

# Women, Class, and Cooperation in Groups: Evidence from a Public Goods Experiment in Lebanon

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July 15, 2019

## Abstract

While recent evidence suggests that women exhibit a high capacity to cooperate in all-women groups, existing research focuses on how women cooperate among themselves versus in mixed-gender situations. We still know little, however, about how social differences among women affect their collective action capacity. We examine this by implementing a public goods experiment in Lebanon in which 713 women and men were randomly assigned to play in same-gender groups that were either homogeneous or heterogeneous in their class (and sectarian) compositions. We show that women contribute significantly less in mixed-class groups while men contribute more, reinforcing that this pattern is unique to women. We also demonstrate that class differences can undermine women's cooperation more than sectarian differences. These findings highlight how social differences—and class differences in particular—can impede women's collective action capacity, revealing the potential barriers to building broad, gender-based coalitions to advance women's rights and interests.

Word Count: 5,791 (excluding references)

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Recent years have witnessed growing attention to achieving gender parity in political and economic life, yet women globally continue to face barriers to their effective participation and representation (Paxton and Hughes, 2016). Consequently, in many countries women still lag behind men in their political representation, labor market participation, and human capital attainment (The World Economic Forum, 2018; The United Nations Development Programme, 2018). While the persistence of gender inequality is undisputed, explanations differ as to *why* women have struggled to achieve better representation of their interests. One set of explanations centers on the institutional, structural, and cultural obstacles to women’s advancement (Benstead, Jamal and Lust, 2015; Beall, 2005). Others argue that women experience difficulties organizing because differences in preferences, goals, or values undermine their will or ability to engage in collective action (Beckwith, 2011; Weldon, 2011).

There remain important unanswered questions about the extent to which differences among women undermine their collective action potential. This might seem surprising in light of recent evidence that women demonstrate strong problem-solving abilities and achieve high levels of cooperation in all-women groups (Greig and Bohnet, 2009; Berge, Juniwyaty and Sekei, 2016; Fearon and Humphreys, 2017). Such evidence is consistent with claims that women—across a wide variety of cultures and contexts—display strong norms of communal and pro-social behavior (Eagly and Wood, 1991; Hyde, 2014). Yet, much of the existing research focuses on women’s behavior relative to men (Croson and Gneezy, 2009; Andreoni and Vesterlund, 2001), or on how women cooperate in same versus mixed gender settings (Solow and Kirkwood, 2002; Balliet et al., 2011). Less attention has been paid, however, to how differences *among women* affect their collective action. In an important exception, Klar (2018) shows that a common gender identity fails to facilitate trust among women in the face of partisan differences over “what it means to be a woman.” Examining how social differences affect cooperation among women is critical to understanding the collective action dilemma that women face and the potential for building broad, gender-based coalitions in diverse societies.

This paper highlights the challenges to women’s cooperation by presenting robust evidence that differences in socio-economic class weaken women’s collective action capacity. While it is not clear *a priori* that this would be the case given the evidence that women are good cooperators, the results are consistent with the possibility that class differences among women introduce greater un-

certainty into interactions, evoke class-based biases, or engender mistrust by accentuating different understandings of gender identity. Finding that class differences impede women’s cooperation is important insofar as socio-economic cleavages are common to most societies and that class identity may be at least as important as racial or gender identity to shaping preferences and behaviors (Manstead, 2018; Brown-Iannuzzi, Lundberg and McKee, 2017). Moreover, history shows that major advances in women’s rights have required building cross-class alliances.<sup>1</sup>

