Pre-Analysis Plan

Understanding Support for Sectarian Politics: Evidence from Survey Experiments in Lebanon

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July 12, 2016

Abstract

The prevalence of ethnic or sectarian politics in many developing countries raises two important questions: (1) To what extent do citizens genuinely support the ethnic status quo, and (2) Is it possible to reduce support for ethnic politics and increase support for a programmatic alternative? This document presents a pre-analysis plan for information and behavioral experiments that aim to address these questions. The experiments were implemented with 2,496 survey respondents in Lebanon in 2015-2016. The first set of experiments explores whether individuals falsify their preferences for sectarianism in response to potential social pressure from political elites or from peers. We investigate this by randomly assigning respondents to public and private versions of a petition as well as invitations to join public versus private Facebook discussion groups promoting cross-sectarian discussion. The second set of experiments explores whether increasing awareness of economic or class interests reduces support for sectarian politics. Specifically, we examine the effects of information treatments that increase awareness of economic inequality or of the cross-cutting nature of the economic cleavage. The pre-analysis plan was prepared using blinded data and submitted to the registry maintained by the Evidence in Governance and Politics (EGAP) network.

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1 Introduction

Ethnic or sectarian politics dominate in many developing countries.[1] In countries such as Lebanon and Iraq, sectarianism is institutionalized in the political system through quotas and other forms of proportional representation designed to ensure power-sharing (Lijphart, 2004). In other countries, the dominance of ethnic politics emerges through the dynamics of political party competition (Chandra, 2004).

Despite the prevalence of ethnic (sectarian) politics, a large political economy literature has argued that more ethnically diverse societies have lower levels of public goods provision, higher levels of clientelism, and weaker accountability (Alesina, Baqir and Easterly, 1999; Habyarimana et al., 2009; Pande, 2011). These adverse outcomes are interrelated. Insofar as ethnic diversity makes it harder for individuals to cooperate or coordinate across ethnic groups, public goods will be under-provided (Habyarimana et al., 2009). Moreover, if politics is dominated by ethnic parties, parties bolster their public support not through programmatic promises but rather through clientelism, constituency services, and the distribution of patronage goods. In such contexts, voters are more likely to vote on the basis of a candidate's ethnicity rather than her qualifications or performance, undermining the logic of accountability and turning elections into a head-counting exercise (Banerjee et al., 2012).

The adverse aspects of ethnic politics raise two questions central to a growing body of literature focused on understanding how to increase support for programmatic politics in countries dominated by ethnic or clientelist politics (Kitschelt and Wilkinson, 2007; Fujiwara and Wantchekon, 2013; Bratton, Bhavnani and Chen, 2012). To what extent do citizens support the ethnic status quo (meaning the institutionalization of politics along ethnic lines) and to what extent would they prefer an alternative basis of political organization, particularly one which gave primacy to programmatic, issue-based politics? Second, is it possible to reduce support for ethnic politics and increase support for an alternative?

This document presents a pre-analysis plan for information and behavioral experiments designed to address these questions. The experiments were embedded in a survey and implemented with 2,496 respondents in Lebanon in 2015-2016. The first set of experiments enable us to explore whether individuals falsify their preferences for sectarianism in response to potential social pressure from political elites or from peers. We investigate this by randomly assigning respondents to public and private versions of a petition as well as invitations to join public versus private Facebook discussion groups promoting cross-sectarian discussion. The second set of experiments explores whether increasing awareness of economic or class interests reduces support for sectarianism and increases support for multi-sectarian, programmatic politics. Specifically, we examine the effects of information treatments that either increase awareness of economic inequality or of the cross-cutting nature of the economic cleavage.

Lebanon presents an important context in which to explore questions about support for an

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[1]We use the terms 'ethnic' and 'sectarian' interchangeably in this document as the relevant term varies by country.

alternative to an ethnic or sectarian status quo. While sectarianism is institutionalized in Lebanon's political system, there is also a deep undercurrent of public frustration with the status quo. Most recently this erupted into massive and rare cross-sectarian protests in late summer 2015 to demand change to a paralyzed and corrupt sectarian political class and a solution to rampant economic and social dysfunction in the country after the government failed to provide for adequate trash removal in Beirut. This project was implemented in the wake of these protests with the goal of shedding light on why citizens did or did not support its objectives and investigating how to strengthen support for future political movements seeking to organize individuals across sectarian lines.

The remainder of the pre-analysis plan describes the Lebanon context, the hypotheses that will be tested with the data, the data and measures, and the estimation strategy. This plan was prepared using *blinded* data, which enabled us to make detailed choices about which measures to use in the analysis and how without knowledge of which individuals were assigned to treatment and control conditions (Olken, 2015). The plan was submitted to the Evidence in Governance and Politics (EGAP) registry.

2 Lebanon Context

Sectarianism has long defined the political way of life in Lebanon.[2] It first became institutionalized in the political system during the French mandate period. The Constitution of 1926 created a parliamentary system with proportional representation along sectarian lines and Article 95 established the sharing of state offices. Following independence in 1943, Christian Maronites and Sunni Muslims struck a National Pact that further enshrined the notion of power-sharing among confessions. The office of the President was reserved for a Maronite Christian while the office of Prime Minister was reserved for a Sunni (later it was agreed that the position of Speaker would go to a Shi'a Muslim). While the proportions afforded to different sects have changed over time, Lebanon has never abandoned the principle of sectarian quotas for representation.

The renegotiation of influence for various sects has been the result of major pressures on the division of power in Lebanon. At the time of independence, Christians were the largest group and also were the most privileged, followed by Sunnis. Shi'a constituted a much smaller and more economically disadvantaged group. Since then, the size of the Maronite population has declined while the Shi'a population share has increased dramatically. While no official census has been conducted in Lebanon since 1932, population estimates suggest that the total Christian population currently constitutes about 40 percent, with Maronites as the largest group constituting about 25 percent. The total Muslim population constitutes about 60 percent split almost evenly between Sunni and Shi'a. These shifting demographics have contributed to conflict among the groups—

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[2]Lebanon has 18 officially recognized sects, including 12 Christian sects, four Muslim sects, Druze and Jewish populations. The most recent demographic study conducted in 2011 by Statistics Lebanon, a Beirut-based research firm, indicated that 27 percent of the population are Sunni Muslim, 27 percent Shi'a Muslim, 21 percent Maronite Christian, 8 percent Greek Orthodox, 5 percent Druze, and 4 percent Greek Catholic, with the remaining 7 percent belonging to smaller Christian denominations `http://www.globalsecurity.org/military/world/lebanon/religious-sects.htm`.

erupting into civil war from 1975-1990—which occurred as domestic and regional pressures led to the erosion of the national pact and the taking up of arms of Lebanon's different sectarian groups. The Taif Agreement of 1989 brought an end to Lebanon's civil war and split representation equally between Christian and Muslim populations in both the Council of Ministers and in the parliament. This is the balance that remains to this day despite the relative increase in the size of the Muslim population.

The institutionalization of politics along sectarian lines is also reflected in the organization of Lebanon's political parties. In the pre-civil war era a number of parties espoused multi-sectarian messages focused on socialism, Arab nationalism, and an end to Lebanon's sectarian power-sharing. Yet, conservative elites sought to bolster their authority by providing sectarian alternatives to left-wing parties (Corstange, 2013, 908). Today, most parties in Lebanon are essentially single-sect catch-alls that aggregate co-sectarians who otherwise differ substantially on non-identity dimensions such as the rich and poor (Corstange, 2013, 898). One important byproduct of the sectarian orientation of political parties in Lebanon is that they rely on clientelism and the direct distribution of social or welfare goods to maintain political support. Cammett (2014) argues that there is variation in whether parties take an inclusive or exclusive approach to the distribution of goods based on the political mobilization strategy of the party and the extent to which it faces competition from other sectarian parties. While social spending in Lebanon thus can cross sectarian lines, it still results in a suboptimal allocation of resources from the perspective of balanced national development. In a geographic analysis of social spending in Lebanon from the 1990s to the present, Salti and Chaaban (2010) find that the sectarian logic of spending in Lebanon has resulted in an allocation of resources that maintains a sectarian balance of spending regardless of development objectives or economic need. They show, for instance, that in 1995 Beirut received 16 percent of total public spending even though it has only eight percent of needy households, while Nabatiyeh had 11 percent of needy households but only received one percent of total public spending.

