of votes given to each candidate by confessional group. Most candidates, even those who won a very low number of votes, tended to receive a higher share of their preferential votes from their co-confessional voters. For example, although only 10% of Christian minorities voted for a co-confessional candidate, every candidate representing this confessional group won a higher share of their votes

27

from their co-sectarian constituents. This was also true for Armenian Orthodox, Armenian Catholic, Maronite, and Greek Orthodox candidates. The only two exceptions were Imad Wakim (Greek Orthodox) who won a slightly higher share of the Maronite than the Greek Orthodox vote (15% compared to 14%), and Jean Talouzian (Armenian Catholic), who won a higher share of the Greek Catholic than the Armenian Catholic vote (11% compared to 9%).

Preferences for co-confessional candidates varied across cadasters

Voters in Medawar had a much higher confessional bias than those in other cadasters, with 56% choosing a candidate from the same confession. This percentage was 36% in Rmeil, 34% in Saifi, and 32% in Achrafieh.¹⁶ The higher confessional bias in Medawar was driven by the higher prevalence of Armenian Orthodox voters in this cadaster—over half of voters in Medawar were registered in Armenian Orthodox polling stations.

In total, Armenian Orthodox candidates won the majority of votes in Medawar (52%), while they obtained less than 20% of preferential votes in all other cadasters. Maronite, Greek Orthodox, and Greek Catholic candidates received their highest percentage of votes in Saifi. Maronite candidates were most successful in Saifi and Rmeil (32% and 30% of votes), Greek Catholic candidates in Saifi and Achrafieh (23% and 22% of votes), and Greek Orthodox candidates in Saifi (21%, while they received less than 20% in all other cadasters). In no cadaster did candidates representing Christian minorities manage to win over 5% of preferential votes. Armenian Catholic candidates were more successful in Achrafieh, followed by Medawar, than they were in Rmeil and Saifi.

Among each confessional group, there were minor geographical variations in the percentage of votes cast for co-confessional candidates. In all cadasters where they had their own polling stations, the majority of Armenian Orthodox voters cast a confessional vote. Their highest confessional bias was in Medawar (74%) and their lowest one in Rmeil (66%). This was the opposite for Armenian Catholic (16% in Medawar compared to 24% in Rmeil), Maronite (37% compared to 42%), and Greek Orthodox voters (18% compared to 27%). Greek Orthodox voters also had one of their highest confessional bias in Saifi (27%). In contrast to the other main Christian groups, Greek Catholics were most sectarian in Medawar (30%), while they were least sectarian in Rmeil and Achrafieh (26% each). Finally, Christian minorities gave a much higher share of their votes to their co-confessional candidates in Achrafieh (14%), and a much lower

16

It must be noted that a very low number of represented voters registered in their own stations in Saifi cast a preferential vote (1,765 voters). Saifi only had Maronite, Greek Orthodox, and Greek Catholic stations, as well as mixed ones. The highest share of preferential votes was cast in Achrafieh (over 15,000 among represented groups), with a similar number in Rmeil and Medawar (about 8,000). These three cadasters had polling stations reserved for each of the represented groups.

	Achrafieh	Rmeil	Saifi	Medawar
Armenian Orthodox	70%	66%		74%
Maronite	37%	42%	40%	37%
Greek Orthodox	26%	27%	27%	18%
Greek Catholic	26%	26%	29%	30%
Christian minorities	14%	9%		3%
Armenian Catholic	20%	24%		16%
Total	32%	36%	34%	56%

Table 6 $\,$ Percentage of votes for co-sectarian candidates by confessional group and cadaster in Beirut 1 $\,$

Note Percentages have been rounded up.

V How did women candidates perform?

Seven out of the 33 candidates in Beirut 1 were women, and altogether, they obtained 9% of preferential votes in the district (3,755 votes). One woman, Paula Yacoubian from Kulluna Watani won an Armenian Orthodox seat.

Four of the five competing lists had at least one woman candidate, with only the FPM-Tashnag list failing to nominate a woman. Two women ran on the LF-Kataeb list: Carole Babikian (independent, 124 votes) and Elena Cloxian (Ramgavar party, 23 votes). Three women ran with Kulluna Watani: Paula Yacoubian (2,500 votes), Joumana Haddad (431 votes), and Laury Haytayan (218 votes). One woman ran in each of the two other lists: Michelle Tueni ('We Are Beirut', 428 votes), and Gina Chammas ('Loyalty to Beirut', 31 votes).

The performance of each woman candidate within her list was highly unequal

Paula Yacoubian, the only successful woman in Beirut 1, won 2,500 votes (6%) and ranked eighth in the district. The vast majority of the votes that went to women candidates (3,755 votes, 9%) were received solely by Yacoubian. She also received the highest share of preferential votes among Kulluna Watani voters, winning almost 1,000 more votes than the next candidate in her list. The higher number of votes received by Yacoubian may be partly explained by her wide media exposure: She was one of Lebanon's most prominent television personalities, and had previously worked in Future TV, one of Lebanon's mainstream television channels, associated with former Prime Minister Saad Hariri.