Our evidence comes from a public goods experiment implemented with 713 women and men interacting in 120 same-gender groups in Beirut, Lebanon. Lebanon is a highly relevant context for this study in that it both embodies the challenges to achieving gender equality and is characterized by class (and sectarian) social divisions that could affect gender-based cooperation. We opt for a public goods game because such games capture the extent to which groups can overcome individual incentives to free-ride and maximize the welfare of all members (Ledyard, 1995; Balliet, Wu and Dreu, 2014). As such, we use the game to examine how class affects the will or ability of women (contra men) to overcome a collective action dilemma and achieve better outcomes for all. Participants were recruited on the basis of their actual socio-economic backgrounds and randomly assigned to play a one-shot public goods game in groups that were either homogeneous or heterogeneous in their class compositions. Overall, 285 women interacted in 48 all-women groups (24 same-class and 24 mixed-class) while 428 men participated in 72 all-men groups (36 of each type).<sup>2</sup>

We find that women in mixed-class groups contributed about 30 percent less to the group fund than women in same-class groups. This pattern holds for both lower and upper class women, although the effect is more pronounced in the latter. In contrast, we show that men contributed significantly more in mixed-class groups, underscoring that the negative effects of class differences are unique to women. Moreover, owing to a cross-cutting experiment in which participants were also randomly assigned to homogeneous and heterogeneous groups on the basis of their sectarian

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<sup>1</sup>For instance, the women’s suffrage movement in the United States entailed efforts to create alliances between lower and upper class women (DuBois, 1998; McCammon, 2003).

<sup>2</sup>The public goods game was played as part of the baseline data collection for a separate experiment that was pre-registered with Evidence in Governance and Politics (EGAP). The results presented here are from exploratory analysis that was not pre-registered.

affiliations, we show that class differences can have a bigger negative effect on women’s cooperation than ethnic differences. This is surprising in light of a large literature highlighting the adverse effects of ethnic diversity on cooperation ([Habyarimana et al., 2009](#); [Miguel and Gugerty, 2005](#)) and the prominence of sectarian divisions in Lebanese politics and society. All in all, these results provide striking evidence that social differences among women—and particularly class differences—can undermine collective action capacity. These results have important implications for understanding prospects for gender-based mobilization and representation in diverse societies, as we elaborate in the discussion and conclusion.

## RESEARCH DESIGN

The setting for our study is Lebanon, a country that exhibits significant barriers to the participation and representation of women in all aspects of life. While women in Lebanon have had the right to vote since 1953, the country lags behind its neighbors on numerous measures of gender parity, ranking 13th out of 17 countries in the Middle East and North Africa on the Global Gender Gap Index—ahead of only Saudi Arabia, Iran, Syria, and Yemen ([World Economic Forum, 2017](#)). Women in Lebanon have long faced obstacles to greater representation of their interests, including gender biased social norms and a political system that is deeply divided along sectarian lines, overshadowing women’s issues ([Geagea and Fakhri, 2015](#)). Yet, there is also considerable evidence that class cleavages impede cooperation among women in key areas. Women’s organizing in Lebanon is often characterized as ‘elitist’ and unwilling or unable to mobilize women across class lines ([Kingston, 2013](#); [Mahdawi, 2010](#); [UN Women, 2017](#)). The absence of large cross-class coalitions is an impediment to the advancement of critical policies, including the introduction of gender-based quotas for representation and the passage of unified personal status and civil marriage laws that would protect women’s rights regardless of their sectarian background.

To examine how gender and class jointly shape cooperation, we implemented a public goods experiment in which 720 lower and upper class Sunnis, Shia, and Christians were recruited from the Beirut area and block randomly assigned to same-gender groups that were either homogeneous or heterogeneous in their class compositions (713 completed the study). In the same-class groups, all six participants were either lower or upper class while the mixed-class groups included three lower-

class and three upper-class participants. We also implemented a cross-cutting experiment in which participants were also randomly and orthogonally assigned to groups that were either homogeneous or heterogeneous in their sectarian composition.<sup>3</sup> Overall, our randomization resulted in 60 same-class and 60 mixed-class groups, including 48 all-women groups involving 285 women and 72 all-men groups involving 428 men.<sup>4</sup>

