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Report

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

Bekaa 2 Electoral District: West Bekaa-Rachaya

Georgia Dagher

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West Bekaa

Rachaya

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

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

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Georgia Dagher

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

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Executive Summary

In the Lebanese parliamentary elections of 2018, the electoral race in the district of West Bekaa–Rachaya was highly contested, with the two winning lists—the first one formed by the Ittihad, Amal, and Free Patriotic Movement (FPM) and the second formed by the Future Movement (FM) and Progressive Socialist Party (PSP)—winning an equal share of votes. Each of the parties were highly successful in mobilizing their sectarian communities, with the Shia vote going mostly to Amal, the Druze vote to PSP, and the Sunni vote to FM and Ittihad, while the Christian groups' vote was more fragmented. Although FPM was highly successful, a high share of Christian communities' votes went to Christian candidates from other affiliations. In line with these preferences for sectarian parties, an overwhelming majority of voters in West Bekaa–Rachaya cast their preferential vote for a candidate from their same confession. While the majority of voters from each group voted along sectarian lines, variations were present, with Druze and Sunni voters being significantly more likely to cast a sectarian vote compared to others. A confessional bias was evident even among voters who chose an independent candidate running on the anti-establishment list. The Sunni candidates in that list won the highest share of their votes from Sunni voters, the Christian candidates from Christian voters, and the Shia candidate from Shia voters. Apart from candidates' results, the performance of the independent list was affected by a number of geographical factors: Lower levels of sectarian homogeneity in a cadaster, higher levels of economic development, and lower poverty rates were all associated with a higher share of votes for the list. Moreover, the list also generally performed better in polling stations that had lower turnouts, suggesting a failure to mobilize high numbers of voters. Apart from these results, there was weak evidence of elections irregularities in West Bekaa–Rachaya. While certain methods of detecting signs of fraud point toward Ittihad and PSP, the results were inconclusive.

Introduction

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

As part of a larger study on the 2018 elections, LCPS has analyzed voter behavior at the national and electoral district levels. Using the official elections results at the polling station level published by the Ministry of Interior,¹ the analysis unpacks the elections results and examines differing patterns in voting behavior across demographic characteristics and geographical areas. The results at the polling station level were merged with a series of potential explanatory factors at the individual and cadastral levels. First, based on the ministry's list of registered voters by confession and gender in each of the polling stations,² we identified the demographic characteristics of registered voters in each of the polling stations. The results at the polling station level were also merged with a series of factors that may have affected voters' choices at the cadastral level in each electoral district. These factors include the level of economic development in a cadaster, approximated by the night-time light intensity;³ the poverty rate in a cadaster, approximated by the ratio of beneficiaries of the National Poverty Targeting Program over the population in the cadaster;⁴ the level of sectarian homogeneity in a cadaster, constructed by LCPS and based on the distribution of voters by confession in each cadaster;⁵ and, finally, the share of refugees over the number of registered voters in a cadaster.⁶ Through the use of multivariate regression analyses, the explanatory significance of each of these factors on voter behavior is identified.

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

This report unpacks the results in the electoral district of West Bekaa-Rachaya (Bekaa 2), which is allocated six parliamentary seats—two Sunni, one Shia, one Druze, one Greek Orthodox, and one Maronite. The report is divided into seven sections. First, we present the demographic distribution of registered voters in West Bekaa-Rachaya. The second section analyzes voter turnout, which varied across confessional groups, genders, and cadastral areas. The third section of this report delves into voters' preferences for political parties and candidates. Going beyond the results at the aggregate level, we shed light on the varying preferences for parties and candidates across voters' sect and gender and across geographical areas in West Bekaa-Rachaya, and how these preferences were affected by cadaster-level characteristics. In the fourth section, we examine voters' sectarian behavior, i.e. their preferences for candidates of their same sectarian group. The fifth section looks at the performance of the district's only woman candidate who ran for elections, while the sixth section looks at the performance of the independent list. The seventh and final section of this report identifies incidents of electoral fraud. Using a number of

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

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

³ Obtained from the National Oceanic and Atmospheric Administration.

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

⁵ Based on electoral data on the sect of voters per polling station, we constructed an index of homogeneity (IH) = $\frac{\sum_{i=1}^n S_{ij}^2}{S^2}$, where S_{ij}^2 is the sum of the square root of the share of each sectarian group in the total number of registered voters in a cadaster. The index ranges between 0 (when the cadaster is fully heterogeneous) and 1 (when the cadaster is fully homogeneous, or only one sectarian group is present).

⁶ Data on the refugee population is collected from UNHCR.

statistical methods—which include analyzing the distribution of results across polling stations, 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?

Almost 150,000 Lebanese were registered to vote in the parliamentary elections of May 2018 in the electoral district of Bekaa 2, also known as West Bekaa–Rachaya. Among the total registered voters, 144,135 were registered in Lebanon⁷ and 3,373 registered from abroad. Out of the total 128 parliamentary seats, six are allocated to West Bekaa–Rachaya: Two Sunni seats, and one Shia, Druze, Maronite, and Greek Orthodox seat, each.

Compared to other districts, West Bekaa–Rachaya has a high level of confessional fragmentation. Sunnis represent the largest group (49%), followed by Shias (15%), Druze (14%), Greek Orthodox (8%), and Greek Catholics and Maronites (7% each). Less than 0.5% of registered voters were Christian minorities, Armenian Orthodox, and Armenian Catholic, combined.⁸

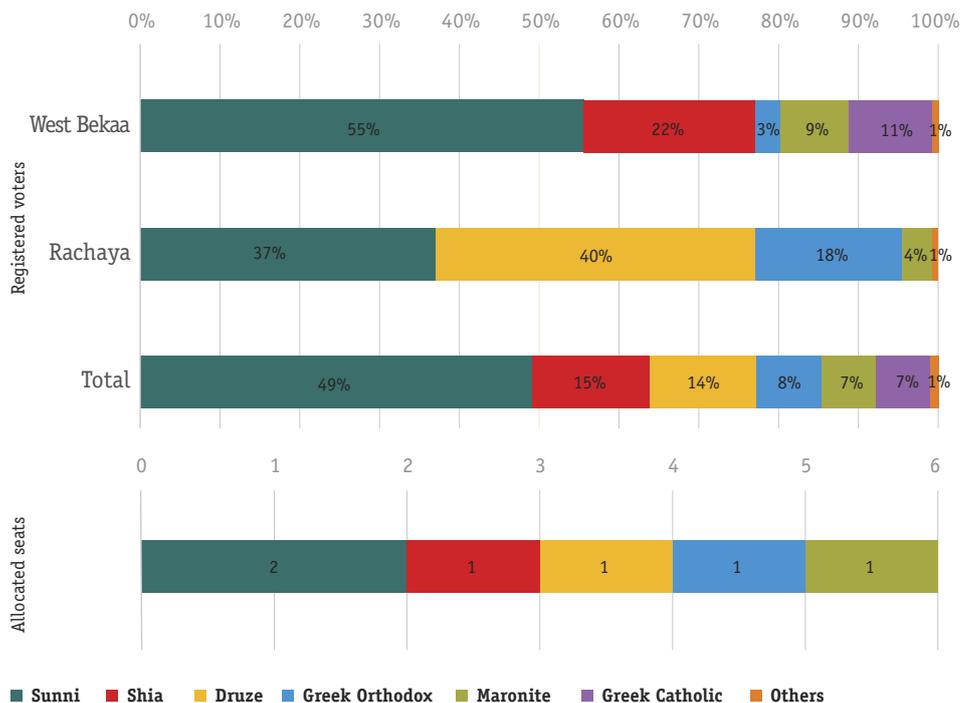
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This includes 561 public employees.

8

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

Figure 1 Registered voters and allocated seats by confessional group in West Bekaa and Rachaya



Note Percentages have been rounded up.

Given the confessional allocation of seats, representation is not the same for every voter but rather depends on the confessional group to which they belong. Maronite and Greek Orthodox voters benefit significantly more from the confessional quota, while Sunnis benefit significantly less than other groups. While the Maronite seat represents almost 10,000 voters and the Greek Orthodox seat almost 12,000, each Sunni seat represents over 35,000 constituents. The Druze and Shia seats represent around 20,000 voters, each (table 1).

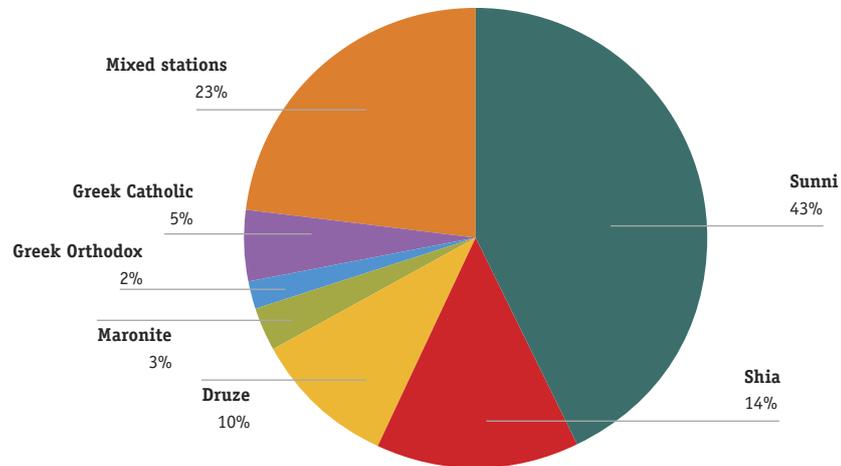
Table 1 Confessional composition of West Bekaa–Rachaya and allocated seats by confessional group

Confession	Number of voters	Percentage	Number of seats	Voters per seat
Sunni	70,417	49%	2	35,209
Shia	20,941	15%	1	20,941
Druze	19,731	14%	1	19,731
Greek Orthodox	11,762	8%	1	11,762
Maronite	9,920	7%	1	9,920
Greek Catholic	10,289	7%		
Christian minorities	441	0%		
Armenian Catholic	40	0%		
Armenian Orthodox	33	0%		
Total	143,574	100%	6	
Public employees	561			
Diaspora	3,373			
Total	147,508			

Note Percentages have been rounded up.

Although registered voters tend to be divided into electoral centers based on their confession and gender, some centers were confessionally mixed—thus inhibiting the complete analysis of voter behavior by confessional group. In West Bekaa–Rachaya, 23% of polling stations had voters from more than one group registered to vote, which overall represented 33,307 voters. As for homogeneous polling stations, Sunnis had the largest share (43%), followed by Shias (14%), Druze (10%), Greek Catholics (5%), Maronites (3%), and Greek Orthodox (2%).

Figure 2 Confessional composition of polling stations in West Bekaa-Rachaya



Note Percentages have been rounded up.

In total, about 90% of Sunnis and Shias, 70% of Druze, and 60% of Greek Catholic voters were registered in their own stations. In comparison, only 40% of Maronite and 30% of Greek Orthodox voters were registered in homogenous stations of their own. Moreover, it is possible to approximate the confessional composition of mixed stations: About a quarter of voters in mixed stations were Sunni and Greek Orthodox, each, and between 10% and 20% were Greek Catholic, Druze, and Maronite. The remaining were Shia (4%) and from minority groups (slightly over 500 voters). In other words, in total, nearly 60% of voters in mixed stations were Christian.⁹

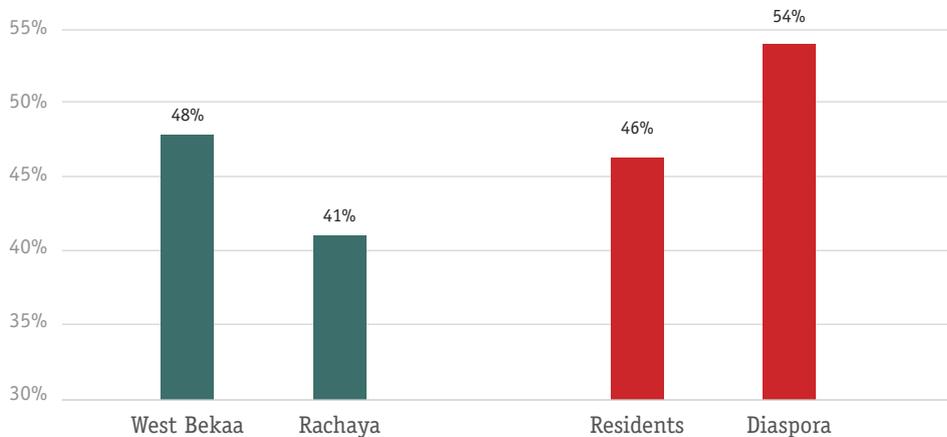
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This is calculated by comparing the total number of registered voters by confessional group to the number of voters registered in their own stations. On the same basis, it is also possible to calculate the confessional composition of mixed stations.

II Who voted?

Turnout in West Bekaa–Rachaya was 46%, lower than the national average of 49%. Among the 147,508 registered voters in the district, 68,227 cast a vote while the remaining 79,281 did not. Turnout was much higher in West Bekaa (48%) than it was in Rachaya (41%). Moreover, the district saw a significant drop in turnout from the last elections of 2009, when 53% of voters voted. Similar to trends in other districts, turnout was much higher among diaspora voters. Among the 3,373 Lebanese emigrants who registered to vote, 54% voted, compared to 46% of residents.

Figure 3 Turnout rates in West Bekaa-Rachaya



Note Percentages have been rounded up.

The Shia community and women were the most mobilized

Turnout largely varied across confessional groups, and was significantly higher in polling stations that serviced Shia voters, reflecting a national trend.

In West Bekaa–Rachaya, turnout among Shia voters was highest (58%), followed by Druze (53%) and Sunni voters (46%). Christian voters had much lower participation rates: Only 39% of Maronite voters, 26% of Greek Orthodox, and 28% of Greek Catholic voters participated in the elections. In mixed stations, turnout stood at 42%. Sunni voters, who were the only ones to have their own polling stations in both West Bekaa and Rachaya, had a much higher turnout in West Bekaa (49%) than they did in Rachaya (37%). Turnout rates were also higher in mixed polling stations in West Bekaa (45%) than they were in Rachaya (39%).

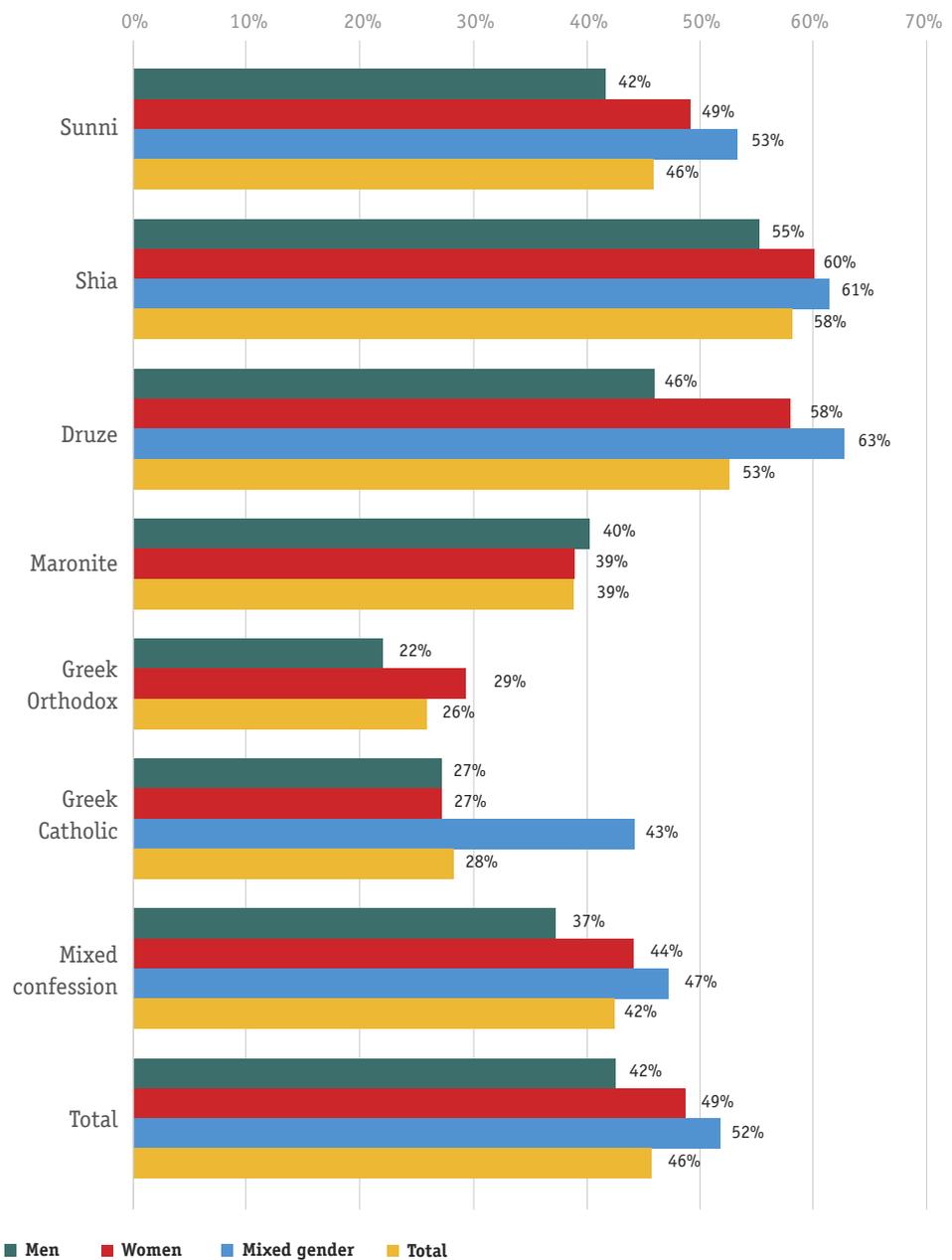
Turnout largely varied across genders, with significantly higher turnout rates reported amongst women (49%) compared to men (42%). Turnout among women voters from most confessional groups was also higher than those among men—between 5% and 12% higher among Sunni, Shia, Druze, and Greek Orthodox women, as well as women registered in mixed-confession stations.