The two other women on the Kulluna Watani list were much less successful, although they performed better than most other women candidates. Joumana Haddad, who ran for the seat representing Christian minorities, was the second most successful woman. She received 431 votes (1% of preferential votes), but ranked 19th in Beirut 1. Similar to Yacoubian, Haddad's better performance relative to other women may have been helped by her previous exposure: She is an author, journalist, and a women's rights activist.

Laury Haytayan, who ran for an Armenian Orthodox seat, won 218 votes (0.5%), ranking 23rd in the district, and seventh out of Kulluna Watani's eight candidates.

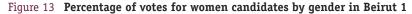
Michelle Tueni (Greek Orthodox), who was the third most successful woman, obtained 428 votes (1%) and ranked 20th in the district. She also ranked second in her list, and received over one third of the votes her list won. Tueni's success relative to most other women candidates could be due to her exposure and family background. She is the daughter of late journalist and MP Gebran Tueni, granddaughter of former MP and minister Ghassan Tueini, and the sister of incumbent MP Nayla Tueni.

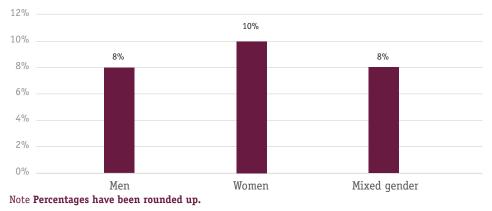
In the LF-Kataeb list, Carole Babikian (Armenian Orthodox), was the fifth most successful woman candidate. She won 124 votes (0.3%), ranking 25th in Beirut 1 and seventh out of the eight candidates in her list. Elena Cloxian, the second woman on the list, also ran for an Armenian Orthodox seat. She is a member of the Ramgavar party and only won 23 votes (0.05%). Cloxian was the least successful woman in Beirut 1, and ranked last on her list by a large margin.

Finally, the last woman candidate in Beirut 1 was Gina Chammas (Christian minorities), who headed the 'Loyalty to Beirut' independent list. Although she ranked first in her list, Chammas won only 31 votes (0.1%), ranking 28th out of the 33 candidates in Beirut 1.

Women voters showed much higher support for women candidates

Across genders, 10% of women voters cast their ballot for a woman candidate (1,857 voters), compared to 8% of men (1,375 voters). In mixed polling stations, women candidates received 8% of preferential votes (322 votes). These variations across genders are statistically significant after controlling for voters' confession and characteristics of the cadasters they were registered in.





Every woman candidate received both a higher share and a higher number of women voters' preferential votes. The three women candidates on the Kulluna Watani list were particularly more successful among women voters than they were among men, with Paula Yacoubian winning 1,232 of her votes from women compared to 928 from men; Joumana Haddad winning 225 votes from women compared to 133 from men; and Laury Haytayan 114 votes from women, compared to 65 from men. Elena Cloxian from the LF-Kataeb list, who won a very low number of votes in the elections, received nearly all of them from women voters (16 votes, compared to four votes from men).

		Paula Yacoubian	Joumana Haddad	Laury Haytayan	Michelle Tueni	Carole Babikian	Elena Cloxian	Gina Chammas
Number	Men	928	133	65	192	41	4	12
of votes	Women	1,232	225	114	199	58	16	13
	Mixed gender	217	39	20	21	18	1	6
Share of	Men	5%	1%	0%	1%	0%	0%	0%
preferential	Women	7%	1%	1%	1%	0%	0%	0%
votes	Mixed gender	5%	1%	0%	1%	0%	0%	0%

Table 7Number and percentage of votes for each woman candidate by gender in Beirut 1

Note Percentages have been rounded up.

Support for women candidates was high among all confessional groups, but the performance of each varied

The share of votes cast for women candidates was highest among Sunni (11%) and Armenian Catholic voters (10%). They were followed by Greek Orthodox and Armenian Orthodox voters (9% each), while the percentages were similar among Greek Catholic, Christian minorities, and Shia voters (8% each). The lowest levels of support were among Maronite voters (6%).

As the actual number of votes cast by each confessional group varied, these percentages did not always translate into high numbers. The highest number of votes received by women candidates came from Greek Orthodox (870 votes) and Armenian Orthodox voters (787 votes). The numbers were also substantial among Sunnis (488 votes), Maronites (420 votes), and Greek Catholics (320 votes), while they were lowest among Christian minorities (220 votes), Armenian Catholic (143 votes), and Shia voters (65 votes). In mixed stations, 241 voters chose a woman.

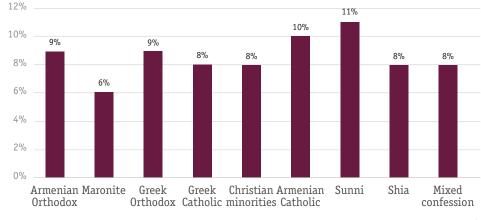


Figure 14 Percentage of votes for women candidates by confessional group in Beirut 1

Note Percentages have been rounded up.

Support for specific women varied across confessional groups. Paula Yacoubian performed significantly better than the other women candidates among all confessional groups. She received over 4% of every group's vote, with the highest being among Armenian Orthodox, Armenian Catholic, and Sunni voters (8%), and the lowest among Maronites (4%). The most significant share of votes she obtained came from voters in Armenian Orthodox stations (663 votes), followed by those in Greek Orthodox stations (460 votes).