We implemented the experiment by organizing the 120 groups in five sets of 24 sessions, where each set of sessions was single-gender.<sup>5</sup> A professional firm recruited participants for one set of sessions at a time using screening surveys to identify eligible participants. The screening survey contained multiple objective measures of socio-economic class that were aggregated into an index, where individuals in the first and third index terciles were eligible for inclusion in the study.<sup>6</sup> This approach enabled us to assign participants by block randomizing on the basis of their *actual* socio-economic class. Most analyses of the impact of socio-economic class on cooperation rely on experiments that attempt to mimic class cleavages by introducing artificial economic inequality into the group setting, for instance by providing participants with varying initial endowments (Buckley and Croson, 2006; Chan et al., 1996). While some studies use measures of real socio-economic class for heterogeneous effects analysis (Cardenas, 2003; Martinsson, Villegas-Palacio and Wollbrant, 2015), few extant studies use such measures for random assignment in order to understand how the class composition of groups affects cooperative outcomes. Using natural identities is potentially

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<sup>3</sup>All mixed sectarian groups had the same composition, with two Christian, two Sunni, and two Shia participants. See Appendix A for a detailed description of the experimental design. This appendix also describes one aspect of our study not implemented as planned, introducing concerns about differential selection into participation by treatment arm (see Appendix A.4). Our subsequent investigations and balance checks in Appendix B suggest no major cause for concern, however.

<sup>4</sup>The fact that we have more men than women groups is due to design considerations for the main study, described in Appendix A.

<sup>5</sup>Specifically, sets 1, 3, and 5 were all men; sets 2 and 4 were all women.

<sup>6</sup>See Appendix A.3 for more information on recruitment and the screening process. We note that participants are not a representative sample of the population. In Appendix C we compare our participants to the Lebanese and Beirut populations.

especially important for detecting results in our context, insofar as evidence suggests that women (compared to men) are more sensitive to the use of real identities in experimental settings involving social dilemmas ([Chowdhury, Jeon and Ramalingam, 2016](#)).

While our experimental design is innovative in how it varies the economic and sectarian compositions of the same-gender groups playing the public goods game, the game itself has features common to one-shot, voluntary contribution mechanism designs.<sup>7</sup> So that participants would know the class and sectarian composition of the group, the moderator started each session by welcoming participants and saying: “We have invited you here today to engage in a discussion with members from [SAME/DIFFERENT] sectarian groups and [SAME/DIFFERENT] economic classes so that you can share with each other your thoughts and feelings about your economic and political hopes and concerns.”<sup>8</sup> Participants were then asked to introduce themselves and offer basic personal information (e.g. on their jobs or neighborhoods) that would have further revealed their profiles.

A moderator completed example exercises and practice activities with participants before playing to ensure comprehension of payoffs.<sup>9</sup> Participants played with 10,000 Lebanese pounds (LBP) and could keep as much of that as they wanted for themselves or contribute any amount (in 1,000 LBP increments) to a group fund. Group contributions were multiplied by 1.5 and divided evenly among all six participants, regardless of whether they had contributed.<sup>10</sup> This highlights the social

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<sup>7</sup>One-shot public goods games are common in the literature, see for instance [Ledyard \(1995\)](#); [Fischbacher, Gächter and Fehr \(2001\)](#); [Chaudhuri \(2016\)](#).

<sup>8</sup>This script refers to engaging in a discussion because the public goods game was played as part of the baseline data collection for the discussion experiment studied in [Paler, Marshall and Atallah \(2019\)](#). We note that we had the moderator reveal the group composition because traits like sect and class are not necessarily readily apparent in Lebanon such that participants otherwise might have only inferred their group type with substantial noise. We are thus estimating the effect of group composition on cooperation, conditional on having made class and sect salient. See Appendix [D](#) for more details as well as on steps taken to mitigate social desirability bias, experimenter effects, and moderator effects.

<sup>9</sup>Eighty-four percent of all participants successfully completed the tests.