While the sectarian cleavage dominates in Lebanon, there is also an important economic cleavage that cuts across sectarian lines. While the Christian population was also more economically advantaged prior to the civil war, in recent decades both the Sunni and Shi'a populations have enjoyed improvements in economic welfare such that all sectarian groups now have a mix of rich and poor. Yet, in a study of support for voting rights for the illiterate, Corstange (2013) finds that public positions on illiterate voting rights are typically cast along sectarian lines, despite the fact that the poor—regardless of sect—are privately more supportive of illiterate voting. These findings suggest that people have both material and sectarian interests.[3] Second, they indicate that private preferences are often in line with socio-economic status or class, but these preferences do not get expressed in a political system where sectarianism prevails because sectarian identity provides a powerful means by which to stigmatize people who 'desert' their sect and give primacy to their material interests.[4] Third, they support the notion that privately, many individuals indeed

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[3]See also Akerlof and Kranton (2000); Bratton, Bhavnani and Chen (2012); Chandra (2004, 9).

[4]Evidence suggests that there is scope for both intergroup convergence and intragroup divergence. For instance, Corstange (2013) notes that well-off Shi'a frequently express dismissive attitudes towards their poorer co-sectarians

have more in common with individuals of similar economic status across sects than with individuals of different economic status within sects, at least on this issue. As Corstange (2013) argues: If class (ethnic) appeals are demonstrably non-credible in a given society, we should not expect many people to respond to them even if they agree with the principles espoused (see also Keefer and Vlaicu (2007)). The overall implication is that people care about their economic interests but sectarianism—including the fear of sanctioning by one's own sectarian group for defection—is hegemonic.

These observations are echoed in focus group discussions conducted by the Lebanese Center for Policy Studies in 2013. In a report on the findings of those focus groups, it is noted that: "Participants explicitly mentioned that they supported a particular party despite disagreeing with (or not being aware of) its policy ideas and whether or not they were receiving services from it, solely because that party represented their sect... Voters feel strong ties to the parties that represent their sect, whether or not they feel they are being served well by these parties." Additionally, this is rooted in a deep distrust of other sects and a perceived need to prevent the victimization of their own sect. Insecurity fuels attachments to sectarian parties and leaders. The report suggests that many Lebanese are voting against their policy principles out of concern for the security of their confessional communities.

While sectarianism is thus deeply entrenched in Lebanon, there are nonetheless signs of demand for an alternative. In 2011, in the wake of the Arab Spring, there were massive street protests demanding an end to sectarianism in Lebanon.[5] Additionally, in recent years there have been some promising examples of multi-sectarian political organization, as was the case for a 2013 public sector strike organized by the Lebanese Trade Union Coordination Committee (TUCC) over issues surrounding a pay raise. Most recently in 2015, Beirut witnessed a massive multi-sectarian political movement that arose in response to the government's failure to manage trash collection. The crisis began when the Naameh landfill had to be closed due to being filled beyond capacity and the private company contracted to collect Beirut's waste ceased to collect the trash.[6] Politicians failed to reach a solution and garbage continued to accumulate until it became a visual reminder to all of the corruption and inefficiency of the sectarian-based political system. On August 29, 2015, more than 250,000 people crowded into historic Martyrs' Square and Riad El Solh Square in downtown Beirut to demand change to a paralyzed and corrupt sectarian political class and a solution to rampant economic and social dysfunction in the country.[7] These protesters came from all confessions and a variety of economic backgrounds to begin a national movement—later dubbed the 'You Stink' movement—that would last for months. The 'You Stink' movement was groundbreaking in its focus specifically on the economic and social concerns of Lebanese citizens. Moreover, the ability of movement organizers to link these concerns to the sectarian-based system of political patronage

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in private settings.

[5] http://www.jadaliyya.com/pages/index/1008/what-is-political-sectarianism.

[6] See http://www.aljazeera.com/news/2015/07/lebanon-capital-drowning-ocean-trash-150726083036505.html.

[7] http://www.huffingtonpost.com/kareem-chehayeb/lebanons-uprising-could-shake-the-countrys-sectarian-foundations_b_8081034.html.

underscored the need for a cross-sectarian solution.

The impact of the national dialogue sparked by the trash crisis was arguably also felt in the recent Beirut Municipal Elections, where the newly-formed secular political party *Beirut Madinati* took an astounding percentage of the votes. The party's principal organizers include members who participated in the You Stink protests and wanted to seek a longer-term, political solution to the social, economic, and political problems highlighted by the trash crisis.[8] Despite final election results that showed a victory for the sectarian political party alliance led by 'Future Movement' Sunni leader, Saad al-Hariri, Beirut Madinati's ability to capture 40 percent of the vote (including a significant percentage of the votes in Hariri's own neighborhood) demonstrates that support for the sectarian-based political system may be weakening under mounting pressure for a new brand of secular, issue-based politics.

All in all, the 2015 political movements illustrate the deep undercurrent of public frustration with the sectarian system. Importantly, similar protests have also challenged sectarianism in Iraq in 2015.[9] Recent events raise important questions about the extent of genuine political support for sectarianism and whether it is possible to reduce support for sectarianism and increase support for multi-sectarian, programmatic politics.

3 Hypotheses

The purpose of this project is to address two related questions motivated by the recent events in Lebanon described above: (1) To what extent do individuals genuinely support sectarian politics, and (2) is it possible to reduce support for sectarianism and increase support for multi-sectarian, programmatic politics?

3.1 Preference falsification and support for sectarian politics

Despite the prevalence of ethnic or sectarian politics in many countries, we still know little about whether individuals genuinely support this mode of political organization or feel pressured to do so by prevailing institutions or social norms. Genuine support for ethnic politics could arise, for instance, if people feel that organizing politics along ethnic lines is the best way to ensure access to benefits (Wantchekon, 2003), the representation of one's interests in the political process, or the security of one's ethnic group. Another possibility is that people simply prefer cooperating with co-ethnics. Ethnic preference-based accounts suggest that "individuals exhibit greater altruism for coethnics, and even antipathy toward non-coethnics" (Berge et al., 2016, 1). Regardless, the stronger the genuine societal support for ethnic politics, the less likely the emergence of a mode of political organization that provides an alternative to a sectarian status quo.

Alternatively, it could be the case that individuals feel pressured to outwardly support sectarian politics, even if they do not do so privately. Conversely, some individuals might outwardly sup-

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[8]See http://www.economist.com/news/middle-east-and-africa/21698599-established-leaders-are-jolted-party-protest-bei
[9]http://www.commondreams.org/views/2015/09/10/massive-protest-wave-iraq-challenges-sectarianism

port multi-sectarian politics (for instance if they live in mixed areas) but privately favor it. Either scenario would be regarded as preference falsification, or the "act of misrepresenting one's genuine wants under perceived social pressures" (Kuran, 1995, 3). In other words, "by definition, preference falsification is the selection of a public preference that differs from one's private preference" (Kuran, 1995, 17). The notion that individuals falsify preferences with respect to support for sectarian politics is consistent with a large literature that shows that fears of *intra*group social sanctioning could play an important role in preventing intergroup coordination and cooperation (Alesina, Baqir and Easterly, 1999; Miguel and Gugerty, 2005; Banerjee, Iyer and Somanathan, 2005). Preference falsification can have important political and social consequences, including the seemingly "widespread public support for policies that would be rejected in a vote taken by a secret ballot" (Kuran, 1995, 18). With respect to sectarianism in divided societies where 'exit' from support for one's sectarian group could be considered criminal (Corstange, 2013), people might continue to publicly support a sectarian status quo despite private preferences for an alternative form of political organization.