Joumana Haddad, the woman candidate who came in second, received 1% of every confessional group's preferential votes except the Armenian Orthodox (0.3%). The highest share of her votes came from Greek Orthodox voters (117 votes), followed by Maronites (78 votes), while less than 50 voters from each of the other confessional groups voted for her. Nevertheless, she was the second preferred woman, after Paula Yacoubian, among Maronite, Greek Catholic, Christian minorities, and Shia voters, as well as among voters in mixed stations.

On the same list, Laury Haytayan was more successful among Armenian voters, being the second-preferred woman among both Armenian Orthodox (54 votes, 1%) and Armenian Catholics (13 votes, 1%).

Michelle Tueni received support mostly from her co-sectarian voters, with 210 Greek Orthodox voters casting their ballot for her (2%). In fact, half of the votes she received came from Greek Orthodox voters. She also received some support from Sunnis (76 votes, 2%), and Greek Catholics (45 votes, 1%). Tueni was particularly unsuccessful among Armenian Orthodox, Armenian Catholic, and Shia voters (10 votes combined).

On the LF-Kataeb list, Carole Babikian failed to win more than 0.4% of any confessional group's vote, but won 1% among voters in mixed stations. Only Greek Orthodox voters gave more than 20 votes to the

candidate (39 votes). The second woman on the list, Elena Cloxian, received the majority of her votes from Armenian Orthodox voters (14 votes), and a combined seven votes from all other polling stations.

Finally, Gina Chammas did not rely on any single confessional group's vote and obtained a similar number of votes across confessions.

Table 8	Number and percentage of votes for each woman candidate by confessional
group i	in Beirut 1

		Paula Yacoubian	Joumana Haddad	Laury Haytayan	Michelle Tueni	Carole Babikian	Elena Cloxian	Gina Chammas
Number	Armenian Orthodox	663	29	54	7	19	14	1
of votes	Maronite	258	78	24	37	20	1	2
	Greek Orthodox	460	117	36	210	39	2	6
	Greek Catholic	197	45	21	45	7	0	5
	Christian minorities	147	35	14	14	5	1	4
	Armenian Catholic	112	8	13	3	5	0	2
	Sunni	347	40	13	76	4	3	5
	Shia	55	6	2	0	2	0	0
	Mixed confession	138	39	22	20	16	0	6
Share of	Armenian Orthodox	8%	0%	1%	0%	0%	0%	0%
preferential	Maronite	4%	1%	0%	1%	0%	0%	0%
votes	Greek Orthodox	5%	1%	0%	2%	0%	0%	0%
	Greek Catholic	5%	1%	1%	1%	0%	0%	0%
	Christian minorities	5%	1%	1%	1%	0%	0%	0%
	Armenian Catholic	8%	1%	1%	0%	0%	0%	0%
	Sunni	8%	1%	0%	2%	0%	0%	0%
	Shia	7%	1%	0%	0%	0%	0%	0%
	Mixed confession	5%	1%	1%	1%	1%	0%	0%

Note Percentages have been rounded up.

VI How did emerging political groups perform?

Two independent lists ran in Beirut 1: Kulluna Watani, which won 16% of votes (6,842 votes), and 'Loyalty to Beirut', which won 0.2% (94 votes).

How did Kulluna Watani perform?

Kulluna Watani, the coalition between independent and emerging groups, received 16% of votes in Beirut 1 (6,842 votes) and one seat, won by Paula Yacoubian. This was the highest percentage of votes and only seat the coalition obtained across the country. Similar to other electoral districts, Kulluna Watani won a higher share of votes among the Lebanese diaspora (345 votes, 18%). The Kulluna Watani list had candidates running for each of the seats in Beirut 1. The Armenian Orthodox candidates were Paula Yacoubian (2,500 votes, 6%), Laury Haytayan (218 votes, 0.5%), and Levon Telvizian (114 votes, 0.3%). Ziad Abs ran for the Greek Orthodox seat (1,525 votes, 4%), Gilbert Doumit for the Maronite seat (1,046 votes, 2%), Joumana Haddad for the Christian minorities seat (431 votes, 1%), Lucien Bourjeili for the Greek Catholic seat (328 votes, 1%), and Yorgui Teyrouz for the Armenian Catholic seat (536 votes, 1%).

Across Beirut 1, support for Kulluna Watani was highest in Saifi (532 votes, 20%). Rmeil came in second (1,470 votes, 16%), followed by Achrafieh (3,102 votes, 16%), while the lowest share of votes the list obtained was in Medawar (1,381 votes, 13%).

Women were more likely to vote for Kulluna Watani and voted more for each of its candidates

Votes for Kulluna Watani significantly varied across genders: 17% of women voted for Kulluna Watani (3,279 voters), compared to 14% of men (2,555 voters). In mixed stations, 16% of voters cast a ballot for the list (663 voters). These variations across genders are statistically significant after controlling for voters' confession as well as the characteristics of the cadasters they were registered in.