<sup>10</sup>The average amount earned in the public goods game was \$7.85 USD, where the maximum earned was \$14.00 USD and the minimum was \$2.50 USD. For reference, the hourly minimum wage in

dilemma of the game—while maximum payoffs would be achieved if everyone in the group contributed their entire endowment, there were also strong individual incentives to free-ride. In such situations, how much an individual chooses to contribute is a function of unconditional considerations (e.g. altruism towards other group members) and/or conditional considerations, namely beliefs about how much others are likely to contribute (Fischbacher, Gächter and Fehr, 2001). Participants were not allowed to coordinate and all contribution decisions were made in private.

We estimate results using weighted least squares regressions of the main outcome (contributions to the group pot) on an indicator for whether a participant was in a mixed-class group, where weights account for unequal treatment assignment probabilities.<sup>11</sup> We estimate treatment effects separately for women and men as well as by class. Given that class and gender are themselves not randomly assigned, we include a vector of control variables—detailed in Appendix F—to account for potential confounding. We show below and in Appendix G that results are not substantively affected by the inclusion of controls and are robust to different estimation strategies. Finally, given that women’s and men’s blocks were implemented sequentially, differential results by gender could be confounded by timing effects.<sup>12</sup> We aimed to mitigate such confounding by implementing the blocks in an alternating fashion, which results in balance in timing with respect to important events (such as temporal proximity to municipal elections, see Appendix B).

## MAIN RESULTS

We first present descriptive evidence of the variation. Figure 1 shows the distribution of contributions to the group pot by treatment and class for women. This initial look at the data suggests that women, on average, contribute substantially less in heterogeneous class groups compared to homogeneous ones. Specifically, for rich women, we observe a much higher average contribution in same-class groups (4,476 LBP) compared to mixed-class groups (2,442 LBP). Poor women also contribute more in same-class relative to mixed-class groups (3,830 versus 3,110 LBP on average).

These patterns are confirmed by the regression analysis. Panel A of Table 1 presents results

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Lebanon is about \$3.78 USD.

<sup>11</sup>See Appendix A.5 for more on how weights were created and Appendix E for more on estimation.

<sup>12</sup>One block of discussions was implemented every 2-3 weeks from February to April 2016.

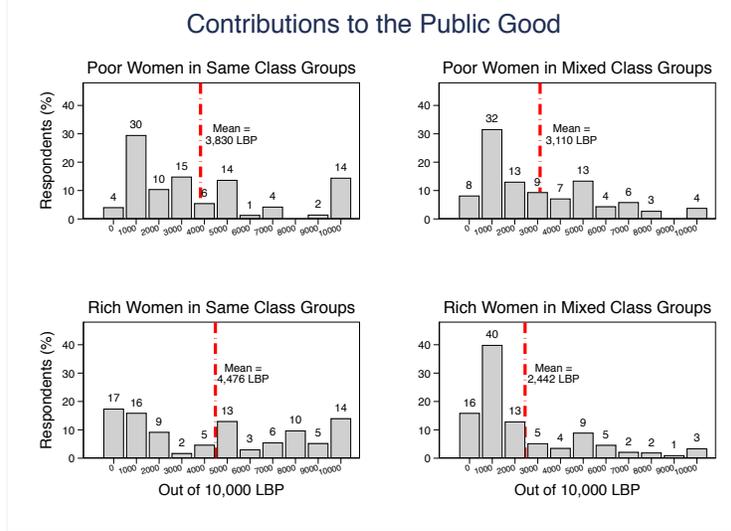


Figure 1: Distribution of contributions to the group pot by class group treatment and socio-economic background, women’s groups only.

for the effect of being in a heterogeneous class group for women participants overall as well as disaggregated by class. Focusing our discussion on the results from model 2 (with controls), we find that women in mixed-class groups contributed 1383 LBP—or about 30 percent—less to the group fund than women in same-class groups ( $p = .000$ ). This pattern holds for both poor and rich women, although it is especially pronounced for the latter. Poor women in heterogeneous class groups contributed 990 LBP less than their counterparts in homogeneous groups, although this result is only weakly significant ( $p = .076$ ). Rich women gave 1908 LBP—or about 43 percent—less in heterogeneous groups ( $p = .003$ ). All in all, these results are striking in how strongly they suggest that women do not cooperate unconditionally with one another and that class cleavages do inhibit cooperation among women.