In polling stations that had both men and women registered to vote, turnout was highest (52%). The variations in turnout rates in gender-mixed stations may be explained by their confessional composition. Some gender-mixed polling stations had only one group registered to vote, and the highest share was reserved for Sunnis, followed by Shias and Druze. Among the stations that had both men and women registered to vote, turnout in those reserved for Sunnis was 53%, in those for Shias it was 61%, in Druze ones it was 63%, in Greek Catholic ones it was 43%, and in those that were mixed in terms of

both gender and sect, turnout was 47%. The total turnouts observed in gender-mixed stations were therefore driven by the much higher turnouts in stations reserved for Druze, Shia, and Sunni voters.

All variations in turnouts across confessional groups and genders are statistically significant, even after controlling for characteristics of the cadasters voters were registered in, such as level of economic development and confessional fragmentation.

Figure 4 Turnout by confessional group and gender in West Bekaa-Rachaya



Note Percentages have been rounded up.

Participation rates varied across cadasters—from below 20% to above 80%

The lowest turnout rates were observed in the cadasters of Kfar Mechki (13%) and Aaytanit (16%). Other cadasters with low turnouts were Mdoukha, Baaloul, and Majdel Balhis (between 20% and 25%, each). Some others, Aain Aarab Rachaya, Bakka, Yanta, Lala, and Khirbet Rouha saw turnouts varying between 25% and 30%.

None of these low-turnout cadasters had Shias registered to vote, reflecting the generally higher turnout among Shia voters in West Bekaa-Rachaya. The cadasters of Kfar Mechki, Aaytanit, and Aain Aarab Rachaya were almost fully Christian. However, despite the generally higher turnout among Sunnis compared to Christian voters, most of the low-turnout cadasters had a majority of Sunnis (over 85%, each): Mdoukha, Baaloul, Majdel Balhis, Bakka, Lala, and Khirbet Rouha. The last low-turnout cadaster, Yanta, had only Druze voters registered to vote.

Table 2 Low-turnout cadasters in West Bekaa-Rachaya

Cadaster	Minor district	Number of registered voters	Turnout	Majority confessional group
Kfar Mechki	Rachaya	1,730	13%	Greek Orthodox (83%)
Aaytanit	West Bekaa	1,858	16%	Greek Catholic (54%) and Maronite (37%)
Mdoukha	Rachaya	1,859	21%	Sunni (99%)
Baaloul	West Bekaa	2,510	21%	Sunni (99%)
Majdel Balhis	Rachaya	2,354	24%	Sunni (86%) and Greek Orthodox (14%)
Aain Aarab	Rachaya	963	26%	Greek Orthodox (88%)
Bakka	Rachaya	1,067	26%	Sunni
Yanta	Rachaya	2,195	28%	Druze
Lala	West Bekaa	4,343	29%	Sunni
Khirbet Rouha	Rachaya	3,730	29%	Sunni

Note Percentages have been rounded up.

In comparison, turnout was above 65% in 10 cadasters. The highest turnout was recorded in Loussia (87%), followed by Maydoun (83%). Cadasters that saw turnouts ranging between 65% and 70% were Haouch El-Harime, Sohmor, Aaqabet Rachaya, Kaoukaba, Tannoura, Hammara, Zellaya, and Raouda.

None of these high-turnout cadasters had Christians registered to vote, reflecting the generally lower turnouts among Christian voters in the district. The two highest-turnout cadasters, Loussia and Maydoun, were almost fully Shia, while Sohmor and Zellaya, which had high turnouts, were fully Shia. Although low turnouts were observed in some Sunni cadasters, some of the high-turnout cadasters were

almost fully Sunni: Haouch El-Harime, Hammara, and Raouda. Similarly, Kaoukaba and Tannoura, that saw high turnouts, were fully Druze. Finally, the last high-turnout cadaster, Aaqabet Rachaya, had a mix of Sunni and Druze voters.

Table 3 **High-turnout cadasters in West Bekaa-Rachaya**

Cadaster	Minor district	Number of registered voters	Turnout	Majority confessional group
Loussia	West Bekaa	219	87%	Shia
Maydoun	West Bekaa	488	83%	Shia (98%)
Haouch El-Harime	West Bekaa	2,774	70%	Sunni
Sohmor	West Bekaa	4,264	70%	Shia
Aaqabet Rachaya	Rachaya	1,880	69%	Druze (64%), Sunni (33%)
Kaoukaba	Rachaya	628	68%	Druze
Tannoura	Rachaya	733	66%	Druze
Hammara	West Bekaa	2,447	65%	Sunni (99%)
Zellaya	West Bekaa	408	65%	Shia
Raouda	West Bekaa	1,918	65%	Sunni (97%)

Note Percentages have been rounded up.

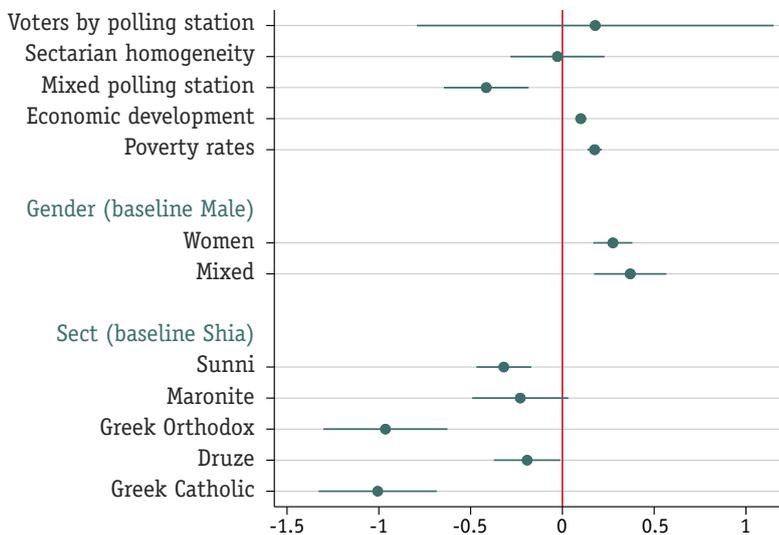
What are the main drivers of turnout?

Apart from these different turnouts in specific cadasters, a multivariate analysis highlights the impact of different individual and geographic characteristics of constituents on turnout rates.

In West Bekaa–Rachaya, higher levels of economic development in a cadaster, as well as higher poverty rates, were associated with significantly higher turnouts in a cadaster. These two relationships are statistically significant even after controlling for voters' gender and sect.

Across genders, women were more likely to vote than men, and voters in stations that had both men and women registered to vote were the most likely to do so—this, as mentioned above, may be due to the sectarian composition of gender-mixed stations. By confessional group, even after controlling for cadaster-level characteristics, Shia, Maronite, and Druze voters were the most likely to vote, followed by Sunnis, while Greek Orthodox and Greek Catholics were the least likely to do so. Moreover, voters registered in mixed-confession polling stations were less likely to vote compared to those in homogenous stations.

Figure 5 Drivers of turnout in West Bekaa-Rachaya



III Who voted for whom?

Only three lists competed in West Bekaa–Rachaya with a total of 16 candidates. Five Sunni candidates competed for the two Sunni seats, three Shia, Maronite, and Greek Orthodox candidates competed for each of their single seats, and two Druze candidates competed for the Druze seat.

The race was highly competitive, with two lists receiving a similar share of votes

The competing lists were: ‘Better Tomorrow’, a coalition between the Amal Movement, Ittihad (Union Party), and the Free Patriotic Movement (FPM); ‘Future for West Bekaa’, a coalition between the Future Movement (FM) and the Progressive Socialist Party (PSP); and ‘Civil Society’, formed by independent candidates.

The ‘Better Tomorrow’ list ranked first with 49% of the votes (32,578 votes). It fielded five candidates and won three seats. Abdul-Rahim Mourad, former MP (from 1992 to 2005), former minister,¹⁰ and leader of Ittihad, won one of the two Sunni seats with 15,111 votes. Amal candidate Mohammad Nasrallah (8,897 votes) won the Shia seat, and Elie Ferzli (backed by FPM), former Minister of Information and former Deputy-Speaker of Parliament (from 2000 to 2005)¹¹ won the Greek Orthodox seat (4,899 votes). There were two other candidates on the list: Faisal Daoud from the Lebanese Arab Struggle Movement (Druze, 2,041 votes), and Naji Ghanem, an independent candidate (Maronite, 838 votes).

¹⁰ Abdul-Rahim Mourad was appointed as Minister of Education in 2000, Minister of State in 2003, and Minister of Defense in 2004.

¹¹ Elie Ferzli was elected Deputy-Speaker of Parliament again in May 2018.

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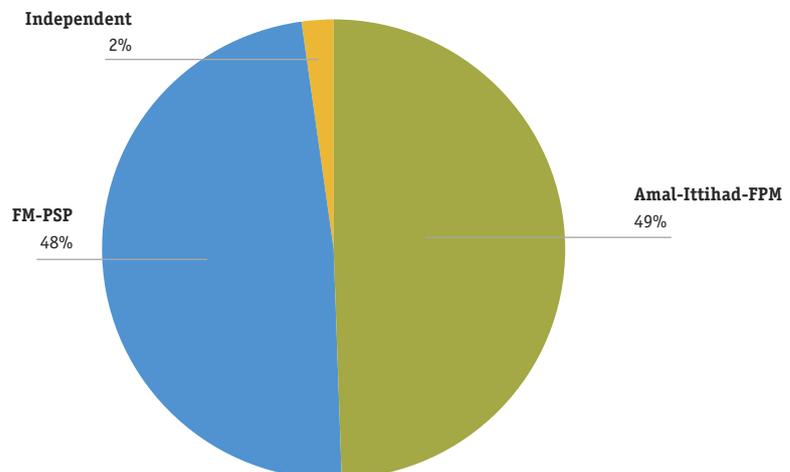
Wael Abou Faour was appointed as State Minister in 2008, Minister of Social Affairs in 2011, and Minister of Public Health in 2014.

The second winning list, 'Future for West Bekaa', fielded six candidates and won 48% of the votes (31,817 votes) and the three remaining seats. PSP candidate Wael Abou Faour, MP since 2005 and former minister,¹² won the Druze seat with 10,677 votes. FM-affiliated candidates Mohammad El Karaawi (8,768 votes) won the second Sunni seat, and Henri Chedid (1,584 votes) the Maronite seat. The three other candidates in the list were incumbent candidate Ziad Kadri from FM (Sunni, 8,392 votes), independent candidate Ghassan Skaf (Greek Orthodox, 995 votes), and incumbent candidate Amine Wehbe from the Democratic Left Movement (Shia, 741 vote).

The independent list, which had five candidates, received only 2% of the votes (1,546 votes).

The new proportional representation electoral system led to a significant increase in representation in West Bekaa–Rachaya. Under the former majoritarian electoral system, the FM-PSP coalition won all seats with 53% of the votes, but it only retained half the seats in 2018. These two parties' opponents benefited from the new system, winning half of the seats.

Figure 6 Percentage of votes for each list in West Bekaa-Rachaya



Note Percentages have been rounded up.

Each political party participating in the elections fielded only one candidate, although FM had two affiliated candidates.

In the Amal-Ittihad-FPM list, the candidate from Ittihad Abdul-Rahim Mourad ranked first in the district, receiving 23% of preferential votes. Amal candidate Mohammad Nasrallah received 14% of preferential votes and ranked third. Elie Ferzli, affiliated with the FPM, won 8% of preferential votes, ranking sixth in the district. On the same list, the

leader of the Lebanese Arab Struggle Movement, Faisal Daoud, received 3% of preferential votes and ranked seventh in the district. Finally, Naji Ghanem, the independent candidate on the list, was among the least voted for with only 1% of preferential votes, ranking 11th in the district.

In the FM-PSP list, Wael Abou Faour (PSP) received 17% of preferential votes and ranked second in the district overall. The other party that headed the list, FM, had one candidate Ziad Kadri, who won 13% of preferential votes and ranked fifth. Two FM-affiliated candidates also ran: Mohammad El Karaawi, who won 14% of preferential votes, ranking fourth, and Henri Chedid, who won only 2% of preferential votes in the district, ranking eighth. On the same list, independent candidate Ghassan Skaf obtained 2% and ranked ninth. The last candidate on the list, Amine Wehbe from the Democratic Left Movement, won 1% of preferential votes, ranking 12th.

Finally, in the third list, all five candidates won only 2.2% of preferential votes combined. However, the majority of these votes went to one candidate, Maguy Aoun (1.3%). Each of the other candidates received between 0.1% and 0.3% of preferential votes.

Table 4 Main candidates in West Bekaa-Rachaya

Candidate	Party	Number of votes	Share of preferential votes	Confession
Abdul-Rahim Mourad	Ittihad	15,111	23%	Sunni
Wael Abou Faour	Progressive Socialist Party	10,677	17%	Druze
Mohammad Nasrallah	Amal	8,897	14%	Shia
Mohammad El Karaawi	Affiliated with the Future Movement	8,768	14%	Sunni
Ziad Kadri	Future Movement	8,392	13%	Sunni
Elie Ferzli	Affiliated with the Free Patriotic Movement	4,899	8%	Greek Orthodox
Faisal Daoud	Lebanese Arab Struggle Movement	2,041	3%	Druze
Henri Chedid	Affiliated with the Future Movement	1,584	2%	Maronite
Others (eight candidates)		4,007	6%	

Note Percentages have been rounded up.

Preferences for lists and candidates largely varied across residencies

There were large variations in the results received by each list and candidate between resident and diaspora voters.¹³ Diaspora voters voted much less for the Amal-Ittihad-FPM list compared to residents (42% compared to 50%), and much more for the independent list (10% compared to 2%), while the votes for FM-PSP were similar (48%).

Varying support for candidates was more pronounced. While the percentage of votes received by Amal-Ittihad-FPM was much lower

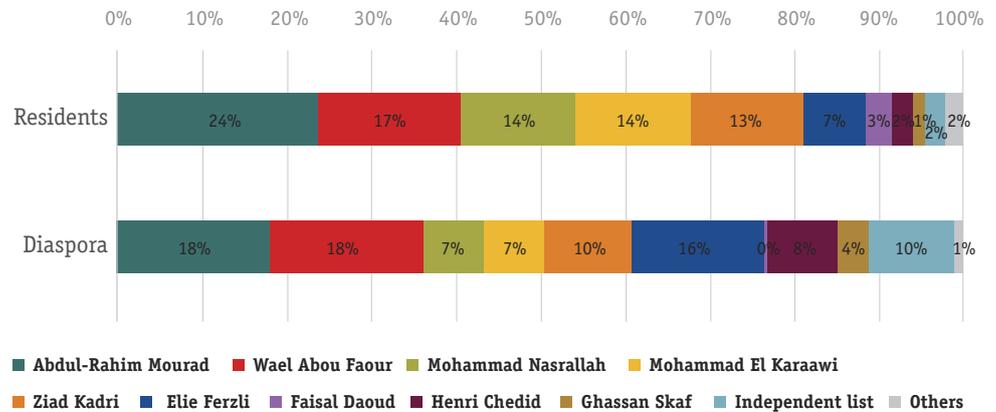
¹³ Among the Lebanese emigrants who voted, 1,624 voted for a list and 1,569 cast a preferential vote.

among emigrants, the share of votes for Elie Ferzli were over two times larger among diaspora voters than they were among residents (16% compared to 7%). This lower support for the list was therefore driven by much lower support for the Ittihad and Amal candidates. In the FM-PSP list, Henri Chedid was significantly more successful among emigrants than he was among residents, with his share of votes among emigrants being four times higher than his share among residents (8% compared to 2%). Ghassan Skaf, who was unpopular among residents, received higher support among the diaspora (4% of their vote, compared to 1% of residents'). Support for Mohammad El Karaawi and Ziad Kadri, however, was much lower.