Understanding true demand for social change requires shedding light on the degree to which preference falsification is pervasive and for which groups in society. Yet, relatively few studies to date have examined preference falsification and its consequences, partly because it is inherently difficult to measure private preferences. Jiang and Yang (2015) use survey data collected before and after a political purge in China to estimate the effect of the purge on the change in the gap between public and private views of the purge. In the context of sectarian politics in Lebanon, Corstange (2013) uses a list experiment to investigate support for illiterate voting rights in Lebanon, finding that people's public preferences on the issue are consistent with their sectarian identity while private preferences are consistent with their economic status—the poor support illiterate voting rights regardless of sect. This leads him to conclude that: "Lebanon's sectarian status quo has been built (at least partially) on social pressure and preference falsification" (Corstange, 2013, 907).

The first goal of our inquiry is to characterize the extent to which there are genuine preferences for sectarianism in Lebanon. We do this using an exercise in which survey respondents are asked how they would like to allocate a future revenue windfall across 26 districts in Lebanon and are randomly assigned to receive information on either the sectarian affiliation of that district, the economic status of that district, or both. Details on this exercise and its specific hypotheses are reported in Section 8. Overall, this exercise will provide insights into how individuals weigh sectarian versus economic considerations when making allocation decisions and will allow us to characterize the extent to which genuine preferences are consistent with a logic of sectarianism or not.

To the extent that not everyone has genuine preferences for sectarianism, we then aim to examine the degree to which people publicly falsify their preferences for replacing the sectarian system with one that encourages multi-sectarian, programmatic politics. We also take our inquiry one step further by examining what type of social pressure induces the most preference falsification. Specifically, individuals could be worried that supporting multi-sectarian political action could lead

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to sanctioning by political elites in contexts in which clientelism is prevalent and organized along a sectarian logic. Alternatively, individuals could be responding more to social pressure from peers and fears of violating intra-group social norms about inter-group interaction, especially in contexts with a high degree of ethnic prejudice or bias. To detect the existence of preference falsification, we will test the following two hypotheses, where we interpret any divergence between public and private behavior as evidence of its existence.

H1 Private preferences will diverge from public preferences when those preferences are made known to **political elites**.

H2 Private preferences will diverge from public preferences when those preferences are made known to **peers**.

Additionally, there is likely to be variation in the extent to which different subgroups in society falsify their preferences. We anticipate that preference falsification will be greatest for those who privately prefer reforming the sectarian status quo but who face the greatest costs (e.g. elite or community sanctioning) for staking this position publicly. To see this, consider a situation (that resembles our empirical test) in which a person is deciding whether to express support for ending sectarianism. For a person who does not support this goal, they will not express support regardless of whether they can do so privately or publicly. Thus we expect to see more support for H1 and H2 among those who privately support ending sectarianism than among those who do not. We expect to see the most support for H1 and H2 among those who privately support ending sectarianism *and* are most vulnerable to sanctioning. We will examine this by testing a number of specific hypotheses that account for private preferences and the costs of taking a public stand. Specifically, we test whether the divergence between public and private preferences will be greatest for those who:

H3a ...**privately dislike sectarianism**.

H3b ...privately dislike sectarianism and are **socially or economically vulnerable** (women, the poor).

H3c ...privately dislike sectarianism and are **fearful of social sanctioning**.

H3d ...privately dislike sectarianism and are in **homogeneous sectarian networks**.

H3e ...privately dislike sectarianism and are in sectarian groups with stronger **norms of intra-group punishment for inter-group cooperation**.

Note, that it could be the case that some individuals privately support sectarianism but are unwilling to admit it publicly because—in mixed or urban areas—this is not regarded as a socially acceptable position. We can use H3d to examine the pattern of divergence for those who privately *like* sectarianism. This would be one explanation for an outcome in which we observe high levels of public support and lower levels of private support among those who privately like sectarianism but are in heterogeneous sectarian networks (or in mixed, urban areas).

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3.2 Economic interest and reducing support for sectarian politics

Is it possible to reduce support for sectarian politics and increase support for multi-sectarian, programmatic politics? Despite the importance of this question, we still know little about how to answer it. One body of literature suggests that the problem is informational and that providing voters with better performance information on co-ethnic politicians can affect political behavior. For instance, Banerjee et al. (2012) find that voters presented with information on criminal/corrupt candidates in India indeed reduced support for their ethnically-favored party. Other studies have focused on whether it is possible to weaken attachment to ethnic identity. Robinson (2013) finds that experimentally manipulating the salience of national identity increased inter-group trust among subjects in Malawi, by extension suggesting an option for facilitating inter-ethnic political cooperation and collective action.

We focus on an alternative possibility that has received less attention to date—that increasing the salience of economic interests can reduce support for sectarianism. This inquiry is based on three observations. First, sectarian politics often yields policy outcomes that are sub-optimal from an economic perspective (Salti and Chaaban, 2010). Second, in what Horowitz (2000) refers to as 'unranked' societies—where sect and class do not correlate—there is invariably economic heterogeneity within sectarian groups and class homogeneity across sectarian groups. Finally, the logic of sectarianism obfuscates this economic common ground across sectarian groups as well as economic differences within sectarian groups. Taken together, these observations suggest the following broad hypothesis:

H4 Increasing awareness of economic class interests will reduce support for sectarian politics and increase support for multi-sectarian, programmatic politics.

Importantly, the notion that sectariansm can obscure the convergence and divergence of economic preferences suggests that providing individuals with economic information can increase their awareness of their economic and class interests. We test two subsidiary hypotheses: that increasing awareness of (i) economic inequality, and (ii) the cross-cutting nature of the economic cleavage will result in reduced support for sectarianism and increased support for multi-sectarian, programmatic politics. There is an important literature that suggests that awareness of economic inequality should be a powerful motivator for class-based political action (Acemoglu and Robinson, 2006). Evidence suggests, however, that individuals frequently misperceive the extent of inequality (Gimpelson and Treisman, 2015). Providing information on the nature and extent of inequality could thus help to increase support for economic or class-based political action, especially among those who are in lower economic classes.

The second subsidiary hypothesis derives directly from the notion that cross-cutting cleavages can moderate the salience of an ethnic cleavage (Lipset and Rokkan, 1967). As Dunning and Harrison (2010, 21) note: "When individuals who are members of the same group or social category on one dimension of interest or identity, such as ethnicity, are members of different groups on another dimension, such as social class, their competing interests on the second dimension may undercut

their primary allegiance to interests arising on the first dimension." Dunning and Harrison (2010) provide evidence of the causal effect of cross-cutting cleavages in Mali, a country in which ethnicity is a prominent feature of identity but is not highly politicized. They show that in the presence of *cousinage* ties—a network of family alliances that cross-cut ethnicity—subjects evaluate non co-ethnic candidates more favorably than they do otherwise. In an application to ethnic conflict, Gubler and Selway (2012) argue that cross-cutting cleavages reduce civil war onset by making it harder for rebels to recruit and maintain loyal combatants. These findings are under-pinned by extensive evidence from a psychological literature on cross-categorization, which finds that prejudice is diminished when people in opposing groups become aware that they share membership in another group (Paluck and Green, 2009).[10] All in all, this literature suggests that the emergence of a cross-cutting cleavage or—in our context—activation of an existing cross-cutting cleavage could increase support for programmatic politics.

> **H4a** Increasing awareness of **economic inequality** will reduce support for sectarian politics and increase support for multi-sectarian, programmatic politics.

> **H4b** Increasing awareness of the **cross-cutting nature of the economic cleavage** will reduce support for sectarian politics and increase support for multi-sectarian, programmatic politics.