Moreover, the pattern of contributions for women is notably different from that observed for men, as shown in Panel B. Instead of negatively affecting cooperation, being in a heterogeneous class group resulted in significantly higher contributions to the group fund for men. Overall, according to model 2, men contributed 946 LBP more in mixed-class settings on average ( $p = .007$ ), with both poor and rich men giving more. These results reinforce that there is something specific to gender that is interacting with the class cleavage in the context of group-based cooperation.

Finally, we find that being in a heterogeneous class group has an even greater negative effect on cooperation for women than being in a heterogeneous *sectarian* group. To obtain these results, we

Table 1: Public Goods Game Results

	Same-class <i>mean</i>	Mixed Class		<i>N</i>
		<i>b/(se)/p</i>		
		Model 1	Model 2	
<b>Panel A: Results for Women</b>				
All women	4153	-1374 (367) 0.000	-1383 (390) 0.000	285
Poor women	3830	-720 (494) 0.148	-990 (552) 0.076	142
Rich women	4476	-2034 (540) 0.000	-1908 (638) 0.003	143
<b>Panel B: Results for Men</b>				
All men	3107	912 (339) 0.007	946 (350) 0.007	428
Poor men	2856	902 (472) 0.057	1233 (549) 0.026	214
Rich men	3359	922 (486) 0.059	834 (533) 0.119	214

*Robust standard errors in parentheses. P-values are from two-sided tests. All models incorporate weights that correct for unequal treatment assignment probabilities across strata. Model 1 has no controls; Model 2 includes all controls.*

take advantage of the cross-cutting experiment (described above) in which the same participants were also randomly assigned to play the public goods game in same or mixed sectarian groups. The results reported in Table 2 demonstrate that women in homogeneous and heterogeneous sectarian groups contributed about equivalent amounts to the group fund. These findings are notable for showing that, even in an ethnically divided society like Lebanon's, class differences can play a bigger role than sectarian differences in inhibiting cooperation among women.<sup>13</sup>

<sup>13</sup>These findings are particularly interesting in light of the fact that our public goods experiment was implemented in the months following mass cross-sectarian and cross-class protests over the government's failure to manage trash collection (see e.g. <https://www.nytimes.com/2015/08/30/world/middleeast/lebanon-protests-garbage-government-corruption.html>). These protests demonstrate that, while Lebanon's institutions and political elites remain divided on the

Table 2: Comparison to Contributions in Mixed-Sectarian Groups (Women only)

	Same sect <i>mean</i>	Mixed sect		<i>N</i>
		<i>b/(se)/p</i>		
		Model 1	Model 2	
All women	3471	-11 (376) 0.977	-179 (402) 0.657	285

*Robust standard errors in parentheses. P-values are from two-sided tests. All models incorporate weights that correct for unequal treatment assignment probabilities across strata. Model 1 has no controls; Model 2 includes all controls.*

## DISCUSSION

The results presented above show that women in mixed-class groups cooperated significantly less than those in same-class groups while men cooperated substantially more, highlighting that this pattern is particular to women. We also show that not all social differences among women have the same effect: the negative effect on cooperation is pronounced for class, but not for sectarian, differences. These results raise important questions, which we investigate below, about why women cooperate less than men in mixed class groups and why class differences undermine women’s cooperation more than sectarian differences.

We consider three possible explanations as to why women cooperate less than men in mixed class groups. It could be that women are more uncertain about how other women will behave in mixed-class settings; are more prone to class bias related to status-seeking; or are more distrustful due to contested views of the appropriate role for women in society. While our study was not designed to examine these mechanisms, we do so to the best of our abilities in Appendix H and summarize the results here.