One pattern observed was emigrants' higher support for Christian candidates and their lower one for Sunni and Shia candidates, compared to residents.

Finally, the share of votes given to candidates from the independent list was almost five times higher among emigrants than it was among residents (10% compared to 2%).

Figure 7 Percentage of votes for the main candidates across residencies in West Bekaa-Rachaya



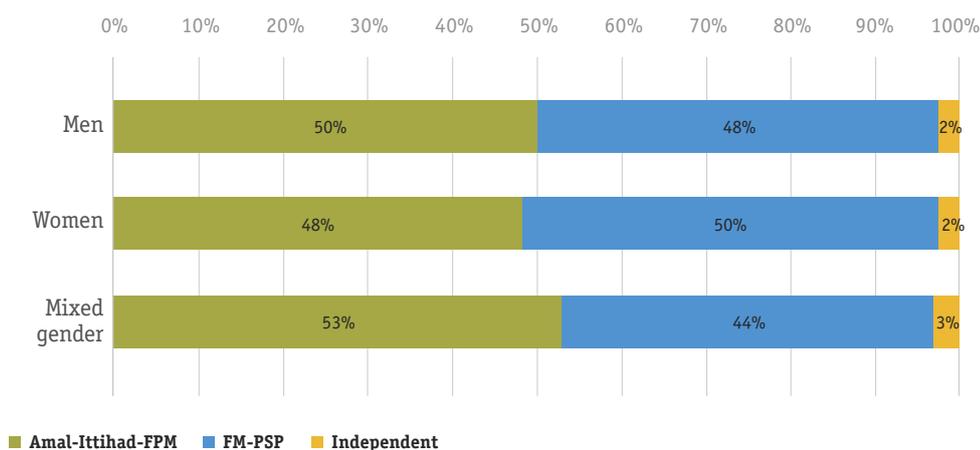
Note Percentages have been rounded up.

There were no significant variations in voting preferences across genders

Preferences for lists did not vary across genders (less than 2% difference for each list). However, polling stations that had both men and women registered to vote saw a much lower percentage of votes go to the FM-PSP list and a higher one go to the Amal-Ittihad-FPM list. The lower percentage for FM-PSP was driven by the much lower support for Mohammad El Karaawi (FM-affiliated) and Ziad Kadri (FM), although on the same list, Wael Abou Faour was much more successful among voters in gender-mixed stations. The higher

percentage for Amal-Ittihad-FPM was driven by the slightly higher support for Mohammad Nasrallah (Amal), Elie Ferzli (FPM-affiliated), and Faisal Daoud (Lebanese Arab Struggle Movement), although Abdul-Rahim Mourad (Ittihad) was slightly less successful in these stations.

Figure 8 Percentage of votes for each list by gender in West Bekaa-Rachaya

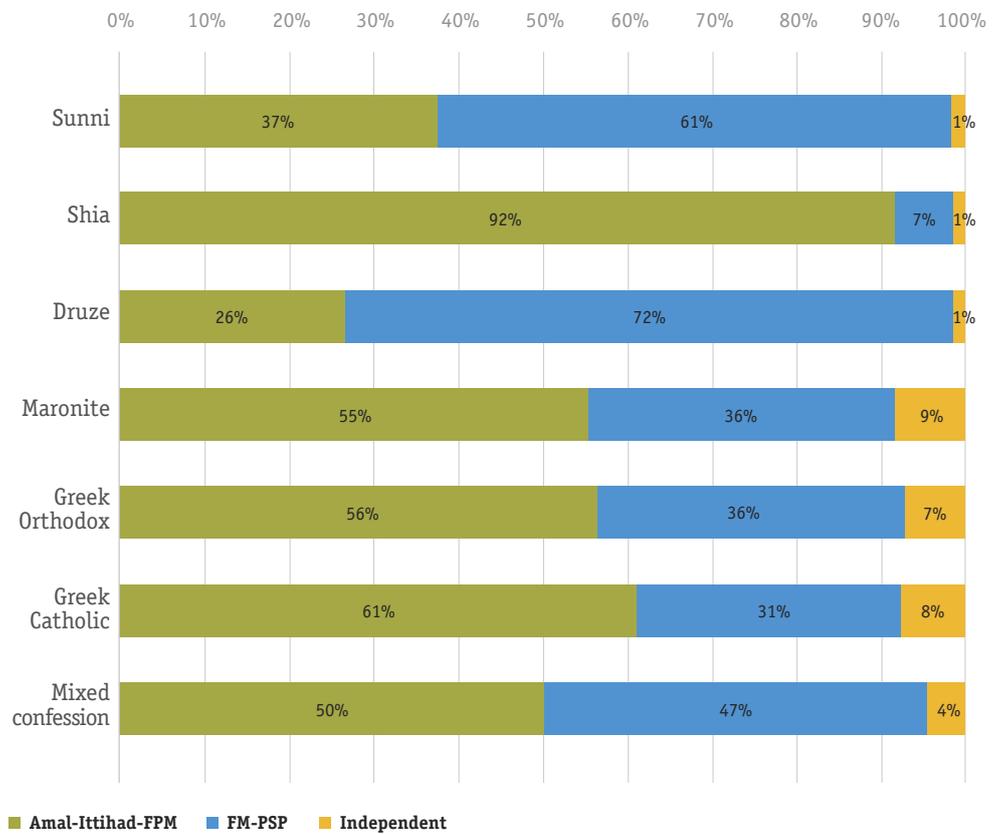


Note Percentages have been rounded up.

Support for lists and candidates significantly varied across confessional groups

There were, however, large variations in preferences for lists across confessional groups. These variations reflect the confessional character of political parties. Sunni voters gave the majority of their votes to the FM-PSP list (61%), driven by their high support for FM; Shia voters to the Amal-Ittihad-FPM list (92%), driven by their support for Amal; and Druze voters to FM-PSP (72%), driven by their support for PSP. The majority of each of the Christian groups voted for the Amal-Ittihad-FPM list (between 55% and 61% of Maronite, Greek Orthodox, and Greek Catholics), mostly driven by higher support for FPM.

Figure 9 Percentage of votes for each list by confessional group in West Bekaa-Rachaya



Note Percentages have been rounded up.

Most of the votes cast by Sunni voters for the FM-PSP list (61%) were divided between Mohammad El Karaawi (FM, 28%) and Ziad Kadri (FM-affiliated, 26%)—reflecting Sunni voters' support for the traditionally Sunni party. However, the candidate that ranked first among Sunnis was Abdul-Rahim Mourad from Ittihad, who received 35%—or nearly all the votes Sunnis cast for the Amal-Ittihad-FPM list.

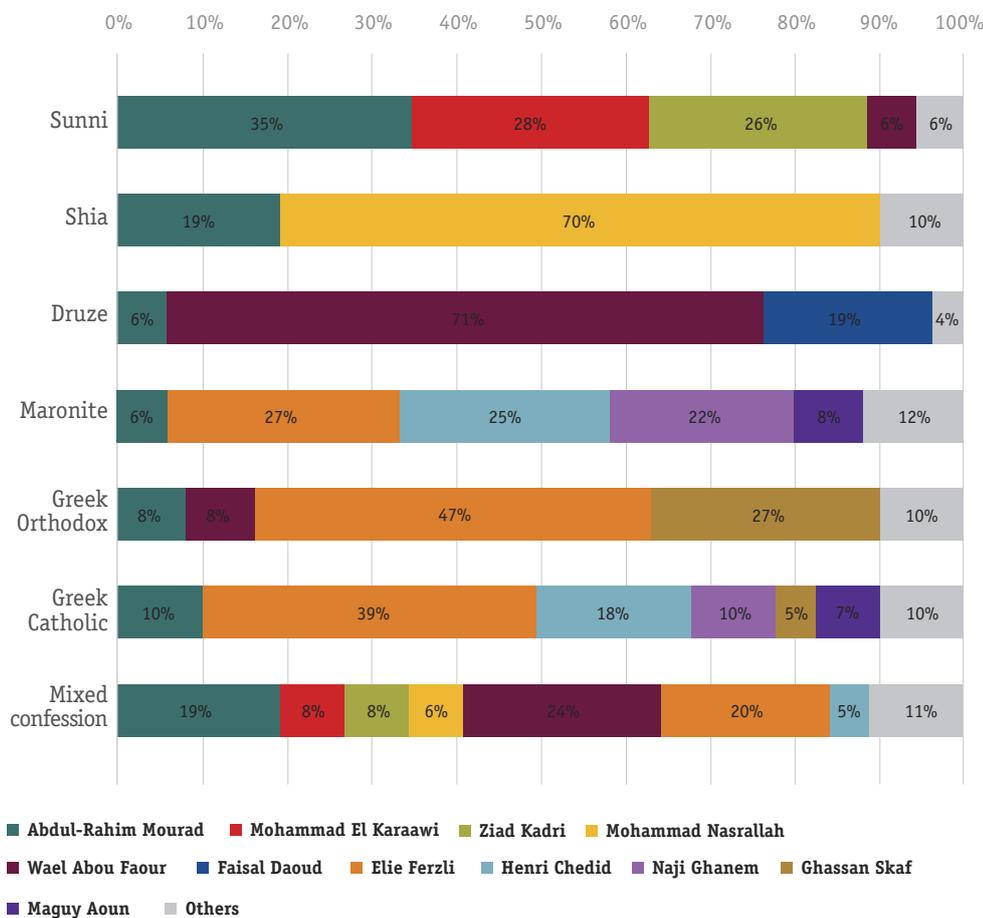
Nearly all Shia voters cast their vote for the Amal-Ittihad-FPM list (92%), while only 7% voted for the FM-PSP list. Looking at support for specific parties among Shias shows that the majority of them (70%) chose Amal candidate Mohammad Nasrallah—reflecting Shia voters' party-loyalty. Only Ittihad candidate Abdul-Rahim Mourad was able to capture a significant share of the Shia vote (19%).

The vast majority of Druze voters voted for FM-PSP (72%) with nearly all of these votes going to PSP candidate Wael Abou Faour (71%). The Amal-Ittihad-FPM list still managed to win a significant share of the Druze vote (26%), with most of these going to the candidate from the Lebanese Arab Struggle Movement, Faisal Daoud (19%).

The majority of Maronite (55%), Greek Orthodox (56%), and Greek Catholic voters (61%) voted for the Amal-Ittihad-FPM list, with most of

these votes going to the Greek Orthodox FPM-affiliated candidate Elie Ferzli (27%, 47%, and 39%). Among Maronite voters, independent Maronite candidate Naji Ghanem on the Amal-Ittihad-FPM list was also successful, receiving a slightly lower share (22%). A significant share of Christian voters also voted for the FM-PSP list with 36% of Greek Orthodox, 36% of Maronites and 31% of Greek Catholics doing so. Most votes among Greek Orthodox went to independent Greek Orthodox candidate Ghassan Skaf (27%), followed by PSP candidate Wael Abou Faour (8%); while most of the Maronite and Greek Catholic votes went to the Maronite FM-affiliated candidate Henri Chedid (who received 25% of the Maronite and 18% of the Greek Catholic preferential vote). The three Christian groups were also those that gave the highest share of votes for the independent list—7% of Greek Orthodox, 9% of Maronite, and 8% of Greek Catholic voters voted for the independent list. Among them, most chose the Maronite candidate Maguy Aoun, who received her highest levels of support among Maronite and Greek Catholic voters (8% and 7% of their preferential votes, respectively).

Figure 10 Main candidates by confessional group in West Bekaa-Rachaya



Note Percentages have been rounded up.

Finally, in mixed stations, the votes were divided between Amal-Ittihad-FPM (50%) and FM-PSP (47%). Among those who voted for Amal-Ittihad-FPM, most of the preferential votes were divided between Abdul-Rahim Mourad (19%) and Elie Ferzli (20%); while among those who voted for FM-PSP, the majority chose Wael Abou Faour (24%), and most of the remaining votes were divided between the Mohammad El Karaawi and Ziad Kadri (8% each).

Given the unequal number of voters by confessional group, looking at the votes received by each candidate from each confessional group can show how diverse their constituents were.¹⁴ The Amal-Ittihad-FPM list obtained a similar share of its votes from Sunnis and Shias (32% each). Among the most successful candidates in this list, Abdul-Rahim Mourad from Ittihad obtained the majority of his votes from Sunni voters (9,301 votes, 63%), while Mohammad Nasrallah from Amal obtained the majority of his from Shia voters (7,733 votes, 89%). Elie Ferzli (FPM-affiliated) obtained the majority of his votes from voters in mixed stations (2,630 votes, 57%)—however, between 8% and 15% of his votes came from each of the Christian confessional groups, which is a significant number given the low share Christian voters registered in their own stations. The Lebanese Arab Struggle Movement candidate Faisal Daoud, who was one of the most successful among Druze voters, obtained 70% of his votes from this confessional group (1,425 votes).

The FM-PSP list obtained the majority of its votes from Sunni voters (55%), followed by Druze voters (17%). Among the most successful candidates in this list, Wael Abou Faour (PSP) obtained 51% of his votes from Druze voters (5,210 votes). The FM and FM-affiliated candidates Ziad Kadri and Mohammad El Karaawi obtained 85% of their votes from Sunnis (6,945 and 7,431 votes, respectively). Henri Chedid received most of his votes from voters in mixed polling stations (627 votes, 43%), followed by Maronite and Greek Catholic voters (25% and 21%, for a total of 667 votes).

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Note that 43% of the votes for lists were cast by Sunnis, 17% were cast by Shias, 12% were cast by Druze, and between 1% and 3% were cast by Maronites, Greek Orthodox, and Greek Catholics, each. The remaining 21% of the votes for lists came from mixed stations.

Table 5 Number of votes for candidates on the winning lists by confessional group in West Bekaa-Rachaya

Candidate			Voters						
Name	Party	Confession	Sunni	Shia	Druze	Maronite	Greek Orthodox	Greek Catholic	Mixed confession
Abdul-Rahim Mourad	Ittihad	Sunni	9,301	2,112	412	88	63	185	2,571
Mohammad Nasrallah	Amal	Shia	166	7,733	30	0	0	13	761
Elie Ferzli	Free Patriotic Movement (affiliated)	Greek Orthodox	270	206	54	385	387	694	2,630
Faisal Daoud	Lebanese Arab Struggle Movement	Druze	152	29	1,425	2	6	1	411
Naji Ghanem	Independent	Maronite	17	11	0	315	4	182	293
Ziad Kadri	Future Movement	Sunni	6,945	27	73	41	0	35	1,049
Mohammad El Karaawi	Future Movement (affiliated)	Sunni	7,431	72	13	26	1	49	1,014
Wael Abou Faour	Progressive Socialist Party	Druze	1,522	211	5,210	25	65	58	3,200
Henri Chedid	Future Movement (affiliated)	Maronite	132	12	4	358	10	309	627
Ghassan Skaf	Independent	Greek Orthodox	244	18	5	50	222	90	303
Amine Wehbe	Democratic Left Movement	Shia	198	456	5	12	1	7	33
Total preferential votes			26,691	10,983	7,315	1,425	816	1,762	13,343

The performance of each candidate largely varied across cadasters

The Amal-Ittihad-FPM list received above 90% of the votes in nine cadasters. The list received all of the votes in the small cadasters of Chebreqiyet Aammiq (representing only 11 votes) and Loussia (189 votes). It also obtained over 90% of votes in Maydoun (395 votes, 99%), Zellaya (257 votes, 98%), Aain El-Tineh (572 votes), Sohmor (2,719 votes), Qelaya (807 votes), Yohmor (1,029 votes), and Machghara (3,867 votes) (between 90% and 93% in each). Other cadasters in which the list received a substantial number of votes were GhazzeH (1,665 votes, 62%), Libbaya (1,529 votes, 81%), Joub Jannine (1,329 votes, 46%), and El-Marj (1,091 votes, 29%).

Among the winners, Sunni candidate Abdul-Rahim Mourad from Ittihad was generally more successful in West Bekaa than he was in Rachaya. He won the majority of preferential votes in four cadasters—all in West Bekaa—while his highest percentage of votes in any cadaster in Rachaya was only 47%. Mourad was most successful in GhazzeH

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This number excludes the votes he obtained from diaspora voters and public employees. All of the votes won among residents mentioned throughout this section also exclude those obtained from public employees.