Additionally, we will examine whether the inequality and cross-cutting cleavages information is complementary or acts as substitutes. Increasing awareness of inequality highlights the degree of the wealth gap and the size of the lower and middle classes relative to upper classes. Yet, to the extent that individuals perceive themselves to be in a 'ranked' system where sect and class correlate (meaning that one sectarian group perceives itself to be systematically disadvantaged relative to another) this might be insufficient to enhance cooperation across sectarian lines (Stewart, 2000; Gurr, 1993). The information on the cross-cutting nature of the cleavage could thus complement the inequality information by emphasizing that members of all sectarian groups belong to both lower and upper economic classes. Alternatively, if the inequality information reinforces prior beliefs that the lower and middle classes consist of members of all sectarian groups, then the information might be redundant. Since it is difficult to predict *a priori* the nature of the interaction we do not state a hypothesis but will explore this empirically.

While support for multi-sectarian, programmatic politics is our main outcome, improving information on inequality and the cross-cutting economic cleavage can also affect more proximate outcomes. We investigate several such intermediate outcomes or mechanisms. First, the information could simply elevate the importance of economic issues relative to other issues, which in turn makes people more willing to act on the basis of their economic interests. Second, it could make people self-identify more on the basis of economics and class rather than on sect, and it is the

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[10]Evidence that the effect of de-emphasizing a single-identity (like sect) to reduce inter-group bias and increase positive perceptions of an out-group comes from both artificial groups created in the lab (typically through the minimal group paradigm) and real world groups in the field (Crisp and Hewstone, 1999; Migdal, Hewstone and Mullen, 1998; Hewstone, Islam and Judd, 1993).

stronger sense of class identity that facilitates support for multi-sectarian, programmatic politics. Third, it could reduce the perceived distance between similar economic groups and increase the perceived distance between different economic groups. Finally, the class size component of the inequality treatment could increase the perceived probability of success of class-based action by revealing the size of the lower and middle classes relative to the upper class.

H5 Increasing economic awareness will elevate the importance of **economic issues** over other (social, security) issues.

H6 Increasing economic awareness will strengthen **economic identity** relative to sectarian identity.

H7 Increasing economic awareness will increase perceived **heterogeneity within sectarian groups** and reduce perceived economic heterogeneity across sectarian groups.

H8 Increasing economic awareness will increase the **perceived probability of success** for economic-based collective action (especially for the lower economic classes in the inequality treatment group).

One important caveat to H4a and H4b comes from the literature on cross-pressure. This literature suggests that membership in conflicting identity groups (like sect and class) could result, on one hand, in weaker partisan intensity (Powell, 1976). This would be consistent with H4a and H4b in so far as it reduced the intensity of support for sectarian parties. On the other hand, cross-pressure is also often associated with dissonance, apathy, and a reduced willingness to take a political position, which could lead to a smaller or null treatment effect. We therefore investigate these adverse effects as possible outcomes of increasing awareness of economic interests in two ways. First we test the hypothesis that increasing awareness of economic interests actually increases reluctance to take political positions or political action.

Second, we also examine whether the effect of increasing economic awareness varies for those who are more or less cross-pressured. Cross-pressure is often conceptualized in two forms: *attitudinal* cross-pressure where an individual perceives one reference group to be benefited by one political party or (political system) and another reference group by a different party (or political system) (Powell, 1976). We therefore hypothesize that the effect of increasing economic awareness on reducing support for sectarianism will be greater for those who do not view the sectarian status quo as yielding many benefits. The second form of cross-pressure is about social networks and suggests that individuals in more heterogeneous networks are more cross-pressured and more anxious about 'taking sides' in the face of multiple competing constituencies (Mutz, 2002). This suggests that the effect of increasing economic awareness on reducing support for sectarianism will have a greater effect on those who are less anxious about displeasing their sectarian groups. Alternatively, Mutz (2002) argues that social heterogeneity could make individuals feel more internally conflicted, leading to political ambivalence and lower levels of participation (Mutz, 2002). We thus predict that increasing awareness about economic interests will induce more cross-pressure for those who are in more homogeneous sectarian networks.

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H9 Increasing awareness of economic class interests will make individuals more cross-pressured (resulting in no change in support for sectarian politics).

H10 The effect of increasing economic awareness on reducing support for sectarianism will be lower for those who feel they **benefit from sectarianism and clientelism**.

H11 The effect of increasing economic awareness on reducing support for sectarianism will be lower for those who are more anxious about displeasing their sectarian group.

H12 The effect of increasing economic awareness on reducing support for sectarianism will be lower for those who have homogeneous sectarian networks.

There are a number of other factors that might condition the effects of increasing the salience of economic issues on support for programmatic politics and that we will investigate. Standard models of political behavior suggest that individuals will withdraw their support for sectarianism if they perceive the benefits or withdrawing to exceed the costs. Consistent with the preference falsification discussion above, the effect of increasing economic awareness on reducing support for sectarianism could be bigger for those who face less social pressure from elites or peers. This yields the following hypothesis:

H13 The effect of increasing economic awareness on reducing support for sectarianism will be lower for those who face higher **costs of social sanctioning** by elites or peers.

A large literature on identity politics suggests that the effect of increasing economic awareness on support for sectarianism could depend on the strength of an individual's pre-existing attachment to their sectarian group, their economic group, or even their Lebanese identity. Following on Bratton and Kimenyi (2008), we predict that increasing economic awareness will have less of an effect on those individuals with a stronger sectarian identity attachment. The predictions on the conditioning role of economic identity are less clear. The marginal effect of increasing economic awareness could be bigger for those who initially have a weak attachment. Alternatively, providing new information to those with a strong economic class attachment could result in higher levels of support for ending the sectarian status quo. We therefore will examine whether economic identity conditions the effect of increasing economic awareness but do not predict the direction of the effect *a priori*. Finally, we anticipate that the effect of increasing economic awareness will be greater for those with a stronger *Lebanese* identity. This derives from the literature on superordinate identities (Robinson, 2013), which suggests that those with a strong Lebanese identity might be less focused on sectarian divisions and more open to cross-sectarian cooperation on an alternative economic logic.

H14 The effect of increasing economic awareness on reducing support for sectarianism will be lower for those with a stronger attachment to their **sectarian identity**.

H15 The effect of increasing economic awareness on reducing support for sectarianism will vary by the strength of attachment to **economic identity**.

H16 The effect of increasing economic awareness on reducing support for sectarianism will be greater for those with a strong attachment to their **Lebanese identity**.

Additionally, we will examine how economic and sectarian status conditions the effect of increasing economic awareness. We expect that the marginal effect of increasing economic awareness will be greatest for the lower economic classes. This is because lower economic classes likely have the most to gain (economically) from a political alternative to the sectarian status quo *and* they might also have less information on these matters to begin with. Furthermore, we anticipate that the effect of economic anticipation might vary by sectarian group. While there is now considerable within-sect heterogeneity in economic class, this has not always been the case in Lebanon. Historically, Christians have held a higher economic status, followed by Sunnis. Shi'a, in contrast, have typically held lower paid and lower-status jobs until more recently. Despite the increasing equalization across sectarian groups, it is possible that historical legacies mean that Shi'a still feel relatively disadvantaged vis-a-vis the other main sectarian groups. It is difficult to predict *a priori* how this might affect outcomes, however. Awareness of inequality might make Shi'a more antagonistic towards the existing sectarian system, although not necessarily supportive of cross-sectarian action. Alternatively, if Shi'a are less likely to believe the information on the cross-cutting nature of the economic cleavage, then that treatment could have less of an effect. While we therefore expect that the effect of the treatments will vary by sectarian group we do not make predictions on the direction of that effect.

H17 The effect of increasing economic awareness on reducing support for sectarianism will be greater for the **lower economic classes**.

H18 The effect of increasing economic awareness on reducing support for sectarianism will vary by **sectarian group**.