First, it is possible that women contribute less in mixed-class groups because of greater uncertainty over how other women will behave in such settings. Contribution decisions in public goods games can be conditional on expectations of what others will contribute (Fischbacher, Gächter and Fehr, 2001; Kocher et al., 2008). Such expectations, however, are based on real life interactions and basis of sect, many ordinary Lebanese are in fact willing to engage and cooperate across sectarian lines. Moreover, the fact that we find that class differences still undermine women’s cooperation in this context underscores the persistent nature of this cleavage.

experiences. It could be that Lebanese women have more economically homogeneous social networks and fewer opportunities for cross-class cooperation than men, for instance because they are less likely to participate in the labor force or hold jobs that allow for cross-class interaction (El Feki, Heilman and Barker, 2017). Fewer social interactions among women from different classes could result in less-developed norms of social behavior and greater uncertainty over how other women will behave in cross-class settings, resulting in lower contributions. This explanation is consistent with evidence that expectations about norms of cooperation are often stronger within familiar groups (Koopmans and Rebers, 2009).

A second possible explanation centers on class bias, especially ‘elitism’ in the behavior of upper-class women. In Lebanon and elsewhere, upper-class women are often accused of being elitist and self-serving rather than acting on behalf of women more broadly (Tamale, 1999). Evidence from the American politics literature demonstrates that women representatives who enjoy status benefits in a male-dominated political arena are less likely to help other women, potentially due to fear that doing so would dilute their own status (Kanthak and Krause, 2010, 2011). Thus, it could be that upper-class women are motivated to differentiate themselves from lower-class women to protect their privileged status in male-dominated societies. The fact that rich women cooperated even less than poor women in mixed-class groups could reflect such out-class bias.<sup>14</sup> Conversely, since men already belong to the *de facto* high status group in male-dominated societies, their efforts to gain status could take other forms. For instance, lower class men could contribute more in mixed-class settings to win the approval of higher status (wealthier) men (Wilkinson and Pickett, 2017). Conversely, higher contributions by upper-class men might reflect a desire to enhance their status through ‘competitive altruism’ and showing that they can provide for the group even at personal expense (Hardy and Vugt, 2006). In sum, the different ways that women and men seek status in male-dominated societies could help to explain why women contribute less, and men more, in mixed-class settings.

Third, it is plausible that rich and poor women diverge in their views of what the role of

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<sup>14</sup>It is also possible that status-seeking could motivate upper class to try to differentiate themselves from lower class men as well, although we are unable to ascertain this since we do not have mixed-gender groups in the experiment.

women in society should be, resulting in distrust and less cooperation in mixed-class settings. The significant changes in women’s access to higher education and jobs in many countries in recent decades has been accompanied by debates *among women* over whether women should play more or less traditional roles in society. In Lebanon and elsewhere, well-educated, professional women have advanced as a result of their labor force participation to a far greater extent than women in low-paying positions (Salameh, 2014; Milkman, 2017; Brenner and Luce, 2006); upper-class women also typically hold more egalitarian and less traditional views (Ceyhun, 2017; El Feki, Heilman and Barker, 2017). The fact that rich and poor women cooperate less in mixed-class groups could thus reflect distrust or antagonism rooted in contested outlooks of women’s place and purpose in society. This is analogous to the argument in Klar (2018), who finds that partisan-based (rather than class-based) differences in gender identity are an important source of distrust among women in the United States. In contrast, the norms and expectations surrounding men’s roles could simply be more settled in male-dominated societies, resulting in fewer obstacles to gender-based cooperation across class lines.

