Explaining the Australian marriage equality vote: An aggregate-level analysis

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Abstract
The Australian public voted in November 2017 in favour of changing the law to allow for same-sex marriage – only the second such national popular vote after Ireland in 2015. Though 61.6% of the Australian public voting in the Marriage Law Postal Survey voted Yes in support of marriage equality, this support was not uniformly distributed across the country, with support at the electoral division level varying between 26.1% and 83.7%. What, then, explains such variation in support for same-sex marriage among the Australian public? In this article, we advance an aggregate, electoral division-level explanation of the Yes vote that links support for the legalisation of same-sex marriage to a set of local-level political and socio-demographic factors.

Keywords
Australia, same-sex marriage, voting behaviour

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Introduction
On 15 November 2017, the Australian Bureau of Statistics (ABS) announced the results of the Marriage Law Postal Survey, ending a contentious, months-long campaign and confirming majority support (61.6%) for legalising same-sex marriage among the Australian public. With just over three in five Australians responding Yes to the survey, the right-of-centre Liberal-National Coalition government of then-Prime Minister Malcolm Turnbull committed to legislating marriage equality by the end of the year, fulfilling this promise on 7 December 2017. This means Australia has joined the 25 countries
recognising marriage equality in law, more than 16 years since same-sex marriage was first legalised in the Netherlands in 2001.

The government-run voluntary postal vote was unusual in the Australian case, since turning up to vote in elections and referenda is legally mandatory. The campaign ahead of the vote through mid- to late-2017 was also politically contentious, with the governing right-of-centre Liberal Party taking no official position and Liberal cabinet ministers siding with both the Yes and No campaigns, and the Labor Party and Green Party both endorsing the Yes campaign. The campaign also featured duelling television ads and accusations of misinformation from advocacy groups Australian Marriage Equality (supporting Yes) and the Coalition for Marriage, mainly backed by Australian religious organisations (supporting No). It entailed court challenges to the lawfulness of the postal vote intended to halt it, and a controversial donation of one million Australian dollars by the Anglican Archdiocese of Sydney to the No campaign. The postal vote thus captured Australians’ attitudes on a highly salient, noncomplex, symbolic social policy issue (or ‘easy’ issue) (Carmines and Stimson, 1980; Haider-Markel and Meier, 1996).

In the end, every Australian state and territory recorded a majority Yes vote, as did 133 of the 150 electoral divisions of the House of Representatives. It was soon apparent, however, that while support for marriage equality was highest in major urban areas (the percentages voting Yes were 70% or higher in each of Sydney, Melbourne, Brisbane, Perth and Adelaide), there were nevertheless parts of metropolitan areas where the majority voted No, including the electoral divisions of Blaxland in New South Wales, west of Sydney (73.9%) and Calwell in Victoria, northwest of Melbourne (56.8%). Support for marriage equality was therefore far from uniformly distributed across the country (see Figure 1).

This chapter in Australian politics has importance beyond Australia because it represents only the second case (after Ireland, in 2015) of legalising same-sex marriage following a national popular vote on the issue. Still, detailed studies of the Irish same-sex marriage referendum are relatively few (but see Elkink et al., 2017; Murphy, 2016; O’Mahony, 2017). Studies of political behaviour and public policy at the subnational level are numerous yet focus almost exclusively on the American case (Camp, 2008; Campbell and Monson, 2008; Fleischmann and Moyer, 2009; Haider-Markel and Meier, 1996; Lax and Phillips, 2009; Lofton and Haider-Markel, 2008; Soule, 2004; Wald et al., 1996). As such, this specific form of mass political participation is relatively understudied, particularly in cross-national perspective. What, then, explains the Australian public’s aggregate support for marriage equality? The aim of this article is to uncover the contextual determinants of the aggregate-level Yes vote using the publicly reported results from the Australian Bureau of Statistics (ABS) joined to other data capturing local-level socio-demographic and political characteristics.