Moreover, each individual Kulluna Watani candidate won a higher number of votes in female-only polling stations than they did in male-only stations. Paula Yacoubian in particular received much higher support among women voters (7% of their vote, compared to 5% of men's). Other candidates who were also particularly more successful among women than they were among male voters were Gilbert Doumit (3% compared to 2%), Yorgui Teyrouz (2% compared to 1%), Joumana Haddad (1.2% compared to 0.7%), and Laury Haytayan (0.6% compared to 0.4%).

Table 9Number and percentage of votes for Kulluna Watani and its candidates bygender in Beirut 1

		Kulluna Watani	Paula Yacoubian	Ziad Abs	Gilbert Doumit	Yorgui Teyrouz	Joumana Haddad	Lucien Bourjeily	Laury Haytayan	Levon Telvizian
er es	Men	2,555	928	634	393	176	133	127	65	45
umb	Women	3,279	1,232	667	496	279	225	154	114	48
P. P.	Mixed gender		217	181	101	55	39	24	20	13
of	Men	14%	5%	4%	2%	1%	0.7%	0.7%	0.4%	0.3%
otes	Women	17%	7%	4%	3%	2%	1.2%	0.8%	0.6%	0.3%
Sh v	Mixed gender	16%	5%	4%	2%	1%	1.0%	0.6%	0.5%	0.3%

Note Percentages have been rounded up.

Support for Kulluna Watani varied across confessional groups and candidates generally performed best among their sectarian communities There were significant variations in the votes cast for Kulluna Watani across confessional groups, although over 10% of every group voted for the list. Shia voters showed the highest support for the list (20%), followed by Greek Catholic and Greek Orthodox voters (19% each). Armenian Catholics, Maronites, and Christian minorities followed (between 15% and 16% each), while the share of votes given to the list was lowest among Armenian Orthodox (11%) and Sunni voters (13%). These variations across confessional groups are statistically significant even after controlling for voters' gender as well as characteristics of the cadasters and polling stations they were registered in.

The highest number of votes obtained by Kulluna Watani came from Greek Orthodox voters registered in their own stations (1,781 votes), followed by Maronite (1,047 votes) and Armenian Orthodox voters (987 votes). A high number of votes for the list also came from Greek Catholic (759 votes) and Sunni voters (612 votes), while less than 500 voters from the remaining confessional groups voted for Kulluna Watani. The number was lowest among Shia voters (162 votes)—although they were the confessional group that gave their highest share of votes for the list.

	Number of votes	Share of votes
Armenian Orthodox	987	11%
Maronite	1,047	16%
Greek Orthodox	1,781	19%
Greek Catholic	759	19%
Christian minorities	402	15%
Armenian Catholic	233	16%
Sunni	612	13%
Shia	162	20%
Mixed confession	514	18%

Table 10Number and percentage of votes for Kulluna Watani by confessional group inBeirut 1

Note Percentages have been rounded up.

Each Kulluna Watani candidate had different constituents. Paula Yacoubian performed well among all confessional groups, receiving over 4% of every group's vote and being the first or second most voted for candidate among her list's voters. Yacoubian was by far the most successful Kulluna Watani candidate among Armenian Orthodox, Armenian Catholic, and Sunni voters who voted for the list. She received 8% of each of these groups' preferential votes, and the majority of the votes these groups cast for Kulluna Watani went to her. Yacoubian was also the preferred Kulluna Watani candidate among Greek Catholics and Christian minorities, while she ranked second among Greek Orthodox, Maronite, and Shia Kulluna Watani voters.

Ziad Abs' main constituents were Greek Orthodox voters, who gave him 6% of their preferential vote. In fact, he received 40% of his votes from voters in these stations (591 out of the 1,482 he obtained among residents). He was also the preferred Kulluna Watani candidate among Shia voters, winning 10% of their preferential vote. Abs was the second most popular Kulluna Watani candidate among Greek Catholic, Christian minorities, and Sunni voters, while he was highly unsuccessful among Armenian voters (0.6% of the Armenian Orthodox and 1.4% of the Armenian Catholic vote). Overall, all confessional groups, except both Armenian communities, gave him 3% of their preferential vote or more.

Gilbert Doumit was the preferred Kulluna Watani candidate among Maronite voters, receiving 4% of their preferential vote, although he only outperformed Yacoubian by a very small margin (six votes). Doumit ranked third among most confessional groups: Greek Orthodox, Greek Catholics, as well as Christian minorities, Armenian Catholics, and Shias, although the number of votes he received among these three latter groups was low. Doumit won over 1% of every confessional group's vote except for the Armenian Orthodox and Sunni one.

Yorgui Teyrouz was overall successful in capturing the Armenian Catholic (3%) and Greek Catholic votes (2%), although the highest share of his votes came from Greek Orthodox voters. He also won over 1% of preferential votes among other Christian voters (Maronite, Greek Orthodox, and Christian minorities), and was least successful among Sunnis (0.2%).

Joumana Haddad received higher support from Christian minorities, Maronites, Greek Orthodox, and Greek Catholics (1%). The lowest share of votes she won was among Armenian Orthodox voters (0.3%). She was also the Kulluna Watani candidate who received the lowest number of votes from Armenian Orthodox voters.