Appendix H presents preliminary evidence to assess the plausibility of these three explanations for our findings. To evaluate the role of both uncertainty and class-bias, we use a question from a self-administered survey completed before the public goods game that captures the extent to which participants’ real-world social networks are heterogeneous or homogeneous in their economic class.<sup>15</sup> A homogeneous network could proxy for uncertainty *or* in-class bias insofar as those with less diverse networks might have fewer opportunities for cross-class interactions or be more biased against individuals from other classes (and thus select into more homogeneous networks). We regard as support for either explanation evidence that the negative effects of being in a mixed-class group were greater for women with homogeneous real-world networks.

The results reported in Appendix Table H.1 show that being in a mixed-class group undermined cooperation for all women participants on average but that these effects were indeed especially big for those with homogeneous social networks. This indicates that both uncertainty and in-class

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<sup>15</sup>About 25 percent of our female participants, and 21 percent of our male participants, have social networks that are primarily homogeneous in terms of class, indicating that mixed-class interactions are likely common.

bias could be telling an important part—but not all—of the story for women. We also find that being in a mixed-class group increased cooperation for all men but that the heterogeneous effects differ for those who were rich or poor. For poor men, being in a mixed class group induced greater cooperation among those with homogeneous social networks, a result that is more consistent with status-seeking motivations. For rich men, being in a mixed class group resulted in more cooperation among those with heterogeneous networks, which could indicate less uncertainty or more experience with ‘competitive altruism’ (Hardy and Vugt, 2006). All in all, these results suggest that uncertainty and status-seeking (with its implications for class-bias) could help to explain the differential results in cross-class cooperation for women and men.

To investigate whether different views of gender identity might be driving mistrust among women in mixed-class groups, we use survey measures that capture both the strength of gender identity and support for civil marriage, a long-debated policy proposal in Lebanon that is often viewed as a challenge to the traditional role of religion and as a way of granting women more rights and protections under the law (Zuhur, 2002). Following on Klar (2018), we expect class differences in gender identity to undermine cooperation only when gender is both salient and such differences in opinion exist. We do find support for the salience of women’s gender identity using a survey measure in which participants ranked a list of possible identities from strongest to weakest. The results in Appendix H show that almost 42 percent of women participants ranked gender as their most important identity (compared to 30 percent for men); 72 percent of women listed it as in their top three identities. Moreover, gender identity was equally important for both rich and poor women. Yet, our data does not suggest that rich and poor women differ in their support for civil marriage; in a regression of support for civil marriage on socio-economic class (and control variables) for women, the coefficient on class is zero. While we cannot rule out the possibility that class differences in other aspects of gender identity undermined women’s cooperation, our analysis provides little support for this mechanism.

In sum, the fact that women cooperate less—and men cooperate more—in mixed-class groups could reflect notable differences in their lived experiences with cross-class interactions; their efforts to attain or maintain social status result in class-bias; or the extent to which there are contested views of gender roles and identity *among women*. While we present tentative evidence to support the plausibility of at least the first two explanations, there is clearly a need for further research

into *why* class differences affect cooperation among women as well as among men.

It is also important to consider why class differences undermine cooperation more than sectarian differences for women. One possible explanation is that sectarian differences are less relevant for women than for men because of the sectarian and gendered way in which competition over resources takes place in Lebanon. Research suggests that, in societies where resources are distributed along ethnic lines through clientelistic networks, women are more likely than men to be denied direct access to these benefits (Benstead, 2016; Beall, 2005; Wantchekon, 2003). If sectarian identity is the foundation of competition over resources for men, and has little impact on access to goods and services for women, then sectarian differences might undermine cooperation among men more than among women. Moreover, such inter-group competition over resources could promote stronger norms of intra-group cooperation among men (Raihani and Bshary, 2015; Van Vugt, Cremer and Janssen, 2007).

To examine this, we take advantage of the study’s factorial design in order to evaluate how the sectarian composition of the group conditions cross-class cooperation for men and women, with results reported in Appendix I. Most notably, we find that sectarian differences do not reduce cooperation even among men. There is, however, clear evidence that class differences strengthen cooperation among men *but only among cosectarians*. In other words, the high levels of cross-class cooperation among men in our main results are driven exclusively by behavior in homogeneous sectarian groups. Conversely, for women, class differences undermine cooperation regardless of the sectarian composition of the group.