We will also examine whether the effect of the treatment varies by five key demographic (and other) characteristics. First, we expect the treatment will have a bigger effect on youth since this group is often more willing to challenge the political and economic status quo. Second, we anticipate that the effect of increasing economic awareness will be greater for women. This is in keeping with research that suggests that men might have stronger preferences for clientelist (and ethnic) politics than women (Wantchekon, 2003). Third, given the extent to which sectarianism is institutionalized in Lebanon, it is possible that increasing economic awareness will only have an effect on those individuals who feel that it is possible to influence system change. We therefore will examine whether the effect of increasing economic awareness is greater for those who retain a sense of political efficacy. Fourth, standard models of Bayesian updating suggest that information will only have an effect if it is new and results in individuals updating their prior beliefs. Focusing on the inequality treatment, we predict that this information will have a bigger effect for those who

previously believed wealth to be more equally distributed. Finally, we expect that the cross-cutting cleavage treatment might have a bigger effect on teachers and public servants because of the salience of the information provided.

H19 The effect of increasing economic awareness on reducing support for sectarianism will be greater among those who are **younger**.

H20 The effect of increasing economic awareness on reducing support for sectarianism will be greater among **women**.

H21 The effect of increasing economic awareness on reducing support for sectarianism will be greater among **more educated**.

H22 The effect of increasing economic awareness on reducing support for sectarianism will be greater among those who feel **politically efficacious**.

H23 The effect of increasing awareness of economic inequality on reducing support for sectarianism will be greater for those who perceived **wealth to be more equally distributed**.

H24 The effect of increasing awareness of the cross-cutting cleavage on reducing support for sectarianism will be greater for **teachers and public servants**.

3.3 Collective action framing and reducing support for sectarian politics

One concern with the hypotheses above is that focusing on economic issues might actually be less effective at reducing support for sectarianism than simply promoting cross-sectarianism directly. We therefore test a final hypothesis that framing collective action in economic terms will have a greater effect on reducing support for sectarianism than framing collective action in cross-sectarian terms, especially when that framing is done in conjunction with increasing economic awareness. If we find no difference between the economic and cross-sectarian framings, or a positive effect of the economic framing, we will interpret this as evidence that the economic framing is at least as effective as a cross-sectarian framing. The biggest concern would arise if the economic framing is less effective than the cross-sectarian framing, which would have implications for how future political movements might choose to organize.

H25 Framing collective action in economic terms will have a greater effect on reducing support for sectarianism than framing collective action in cross-sectarian terms.

H26 Framing collective action in economic terms will have a greater effect on reducing support for sectarianism than framing collective action in cross-sectarian terms when combined with increased economic awareness.

4 Treatments

We test our hypotheses using information and behavioral experiments embedded in a survey conducted with a representative sample of 2,496 individuals in Lebanon between December 2015 and

February 2016. The survey and experiments were conducted by the professional Beirut-based firm Information International following an extensive period of piloting and training. All surveys and experiments were implemented one-on-one by trained enumerators in respondents' homes.

4.1 Testing Preference Falsification

Petition treatment (H1). The first hypothesis tests whether making opposition to sectarianism public to **political elites** causes a divergence between public and private support for sectarianism, where divergence is interpreted as evidence for preference falsification. To test the extent of preference falsification, we give all survey respondents an opportunity to sign a **petition**. The content of the petition was consistent with the goals of the multi-sectarian movement that swept Beirut in Fall 2015. The petition unabashedly critiqued the existing sectarian status quo and called for abolishing confessional politics, reforming the sectarian division of power, reducing the influence of sectarian parties, encouraging the emergence of programmatic parties, and ensuring that revenue and services from the state are allocated on the basis of economic need and development priorities and not on the basis of traditional confessional politics. To underscore the notion that this action will be revealed to political elites, all respondents are informed that the petition will be presented to their party leaders, members of parliament, and other key confessional leaders (see Appendix B for the full text).

We test H1 by randomly assigning respondents to public or private versions of the petition. In the public version, respondents were informed that in order to sign the petition they had to provide their name, age, confession, and electoral district. Individuals in the private condition had to provide their age, confession, and electoral district but not their name.[11] Initial piloting suggested that this variation captures the fact that Lebanese fear losing access to benefits from political leaders if they take a position that advances a multi-sectarian economic agenda over the interest of the confessional parties. After being informed about the petition, respondents were given a blank petition inside an envelope (both labeled with their unique ID) and were asked to make their decision in private (not within the sight of the enumerator). To protect the confidentiality of their decision, all respondents were asked to seal the petition—whether completed or not—inside the envelope and return it to the enumerator.

Facebook treatment (H2). The second hypothesis examines whether making opposition to sectarianism public to **peers** causes public support to diverge from private support, we presented respondents with an opportunity to join a Facebook group that promoted cross-sectarian discussion. Specifically, the Facebook group was designed to serve as: "a forum for those who are interested in engaging in and supporting multi-sectarian dialogue on social, economic, and political issues, and in learning about ways to take multi-sectarian action." The site was established and maintained by our partner organization LCPS.

To test the hypothesis, respondents were randomly assigned to one of two versions of the group: one with very strict privacy settings and one with public settings. Those assigned to the 'public'

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[11]Only petitions where all required information is provided are considered valid. See Section 6.

group were informed that membership in the group is public, meaning "anyone can find the group by searching for it on Facebook, anyone can see who belongs to the group, and anyone can request to join the group." In contrast, those assigned to the "private" group were informed that membership in the group is private, meaning "no one can find the group by searching for it on Facebook, only other group members can see who belongs to the group, and only other group members can see posts and content shared in the group" (see Appendix C for details). Thus, whereas the petition takes on the issue of sanctioning from political elites, the Facebook groups provide an opportunity to measure willingness to engage in multi-sectarian dialogue on political, social, and economic issues if there is a chance that your close family and friends will be able to see your engagement and position-taking in this context of multi-sectarian interaction.

Those who elected to receive an invitation from LCPS to join the group were asked to provide their Facebook profile name and an email address or phone number. If the respondent could not recall his or her profile name, they were asked to provide their given name (First name and Surname) in order for LCPS to confirm that the invitation would be sent to the correct individual. Respondents filled out this information on a separate sheet of paper and sealed it in an envelope before turning it over to the enumerator in order to protect personal identification information. The sheets of paper were pre-labeled with the corresponding unique respondent identification number so that membership in the Facebook group could be linked back to responses in the survey.

4.2   Testing Economic Interests

To test the effect of increasing awareness of economic inequality (H4a), of increasing awareness of a cross-cutting economic cleavage (H4b), and to test the framing effects of collective action (H25) we embedded information experiments in the survey itself following a 2x2x2 factorial design. The information in the treatments was conveyed by trained enumerators who used customized illustrations (see Appendix D) to underscore the information provided. For the full text of the information treatments, see Appendix E.

Inequality treatment (H4a). The goal of the inequality treatment was to provide individuals with new information on how wealth is distributed within Lebanon. Specifically, it provided information on Lebanon's worldwide ranking in wealth inequality; provided illustrations of how wealth and assets are divided across economic classes within Lebanon; and illustrated the size of the lower and middle classes relative to the upper class. Estimating wealth inequality in Lebanon is a notoriously difficult task. All information used for this treatment was adapted from a report published by the Credit Suisse Research Institute (*Global Wealth Databook 2013 & 2014*). This treatment did not explicitly emphasize class homogeneity across sectarian groups, although the illustrations took care not to associate wealth with any particular sectarian group.

Cross-cutting cleavage (H4b). This treatment focused on providing information on shared economic interests within economic classes regardless of sectarian affiliation and on the heterogeneity of economic preferences within sectarian groups. The treatment used a recent legislative debate over whether to increase wages for teachers and public sector employees as an illustration

of preference convergence/divergence. This was an instance in which lower and middle class individuals from different sectarian groups supported the wage increase and wanted to fund it through taxes on the wealthy. In contrast, the wealthy did not support the wage hike and, if it passed, wanted it funded through regressive value-added taxes. While this debate had received coverage in the media, our piloting revealed that coverage had not really crystallized the notion that this is one example of an instance in which lower class Lebanese from different confessions have more in common economically with each than with upper class members of ther own confessions (and vice versa).