Lucien Bourjeily was most successful among Greek Catholic voters (71 votes, 2%), winning less than 1% of preferential votes among all other confessional groups. Although the number of votes he won from Greek Orthodox voters (74 votes) was slightly higher than what he won from Greek Catholics, compared to other candidates, Bourjeily received a higher share of his votes from Greek Catholic voters.

The seventh candidate on the list, Laury Haytayan, performed better among Armenian voters than she did among other groups. She received 0.9% of the Armenian Catholic and 0.6% of the Armenian Orthodox vote. The higher share among Armenian Catholic voters, however, represents a very low number of votes (13 votes), while about one quarter of her total votes came from Armenian Orthodox voters (54). Finally, Levon Telvizian's share of votes was highest among Armenian Orthodox voters (0.4%), who also gave him slightly over one third of his votes. He ranked last in his list among all confessional groups, except the Armenian Orthodox, who voted for Kulluna Watani.

There was one common pattern in preferences for different candidates: Most Kulluna Watani candidates tended to perform best among their coconfessional voters. Armenian Orthodox candidates Paula Yacoubian, Laury Haytayan, and Levon Telvizian's highest share of votes were obtained from voters in Armenian Orthodox polling stations. They were the only ones to receive a higher number of votes from Armenian Orthodox than from Greek Orthodox voters. Greek Orthodox candidate Ziad Abs received his highest share of votes, by far, from Greek Orthodox polling stations.

Given that a much higher number of Greek Orthodox voters voted for Kulluna Watani, all Christian candidates received their highest share of votes from Greek Orthodox stations. However, Gilbert Doumit received a comparatively higher share of his votes from Maronite voters. Similarly, Lucien Bourjeili received a significantly higher share of his votes from Greek Catholic voters, Joumana Haddad from minority Christian voters, and Yorgui Teyrouz from Armenian Catholic voters.

		Paula Yacoubian	Ziad Abs	Gilbert Doumit	Yorgui Teyrouz	Joumana Haddad	Lucien Bourjeily	Laury Haytayan	Levon Telvizian
Number	Armenian Orthodox	663	50	48	50	29	36	54	37
of votes	Maronite	258	232	264	105	78	53	24	10
	Greek Orthodox	460	591	319	134	117	74	36	21
	Greek Catholic	197	161	152	92	45	71	21	6
	Christian minorities	147	90	53	32	35	10	14	8
	Armenian Catholic	112	19	23	37	8	9	13	4
	Sunni	347	123	34	8	40	27	13	3
	Shia	55	77	10	4	6	6	2	0
	Mixed confession	138	139	87	48	39	19	22	17
Share of	Armenian Orthodox	8%	1%	1%	1%	0.3%	0.4%	0.6%	0.4%
preferential	Maronite	4%	4%	4%	2%	1.2%	0.8%	0.4%	0.2%
votes	Greek Orthodox	5%	6%	3%	1%	1.2%	0.8%	0.4%	0.2%
	Greek Catholic	5%	4%	4%	2%	1.1%	1.8%	0.5%	0.2%
	Christian minorities	5%	3%	2%	1%	1.3%	0.4%	0.5%	0.3%
	Armenian Catholic	8%	1%	2%	3%	0.6%	0.6%	0.9%	0.3%
	Sunni	8%	3%	1%	0%	0.9%	0.6%	0.3%	0.1%
	Shia	7%	10%	1%	1%	0.8%	0.8%	0.3%	0.0%
	Mixed confession	5%	5%	3%	2%	1.4%	0.7%	0.8%	0.6%

Table 11Number and percentage of votes for Kulluna Watani candidates by confessionalgroup in Beirut 1

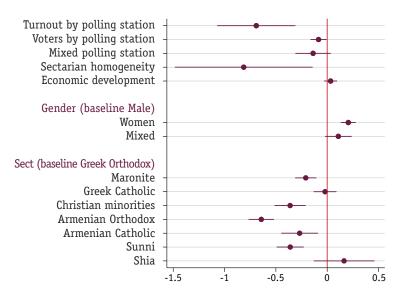
Note Percentages have been rounded up.

What are the main drivers of votes for Kulluna Watani?

In Beirut 1, Kulluna Watani generally received better results in polling stations with lower turnouts, which highlights its failure in mobilizing constituents. The list also tended to perform better in stations with a smaller number of registered voters. Across the district's four cadasters, voters in less homogeneous cadasters were significantly more likely to vote for Kulluna Watani.

After controlling for the polling station and cadaster characteristics, women were significantly more likely to vote for Kulluna Watani compared to men. Shias were the most likely to vote for Kulluna Watani, followed by Greek Orthodox and Greek Catholics, while Armenian Orthodox voters were the least likely to do so. There was no significant variation between Maronites, Sunnis, Armenian Catholics and Christian minorities, who stood in between.

Figure 15 Drivers of votes for Kulluna Watani in Beirut 1



How did the 'Loyalty to Beirut' list perform?

The 'Loyalty to Beirut' list won 94 votes and had four candidates. The candidates in the list were Gina Chammas (Christian minorities, 31 votes), Roger Choueiri (Maronite, 25 votes), Antoun Qalaijian (Armenian Catholic, 20 votes), and Robert Obeid (Greek Orthodox, seven votes). There were no significant differences in the votes cast for the list across genders. The list did not receive over 20 votes from any confessional group, with its highest number being among Greek Orthodox voters (17 votes).