We undertake an aggregate, Federal Electoral Division (FED)-level analysis of the marriage equality vote for two principal reasons. The first is necessity: unlike the case of Australian federal elections, no large-scale surveys of the Australian public measuring voting intentions (during the campaign) or self-reported vote (after the campaign) were conducted; this means that the FED-level data from the ABS are the best data available for studying Australians’ voting behaviour in this case. Second, given that legislation was required to change Australian marriage law in response to the postal survey result, it is important to understand electoral division-level dynamics because these districts are the contexts inhabited by legislators. Such aggregate-level (or ecological) explanations of political behaviour also have a long history, dating back to the seminal work of V.O. Key
Gravelle and Carson (1949) who sought to explain racial attitudes and voting behaviour in the southern United States with reference to local contextual factors. Extensions of this tradition of analysis include contextual analyses of voting behaviour in other country contexts, including Australia (Eagles, 2002; Jones, 1981) and the local-level correlates of anti-gay hate crime (Green et al., 2001). Thus, aggregate-level analyses of political behaviour are a valuable tool in explaining a range of aggregate political and social phenomena (Eagles, 1995). With the analysis presented here, we aim to contribute to ongoing internationalisation of research on public attitudes towards same-sex rights (cf. Brewer, 2014).

We structure the rest of the article as follows. First, we provide some necessary background on the politics of marriage equality in Australia, and survey the existing literature on support for same-sex marriage to motivate our research expectations. We then describe our contextual, aggregate-level data sources and our modelling approach before discussing our results.

**Background and research expectations**

From the perspective of survey methodology, the Marriage Law Postal Survey would be considered a great success. The survey featured a clear question: ‘Should the law be changed to allow same-sex couples to marry?’ Further, the national postal survey participation rate of 79.5% of enrolled voters was high by global standards for a voluntary ballot. Electoral division-level participation ranged between 50.0% and 85.2%. (The significance of varying participation rates is discussed in our findings.) In terms of...
ascertaining majority public opinion, the postal survey was considered redundant by many commentators because numerous publicly released polls had indicated that majority support for same-sex marriage had existed for a decade (Coorey, 2015). Still, the voluntary survey was politically expedient for the Liberal-National Coalition government, allowing it to keep its promise from the 2016 election campaign to hold a plebiscite of sorts on the issue, even though it was subsequently twice unable to command support in the Senate to pass the necessary enabling legislation to do so. The postal survey did not require legislation to be passed, and thus allowed the government to deal with the impasse on same-sex marriage policy caused by conflict between factions within the Coalition over the issue (Carson et al., 2018). McAllister (2011) argues that Australia’s main political parties typically avoid adjudicating on ‘moral’ issues, since they tend to promote intra-party divisions. Consistent with this approach, then-Australian Prime Minister Malcolm Turnbull argued the popular ballot was necessary to ‘give all Australians a say’ (Koziol and Remeikis, 2017). A similar motivation underpinned the Irish decision to put same-sex marriage to a popular vote. By doing so, Ireland’s political parties avoided intra-party division, and avoided electoral retribution for their stances on the issue (O’Mahony, 2017).

The Australian postal survey, however, had several antecedents in bills introduced in the federal Parliament. Since the Marriage Act (1961) was changed in 2004 by the Coalition government of John Howard to define marriage as between a man and a woman, 23 bills dealing with same-sex marriage had been introduced in Parliament, though only four reached a first vote (between 2010 and 2013), and these were defeated on second reading. In the only instance where a marriage equality bill came to a final vote in the House of Representatives, the vote outcome was known beforehand as the Coalition majority in the House prohibited a free vote of its members, instructing them to vote against the bill (McKeown, 2018). The bill was defeated 98 to 42 (Wilson, 2012). What was instructive about the vote was it highlighted the ongoing tensions about marriage equality within the ruling Liberal-National Coalition, as well as the left-of-centre Australian Labor Party, which supported the bill 38 to 27. These tensions over same-sex marriage policy within Australia’s two major political parties show that in the Australian case, as in the Irish case, the issue cuts across the traditional left-right ideological divide. We therefore expect other factors beyond party identification to be determinants of the aggregate-level Yes vote in Australia.