These results support two main takeaways. First, sectarian differences do not undermine cooperation for either men or women in Lebanon. While this is surprising given the Lebanese context, there are several possible explanations. It could be that ordinary Lebanese are simply less divided along sectarian lines than many believe. A similar lack of coethnic bias has been found in public goods games played in Kenya, another context where ethnic divisions are thought to be highly salient (Berge et al., 2016). It is also possible that sectarian differences only undermine cooperation among certain subgroups in the population—for instance those with stronger identity attachments or greater access to coethnic elites (Marshall, 2019)—or when ethnic divisions are activated by political elites, often to preserve their political power (Posner, 2004; Fearon and Laitin, 2000)

Second, and even more striking, sectarian differences in Lebanon could generate divergent pres-

asures for cross-class cooperation for men and for women. The results for men suggest that the chief impact of sectarian differences in Lebanon is not more out-group antagonism but rather more in-group cooperation among cosectarian men who differ on other social dimensions. This is consistent with the evidence cited above that inter-group competition over resources can serve to strengthen in-group cohesion, possibly operating through either our theorized social interaction or status-seeking mechanisms. Critically, because women are generally excluded from competition over resources, they might not experience similar pressures for in-group solidarity. Moreover, whereas sectarian competition might catalyze cross-class, within-sect cooperation among men, the *absence* of such sectarian competition among women might exacerbate class-based competition over resources. This would be consistent with the status-seeking mechanism described above—in which rich women seek to preserve their access to resources by differentiating themselves from lower-class women—and would help to explain why class differences undermine cooperation among women unconditional on sect. Our evidence indeed supports this insofar as class differences undermine cooperation in both homogeneous and heterogeneous sectarian groups for rich women in particular (see Appendix I). Overall, these findings suggest an important possible relationship between sectarian and class differences in their differential effect on cooperation for women and men that merits investigation in future research.

Future research should also examine how the results presented here generalize beyond the case of Lebanon. While Lebanon’s power-sharing institutions and conflict history are in some ways unique, Lebanon is also similar to the many other countries that have multiple salient social cleavages and male-dominated cultures or institutions. The fact that class differences among women—whether historical or due to more recent societal changes—are prominent in many countries, including the United States, suggests that the results presented here extend to other contexts (Geier et al., 2014). Yet, our results also suggest that considering how different social cleavages relate to one another might be one of the most important factors in external validity. Just as sectarian differences possibly induce cross-class cooperation *within* sectarian groups among men, we might observe similar dynamics for women in other countries where ethnicity (or some other cleavage, like partisanship) is more salient for women. We emphasize though that we are not claiming that it will always be *class* differences that undermine cooperation among women. While there is good reason to believe that class divisions impede women’s cooperation in many contexts, any number of social

cleavages could divide women. The main contribution of this paper is the broader point that social divisions among women—class or otherwise—exist and can have important consequences for women’s collective action potential and ability to work together to tackle persistent barriers to gender equality.

## CONCLUSION

There is a growing global interest in improving the participation and representation of women in political, economic, and social life. This paper provides striking evidence that one barrier to advancing these goals could be women themselves, particularly the obstacles to collective action that arise when women differ on other social dimensions. In showing that women cooperate less across class lines than within homogeneous class groups, our results challenge the perception that women cooperate unconditionally with one another and suggest that there could be significant barriers to the formation of broad, gender-based coalitions to advance women’s rights and interests. This paper also raises important questions as to *why* women cooperate less in heterogeneous class groups and why some social differences seem to undermine cooperation more than others. Answering such questions through future research is critical to understanding women’s collective action capacity in diverse societies and to thinking about how barriers to cooperation can be lowered with the goal of improving the welfare and status of all women.

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