(62%), Raouda (55%), Khiara (53%), and Haouch El-Harime (51%). All these cadasters were almost fully Sunni (over 96%)—reflecting the high support he obtained from Sunni voters. Ghazzeh, and to some extent Raouda, were two of the cadasters he won his highest number of votes from. The majority of the votes obtained by Mourad (53% of the votes, or 7,795 votes out of the 14,732 he obtained)¹⁵ came from nine cadasters only: Ghazzeh (1,610 votes), El-Marj (956 votes), Haouch El-Harime (955), Joub Jannine (872), Machghara (832), Souairi, Kamed El-Laouz, Manara, and Raouda (between 630 and 670 votes in each). All of these cadasters were also fully, or almost fully, Sunni. The exception was Machghara, which had a mix of Shia and Christian voters, and where the Amal candidate Nasrallah won the highest share of votes (with Abdul-Rahim Mourad winning 20%).

Amal candidate Mohammad Nasrallah had mixed results across the district: While he won the majority of preferential votes in nine cadasters, he did not obtain more than 2% in all the others. All of the cadasters in which he was successful were in West Bekaa. Nasrallah won over 70% of votes in Maydoun (89%), Zellaya (83%), Aain El-Tineh (81%), Sohmor (76%), and Loussia (72%). He also won between 60% and 70% in Qelaya, Libbaya, Yohmor, and Machghara. Moreover, 8,426 of the 8,703 votes he obtained among residents came from voters in these nine cadasters, in particular those in Machghara (2,546 votes), Sohmor (2,173 votes), Libbaya (1,225 votes), and Yohmor (710 votes), while he won between 135 and 600 votes in the others. These cadasters were fully, or almost fully Shia—the exception was Machghara, which had a significant number of Christian voters. However, nearly all of the votes Nasrallah obtained in Machghara were cast in polling stations with Shias registered to vote (2,178 votes). Christian voters in the cadaster voted much more for Elie Ferzli.

Elie Ferzli, affiliated with FPM, obtained the majority of preferential votes in Ain Hircha (53%) only, and above 40% in Aana, Haouch El-Qinnabeh Rachaya, and Beit Lahia. He ranked first in all of these cadasters, where at least 80% of registered voters were Christian. Apart from this, the highest number of votes he was able to obtain was, similar to most candidates, in Machghara (404 votes). He also won between 300 and 400 votes in each of Khirbet Qanafar, Joub Jannine, the cadaster of Rachaya, Saghbine, and Aana.

Faisal Daoud, the Druze candidate from the Lebanese Arab Struggle Movement, obtained over 30% of preferential votes in only two cadasters—Helouet Rachaya (56%) and Aayha (34%)—both nearly fully Druze. Half of his votes, or 1,020 out of the 2,026 he won among residents, came from voters in Aayha (477 votes), the cadaster of Rachaya (308 votes), and Aaqabet Rachaya (235 votes). Daoud was much more successful in Rachaya and did not manage to win more than

1% of preferential votes in any of the cadasters in West Bekaa. This reflects his reliance on Druze voters, who were all registered in Rachaya.

Naji Ghanem, the last candidate in the Amal-Ittihad-FPM list, obtained his highest percentage of votes—and the majority of his votes—in Saghbine (447 votes, 34%) out of the 822 votes he won among residents in West Bekaa–Rachaya.

The FM-PSP list won over 80% of votes in six cadasters. It obtained the highest percentage of votes in Mhaidse (676 votes, 87%), followed by Tannoura (402 votes, 86%), and between 80% and 85% of the votes in Dahr El-Ahmar (554 votes), Kaoukaba (350 votes), Yanta (479 votes), and Biret Rachaya (899 votes). It also won over 70% in Aaqabet Rachaya (954 votes), Kfar Qouq (819 votes), Qaraoun (1,730 votes), and Baaloul (376 votes). A large number of voters also cast their vote for the list in El-Marj (2,488 votes, 67%), the cadaster of Rachaya (1,924 votes, 67%), Souairi (1,514 votes, 65%), Joub Jannine (1,502 votes, 52%), and Kamed El-Laouz (1,486 votes, 65%).

Mohammad El Karaawi, the Sunni winner backed by FM, won the majority of preferential votes, as well as the most significant share of his votes, in Qaraoun (1,605 votes, 70%), followed by El-Marj (2,078 votes, 58%). He also won the majority of votes in Baaloul (294 votes, 58%) and over 40% in Lala (566 votes, 48%), Selsata (46%, although only 6 votes), and Haouch El-Harime (770 votes, 41%).

PSP winner Wael Abou Faour won over 80% of preferential votes in Mhaidse Rachaya (85%), Dahr El-Ahmar, Tannoura, and Kaoukaba (between 80% and 81%). He also won between 70% and 80% in Yanta, Aaqabet Rachaya, and Kfar Qouq, with at least 300 votes in each. Overall, the majority of the votes Abou Faour received came from voters in the cadaster of Rachaya (1,831 votes), Aaqabet Rachaya (938 votes), Aayha (806 votes), Kfar Qouq (800), Mhaidse Rachaya (651 votes), and Aain Aata (546 votes)—accounting for 5,572 votes out of the 10,291 he won among residents.

FM-backed Maronite winner Henri Chedid only won more than 20% in two cadasters: Khirbet Qanafar (36%) and Bab Maraa (22%, equivalent to only 41 votes). Khirbet Qanafar was also the cadaster where he won his highest number of votes (543 votes), representing over one third of the 1,452 votes he won among residents. Chedid received less than 100 votes in all other cadasters, except Saghbine (128 votes).

Sunni FM candidate Ziad Kadri obtained the majority of votes in the two Sunni cadasters of Biret Rachaya (76%) and Souldan Yaacoub (51%). He also won over 40% in five cadasters: Kamed El-Laouz (48%), Rafid Rachaya (47%), Khirbet Rouha (46%), Manara (41%), and Kfar Dines (40%), all also fully Sunni. Some of these cadasters were among those he won a significantly high share of his votes from. In fact, the majority of the votes he won came from Kamed El-Laouz (1,041

votes), Souairi (865 votes, where he also ranked first), Biret Rachaya (818 votes, ranked first), Ghazzeh (765 votes), and Soultan Yaacoub (654 votes). These cadasters account for 4,143 votes out of the 8,170 Kadri won among residents.

Ghassan Skaf, the Greek Orthodox candidate in the list, managed to win 39% of votes in Aita El-Foukhar, representing 397 of the 932 votes he won among residents. He won 8% of votes or less—and less than 80 votes—in all other cadasters. Similarly, Shia candidate Amine Wehbe, who was the least successful in the list, won 16% of preferential votes in Libbaya—representing 305 of the 712 votes he won among residents. He won 4% of votes or less (and less than 90 votes) in all other cadasters.

What are the drivers of votes for the winning lists and parties?

A multivariate analysis highlights the effect of several factors on the success of each of the winning lists and parties.

In West Bekaa–Rachaya, the first winning list, Amal-Ittihad-FPM, was generally more successful in cadasters with lower poverty rates, with no other geographical factor having a significant effect on its results. Across polling stations, the list performed better in homogeneous stations than it did in mixed ones. Shia voters were significantly more likely to vote for Amal-Ittihad-FPM compared to other sectarian groups, while Druze voters were significantly less likely to do so. Among the winning parties in the list, Ittihad tended to perform better in cadasters with higher levels of sectarian homogeneity and also received better results in cadasters with lower poverty rates. Across confessional groups, Sunnis were the most likely to vote for Ittihad, and Druze and Maronite voters were the least likely to do so. The second winning party, Amal, was generally more successful in cadasters with higher levels of economic development. Voters in homogeneous stations were significantly more likely to vote for the Amal candidate Mohammad Nasrallah, and across confessions, Shias were much more likely to vote for him compared others, and Maronite and Greek Orthodox voters were much less likely to do so. Finally, the FPM-affiliated candidate Elie Ferzli was significantly more successful in cadasters with lower poverty rates, as well as those with lower levels of sectarian homogeneity. Across polling stations, voters in smaller stations were more likely to vote for the FPM-affiliated candidate, who also tended to perform better in mixed polling stations. Greek Orthodox, followed by Greek Catholic and Maronite voters were the most likely to vote for Ferzli, while Druze and Sunni voters were the least likely to do so.

Figure 11 Drivers of votes for the Amal-Ittihad-FPM list

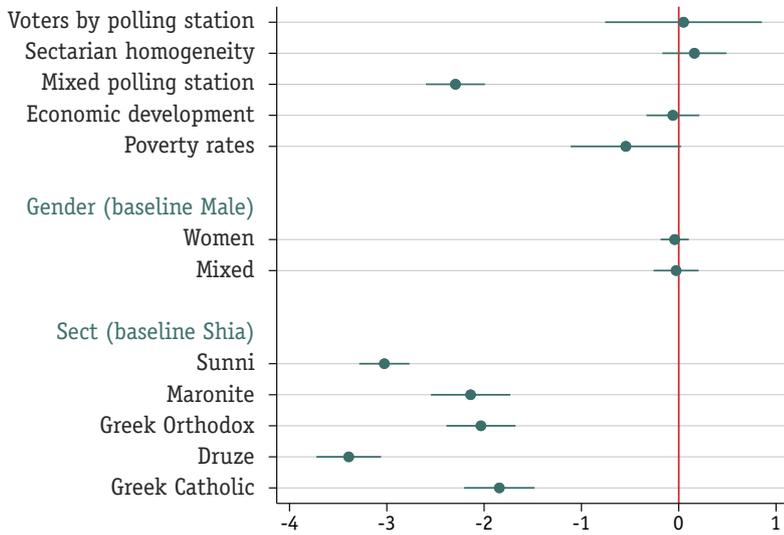


Figure 12 Drivers of votes for Ittihad

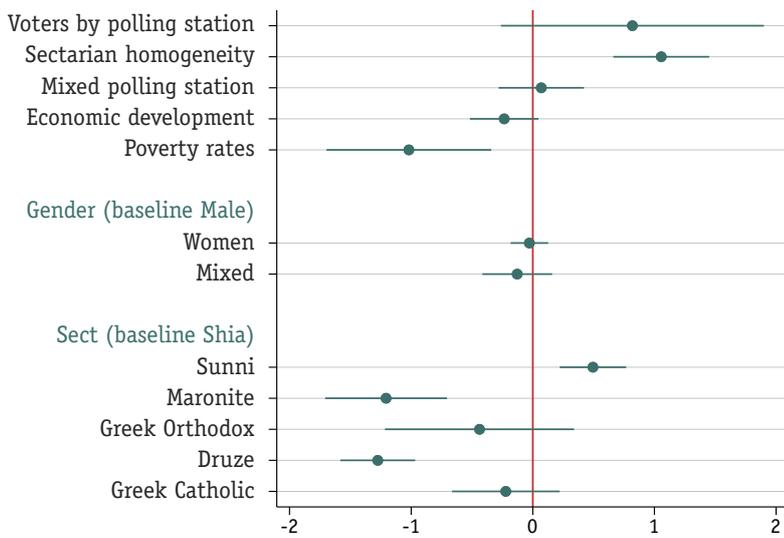


Figure 13 Drivers of votes for Amal

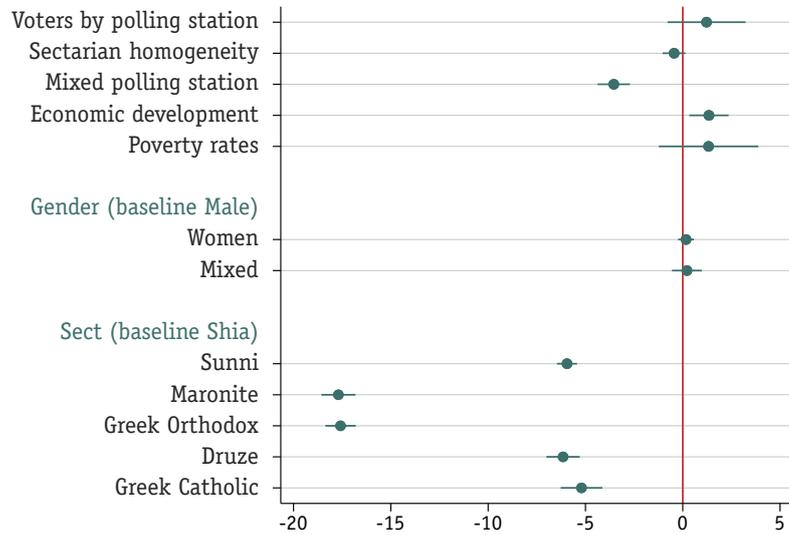
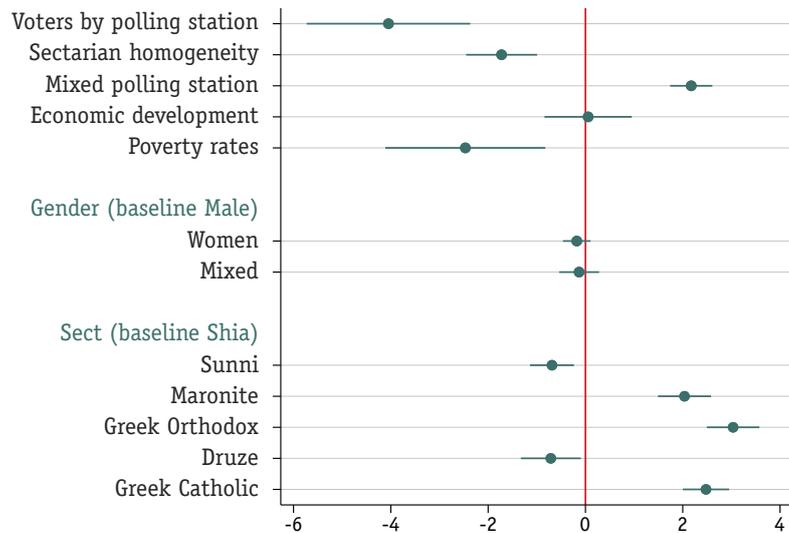


Figure 14 Drivers of votes for FPM



The second winning list, FM-PSP, was more successful in cadasters with higher poverty rates, with no other geographical factor affecting its results. Voters in mixed polling stations were significantly more likely to vote for the list compared to those in homogeneous stations. Across confessional groups, Druze and Sunni voters were the most likely to vote for the list, while Shias were the least likely to do so. There were no significant variations between the three Christian groups, who stood in between. Among the parties in the list, FM and its affiliated candidates tended to perform significantly better in cadasters with higher levels of economic development and those with lower poverty rates. Similar to the list, voters in mixed stations were more likely to vote for FM.

Sunnis were the most likely to vote for the party, followed by Maronites and Greek Catholics, while Greek Orthodox and Druze voters were the least likely to do so. The results for PSP differed, with voters in cadasters with lower levels of economic development, as well as those in cadasters with higher poverty rates, being significantly more likely to vote for the PSP candidate. Across polling stations, voters registered in larger polling stations, as well as those in mixed stations, tended to vote more for the candidate. Druze voters were significantly more likely to vote for PSP compared to other confessional groups, while Shias, Maronites, and Greek Catholics were the least likely to do so.