Same-sex marriage has been classically labelled a ‘morality’ issue in political science and as such has been considered especially appropriate for studying the relationship between public opinion and policy responsiveness (Carson et al., 2018; Meier, 1999). In the thoroughly studied American case, the politics of same-sex rights have been cast as a moral issue (Ellis and Kasniunas, 2011). This is because moral issues tend to be framed in ways that are easy for voters to understand and to follow in public debate, and thus easy issues on which to form an opinion (Haider-Markel and Kaufman, 2006; Lax and Phillips, 2009). Still approaching the same-sex marriage debate as (merely) a morality issue is contestable in 2018. While it remains an issue that is easy for mass publics to understand, considerable effort was made by interest groups in both the Irish and Australian settings to recast same-sex marriage as a civil rights issue, emphasising legal equality of relationships (Johnson et al., 2011; Murphy, 2016). Though not to dismiss that for some citizens (and political figures) same-sex marriage was and is a religious-moral issue, we contend that focusing strictly on morality politics misses the civil rights emphasis of recent marriage equality campaigns in cases such as Ireland and Australia.
Indeed, existing research has shown that a range of national-level demographic characteristics (including age, educational attainment, religious affiliation and immigrant populations) and characteristics of the political system influence how societies approach same-sex relations (Schwartz and Tatalovich, 2018). We contend that even greater analytical leverage is gained by looking at local demographic and political characteristics. Studies of the American and Australian cases suggest that local-level variation in religious denomination, education, age, recent migration and marital status may shape the Yes vote.

Religious adherence is often associated with heteronormative values and traditional notions of family, while secular values are associated with greater support for same-sex marriage (Kollman, 2007). Following from this, several studies find that conservative Protestant populations make the adoption of same-sex rights less likely (Camp, 2008; Fleischmann and Moyer, 2009; Haider-Markel, 2001; Haider-Markel and Kaufman, 2006; Haider-Markel and Meier, 1996; Kane, 2003; Lax and Phillips, 2009; Wald et al., 1996). In the American case, states with more liberal (progressive) voting publics, or more progressive legislators, also increased the probability of same-sex rights being legislated (Fleischmann and Moyer, 2009; Kane, 2003; Lax and Phillips, 2009; Soule, 2004). Higher concentrations of university degree holders have the same effect (Camp, 2008; Fleischmann and Moyer, 2009; Haider-Markel and Meier, 1996). By contrast, American counties with higher proportions of households with traditional family structures are more likely to have enacted same-sex marriage bans (McVeigh and Diaz, 2009). US states with higher proportions of residents aged 65 or older are also less likely to protect same-sex rights (Kane, 2003). These aggregate-level relationships relating religious denomination, political attitudes, household composition and age structure to support for same-sex rights align with findings at the individual level in studies of American public opinion (Becker, 2012; Brewer, 2003a, 2003b; Flores, 2014; Gaines and Garand, 2010; Sherkat et al., 2011). These findings also align with the Australian experience, where Carson and colleagues (2018) find that respondents with no religion, younger voters and the university-educated were more likely to support same-sex marriage. Conversely electoral divisions with fewer same-sex couples, a higher average Liberal-National two-party vote across the most recent elections, and a greater proportion of overseas-born residents tended to have stronger opposition to same sex marriage (Carson et al., 2018).

In light of existing research literatures on public opinion and public policy relating to same-sex marriage, we advance a set of expectations regarding the factors shaping the Australian marriage equality postal vote. We expect that higher proportions of university degree-holders at the aggregate level will be associated with greater Yes support. On the other hand, we expect that higher aggregate-level proportions of those aged 65 years or older, married (by definition, opposite-sex marriages at the time), recently arrived immigrants and those belonging to specific religious groups will result in reduced Yes support.