		Loyalty to Beirut	Gina Chammas	Roger Choueiri	Antoun Qalaijian	Robert Obeid
Confessional group	Armenian Orthodox	9	1	2	2	1
	Maronite	7	2	2	1	0
	Greek Orthodox	17	6	4	2	4
	Greek Catholic	14	5	7	2	0
	Christian minorities	15	4	2	7	1
	Armenian Catholic	4	2	0	2	0
	Sunni	14	5	3	4	1
	Shia	1	0	1	0	0
	Mixed confession	11	6	4	0	0
Gender	Men	35	12	9	7	5
	Women	40	13	11	8	2
	Mixed gender	17	6	5	5	0

Table 12Number of votes for 'Loyalty to Beirut' and its candidates by confessionalgroup and gender

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—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 or not. 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% turnout could suggest either voter or vote rigging at any stage of the election process. Other lines of research focus on statistical tests that examine the random nature of numbers to test whether numbers were manipulated in a non-random manner.

There are some irregular patterns in turnout

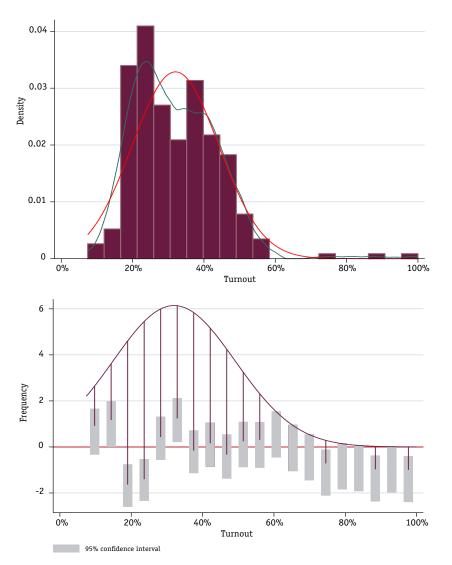
Turnout usually has a normal shape, with the majority of electoral centers having a turnout close to the middle (average) and with few stations in the extreme ends.

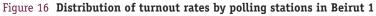
The average turnout across the 247 polling stations in Beirut 1 was 32%,¹⁷ ranging from 7% to 100%. Compared to a normal distribution,

Excluding the stations abroad and the one that had public employees registered to vote.

17

turnouts by polling stations diverged from expected turnout rates, with a significantly lower number of stations with very low turnouts (below 10%), and a higher number than expected of mid-low turnout (15-25%) and very high turnout stations (above 70%). Behind this irregular pattern, potential irregularities may have taken place.



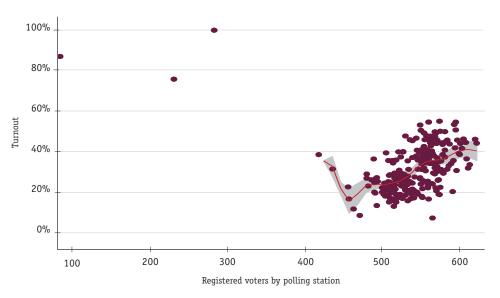


No prior evidence of voter rigging

Voter rigging entails political parties pressuring or coercing voters with the intended aim of affecting turnout. 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 facilitate aggregate monitoring of whether voters cast their ballots, and for whom.¹⁸ High turnouts in polling stations with fewer voters may therefore point at fraud in those stations.

While there were only three polling stations with less than 300 registered voters, these had significantly higher turnouts (76%, 87%, and 100%) suggesting that politicians may have exerted pressure on voters to vote in these specific polling stations. However, no pattern was present in the remaining polling stations, thus providing no evidence of fraud.

Figure 17 Polling station size and turnout rate in Beirut 1



FPM and LF benefited from very high turnouts, suggesting voter or vote rigging

Besides the size of the polling stations, normally, if there was a lack of pressure on voters to cast their ballots in a certain way, votes for each party should be more or less the similar regardless of whether polling stations had very low, normal, or very high turnouts.¹⁹ A higher share of votes for a party in stations with significantly high turnouts could be due to its higher capacity to mobilize its supporters, but could also suggest pressure to vote, or even ballot stuffing, as adding ballots for a party would increase both the votes for this party and turnouts in a polling station. A relationship between turnouts and votes for a party could be related to the variations in both turnout rates and support for parties across sectarian groups. In order to take into consideration the differences across sectarian groups, standardized

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

19 Myagkov, M., P.C. Ordeshook, and D. Shakin. 2009. 'The Forensics of Election Fraud.' Cambridge University Press. variables of turnout rates and percentage of votes for each party were created. 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 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 stations within the same sect (one standard deviation below/above the mean turnout by polling station). The standardized measures of share of votes for lists and parties follow the same procedure. As previous studies have found, no clear relation should be observed between turnouts and votes for a party in 'clean' elections.²⁰

In polling stations where turnouts were significantly above the norm, LF and FPM candidates received much better results. LF's share of votes was 6% higher in very high turnout centers than it was in normal turnout centers (23% compared to 17%), and FPM's share of votes was 4% higher (23% compared to 19% in normal turnout centers). This could be due to the larger mobilization capacity of these parties in certain centers, but may also suggest vote buying on their part. Conversely, neither Kataeb nor Tashnag nor Kulluna Watani received significantly better results in centers with abnormally high turnouts.