Figure 15 Drivers of votes for the FM-PSP list

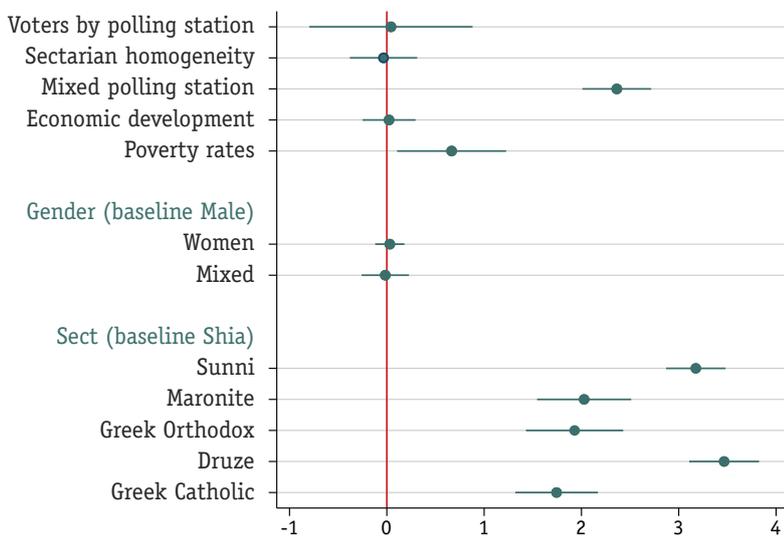


Figure 16 Drivers of votes for FM and its affiliated candidates

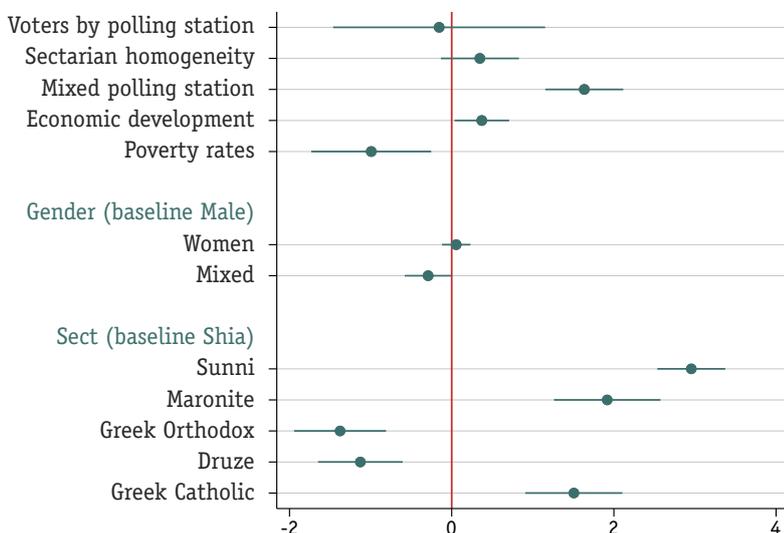
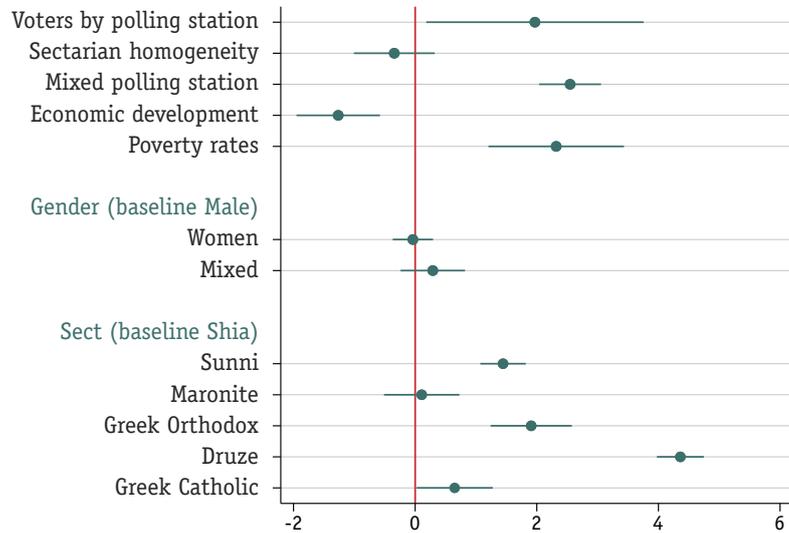


Figure 17 Drivers of votes for PSP



Overall, in West Bekaa–Rachaya, higher levels of sectarian homogeneity in a cadaster were associated with a higher share of votes for Ittihad and a lower one for FPM. Voters in cadasters with higher levels of economic development tended to vote more for Amal and FM, while they voted less for PSP. FM, Ittihad and FPM tended to receive better results in cadasters with lower poverty rates, and the opposite was true for PSP, which was generally more successful in cadasters with higher poverty rates. Across polling stations, voters in larger ones were more likely to vote for PSP while they were less likely to vote for FPM. In mixed stations, voters generally voted more for FPM, FM, and PSP, and less for Amal. Finally, across sectarian groups, Sunnis were the most likely to vote for Ittihad and FM, Shias were the most likely to vote for Amal, Druze voters were the most likely to vote for PSP, and Greek Orthodox voters, closely followed by Maronites and Greek Catholics, were the most likely to vote for FPM. These variations are statistically significant even after controlling for characteristics of the cadaster voters were registered in, highlighting voters' strong preferences for their sectarian parties.

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

In West Bekaa–Rachaya, 98% of voters cast a preferential vote within their selected list. Among those represented by a seat, 85% voted for a candidate from their own confessional group.

There were five Sunni candidates (who received 51% of votes in total), three Shia (15% of votes), three Greek Orthodox (9% of votes), three Maronite (5% of votes), and two Druze candidates (20% of votes).

Druze and Sunni voters were the most likely to cast a sectarian vote

Although a confessional bias existed among all groups, there were large variations in preferences for co-confessional candidates. The bias was significantly higher among Druze (91%) and Sunni voters (90%) than it was among other groups. Sunni voters, who were the only confessional group to have their own polling stations in both West Bekaa and Rachaya, had a higher confessional bias in West Bekaa (92%, compared to 80% in Rachaya). They were followed by Greek Orthodox (78%) and Shia voters (75%), while the confessional bias was lowest among Maronite voters (55%). These variations are statistically significant even after controlling for voters' gender as well as characteristics of the cadasters in which they were registered, such as level of economic development and confessional fragmentation.

Greek Catholic voters, who were not represented by a seat, had a preference for Christian candidates, with 45% casting their ballot for a Greek Orthodox candidate, and 35% for a Maronite candidate. They also gave a significant share of their vote to Sunni candidates (15%).

Overall, Druze, Shia, and Maronite candidates only managed to capture a significant share of votes among their co-confessional voters. Greek Orthodox candidates were successful among all Christian voters, while Sunni candidates received a significant share of every confessional group's vote. However, almost all of the votes for Sunni candidates among non-Sunni voters were cast for Abdul-Rahim Mourad from Ittihad. Other Sunni candidates received less than 5% of non-Sunni voters' preferential votes.¹⁶ Similarly, almost all of the votes Maronites and Greek Catholics cast for Greek Orthodox candidates went to a single candidate, Elie Ferzli (FPM-affiliated), who received 27% and 39% of their votes, respectively.

¹⁶

The votes won by the remaining Sunni candidates were: Less than 1% among Shias, Druze, and Greek Orthodox, but almost 5% among Maronites and Greek Catholics.

Table 6 Percentage and number of votes for candidates from each confession by confessional group in West Bekaa-Rachaya

	Voters' confession	Candidate's confession				
		Sunni	Shia	Druze	Maronite	Greek Orthodox
Share of preferential votes	Sunni	90%	1%	6%	1%	2%
	Shia	20%	75%	2%	0%	2%
	Druze	7%	1%	91%	1%	1%
	Maronite	11%	1%	2%	55%	31%
	Greek Orthodox	8%	0%	9%	5%	78%
	Greek Catholic	15%	1%	3%	35%	45%
	Mixed confession	35%	6%	27%	10%	22%
Number of votes	Sunni	23,897	368	1,674	215	537
	Shia	2,211	8,261	240	46	225
	Druze	505	40	6,635	75	60
	Maronite	155	12	27	786	445
	Greek Orthodox	64	1	71	44	636
	Greek Catholic	269	22	59	613	799
	Mixed confession	4,662	807	3,611	1,271	2,992

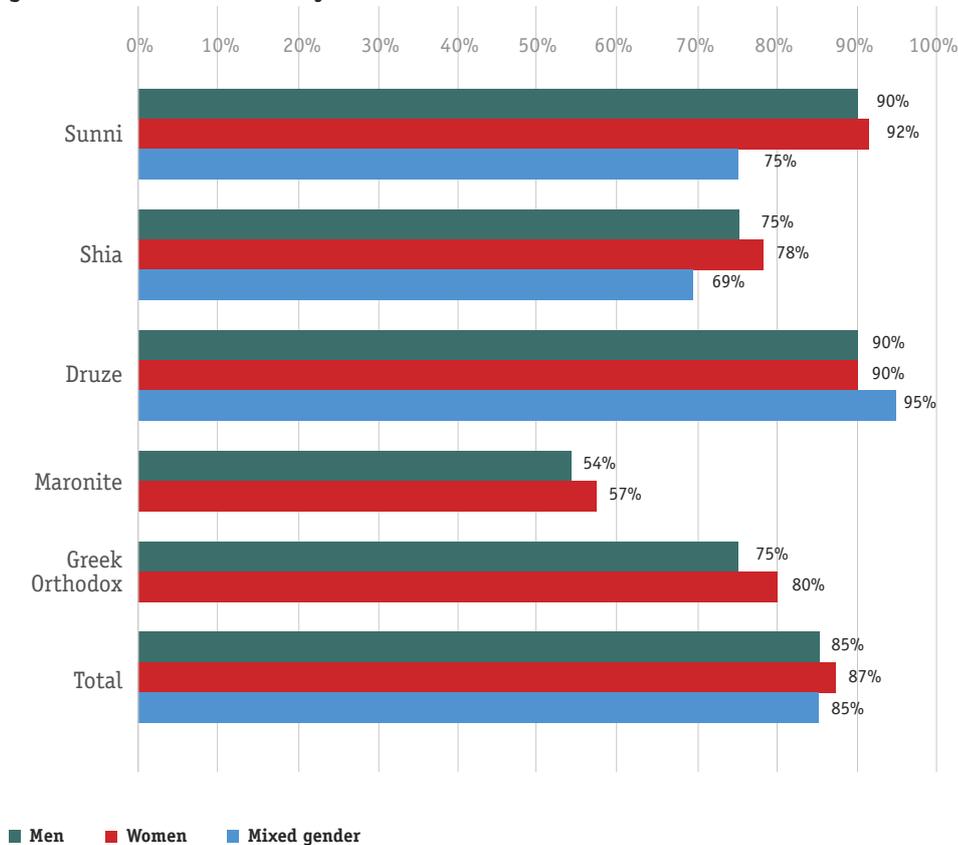
Note Percentages have been rounded up.

Women were more likely to vote for a co-sectarian candidate

The percentage of votes cast for co-sectarian candidates was higher among women than it was among men (87% compared to 85%). These variations across genders are statistically significant even after controlling for voters' confession and characteristics of the cadasters they were registered in.

Women from all confessional groups had a higher sectarian bias than their male counterparts. The variations were particularly large among Greek Orthodox, Maronite, and Shia women, with the share of votes they cast for co-sectarian candidates being between 3% and 5% higher than the share among each of their male counterparts.

Figure 18 Percentage of votes for co-sectarian candidates by confessional group and gender in West Bekaa-Rachaya



Note Percentages have been rounded up.

There were geographical variations in the percentage of votes for co-sectarian candidates even among each confessional group

Sunni voters had their own polling stations in 23 cadasters: In 11 of these, over 90% of the votes went to Sunni candidates, while in only two was the share lower than 80%. In Aaqabet Rachaya, nearly all Sunni voters voted for Druze candidates (94%)—most of which went to Wael Abou Faour (75%)—and only 4% voted for a Sunni candidate. What may have influenced Sunni voters' choice in Aaqabet Rachaya is the high prevalence of Druze voters in the cadaster (66% of registered voters, with the rest being Sunni). Druze voters in this cadaster had a significantly high confessional bias (94%), with 74% voting for Abou Faour. The second cadaster with the lowest confessional bias among Sunni voters was Aita El-Foukhar (53%), where a high share (36%) voted for Greek Orthodox candidates—mostly Ghassan Skaf (independent with FM-PSP) who obtained 30% of their vote and ranked first. Again, their choice may have been influenced by the higher prevalence of Greek Orthodox voters in the cadaster (65% of registered voters)—where 89% of them voted for a co-confessional candidate.

In comparison, Sunnis gave over 95% of their preferential votes to Sunni candidates in four cadasters. Their highest sectarian bias was observed in Ghazzeh (98%), followed by Haouch El-Harime (97%), Qaraoun (96%), and Biret Rachaya (95%). Among these cadasters, Qaraoun was the only one that was not fully Sunni, as 14% of its registered voters were from Christian groups.

Shia voters had their own polling stations in nine cadasters: In three of these, less than 70% of the votes went to Shia candidates, and in three others, more than 80% did. The lowest percentage of votes for Shia candidates was observed in Souairi, where only 12% voted for a co-confessional candidate. Shia voters in Souairi mostly chose Sunni candidate Abdul-Rahim Mourad (181 votes, 73%). The high prevalence of Sunnis in this cadaster (90% of registered voters) may explain this low preference for Shia candidates. However, Sunni voters in Souairi voted differently from their Shia counterparts, with the majority of their votes going to FM Sunni candidate Ziad Kadri. Shias who did not have a confessional bias therefore still had a high preference for the Sunni candidate running on the same list as Amal. The two other cadasters where less than 70% of Shias chose a co-confessional candidate were Yohmor and Qelaya (68% each), in which nearly all of the co-confessional vote went to Mohammad Nasrallah (63% and 67%, respectively). Most of the remaining Shia vote in both cadasters went to Abdul-Rahim Mourad (23% in each).

Conversely, more than 80% of Shia voters cast their ballot for a co-confessional candidate in Aain El-Tineh (88%), followed by Zelaya (85%) and Libbaya (83%). While in the two former cadasters, over 80% of Shia voters voted for Mohammad Nasrallah, in Libbaya, 16% voted for Amine Wehbe from the Democratic Left Movement, and 66% voted for Nasrallah. Wehbe, who obtained 712 votes among residents, received 456 votes from Shia voters—305 of these were cast in Libbaya.

The confessional bias among Druze voters was widespread across the district. Out of the 11 cadasters that had polling stations reserved for Druze voters, the confessional bias was lower than 90% in only three. The three cadasters with the lowest percentage of votes for Druze candidates were Aain Aata (79%), Bakkifa (81%), and Yanta (88%). Most of the remainder of the Druze vote in these went to Abdul-Rahim Mourad (Sunni). Druze voters had their highest confessional bias in Aayha (96%) followed by Kaoukaba (95%).

There were Maronite polling stations in only three cadasters. A minority of Maronite voters voted for a co-confessional candidate in Aain Zebdeh (35%)—where a large share of their vote went to Greek Orthodox candidate Elie Ferzli (39%). In other words, they still had a preference for the Christian candidate backed by FPM, a traditional Christian party. Among the two other cadasters with Maronite-only

polling stations, the highest sectarian bias was in Khirbet Qanafar (59%), where most Maronites voted for Henri Chedid (48%). In Saghbine, 57% of Maronite voters cast a confessional vote, with independent candidate on the Amal-Ittihad-FPM list Naji Ghanem being the most popular (38%). In both Khirbet Qanafar and Saghbine, the second most preferred candidate among Maronite voters was Elie Ferzli (29% and 23%, respectively), rather than a Maronite candidate.

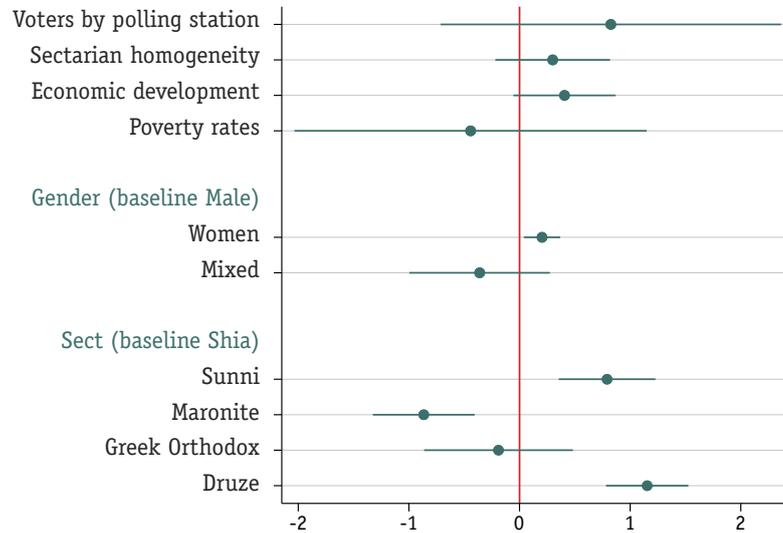
Similarly, there were Greek Orthodox polling stations in only three cadasters. Greek Orthodox voters had their lowest confessional bias in Kfar Mechki (47%). While the most successful candidate among Greek Orthodox voters in Kfar Mechki was their co-confessional one Elie Ferzli (38% of their preferential vote), he was closely followed by Abdul-Rahim Mourad (35% of their vote), and Wael Abou Faour also obtained a significant share (15%). Greek Orthodox voters showed their highest co-confessional preference in Aita El-Foukhar (89%), where the vote was highly contested between Ghassan Skaf (46%) and Elie Ferzli (43%). Finally, in the cadaster of Rachaya, 72% of Greek Orthodox voters cast a confessional vote. The majority voted for Elie Ferzli (59%), and the second most preferred candidate was Druze candidate Wael Abou Faour (17%).