**Data and method**

To test our expectations, we undertake an aggregate analysis of the Marriage Law Postal Survey results at the level of Australia’s 150 lower house electorates or FEDs. Our dependent variable is the aggregate Yes percentage at the FED level. It is important to emphasise that in providing an aggregate-level (or ecological) explanation of the vote results, we do not endeavour to make ecological inferences – that is, inferences from the
division-level vote results to individual-level support for marriage equality. Analyses of contextual effects at the aggregate level and ecological inferences are distinct endeavours (Katz and King, 1999), and our project here is the former. An individual-level analysis of Australian attitudes towards same-sex marriage has been provided by Carson and colleagues (2018). Our ecological analysis here is complementary in that it models the actual returns of the postal vote, and not stated (attitudinal) support for same-sex marriage (see also McAllister and Snagovsky, 2018). Furthermore, as noted above, an analysis at the FED level is important because changes to Australian marriage law must be enacted, and electoral divisions are the contexts inhabited by legislators. It is therefore important to understand the dynamics operating at this level of analysis. The measurement of our dependent variable and our research design is thus very similar to aggregate analyses of the two-party vote share in the American electoral system (e.g., Ansolabehere and Snyder, 2002; King and Gelman, 1991).

We obtain the official results of the Marriage Law Postal Survey for Australia’s 150 FEDs from the ABS. These data represent the smallest aggregation of ABS results publicly released. These data provide the percentage of the Yes vote, the participation rate (the percentage of eligible voters who returned a survey) and the total number of eligible voters, which we use as an analytical weight in our regression analyses to adjust for the varying number of eligible voters in each FED. We augment these data by joining FED-level socio-demographic characteristics derived from the General Community Profile Tables for the 2016 Census of Population and Housing, also available from the ABS. These characteristics are total population and the percentages of the FED population who are as follows: aged 65 or over, have a university degree, are married or widowed (adults only), foreign-born and arrived in Australia between 2006 and 2016, and the percentage who identify as Catholic, conservative Protestant, and Muslim. It is important to emphasise that the census data provide measures of religious affiliation only and not religiosity or religious adherence. We additionally join data from the AEC that capture the FED-level partisan context, namely the House of Representatives two-party preferred vote (Liberal–National Coalition versus Labor) and the party of the winning candidate (Coalition or Labor) from the 2016 federal election. Descriptive statistics are provided in Appendix 1.

With the aggregate percentages of Yes responses ranging between 26.1 (in the electoral division of Blaxland, New South Wales) and 83.7 (in the electoral division of Melbourne, Victoria) and roughly normal distribution, ordinary least squares (OLS) models are appropriate. We employ observation weights based on the number of eligible voters in each electoral district in estimating our models. We test two different model specifications. Both include the postal survey participation rate and the full set of socio-demographic characteristics. The first model also includes the Liberal–National Coalition percentage of the House of Representatives two-party preferred vote; the second model substitutes a dummy variable indicating whether the elected member of the House is from the Coalition (Labor is the reference category).

**Results: Aggregate-level support for marriage equality**

Concerning overall model performance, the models fare well on a key criterion given our substantive case: predicting a majority Yes or No result at the electoral division level. Both Model 1.1 and Model 1.2 predict a majority Yes result in 130 out of the 133 FEDs that voted Yes in the majority; they predict a majority No result in 9 out of the 17 FEDs that voted No in the majority. In total, 139 out of 150 FEDs are correctly predicted. The models thus capture
the aggregate-level dynamics shaping the Australian marriage equality vote. Examining the model coefficients, there are several findings of note (see Table 1). First, the aggregate demographic characteristics of electoral divisions shape the level of the Yes vote in expected ways. In substantive terms, the results from Model 1.1 indicate that moving across the entire range from the minimum to the maximum value on the electoral division-level percentage of the population aged 65 years or older (from 6.7% to 27.6%) is associated with a predicted 12.8 percentage point decrease in the Yes vote, from 67.0% to 54.2%. The same movement on the percentage of the population who is married or widowed is associated with a predicted decrease of 23.2 percentage points, from 77.3% to 54.1%. By contrast, moving across the entire range on the percentage of university degree holders (from 16.4% to 66.3%) is associated with a predicted increase in the Yes vote of 3.8 percentage points, from 59.9% to 63.7% – a difference which is not statistically significant.