In polling stations with abnormally low turnouts, FPM also obtained a significantly higher share of votes, which was 10% higher than it was in stations that had normal turnouts (nearly 30% compared to 19%). Kataeb and Kulluna Watani also benefited from very low turnouts. The Kataeb candidate Nadim Gemayel's votes were 5% higher in very low turnout centers than they were in normal ones (13% compared to 8%), and Kulluna Watani candidates' votes were nearly 4% higher (18% compared to slightly less than 15%). Only Tashnag was significantly less successful in centers with abnormal turnout rates than it was in centers with normal turnouts.

FPM and LF's better performance in very high turnout centers could suggest voter rigging. As FPM also performed better in centers with very low turnouts, the party may have engaged in fraud only in some polling stations rather than others. Kataeb and Kulluna Watani's better results in polling stations with very low turnouts could in turn point toward their weakness in mobilizing voters. **20** Ibid.

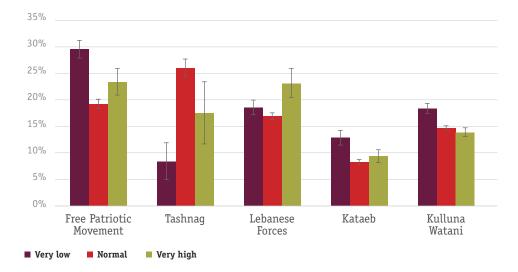


Figure 18 Percentage of votes for parties and standardized turnout rate in Beirut 1

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

There is some evidence of vote rigging

Another type of election irregularities would be vote rigging, such as ballot stuffing and vote counting manipulations. One way of detecting signs of ballot stuffing is to look at the correlation between the percentage of null votes and turnouts, as well as votes for a specific party, in a polling station. Previous evidence shows that when political parties add ballots, they tend to forget to include a similar proportion of invalid votes.²¹ A lower percentage of invalid votes in a polling station, associated with a higher turnout and a higher percentage of votes for a 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 party.

In Beirut 1, there was no significant correlation between the percentage of null votes and turnouts by polling station.

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

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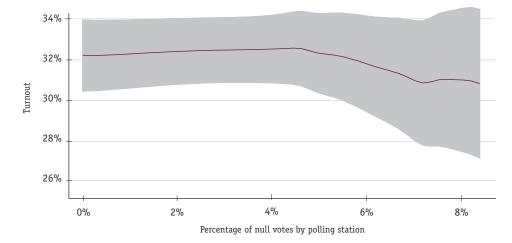
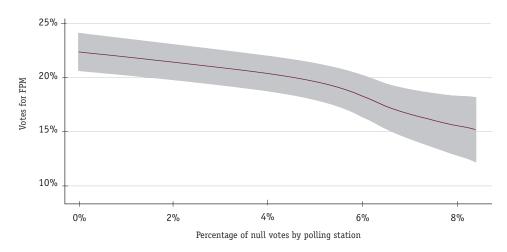


Figure 19 Turnout and percentage of null votes by polling station in Beirut 1

Beyond turnouts, examining the relationship between the votes for parties and the share of null votes in a polling station can provide a way to detect suggestive evidence of ballot stuffing. The share of votes for FPM and Kataeb decreased as the share of null votes in a polling station increased. However, the decrease was smaller than the increase in the share of null votes. The differences were largest in votes for FPM, with its percentage of votes steadily decreasing from 22% in polling stations that had no null votes to 15% in those that had the highest share of null votes (which was 8%). For Kataeb, the percentage of votes decreased from 10% to 5%.

As the percentage of votes for both parties did not decrease in similar proportion as that of null votes, this does not provide strong evidence of ballot stuffing.



 $\label{eq:Figure 20} \ \ \mbox{Votes for FPM and percentage of null votes by polling station in Beirut 1}$

LCPS Report

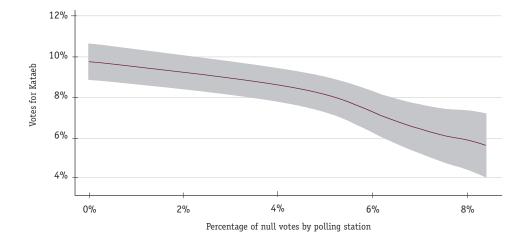


Figure 21 Votes for Kataeb and percentage of null votes by polling station in Beirut 1

Another form of vote rigging entails 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 by examining the distribution of the last digits in votes for a party.²² 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).

Looking at the distribution of the last digits in votes for each party by polling station,²³ votes for FPM, LF, and Kataeb candidates deviated from the uniform line. In particular, there was an over-counting of votes ending in six for FPM, an over-counting of votes ending in zero and two, as well as an under-counting of votes ending in four for Kataeb, and an under-counting of votes ending in four for LF. These deviations may suggest vote counting manipulation.