All of these geographical variations in preferences for co-sectarian candidates do not seem to have been affected by characteristics of the specific cadasters. This means that there was no common pattern across or even between voters from the same sectarian groups.

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

No geographical characteristic—such as the level of sectarian homogeneity, economic development, or poverty rates—had a significant effect on voters' confessional biases. Only voters' characteristics were significant. After controlling for cadaster-level factors, women were more likely to cast their preferential vote for a co-sectarian candidate. Across sectarian groups, Druze and Sunni voters were the most likely to vote for a co-sectarian candidate, while Maronites were the least likely to do so. Shia and Greek Orthodox voters stood in between.

Figure 19 Drivers of votes for co-sectarian candidates in West Bekaa-Rachaya



V How did women candidates perform?

Only one woman candidate ran in West Bekaa–Rachaya. Maguy Aoun, the Maronite candidate on the independent list, received 1% of preferential votes in the district (847 votes) and ranked first in her list. She was more popular among the diaspora, winning 4% of their vote (65 votes). In addition, Aoun performed slightly better than two candidates on the party-affiliated lists—Amine Wehbe and Naji Ghanem.

Christian voters voted more for the woman candidate, but there were no significant variations across genders

Maguy Aoun was most successful among Christian voters, receiving nearly 8% of the Maronite, 7% of the Greek Catholic, and 4% of the Greek Orthodox preferential vote. Less than 1% of voters from each of the other confessional groups chose her. The variations in support for Aoun across confessional groups were statistically significant, with Sunnis and Shias being the least likely to vote for her.

Nearly half of the votes Aoun received among residents came from voters in mixed stations (351 votes, 3%), as well as those in Greek Catholic (122 votes) and Maronite polling stations (113 votes). Most of the remaining votes Aoun received were cast in Druze and Sunni polling stations (71 and 66 votes, respectively), with a small share coming from Greek Orthodox and Shia ones (30 and 23 votes, respectively).

Across genders, women voters gave a slightly higher number of votes to Maguy Aoun (343 votes, compared to 296 votes among men). In polling stations that had both men and women registered to vote, 137 voters gave her their preferential vote.

Table 7 Number and percentage of votes for Maguy Aoun by confessional group and gender

		Number of votes	Percentage of votes
Voters' confession	Sunni	66	0.2%
	Shia	23	0.2%
	Druze	71	1%
	Maronite	113	8%
	Greek Orthodox	30	4%
	Greek Catholic	122	7%
	Mixed confession	351	3%
Voters' gender	Men	296	1.2%
	Women	343	1.2%
	Mixed gender	137	1.5%

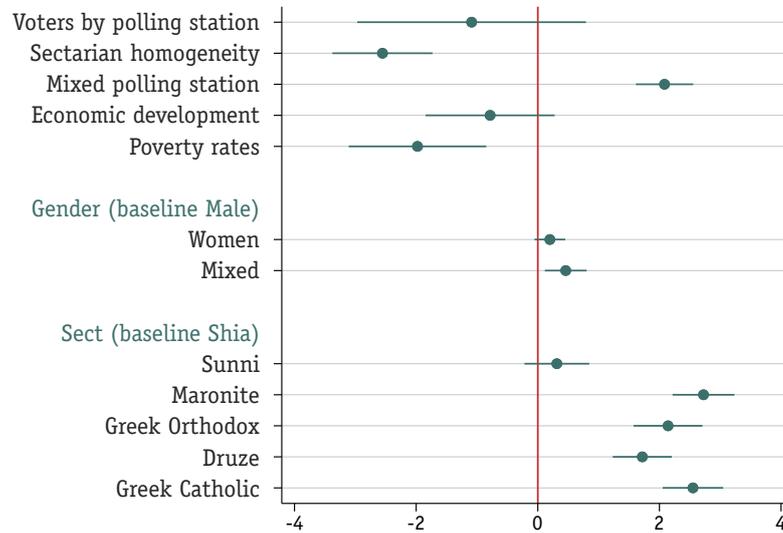
Note Percentages have been rounded up.

Maguy Aoun received a high share of her votes from only a few cadasters. Out of the 776 votes Aoun received among residents, excluding public employees, she won her highest number in Saghbine (115 votes, 9%) and Khirbet Qanafar (107 votes, 7%). She also managed to win a high number of votes in Machghara (95 votes, 2%)—particularly in the neighborhood of Machghara Faouqa (73 votes)—followed by Beit Lahia (42 votes, 11%).

What are the drivers of votes for the woman candidate?

Across geographical areas, Maguy Aoun tended to perform significantly better in cadasters with lower levels of confessional homogeneity and those with lower poverty rates, as well as in mixed polling stations. These factors affected her list's results in the same way: Voters in more heterogeneous cadasters, those in mixed stations, and those in cadasters with lower poverty rates were more likely to vote for the independent list. Across confessional groups, Maronite and Greek Catholic voters were the most likely to vote for the woman candidate, followed by Greek Orthodox and Druze voters, while Shias and Sunnis were the least likely to do so.

Figure 20 Drivers of votes for Maguy Aoun



VI How did emerging political groups perform?

The independent list in West Bekaa–Rachaya, named ‘Civil Society’, obtained 1,546 votes (2%). It fielded five candidates, one for every seat except the Druze one. Most of the votes won by the list were cast for Maronite candidate Maguy Aoun (847 votes). The other candidates on the list were Alaa Shamali (Sunni, 168 votes), Ali Sobh (Shia, 162 votes), Joseph Ayoub (Greek Orthodox, 150 votes), and Faisal Rahal (Sunni, 106 votes).

The independent list found higher levels of support among diaspora voters, with 10% of them voting for the list (170 voters). Moreover, in contrast to the two party-affiliated lists, the independent one received a high share of its total votes from diaspora voters (11%, while each of the other two lists received only 2% of their votes from the diaspora). Among the candidates, Maguy Aoun and Ali Sobh were the most popular (65 and 62 votes, respectively), and in fact, over one third of Sobh’s total votes came from emigrants. They were followed by Joseph Ayoub (13 votes), Faisal Rahal (10 votes), and Alaa Shamali (seven votes).

Support for the list varied across confessional groups, and candidates performed better among their co-sectarian constituents

The list was more successful among Christian voters—receiving 9% of the Maronite, 8% of the Greek Catholic, and 7% of the Greek Orthodox vote. By contrast, only 1% of Sunnis, Shias, and Druze voted for the list, each. In polling stations with multiple confessional groups registered to vote, 4% of voters cast their ballot for the list.

Variations in support for specific candidates were even more

pronounced: The Maronite and Greek Orthodox candidates were most successful among Christian voters, Sunni candidates among Sunni voters, and the Shia candidate among Shia voters.

Maguy Aoun managed to win a significant share of every confessional group's vote, but was most successful among each of the Christian groups and Druze voters, who did not have a co-sectarian candidate to vote for. Aoun received over 85% of the Maronite (113 votes), Greek Catholic (122 votes), and Druze (71 votes) votes that were cast for her list. The majority of Greek Orthodox who voted for the list also chose her (30 votes), with the Greek Orthodox candidate Joseph Ayoub obtaining an almost similar share (27 votes). In fact, no Maronite or Greek Orthodox voter voted for a for a non-Christian independent candidate. The preferred candidates among Sunnis and Shias were also their co-confessional ones. Alaa Shamali was most successful among Sunni voters (138 votes), and was followed by the second Sunni candidate, Faisal Rahal (82 votes). In addition, over 80% of the total votes obtained by each of the two candidates among residents were cast in Sunni polling stations. The Shia candidate, Ali Sobh, received most of the Shia vote (72 votes), and 75% of the total votes he received among residents came from Shia voters.

Table 8 Number and percentage of votes for the independent list and its candidates by confessional group in West Bekaa-Rachaya

		Independent list	Maguy Aoun	Alaa Shamali	Joseph Ayoub	Ali Sobh	Faisal Rahal
Number of votes	Sunni	346	66	138	23	4	82
	Shia	105	23	0	1	72	0
	Druze	97	71	5	1	5	2
	Maronite	127	113	0	10	0	0
	Greek Orthodox	59	30	0	27	0	0
	Greek Catholic	142	122	0	15	2	0
	Mixed confession	485	351	16	59	13	12
Share of votes	Sunni	1%	0.2%	0.5%	0.1%	0%	0.3%
	Shia	1%	0.2%	0%	0%	1%	0%
	Druze	1%	1%	0.1%	0%	0.1%	0%
	Maronite	9%	8%	0%	1%	0%	0%
	Greek Orthodox	7%	4%	0%	3%	0%	0%
	Greek Catholic	8%	7%	0%	1%	0.1%	0%
	Mixed confession	4%	3%	0.1%	0.4%	0.1%	0.1%

Note Percentages have been rounded up.

Support for the list did not significantly vary across genders

The list received a similar share of votes across genders (2%), although a slightly higher number of women than men voted for it (608 compared to 518 votes). In mixed stations, 235 voters voted for the list. Both men and women voted mostly for Aoun (1% of preferential votes among each), who also won a slightly higher number of her votes from women voters (343 votes, compared to 296 votes from men). All other candidates, with the exception of Ali Sobh, received a higher number of votes from women, with the differences being larger for Alaa Shamali (82 votes from women compared to 64 from men) and Faisal Rahal (42 votes from women compared to 28 votes from men).

Table 9 Number and percentage of votes for the independent list and its candidates by gender in West Bekaa-Rachaya

		Independent list	Maguy Aoun	Alaa Shamali	Joseph Ayoub	Ali Sobh	Faisal Rahal
Number of votes	Men	518	296	64	50	43	28
	Women	608	343	82	58	34	42
	Mixed gender	235	137	13	28	19	26
Share of votes	Men	2.0%	1.2%	0.3%	0.2%	0.2%	0.1%
	Women	2.1%	1.2%	0.3%	0.2%	0.1%	0.2%
	Mixed gender	2.5%	1.5%	0.1%	0.3%	0.2%	0.3%

Note Percentages have been rounded up.

Most candidates relied on voters in one specific area

There were large geographical variations in the votes received by each candidate. Maguy Aoun, who won 776 votes among residents, received her highest number of votes in Saghbine (115 votes, 9%) and Khirbet Qanafar (107 votes, 7%), Machghara (95 votes), and the cadaster of Rachaya (72 votes). In addition to Saghbine, the highest percentage of votes she obtained was in Beit Lahia (42 votes, 11%).

The list's second candidate, Alaa Shamali, won 159 votes among residents and received two thirds of these from voters in El-Marj (107 votes, 3%). He won less than 10 votes in all other cadasters. Joseph Ayoub won 136 votes among residents, and nearly half of these came from voters in Joub Jannine and the cadaster of Rachaya (34 and 30 votes, 1% of preferential votes in each), while he obtained less than 10 votes in all other cadasters. Faisal Rahal won 96 votes among residents of which well over half came from voters in Lala (65 votes, 6%), while he won four votes or less in all other cadasters. Finally, Ali Sobh, who also won 96 votes among residents, received over one third of these

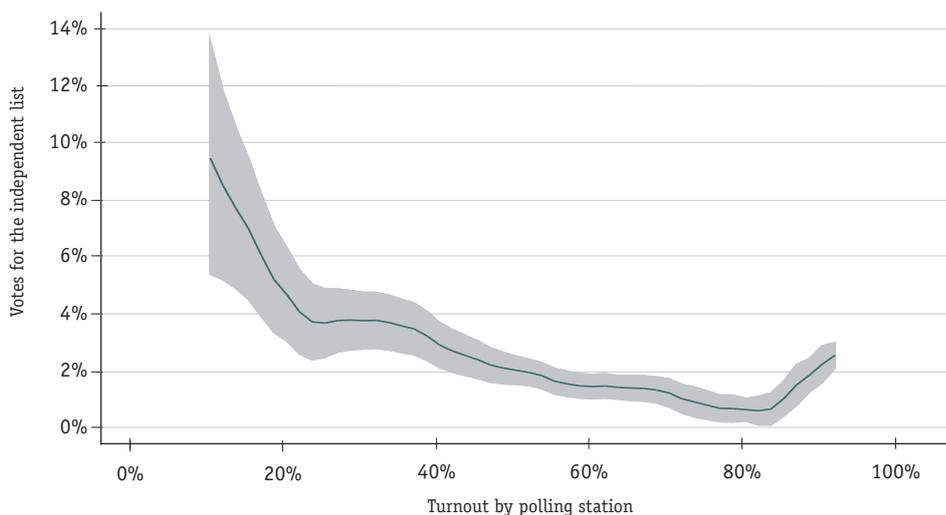
from voters in Aain El-Tineh (38 votes, 6%). This suggests that candidates were able to mobilize voters in specific areas on the ground, but failed to appeal to a larger number of voters across the district.

Lower turnouts and lower levels of sectarian homogeneity were associated with a higher share of votes for the list

Apart from the performance of each candidate, votes for the independent list significantly varied from polling station to polling station. In 176 polling stations, five voters or less voted for the list—and in 38 of these, the list did not receive a single vote. By contrast, the list received 10 votes or more in 46 stations, and more than 20 votes in 10 of these.

The independent list's results were significantly affected by turnout rates, as the list tended to perform better in polling stations that had lower turnouts. When turnouts were at their lowest, the list received nearly 10% of votes on average, while in polling stations that had the highest turnouts, it received only 1%. These variations are statistically significant, even after controlling for voters' and cadasters' characteristics. This highlights the independent list's weakness in mobilizing voters, and may suggest that independents tended to perform better among constituents not specifically targeted by traditional parties.

Figure 21 Turnout by polling station and percentage of votes for the independent list

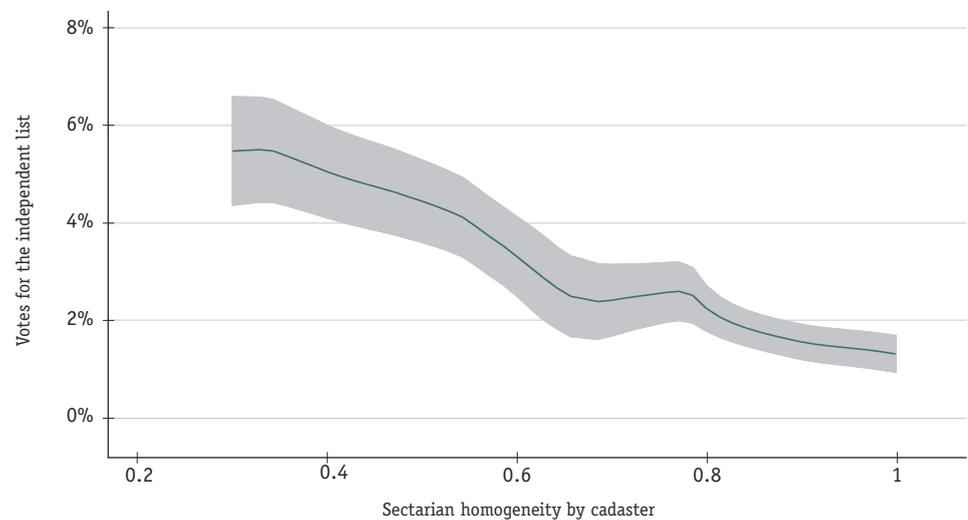


Moreover, there were large geographical variations in the votes received by the list. While the list won 0.1% of votes or less in 27 cadasters, it received over 5% of votes in 10. The highest share of votes it obtained was in Beit Lahia (43 votes, 11%), followed by Aaytanit (30 votes, 10%). It also won a substantial share in Saghbine (125 votes, 9%), Khirbet Qanafar (118 votes, 8%), Tall Znoub (22 votes, 7%),

Bab Maraa (13 votes, 7%), Aain El-Tineh (38 votes, 6%), Kfar Mechki (12 votes, 6%), Lala (66 votes, 5%), and Mansoura (47 votes, 5%). However, these percentages do not always translate into a high number of votes. The list obtained over 100 votes only in five cadasters: Saghbine, Khirbet Qanafar, as mentioned above, El-Marj (123 votes), Machghara (122 votes), and the cadaster of Rachaya (120 votes). This is equal to 45% of the votes the list obtained across the district among residents (608 votes out of the 1,361 votes it won among residents).