A key finding that is apparent from a simple, bivariate scatterplot (see Figure 2) and also borne out in the regression analysis is that aggregate-level participation in the postal survey mattered to the Yes result: the effect of the participation rate on the Yes percentage is positive and highly significant. Substantively, the results from Model 1.1 indicate that increasing the postal survey participation rate from its minimum value (50.0%) to its maximum (85.8%) is associated with a predicted increase in the Yes vote from 29.5% (i.e., a sizable No vote majority) to a comfortable majority of 68.4% – a difference of 39 percentage points. This aggregate result has a number of implications. First, it suggests different levels of issue salience among Yes and No supporters, with marriage equality being a more salient issue for its supporters than its opponents in the Australian case. This offers a contrast to evidence from the United States, where same-sex marriage has often

| Table 1. Explaining electoral division-level support for marriage equality (% yes). |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|                                | Model 1.1                        | Model 1.2                        |                                |
|                                | b (SE)                          | b (SE)                          |                                |
| Intercept                      | 61.33 (0.33)***                 | 61.67 (0.55)***                 |                                |
| Participation %                | 1.09 (0.13)***                  | 1.11 (0.13)***                  |                                |
| Coalition two-party preferred vote % | -0.05 (0.04)               | -0.65 (0.83)                     |                                |
| Age: 65 + %                    | -0.61 (0.14)***                 | -0.63 (0.13)***                 |                                |
| University degree %            | 0.08 (0.05)                     | 0.07 (0.05)                     |                                |
| Married or widowed %           | -0.62 (0.08)***                 | -0.63 (0.08)***                 |                                |
| Foreign-born (arrived 2006–2016) % | -0.37 (0.11)***               | -0.36 (0.11)***                 |                                |
| Catholic %                     | -0.46 (0.09)***                 | -0.47 (0.09)***                 |                                |
| Conservative protestant %     | -1.17 (0.24)***                 | -1.19 (0.24)***                 |                                |
| Muslim %                       | -1.41 (0.12)***                 | -1.39 (0.12)***                 |                                |
| $R^2$                          | 0.85                            | 0.85                            |                                |
| Root MSE                       | 4.08                            | 4.09                            |                                |
| $N$                            | 150                             | 150                             |                                |

Source: Australian Bureau of Statistics; Australian Electoral Commission.
Notes: Least-squares coefficients. Analyses are weighted by the number of eligible voters. All continuous independent variables are mean-centred. Data are derived from Federal Electoral Division (FED) level figures ($N=150$). ***$p \leq 0.01$; **$p \leq 0.001$. 

...
been a more salient political issue (as a moral issue) for its opponents, and this has entailed a negative relationship between turnout and pro-same sex marriage vote outcomes (Haider-Markel and Meier, 2003; Lofton and Haider-Markel, 2008). Second, it suggests that campaigning by the Yes campaign (involving around-the-clock telephone banks by trade unionists and other advocates of same-sex marriage) may have had a positive effect on the outcome. Establishing a causal relationship in this regard is a fertile area for future research, but we offer some observational findings on the correlates of participation in the postal vote in the following section.

While participation rates mattered substantially to the postal survey outcome, the effects of electoral division-level political context – whether one looks at the percentage of the 2016 federal election House vote for the Coalition, or whether an electoral division is a Coalition-held seat – are negligible. Again, a bivariate scatterplot makes this clear (see Figure 3). Based on the results from Model 1.1, increasing the Coalition vote from its minimum value (27.6%) to its maximum (74.9%) is associated with a slight decrease in the predicted Yes vote from 62.4% to 60.2%; the results from Model 1.2 indicate that the predicted mean Yes vote for Coalition-held House seats is 61.4%, compared to 62.0% for Labor-held seats (neither effect, however, approaches statistical significance). These results speak to the intra-party divisions (among the Liberal-National Coalition, and the Labor Party) on the issue of same-sex marriage referenced above. They also have clear implications for the current Liberal–National Coalition government, namely that a majority of Australian voters, even in secure Coalition seats, support marriage equality. This finding also highlights the disjuncture that has existed between majority public opinion on same-sex marriage and the lack of elite policy responsiveness from the major parties in recent years. It also aligns with findings by Carson and colleagues (2018) that Australian voter opposition to same-sex marriage had to be substantially below 50% before parliamentarians (from either the Coalition or Labor) would be likely to support same-sex marriage.