Collective action (H25). This experiment provided two variations on how to frame the collective action associated with the recent trash protests in Beirut. All respondents were randomly assigned to either a 'cross-sectarian' group that described the recent protests as an example of cross-sectarian cooperation or an 'economic' group that described the protests as an example of cooperation by lower and middle economic classes. It should be noted that this experiment was not central to the lines of inquiry in this project and actually makes it harder for us to find support for H4a and H4b if it has a strong effect on the outcome and reduces the potential impact of the other treatments. We include it here for completeness and transparency about the research design.

Control: Prior to administering the information treatments, all survey respondents were asked to think about their biggest and second biggest economic concerns facing their household today. This serves as a control for simply making economic issues more salient and allows us to examine the effects of new information designed to increase awareness of one's economic position relative to other individuals.

5 Sampling and randomization

The sampling and randomization was done by the authors and provided to Information International (II) for implementation. All participants in the experiments described above were randomly sampled using multistage cluster sampling from the adult population (18-65 year olds) in Lebanon. First, primary sampling units (PSUs) were randomly sampled within strata formed by district, population category (small, medium, or large), predominant sect, and capital status. In our case, primary sampling units are neighborhoods in some big cities and cities or villages otherwise. The number of interviews conducted within each PSU varied by the PSU population size and were determined in part by the requirements for block randomization. Specifically, eight individuals were randomly sampled within small PSUs (fewer than 2000 residents; 16 within medium PSUs (2001-34,999) residents; and 32 in large PSUs (greater than 35,000 residents). We excluded PSUs and strata that had fewer than 200 people and that were in insecure areas, which were predominantly Hezbollah controlled areas.[12]

Random assignment to the information treatments was blocked at the PSU level. Since the information experiments (the inequality experiment + cross-cutting cleavage experiment + collective

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[12]We excluded 194 PSUs, reducing our eligible PSUs from 1,017 to 823.

action experiment) follow a 2x2x2 design (8 treatment groups), this means that one person was assigned to each treatment combination in small villages, 2 in medium PSUs and 4 in large PSUs. In addition, assignment to the petition and Facebook treatments were blocked on PSU and done at the individual level in medium and large PSUs. Since we have 2x2x2x2 treatments when we combine the information treatments with either the petition or the Facebook treatments, having 16 or 32 respondents in medium and large PSUs enabled perfect blocking. In small PSUs, however, treatment assignment to the petition and Facebook treatments was done at the PSU level in case of spillover (respondents discussing their Facebook or participation decisions with other members of their communities). We therefore adjusted our sample in order to allow for blocking of treatment assignment at a higher level for 'small' PSUs. We did this by first creating new strata for small PSUs formed on the basis of Mohafazat and majority confession. If the new strata had an odd number of already sampled villages, we randomly sampled one additional PSU such that there were an even number of PSUs in each of these new strata. PSUs within these new strata were then randomly and orthogonally assigned to petition and Facebook treatments. All in all, we have a final sample consisting of 195 PSUs and 2,496 respondents.

The sampling of households and individuals within households was done following II standard procedures. The first stage consisted of selecting neighborhoods from each selected area in a way to represent the diversity of the areas. Each area was then stratified into zones or strata. The second stage consisted of selecting households based on a systematic random sample in each selected neighborhood according to the estimated number of buildings in the neighborhood. Finally, the third stage involved sampling a primary respondent of the specified gender within each household. To achieve a similar number of men and women in the sample, a targeted gender was set for each household and these were also designed to be balanced across all treatment assignments. The final sample consisted of 50.7 percent men and 49.3 percent women. Individuals were then selected by randomly selecting a month of the year and then selecting the person born earliest in that month (in case no one is born in that month, the field workers moved on to the next month). This method was selected after piloting showed that fully enumerating a list of all eligible individuals within a household and sampling from that drew too much suspicion from respondents. If a sampled household or individual was not at home, a follow-up was conducted. Enumerators took the next household or respondent on the list if no one was available after the second contact. If the selected respondent accepted to participate in the survey, the respondent was explained the objectives of the survey and re-assured that the questionnaire is voluntary, anonymous and confidential, as stated in the introduction script.

While sampling was done systematically, it is important to note that the population data for PSUs or neighborhoods is not reliable. We therefore do not plan to use sampling weights in our analysis. There was also a very high degree of refusals: overall, 1,522 households or respondents initially approached refused to participate in the study. This is possibly because the study was long relative to other typical surveys in Lebanon, or because the subject matter was viewed as sensitive. As a result, while our estimates of the treatment effects are internally valid, given our sample, we

cannot readily draw inferences to the full population.

6 Data and measures

All data for this project comes from a household survey and the behavioral measures of willingness to sign the petition and join the Facebook discussion groups. This section details the main measures that will be used in the study, including measures for outcomes, mechanisms, heterogeneous effects, and controls.

6.1 Behavioral Outcomes

We use willingness to sign a petition and join a Facebook group as our main behavioral outcome measures. Specifically, we use signing the petition as the main outcome measure for H1, H4a, H4b, H13, H25, and H26 and joining a Facebook group as the main outcome measure for H2. We first describe how these behavioral measures will be used in our inquiry into preference falsification and then how they will be used to evaluate the effects of increasing economic awareness.

Petition. The main outcome for the test of H1 is willingness to sign the petition. The main binary indicator equals one if the respondent signed the petition *and* completed all information requested. In the private condition, this included providing information on his or her electoral district, age, confession, and the date. In the public treatment condition, this also included providing a name. Respondents were instructed to make their decision in private (out of sight of the enumerator) and seal the petition in an envelope regardless of whether they wanted to sign it or not. If they chose not to return it they could put it in the envelope unsigned. If they chose to return it they were told they had to complete all information. The petitions were pre-labeled with the corresponding unique respondent identification number so that the decision to sign could be linked back to responses in the survey.

Facebook. The main outcome for the test of H2 is indicated willingness to join the Facebook group. We create two binary indicators: one for those who simply expressed a willingness to join the Facebook group and one for those who also provided correct and complete information, enabling an invitation to be sent.[13] Those who elected to receive an invitation from LCPS to join the group were asked to provide their Facebook profile name and an email address or phone number. If the respondent could not recall his or her profile name, they were asked to provide their given name (First name and Surname) in order for LCPS to confirm that the invitation would be sent to the correct individual. Respondents filled out this information on a separate sheet of paper and sealed it in an envelope before turning it over to the enumerator in order to protect personal identification information. The sheets of paper were pre-labeled with the corresponding unique respondent identification number so that membership in the Facebook group could be linked back to responses in the survey. The Facebook group administrator at LCPS was asked to verify each

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[13]We include the former because there is some indication that II did not sufficiently explain to respondents what information they needed to provide in order to receive an invitation.

piece of required information for validity. Each respondent who expressed an interest in joining the Facebook group and paid the cost of taking the additional time to fill out the form thus had their answers coded for whether they provided a valid Facebook profile name/given name and a valid email address or valid phone number.

The original—unfulfilled—intention was to collect additional outcome data, including whether an individual actually accepted the group invitation once received and information about their activity on the group page, conditional on acceptance. We designed this in accordance with Facebook policies. Upon accepting an invitation and going to the group page, a participant would have been informed in the group's description that LCPS staff would be monitoring activity in the group.[14] Participants' activity within the groups would have been monitored in order to provide more distant measures of willingness to engage in multi-sectarian dialogue.[15] Overall, 586 respondents expressed interest in joining one of the two groups, of which 185 provided valid contact information to receive an invitation. Unfortunately, none of those who received an invitation actually accepted it.[16] All in all, since we cannot use the behavioral measure of actually *joining*, we focus on the measures of willingness.