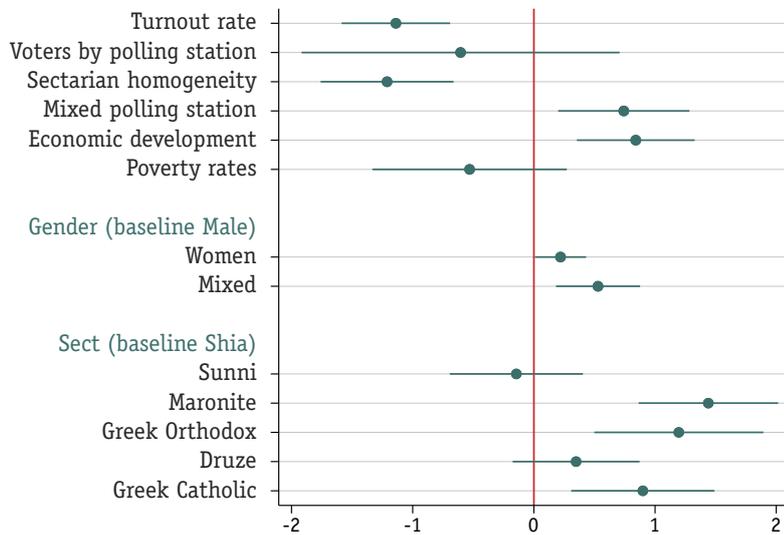
Beyond this, the percentage of votes obtained by the list significantly decreased as the level of confessional homogeneity in a cadaster increased. In the most heterogeneous cadasters, the list received an average of 6% of votes, while that share steadily decreased until reaching 1% in the most homogeneous cadasters. This relationship is statistically significant even after controlling for voters' gender and confession, as well as other characteristics of the cadasters they were registered in. This may point toward sectarian parties' higher capacity in mobilizing voters in more homogeneous localities, which have a higher presence of their main constituents.

Figure 22 Sectarian homogeneity by cadaster and percentage of votes for the independent list



Other geographical-level characteristics that impacted the list's results were the level of economic development and poverty rates in a cadaster. Generally, higher levels of economic development in a cadaster were associated with a significantly higher share of votes for the list, and voters in cadasters with lower poverty rates were slightly more likely to vote for the list.

Figure 23 Drivers of votes for the independent list



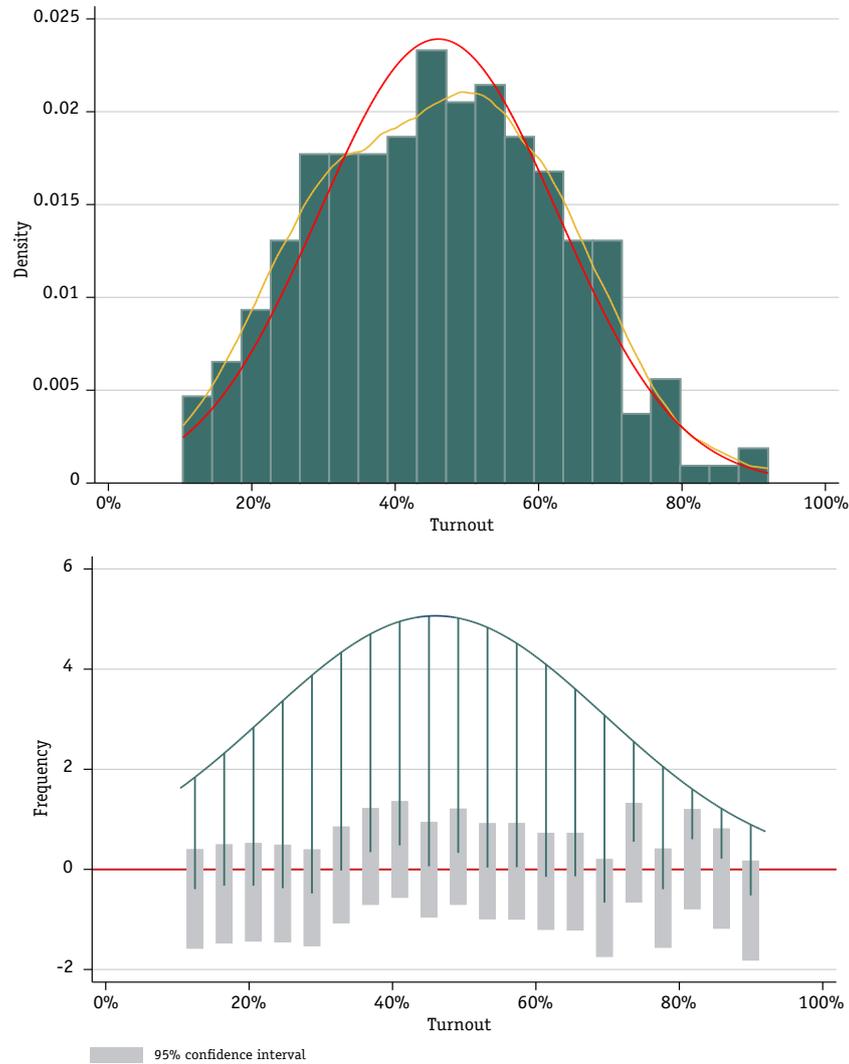
VII Were there any signs of irregularities?

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 politically connected ones—and election officials. Voter rigging, or pressuring voters to cast ballots in a certain manner, tends to occur more in small polling stations where it is easier to monitor voters' behavior. Therefore, testing whether turnout was abnormally higher in smaller voting centers can help approximate whether there was a presence of voter rigging or not. Another method for detecting signals of election fraud is to observe the distribution of turnout and vote numbers and test whether they have a 'normal' shape. For example, an abnormally high number of voting centers with close to 100% turnout could suggest either voter or vote rigging at any stage of the election process. Other lines of research focus on statistical tests that examine the random nature of numbers to test whether numbers were manipulated in a non-random manner.

No irregularities in the distribution of turnouts

Turnout usually has a normal shape, with the majority of polling stations having turnouts close to the average, and a small number of stations having a very high or very low turnout rate. The distribution of turnouts by polling station in West Bekaa–Rachaya did not significantly diverge from the normal distribution, providing no initial evidence of vote or voter rigging.

Figure 24 Distribution of turnouts by polling station in West Bekaa-Rachaya



There are no signs of voter rigging pointing toward a specific party. Voter rigging occurs when political parties use coercive measures to influence voters' behavior. The literature on election irregularities distinguishes vote rigging from voter rigging, when coercion is not evident in the latter case. However, signs of voter rigging can be detected 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.¹⁷

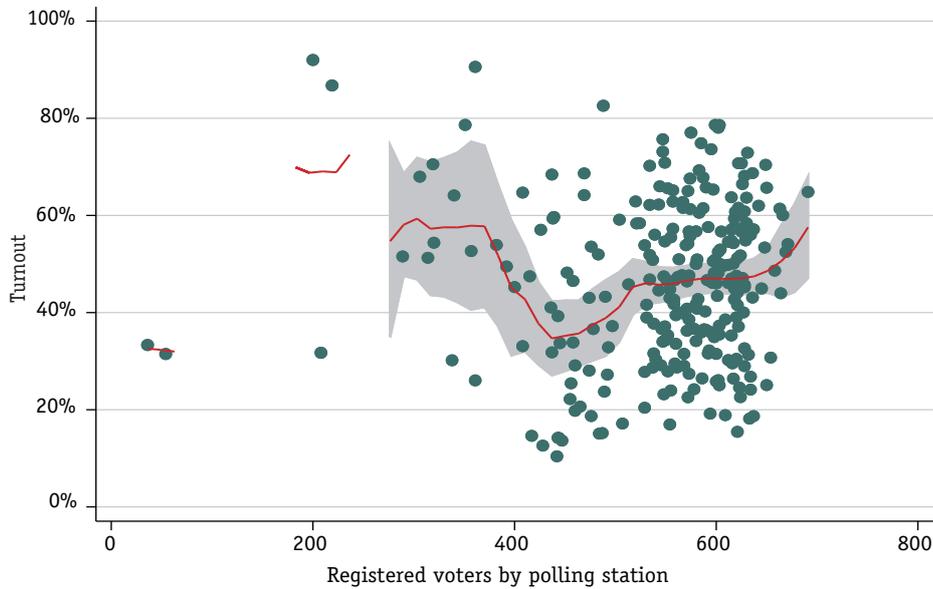
In West Bekaa-Rachaya, average turnouts tended to decrease from over 80% in the smallest polling stations to less than 40% in those that

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

had 400 registered voters or more. However, on average, turnout rates increased slightly to nearly 60% in some of the largest stations.

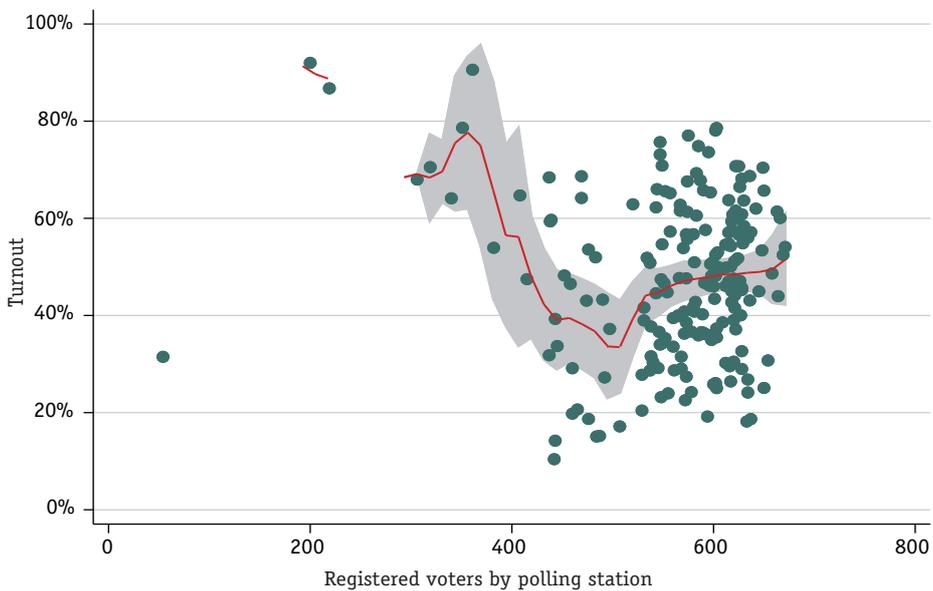
Figure 25 Polling station size and turnout rates in West Bekaa-Rachaya



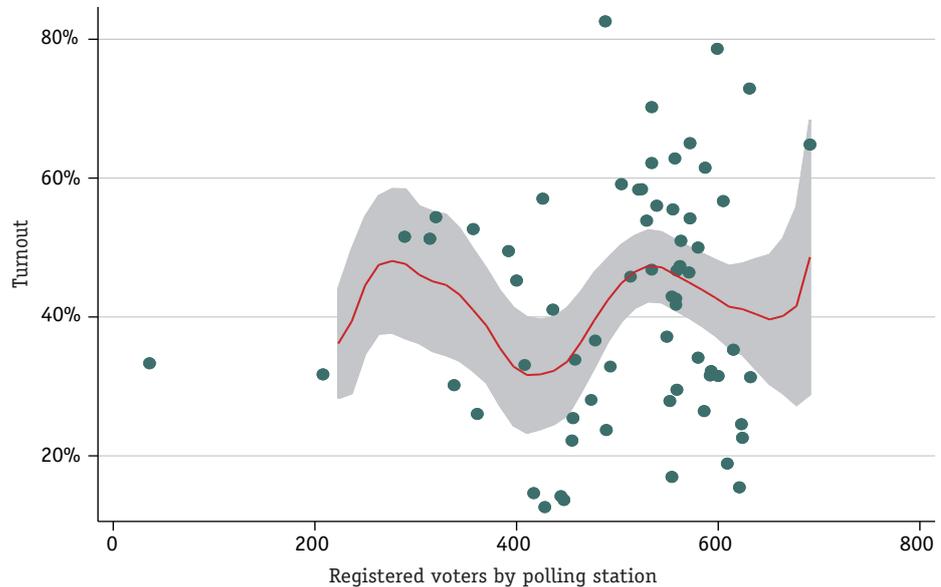
Given that registered voters are mostly segregated by confession and gender, political parties may have higher interest in targeting voters in specific polling stations where their constituents are registered to vote. Comparing the relationship between the size of the polling station and turnouts between mixed and homogeneous stations shows a clearer downward trend in homogeneous stations.

Figure 26 Polling station size and turnout rates by type of polling station

a Homogenous polling stations



b Mixed polling stations

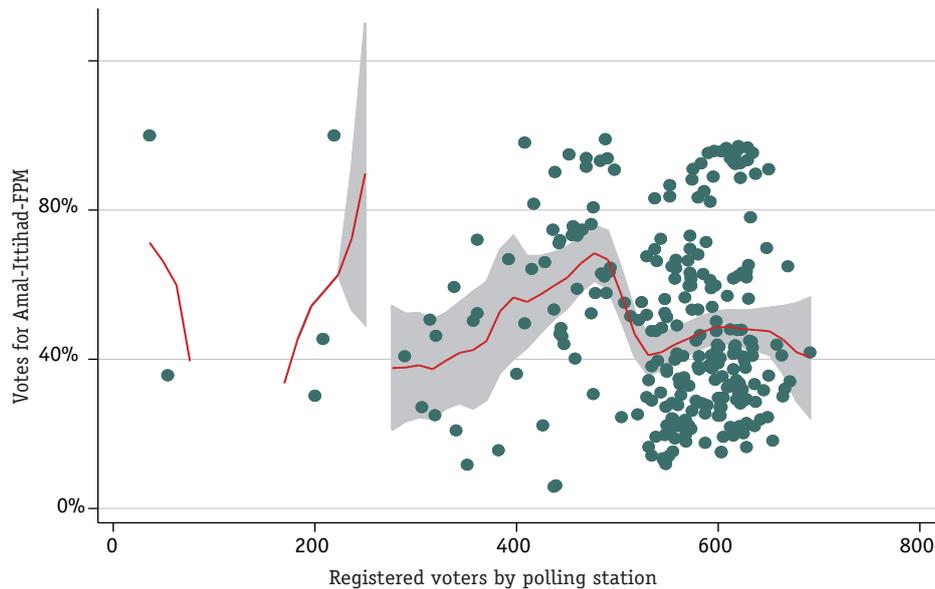


One specific list or party could have benefited from smaller stations, which would suggest vote monitoring on their part. Looking at the relationship between the size of the polling station and the votes for each list and party shows no clear relationship between the two, meaning that any potential incident of voter rigging did not benefit one specific party over others. However, some parties obtained significantly higher results in certain polling stations. For example, the Amal-Ittihad-FPM list received all of the votes in two stations, one of which was the smallest in the district (less than 40 registered voters), the other was also relatively small (nearly 220 voters). The list also won over 98% of votes in two other stations. The FM-PSP list won over 90% of votes in two stations, with nearly all of these going to the PSP candidate.

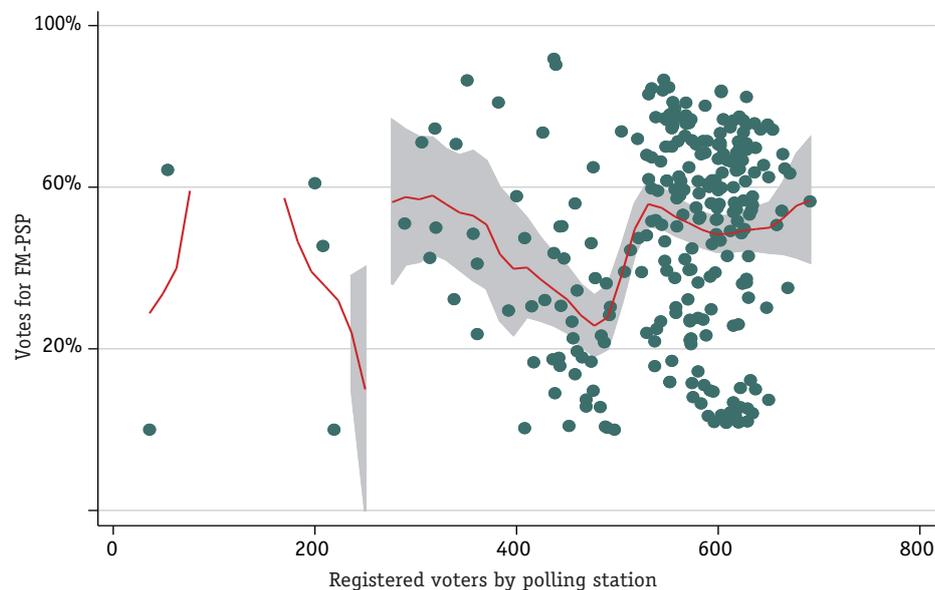
Overall, these results could suggest that pressure was exerted on voters in certain polling stations, but not across the district by one specific party.