![Figure 2. Aggregate-level turnout and support for marriage equality (% yes).](image)
The regression results also indicate that the local concentration of recent immigrants is another important factor shaping the aggregate Yes vote, acting to reduce aggregate-level support for marriage equality. Increasing the percentage of the foreign-born population having arrived in the last 10 years (between 2006 and 2016) from its minimum (1.1%) to its maximum (28.6%) is associated with a predicted decrease of more than 10 percentage points in the electoral division-level Yes vote (64.4% to 54.3%). This provides some validation to the post-survey media speculation about a values gap between western Sydney’s ethnically diverse population with a high concentration of recent immigrants and the rest of Australian society (Higgins, 2017).

Finally, and importantly, support for the Yes vote is shaped by the concentration of different religious groups. Bivariate scatterplots are again telling (see Figures 4 to 6). Perhaps reflecting the interventions of leaders of the Catholic Church in Australia in support of the No campaign, the regression results indicate that the local concentration of self-identified Catholics exerted an appreciable negative effect on Yes support at the electoral division level. Moving across the range of the percentage of Catholics from its minimum (11.4%) to its maximum (36.1%) is associated with a decrease in the Yes vote of more than 11 percentage points (from 66.5% to 55.1%). Nevertheless, the electoral districts with the highest concentrations of Catholics in Australia are, all else equal, still predicted to have majority Yes support. The effect of the local concentration of conservative Protestants, exerts a similar effect on Yes support. Moving its minimum (1.9%) to its maximum (14.7%) is associated with a decrease of more than 14 percentage points, from 66.3% to 51.4%. Here, the same observation applies: even in areas with the highest concentrations of conservative Protestants, there is the barest predicted majority Yes support, but a predicted majority nevertheless. Still, this accords with previous work finding that several churches in Australia tend to favour the traditional definition of marriage; further, regular churchgoers have in recent decades tended to support the Liberal-National Coalition over Labor (Maddox, 2005; Warhurst, 2007). At the
same time, it is important to reiterate that these results indicate the effects of aggregate-level religious denomination only and not religious adherence, which certainly varies within churches. In this respect, these effects may be under-estimates of the relationship between adherence to traditional Christian values and support for marriage equality. By contrast, the effect of local Muslim concentration exerts a much stronger negative effect on Yes support. Again, moving across the full range of the electoral district-level percentage of Muslims from its minimum (0.1%) to its maximum (29.2%) is associated with a decrease of more than
41 percentage points, from 64.7% to 23.5%. This result again provides evidence in support of the claimed values gap between Muslim Australians and the wider Australian society (Higgins, 2017). To wit, the electoral division with the highest percentage of Muslims – Blaxland in New South Wales with 29.2% – also recorded the lowest Yes support at 26.1%.

**Results: Aggregate-level participation in the marriage equality postal vote**

Given the positive association between the electoral division level participation rate and the Yes vote, it is worth examining the factors associated with the participation rate itself (see Table 2). Age is one factor that is associated with decreased support for marriage equality while also being associated with higher aggregate-level participation in the postal vote. Based on the results from Model 2.1, the electoral districts with the smallest and largest percentages for those aged 65 years or older exhibit a 4.6 percentage point gap in participation (77.4% compared to 81.9%). This finding aligns with analyses of the 2015 Irish marriage referendum (Elkink et al., 2017). Still, this modest participation gap needs to be placed in the context of Australia’s relatively young age profile among liberal democracies: 30.3% of Australian adults are between 18 and 34; 20.2% are aged 65 or older. Put simply, there are more young Australian adults in the aggregate, and younger electoral districts exhibited higher support for marriage equality, even if participation was slightly lower.

The partisan makeup of electoral districts also made a modest difference to participation. Electoral districts with high levels of support for the Liberal-National Coalition exhibited slightly lower participation: increasing two-party preferred vote percentage from its minimum to its maximum is associated with a 3.1 percentage point decrease in postal vote participation.

Importantly, two key aggregate-level electoral district characteristics that were associated with lower Yes vote percentages were also associated with lower participation in the

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**Figure 6.** Percent Muslim and support for marriage equality (% yes).
Table 2. Explaining electoral division-level participation in the marriage equality postal vote (% of eligible voters participating).