The petition is also the main behavioral outcome used to test the effects of the information treatments on reduced support for sectarianism (H4a, H4b, H25 and H26). Additionally, to test H13 on whether the effects of the economic information treatments vary by the cost of support, we look at whether the effects of the information treatments vary for those who were in the public versus private petition treatments. While we will see if the information treatments also affect the Facebook outcome, we do not necessarily expect results here. It is possible that the economic awareness treatments decreased willingness to engage with members of other sectarian groups if they were also of other economic classes. Since these groups were not class specific, the treatments might reasonably have had no effect on this outcome.

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[14]The LCPS administrator's additional responsibilities included: (1) posting content to the groups, (2) monitoring the groups for inappropriate behavior, (3) keeping track of member activity and recording pertinent information about that activity, and (4) sending and approving membership requests. Where possible, the LCPS administrator was instructed to post content to the groups 2-3 times per week, with an emphasis on posting Arabic-language content in order to make it accessible to the largest number of likely participants. LCPS-posted content draws on relevant NGO publications, independent research reports, private sector reports, (draft) legislation, news articles, and topical blogs.

[15]The LCPS administrator monitoring the groups was provided with a detailed instruction manual outlining all necessary protocols. This manual may be available upon request. The research team also took care to comply with all Facebook terms of use in place at the time the groups were initiated, including only sending invitations to those who opted to join or who were added by friends, as well as clearly informing group members on the group page that LCPS would be monitoring all activity within the group.

[16]We believe there are several factors that contributed to this lack of take-up, including: (1) insufficient explanation by Information International on steps for accepting group membership; (2) issues with timing and coordination between LCPS and Information International that resulted in long delays before invitations were sent; (3) a recent change to Facebook software and privacy updates that likely resulted in 'reminder' emails/messages not reaching respondents; (4) an inability to invite people by phone number.

6.2 Survey data

The survey contained a number of measures that we use to evaluate the remaining hypotheses and as controls. The complete survey instrument is available from the authors and in Appendix F we provide a detailed accounting of how all variables intended for analysis will be used. One advantage of working with blinded data is that we can use the actual data to determine which variables can be aggregated into indices or which variables should be excluded from analysis due to missingness or strange distributions, or which covariates best predict the outcomes and should be included as controls (Olken, 2015). Appendix F is the outcome of the following steps that we took in preparing the blinded data for analysis.

- **Imputation:** We first performed ten rounds of missing data imputation using Stata's ice command for chained imputations. There were relatively low levels of item missingness for most variables so the imputation is unlikely to make a difference for the results. While we imputed all variables, in the case where missingness exceeded 10 percent of the observations (250 individuals) we exclude those variables from the analysis. None of these variables were essential to the hypothesis tests.

- **Cleaning and coding:** We next recoded variables as needed for directionality. We also created binary versions of ordinal and interval variables by cutting at the midway point of the scale (so for instance a four-point scale of likelihood would be coded very likely, somewhat likely = 1 and not too likely, not likely at all = 0). Very few of the variables required additional transformations, except for instance *age* (for which we created terciles and quantiles), and *blackout* (Q63) for which we took the square root of the response for comparability with Corstange (2013).

- **Indices:** For items that were intended to measure the same construct, we checked correlations and created indices using appropriate variables. Our main indices were constructed through inverse covariance weighting as in Anderson (2008). We also create an equally weighted mean effects index for comparability. For ease of analysis, we create binary versions of the indices by cutting at the median. We will primarily use the binary versions for the heterogeneous effects analysis. For index variables we do not plan to analyze the components separately except for the outcome variables and unless noted in column G of Appendix F.

- **Controls:** All control variables are pre-specified for the different study components in columns F-H of Appendix F. Since there are multiple outcome measures of interest we do not take the step of regressing all outcomes on these measures to determine if they are strong predictors of the outcomes. Rather, we make this choice based on *a priori* beliefs about which variables might be strong predictors of the different outcomes of interest. We will also use the covariates in columns F-H for balance checks for the relevant studies.

7 Estimation Strategy

For ease of exposition, we label the treatments as follows:

- T1: Public petition (control = private)

- T2: Public Facebook group (control = private)

- T3: Information on economic inequality

- T4: Information on cross-cutting economic cleavage

- T5: Collective action treatment with economic framing (control = cross-sectarian framing)

To test H1, H2, H5-H8, and H25 we estimate the following model:

$$Y_{ijk} = \alpha + \beta_1 T_{i/jk} + X'_{ijk}\gamma + \mu_k + \epsilon_{ij} \tag{1}$$

where Y_{ijk} denotes the outcome for individual i in primary sampling unit (PSU) j in randomization block k. $T_{i/jk}$ is an indicator corresponding to one of the five treatments listed above, where the subscript i/j denotes that treatment is assigned at the individual level in all cases *except* for the petition and Facebook treatments in small primary sampling units, where it is assigned at the PSU level.[17] μ_k denotes randomization block fixed effects and ϵ_{ij} is the error term, where standard errors are clustered at the primary sampling unit level. X'_{ijk} is a vector of the individual level controls specified in Appendix F. For all regressions discussed in Section 7, we will also follow on Lin (2013) and estimate a model where we normalize each covariate to have mean zero and interact the de-meaned covariate with the treatment assignment indicator (we will also do this for fixed effect indicators).[18] Our main coefficient of interest is β_1 which provides the estimate of the average treatment effect.

We will test H4a and H4b using the following model:

$$Y_{ij} = \alpha + \beta_1 T3_{ij} + \beta_2 T4_{ij} + \beta_3 T3_{ij}T4_{ij} + X'_{ij}\gamma + \mu_j + \epsilon_{ij} \tag{2}$$

where we drop the subscript k since all information treatments were assigned at the individual level within primary sampling units that also served as randomization blocks. From this equation, the average treatment effect of the inequality treatment is $\beta_1 + \beta_3$ and the average treatment effect of the cross-cutting cleavage treatment is $\beta_2 + \beta_3$. The coefficient β_3 captures any interaction effect between the two treatments.

In general, to estimate treatment effects conditional on covariates—as in H3a-e, H9-H24, and H13—we use the following model:

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[17]Recall that small PSUs were aggregated into larger strata and treatment assignment to Facebook and the petition was done at the PSU level. Thus $j = k$ in all medium and large primary sampling units, but $j \neq k$ in small PSUs. This is relevant only for analysis of the effects of the petition and Facebook treatments.

[18]Specifically, we will estimate the following: $Y_{ijk} = \alpha + \beta_1 T_{i/jk} + \sum_{p=1}^{q}(\gamma_p X^p_{ijk} + \psi_p X^p_{ijk} T_{i/jk}) + \mu_k + \epsilon_{ij}$.

$$Y_{ij} = \alpha + \beta_1 T_{i/jk} + \beta_2 Z_{ijk} + \beta_3 T_{i/jk} Z_{ijk} + X'_{ijk}\gamma + \mu_k + \epsilon_{ij} \tag{3}$$

where Z_{ij} refers to a covariate not included in the vector of covariates X', except in the case of H13 in which it refers to $Z_{ij} = T1$. We affirm that, unless Z_{ij} is another experimental treatment, we do not attach a causal interpretation to its conditioning effect on the outcome.

Finally, in some cases, our hypotheses require triple interactions. For instance, to examine whether the effect of collective action information varies with the inequality and cleavage information (H26), we examine whether the effect of T5 varies depending on whether the respondent is in T3 and/or T4. To test this we will expand Equations 2 or 3 by including the third treatment/covariate, its interaction with the other two treatment(s)/covariate(s) of interest, and the interaction of all three variables of interest, with the rest of the estimation equation (controls, fixed effects, etc) remaining the same.