Figure 27 Polling station size and percentage of votes for the winning lists in West Bekaa-Rachaya

a Polling station size and percentage of votes for the Amal-Ittihad-FPM list



b Polling station size and percentage of votes for the FM-PSP list



Ittihad and PSP benefited from very high turnout rates

Another way to test for voter rigging is to look at the relationship between turnout by polling station and votes for a list or party. Normally, if there was a lack of pressure on voters to cast their ballots in a certain way, no specific list or party should benefit from significantly high turnout rates.¹⁸ A higher share of votes for a party in stations with significantly high turnouts could be due to its higher capacity to

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Larreguy, H. A., J. C. Marshall, and P. Querubin. 2016. 'Parties, Brokers, and Voter Mobilization: How Turnout Buying Depends Upon the Party's Capacity to Monitor Brokers.' *American Political Science Review*, 110(1): 160-179.

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 differences across sects and votes for a party, standardized variables of turnout rates and percentage of votes for this 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 divided by the variability (standard deviation) of the turnout rates in those centers. This measures how abnormally low or high the turnout in a polling station is compared to all other centers within the same sect. The standardized measures of share of votes for lists and parties 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.¹⁹

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

Accounting for the differences in the share of votes for each party and turnouts among each confessional group shows significant variations in the percentage of votes obtained by each party between polling stations that had abnormally low (1 standard deviation below the mean turnout by polling station), normal, and abnormally high turnouts (1 standard deviation above the mean).

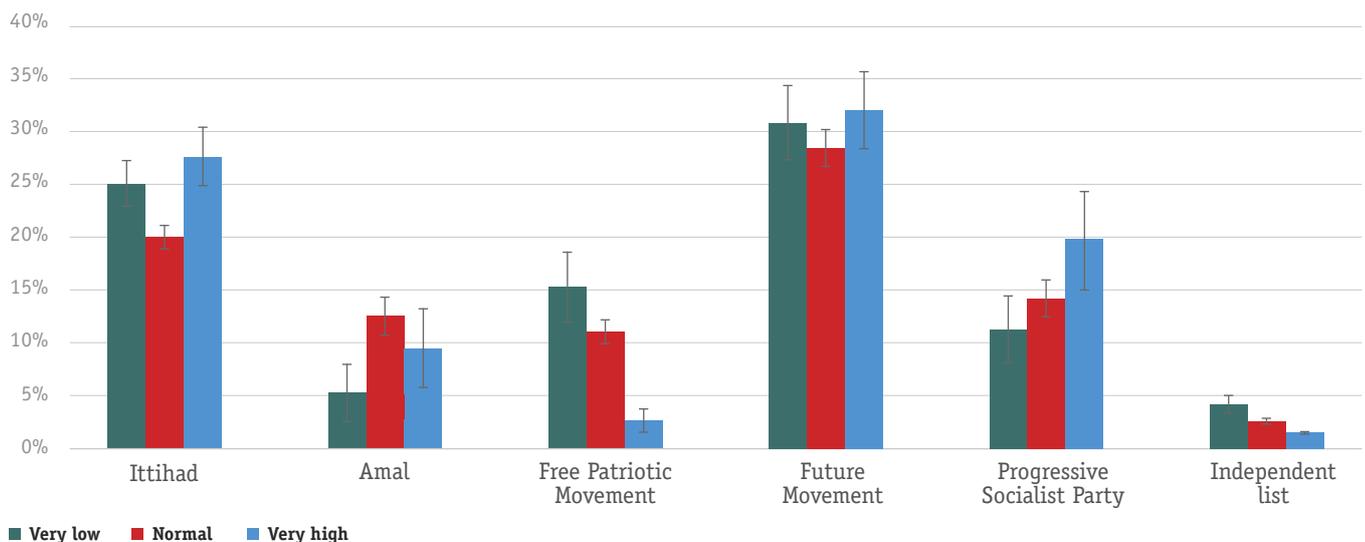
Ittihad, and to some extent, PSP candidates significantly benefited from higher turnouts, while the opposite was true for other parties. Compared to his share of votes in polling stations that had normal turnouts (20%), Ittihad candidate Abdul-Rahim Mourad's votes were 8% higher in very high turnout polling stations (28%). He also benefited from very low turnout stations, where his share of votes was 5% higher (25%). Regarding PSP candidate Wael Abou Faour, his share of votes in polling stations that had very high turnouts was 6% higher than it was in those that had normal turnouts (20% compared to 14%). Conversely, FPM-backed candidate Elie Ferzli was significantly less successful in stations with very high turnouts, where his share of votes was 8% lower than it was in polling stations with normal turnouts (3% compared to 11%). However, Ferzli benefited from lower turnouts, with his share of votes being 4% higher in very low turnout stations (15%). There were no significant variations in the vote for FM, while the Amal candidate lost a significantly high share of votes to lower turnouts (6% in polling stations with very low turnouts compared to 12% in those with normal turnouts).

Finally, the main loser of very high turnouts was the independent list, whose share of votes in polling stations with very high turnouts was twice as low as its share in stations with normal turnouts (1% compared

to nearly 3%). The list performed better in polling stations with very low turnouts, where its share of votes was 2% higher.

These results could overall suggest pressure to vote for the Ittihad and PSP candidates.

Figure 28 Percentage of votes for the main parties and standardized turnout rates in West Bekaa-Rachaya



There is no evidence of ballot stuffing, but some suggestive signs of vote counting manipulations

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

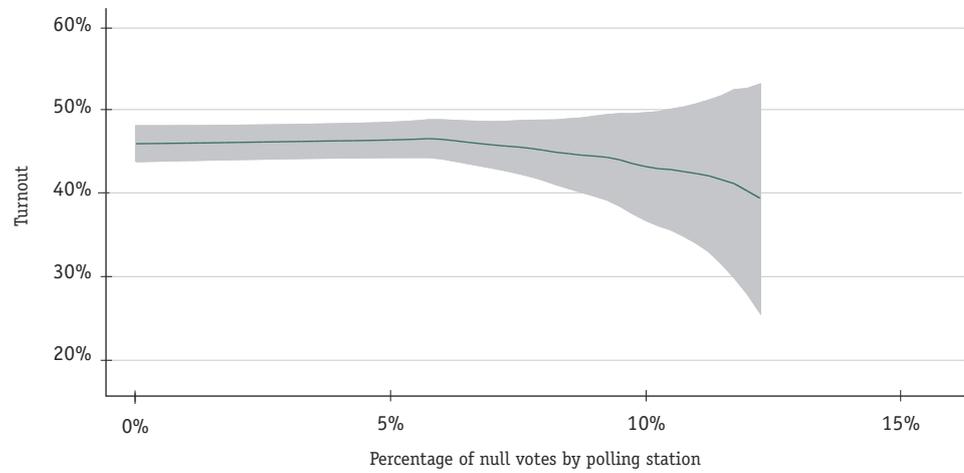
One way of detecting signs of ballot stuffing is to see how the percentage of null votes in a polling station correlates with the turnout, as well as the percentage of votes that a particular party obtained. Previous evidence shows that when political parties add ballots, they tend to forget to include a similar proportion of invalid votes.²⁰ Potential irregular behaviors can be identified by looking at the correlation between the percentage of null votes, turnouts, and votes for a party. However, a negative correlation would not be enough to suggest ballot stuffing—as null votes could be ‘protest’ ones. Stronger evidence of ballot stuffing would be demonstrated in cases where the increase in the share of null votes is smaller than the decrease in the percentage of votes for a party.

There was no significant relationship between the percentage of null votes and turnouts by polling station in West Bekaa–Rachaya, thus providing no evidence of ballot stuffing. Even when looking at the share of votes obtained by each list and party across the percentage of null votes by polling station, no relationship appears.

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

Figure 29 Turnout and percentage of null votes by polling station in West Bekaa-Rachaya



Another form of vote rigging would entail parties manipulating the vote count by either adding or subtracting votes for a party ('cooking' the numbers), or 're-shuffling' votes within their list from one candidate to another. One way of detecting manipulations in the vote counting process is to look at the distribution of the last digits in the number of votes for a list or party.²¹ 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 regular elections, the last digits in votes for a list or 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 list by polling station²² shows that the last digits in the number of votes for the Amal-Ittihad-FPM list significantly deviated from the uniform line. In particular, there was a much lower number of votes ending in zero and eight, and a higher number of votes ending in seven than expected. The distribution in the number of votes for each party in the list shows no irregular pattern, suggesting that any potential incidents of vote rigging was not done to the benefit of a specific party in the list.

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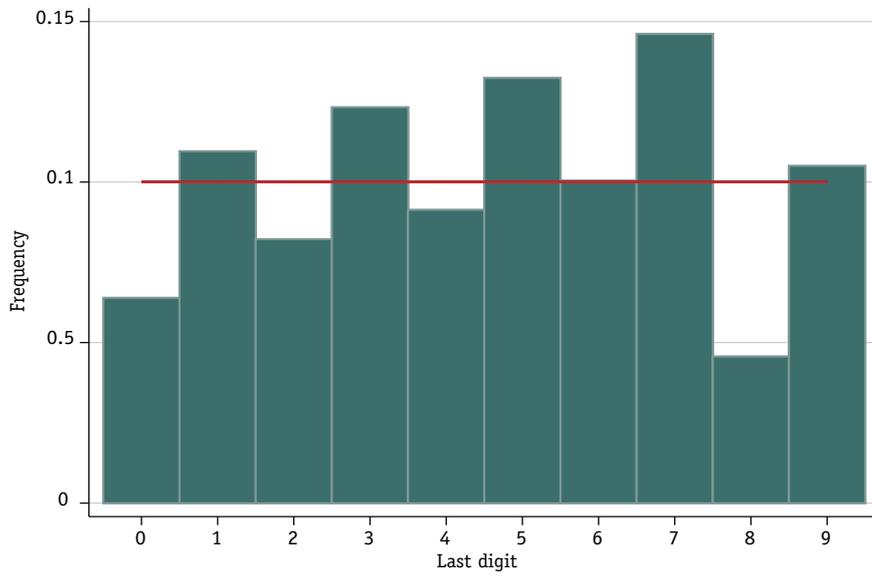
Beber, B. and A. Scacco. 2012. "What the Numbers Say: A Digit-Based Test for Election Fraud." *Political Analysis*, 20(2): 211-234.

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Here we restrict the sample of stations where each list obtained at least 50 votes to avoid an overcounting of ones or zeros.

Figure 30 Distribution of last digits in the number of votes for the Amal-Ittihad-FPM list

a Frequency of last digits in the number of votes for the Amal-Ittihad-FPM list



b Distribution of last digits in the number of votes for the Amal-Ittihad-FPM list compared to the uniform distribution

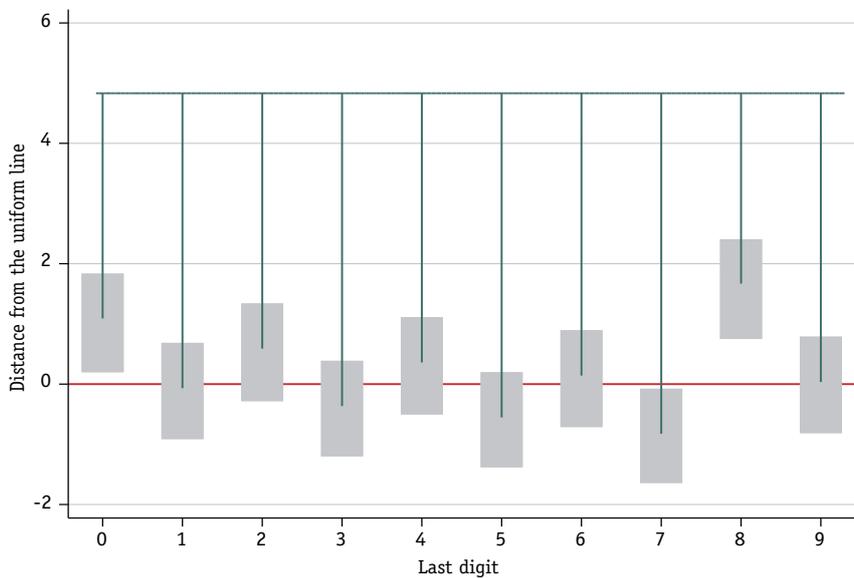
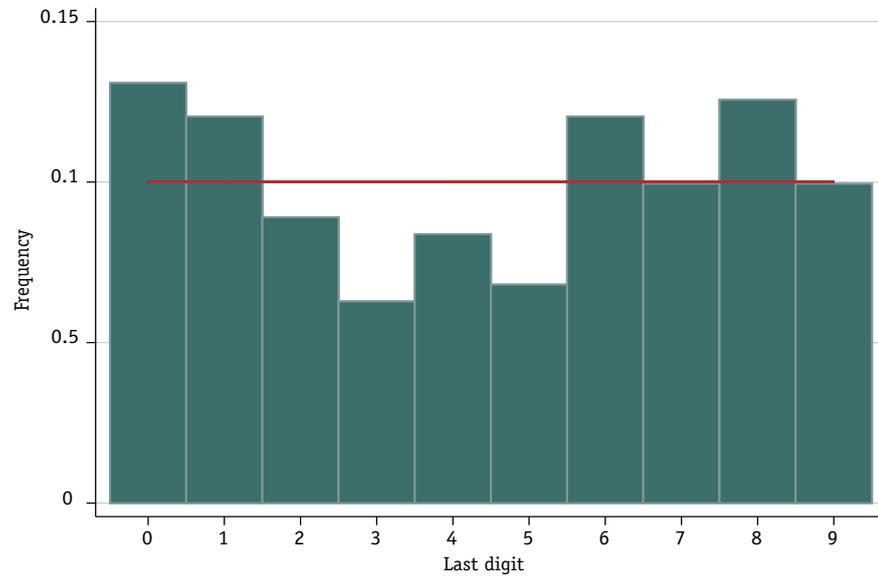
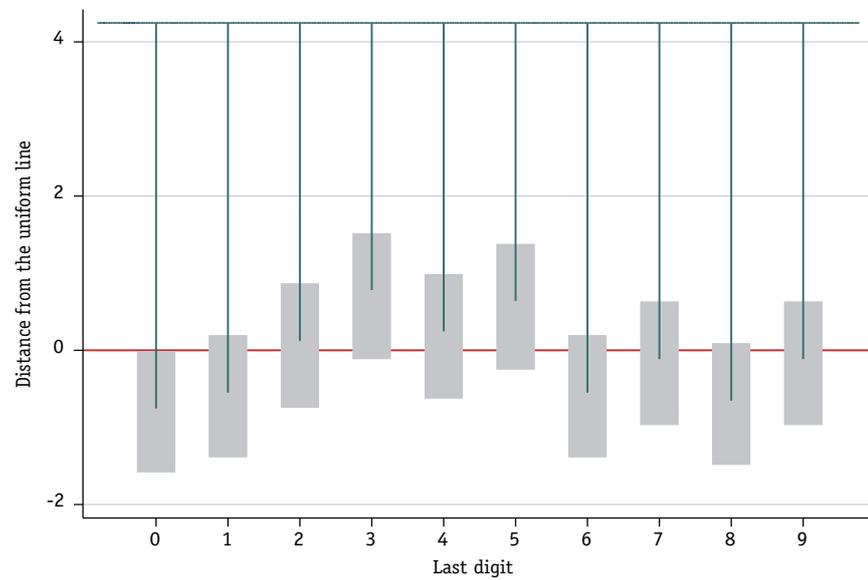


Figure 31 Distribution of last digits in the number of votes for the FM-PSP list

a Frequency of last digits in the number of votes for the FM-PSP list



b Distribution of last digits in the number of votes for the FM-PSP list compared to the uniform distribution



Overall, there is weak evidence of irregularities in West Bekaa-Rachaya

There was some weak evidence of irregularities in the elections in West Bekaa–Rachaya, although some methods of detecting signs of voter and vote rigging suggest potential fraud on the part of Ittihad and PSP.

Normally, if there was a lack of pressure on voters to vote or not to vote, votes for each party should not significantly vary across turnouts by polling station. However, Ittihad and PSP—particularly the former—benefited from very high turnouts. This could suggest voter rigging from these parties. Higher turnouts benefiting a party could also be due to ballot stuffing, as a party adding ballots for its candidates would increase both turnouts and votes for this party in a polling station. One method of testing for signs of ballot stuffing, which involves looking at the variations in turnouts, votes for parties, and the share of null votes by polling station, did not point toward ballot stuffing. Another way of detecting signs of ballot stuffing, and vote rigging more generally, such as vote counting manipulations, is to look at the distribution of the last digits in the number of votes for a list or party. In regular elections, these last digits should be uniformly distributed. The last digits in the number of votes for the Amal-Ittihad-FPM list significantly deviated from the uniform line, which could point toward vote rigging. However, this result was observed in the votes for the list rather than any one candidate, as the last digits in the number of votes for each candidate were not abnormally distributed. Overall, given that not all methods of detecting fraud pointed toward the same party, the evidence of election irregularities in West Bekaa-Rachaya is inconclusive.