<table>
<thead>
<tr>
<th></th>
<th>Model 2.1</th>
<th>Model 2.2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b   (SE)</td>
<td>b   (SE)</td>
</tr>
<tr>
<td>Intercept</td>
<td>79.40 (0.17)***</td>
<td>79.71 (0.29)***</td>
</tr>
<tr>
<td>Coalition two-party preferred vote %</td>
<td>−0.07 (0.02)**</td>
<td>—</td>
</tr>
<tr>
<td>Coalition house of representatives seat</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Age: 65 + %</td>
<td>0.22 (0.07)**</td>
<td>0.18 (0.07)*</td>
</tr>
<tr>
<td>University degree %</td>
<td>0.25 (0.02)***</td>
<td>0.24 (0.02)***</td>
</tr>
<tr>
<td>Married or widowed %</td>
<td>0.15 (0.04)</td>
<td>0.13 (0.04)***</td>
</tr>
<tr>
<td>Foreign-born (arrived 2006–2016) %</td>
<td>−0.26 (0.06)***</td>
<td>−0.27 (0.06)***</td>
</tr>
<tr>
<td>Catholic %</td>
<td>−0.09 (0.05)</td>
<td>−0.11 (0.05)*</td>
</tr>
<tr>
<td>Conservative protestant %</td>
<td>−0.14 (0.12)</td>
<td>−0.20 (0.13)</td>
</tr>
<tr>
<td>Muslim %</td>
<td>−0.16 (0.06)*</td>
<td>−0.11 (0.06)</td>
</tr>
<tr>
<td>(R^2)</td>
<td>0.74</td>
<td>0.72</td>
</tr>
<tr>
<td>Root MSE</td>
<td>2.13</td>
<td>2.19</td>
</tr>
<tr>
<td>(N)</td>
<td>150</td>
<td>150</td>
</tr>
</tbody>
</table>

Source: Australian Bureau of Statistics; Australian Electoral Commission.
Notes: Least-squares coefficients. Analyses are weighted by the number of eligible voters. All continuous independent variables are mean-centred. Coefficients control for a single outlier (Lingiari, Northern Territory). Data are derived from Federal Electoral Division (FED) level figures (\(N=150\)).

\*p \leq 0.05; \**p \leq 0.01; \***p \leq 0.001.

marriage equality postal vote. Electoral divisions with high concentrations of recent immigrants recorded lower participation rates. Increasing the percentage of recent immigrants from its minimum to its maximum is associated with a 7.2 percentage point decrease in participation (from 81.6% to 74.4%). Further, increasing the concentration of Muslims from its minimum to its maximum is associated with a 4.7% decrease in participation (from 79.8% to 75.1%). In sum, these findings suggest that marriage equality had greater salience among segments of the Australian public that supported the Yes side.

Conclusion

This article has endeavoured to identify the local, aggregate-level political and socio-demographic factors that shaped Australians’ aggregate-level support for same-sex marriage captured in the Marriage Equality Postal Survey. Among its key findings are that electoral division-level support for same-sex marriage are shaped chiefly by the aggregate level of participation in the survey itself, with greater participation associated with greater support. This has important implications for research on campaigns and their effect on voter turnout that ought to be pursued in future research. We argue that a morality politics framework alone is insufficient for understanding the same-sex marriage outcome. Yet, we also find that support for marriage equality is shaped by the religious context of the electoral division (with greater proportions of Catholics, conservative Protestants and Muslims all decreasing support), and the local concentration of opposite-sex married persons (again decreasing support). This suggests that for some citizens a
morality framework is useful for understanding reduced support for same-sex marriage. Higher local concentrations of older residents also reduce support, while higher concentrations of university degree holders increase support, though to lesser degrees. Finally, it is worth noting that after accounting for the effects of these socio-demographic factors, the effects of the political (specifically partisan) context are virtually non-existent. Even the safest House seats for the right-of-centre Coalition are predicted to have majority support for marriage equality. Our results are largely congruent with the analysis of the marriage equality vote by McAllister and Snagovsky (2018), suggesting that our findings are robust.