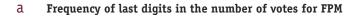
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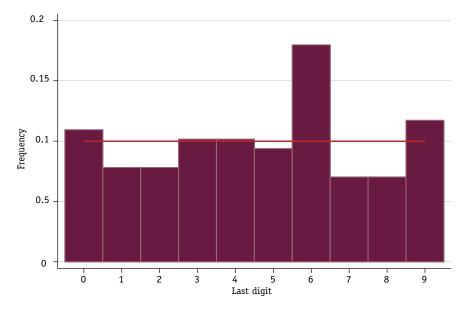
Beber, B. and A. Scacco. 2012. 'What the Numbers Say: A Digit-Based Test for Election Fraud.' *Political Analysis*, 20(2): 211-234.

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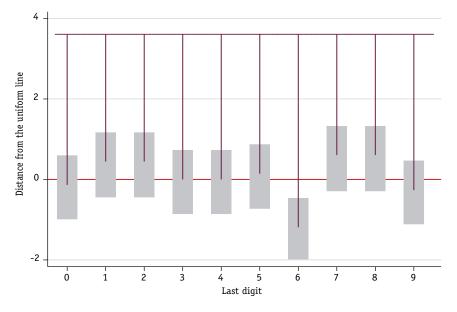
Here we restrict the sample of stations where each party obtained at least 30 votes to avoid an overcounting of ones or zeros.

Figure 22 Distribution of last digits in the number of votes for FPM

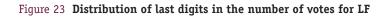


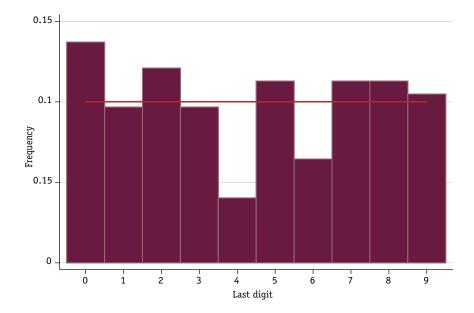


b Distribution of last digits in the number of votes for FPM compared to the uniform distribution



LCPS Report





a Frequency of last digits in the number of votes for LF

b Distribution of last digits in the number of votes for LF compared to the uniform distribution

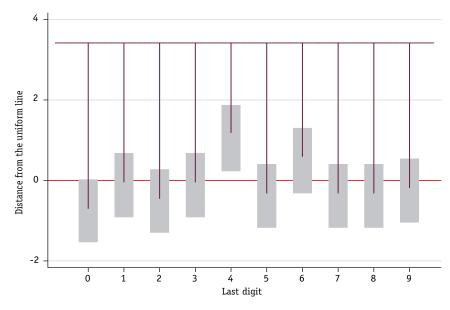
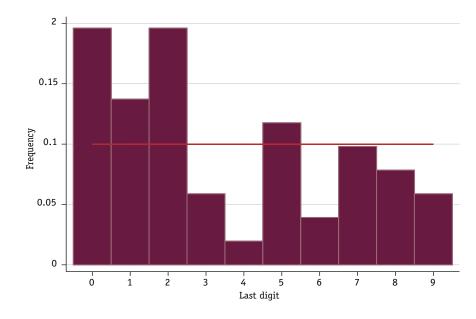
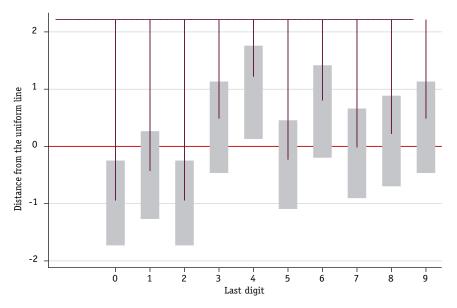


Figure 24 Distribution of last digits in the number of votes for Kataeb



a Frequency of last digits in the number of votes for Kataeb

b Distribution of last digits in the number of votes for Kataeb compared to the uniform distribution



Overall, there are some minor signs of irregularities in Beirut 1 There was some weak evidence of irregularities in the elections in Beirut 1, although some methods of detecting signs of voter and vote rigging suggest potential fraud on the part of FPM, Kataeb, and LF.

Normally, if there was a lack of pressure on voters to vote or not to vote, votes for each party by polling station should not significantly vary across turnouts by polling station. However, FPM and LF obtained significantly better results in stations that had abnormally high turnouts. This could suggest pressure to vote on the part of these parties through vote buying, although it could also simply be due to more effective mobilization of their voters in high-turnout stations. The better performance of FPM and LF in these stations could suggest ballot stuffing as well, as a party adding ballots for its candidates would increase both turnouts and votes for this party in a polling station. Signs of ballot stuffing can be detected when observing a negative relationship between the share of null votes and votes for a party in a polling station. While a negative relationship was present in votes for FPM and Kataeb, the decrease was not significant enough to provide evidence of ballot stuffing.

Another type of irregularities would be vote counting manipulations, with parties adding or subtracting ballots, or re-shuffling votes for candidates in their list. One way to detect these is by looking at the distribution of the last digits in votes for a specific party across polling stations, which, in regular elections, should be uniformly distributed. There is evidence that the last digits of votes for FPM, Kataeb, and LF deviated from the uniform distribution, which may suggest manipulations in the vote count.