7.1 Robustness checks

While the main models specified above use regression adjustment, we will also run all analysis without controls. Additionally we will check the robustness of results to enumerator fixed effects.

7.2 Multiple hypothesis testing correction

To account for the fact that we have several outcome measures and several conditional effects hypotheses, we will do multiple inference correction using a false discovery rate (FDR) correction to control the Type-1 error rate, as in Anderson (2008). We will control separately for the multiple outcomes used to test H4a and H4b. We will also control separately for the conditional effects hypotheses tested in H3 and H9-H22. We will control the FDR at level 0.05 and will report both naive and corrected p-values.

8 Map Exercise

As part of our investigation into the nature of preference falsification, we implemented an experimental exercise integrated into the survey to measure how individuals weigh sectarian versus economic considerations when making allocation decisions. In 2010, geologic studies revealed major reserves of oil and gas in the Levantine basin, with estimated reserves including approximately 122 trillion cubic feet of natural gas and 1.7 billion barrels of oil.[19] This natural resource discovery stands to be a big boon for Lebanon, one of the countries that has territorial jurisdiction over the basin. While the discovery has generated substantial enthusiasm within Lebanon, many are also concerned that the potential benefits will not be realized in light of the country's sectarian political system.

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[19]These estimates are cited in a report on oil and gas in Lebanon published by the Market and Economic Research Division of BankMed (2014), drawing on publicly available data.

To better understand individual preferences for sectarian versus need-based allocation of resources, we asked all respondents to participate in a map exercise in which they were asked to allocate the proportion of future revenue from oil and gas that should go to each of Lebanon's 26 districts. To encourage respondents to take this activity seriously, they were informed that the information would be shared with policy-makers to influence the public debate (although their individual decisions would be kept confidential).

All survey respondents were randomly assigned at the individual level to 'sectarian' treatment or control groups, where those in the treatment group received information on the majority confession in each of the districts; or to an 'economic' treatment, where those in the treatment group received information on the economic status of the district (ranging on a five point scale from 1 'rich and well-developed' to 5 'very under-developed'). These experiments were implemented in a 2x2 factorial design, yielding four possible conditions: (1) a pure control group that only received a map of the districts and a list of the district names, (2) a sectarian only group that received information on the major confession in each district, (3) an 'economic' group that received information on the economic status, and (4) a group that received both sectarian and economic information. The information was presented in a systematized way across all experimental conditions. All participants received a map of the country with the districts labeled and a list of all the districts. In each treatment condition the map was labeled with the relevant information for each district and a column was added to the list of districts with the appropriate information (see Appendix G).

Our goal is to test the hypotheses depicted in Table 1. This table shows stylized predictions for four main dependent variables based on the proportions allocated to co-sectarian versus non co-sectarian districts at each of three levels of development. We predict that, relative to the control, those in the sectarian treatment will allocate more to co-sectarian districts, regardless of their economic need (in the absence of economic information). Similarly, we anticipate that those in the economic treatment will allocate more to poor districts, regardless of sectarian status (in the absence of information on majoritarian sect). The most interesting test arises from comparing allocations in Group 4—when individuals can weigh both sectarian and economic factors in making their decisions—to those in Group 2 and Group 3. If the pattern in Group 4 resembles that in H1 or H2 and there is no statistical difference between the results in Group 2 and Group 4, we will take this as an indication that individuals prefer to allocate resources along sectarian lines. If the pattern of results for Group 4 is closer to H3 and there is no difference between allocations in Groups 3 and 4, then we will take this as an indication that people prefer to allocate resources on the basis of economic need.

We will test hypotheses by estimating the following main model:

$$Y_{ij} = \beta_0 + \beta_1 econ_{ij} + \beta_2 sect_{ij} + \beta_3 sect_{ij} econ_{ij} + X'_{ij}\gamma + \mu_j + \epsilon_{ij} \tag{4}$$

where $econ_{ij}$ is an indicator of assignment to the economic condition, $sect_{ij}$ is an indicator of assignment to the sectarian condition, X'_{ij} is a vector of covariates specified in Appendix F, μ_j denotes randomization block fixed effects (blocks here are the same as primary sampling units),

Table 1: Hypotheses for Map Exercise

	Group 1 Control	Group 2 Sect	Group 3 Econ	Group 4 Both H1	H2	H3:
Poor districts						
Own		+++	+++	+++	+++	+++
Other			+++			+++
Medium districts						
Own		+++		++	+++	
Rich districts						
Own		+++		+	+++	

and ϵ_{ij} is the error term.[20]

The main coefficient of interest is β_3, which captures the interaction effect of the two treatments (with the rest the same as described in Section 7). We will interpret the sign on the β_3 coefficient as evidence that either sectarian or economic considerations dominate following the examples in Table 2. Take for instance the potential pattern of results for allocations to poor, non co-sectarian districts (Panel B). We expect the sectarian treatment to have no effect on increasing allocations to poor, non co-sectarian districts vis-a-vis the controls. We expect that the economic treatment will increase allocations to poor, non co-sectarian districts vis-a-vis the controls. We do not know in advance, however, whether the outcomes for the group that receives both types of information will resemble those in the sectarian treatment group or the economic treatment group. If they more closely resemble those in the sectarian treatment group, then the coefficient β_3 will be negative; if they more closely resemble those in the economic treatment group, then there will be no significant interaction coefficient. This interpretive exercise can be repeated for the other three main outcome variables in Table 2.

We can also use Equation 4 to obtain the average treatment effects of the *econ* and *sect* treatments. The average treatment effect of the *econ* treatment is captured in $\beta_1 + \beta_3$ and the average effect of the *sectarian* treatment is $\beta_2 + \beta_3$. Returning to our example of allocations to poor, non co-sectarian districts (Panel B), if economic considerations dominate, we would expect to see a positive coefficient on $econ_{ij}$ in Equation 4 and a null effect for $sect_{ij}$ in Equation 4. All in all, while these predictions are stylized and the real data will likely be substantially noisier, these are the general patterns that we will be looking for. We will also look at the mean outcomes in each of the four experimental groups and do pairwise difference in means tests to further clarify patterns if needed.

Finally, we will also investigate whether the effect of the treatments varies based on the characteristics of the respondents, where the characteristics are pre-specified in Appendix F. We will do this by introducing a covariate Z_{ij} into the analysis and interacting it with all treatment indicators

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[20]As in the above, we will also estimate a model in which covariates are demeaned and interacted with the treatment assignment indicators: $Y_{ij} = \beta_0 + \beta_1 econ_{ij} + \beta_2 sect_{ij} + \beta_3 sect_{ij} econ_{ij} + \sum_{p=1}^{q}(\gamma_p X_{ij}^p + \psi_l X_{ij}^p econ_{ij} + \eta_p X_{ij}^p sect_{ij}) + \mu_j + \epsilon_{ij}$.

in the equation (akin to Equation 3). Specifically, we will look at variation by sect, economic class, sectarian attachment and benefits.

Table 2: Hypotheses for Map Exercise

PANEL A: DV = Poor, co-sectarian

		Sect N	Y	Diff
Econ	N		+	+
	Y	+	+	0
	Diff	+	0	-

PANEL B: DV = Poor, non co-sectarian

		Sect N	Y	Diff if 0:	Diff if +:
Econ	N		0	0	0
	Y	+	0 or +	-	0
(sect)	Diff if 0:	+	0	-	
(econ)	Diff if +:	+	+		0

PANEL C: DV = Mid, co-sectarian

		Sect N	Y	Diff if 0:	Diff if +:
Econ	N		+	+	+
	Y	0	0 or +	0	+
(econ)	Diff if 0:	0	-	-	
(sect)	Diff if +:	0	0		0

PANEL D: DV = Rich, co-sectarian

		Sect N	Y	Diff if 0:	Diff if +:
Econ	N		+	+	+
	Y	0	0 or +	0	+
(econ)	Diff if 0:	0	-	-	
(sect)	Diff if +:	0	0		0

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