While the results presented here offer a compelling aggregate-level (or ecological) explanation of the aggregate-level marriage equality postal survey results, they raise a set of corollary questions. First, given that mass public opinion is routinely observed to be structured by cues from political elites (e.g., Zaller, 1992), why are party cues (and political polarisation at the elite level) relating to same-sex marriage so muted in the Australian case, when such attitudes are highly polarised in other cases, such as in the US? Second, given the noted gaps in attitudes between both newly arrived Australians and the rest of Australian society, what accounts for such gaps, and do they diminish over time? Research on the acculturation and adaptation of political attitudes of immigrants in other western democracies (e.g., Fitzgerald et al., 2014) offers a possible avenue of inquiry for students of Australian politics and society, though we leave these questions for future studies.

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Supplemental material
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Notes
3. We define ‘conservative Protestant’ as including Baptist, Christian Brethren, Church of Christ, Lutheran, Pentecostal, Presbyterian Reformed, and Seventh-Day Adventist denominations. We do not include Anglican, Salvation Army, Uniting Church, or non-specific ‘other Protestant’ denominations in calculating these percentages.
4. http://results.aec.gov.au/20499/Website/HouseDownloadsMenu-20499-Csv.htm (accessed 23 November 2017). It is worth noting that the FED-level correlations between House of Representatives and Senate voting are 0.86 for Coalition voting, and 0.88 for Labor voting. We therefore use only House voting in our models to avoid introducing collinearity into our results.
5. Because the dependent variable is properly a proportion, some econometrically inclined readers might consider a fractional regression or beta regression more appropriate. It is worth observing that these data do not exhibit censoring at 0 or 1. Furthermore, these alternative model parameterizations yield results that do not differ from those provided by the easier-to-interpret linear models presented here. These models are provided in the online appendix.
References


**Author biographies**

**Timothy B Gravelle** is a Lecturer in Political Science in the School of Social and Political Sciences at the University of Melbourne. His research interests include comparative public opinion and political behaviour, spatial and contextual models of political behaviour, and public opinion towards foreign policy.

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## Appendix 1

*Descriptive statistics*

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes %</td>
<td>61.33</td>
<td>10.22</td>
<td>26.05</td>
<td>83.69</td>
</tr>
<tr>
<td>Participation %</td>
<td>79.29</td>
<td>4.05</td>
<td>49.97</td>
<td>85.82</td>
</tr>
<tr>
<td>Liberal-National coalition two-party preferred vote (House of Representatives, 2016)</td>
<td>50.18</td>
<td>11.40</td>
<td>27.64</td>
<td>74.90</td>
</tr>
<tr>
<td>Liberal-National coalition seat (House of Representatives, 2016)</td>
<td>0.52</td>
<td>0.50</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Population aged 65 + %</td>
<td>15.97</td>
<td>4.16</td>
<td>6.65</td>
<td>27.59</td>
</tr>
<tr>
<td>University degree %</td>
<td>34.87</td>
<td>13.87</td>
<td>16.43</td>
<td>66.27</td>
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<tr>
<td>Married/widowed %</td>
<td>53.53</td>
<td>5.50</td>
<td>27.67</td>
<td>65.21</td>
</tr>
<tr>
<td>Foreign born (arrived 2006–2016) %</td>
<td>9.46</td>
<td>6.30</td>
<td>1.08</td>
<td>28.64</td>
</tr>
<tr>
<td>Catholic %</td>
<td>22.64</td>
<td>4.38</td>
<td>11.40</td>
<td>36.08</td>
</tr>
<tr>
<td>Conservative protestant %</td>
<td>6.13</td>
<td>2.15</td>
<td>1.90</td>
<td>14.65</td>
</tr>
<tr>
<td>Muslim %</td>
<td>2.44</td>
<td>3.95</td>
<td>0.08</td>
<td>29.20</td>
</tr>
</tbody>
</table>

Sources: Australian Bureau of Statistics; Australian Electoral Commission.

Notes: Federal Electoral Division (FED) level figures (N = 150). Observations are weighted by the number of eligible voters.