## Title

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# Trends in Public Support for Marriage for Same-Sex Couples by State 

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## Executive Summary

This research brief uses data from multiple national surveys and well-established statistical methods to estimate public opinion about marriages for same-sex couples for each state in the United States.

Main findings from this study include:
> Since 2004, public support for marriage for same-sex couples has increased in every state in the U.S. with an average increase of $2.6 \%$ per year.
> Public support for marriage for same-sex couples has increased more rapidly since 2012. On average since 2012, states increased their support by $6.2 \%$ a year.
> Since 2014, the most rapid rate of increase in support for marriage for same-sex couples occurred primarily in states that presently recognize same-sex marriage. Indeed, legal recognition of marriage for same-sex couples has been followed by more rapid increases in public support.
> If current trends continue, by 2016 public support for marriage for same-sex couples will be at $40 \%$ or higher in every state, with 6 states above $45 \%$ and the remaining states between $50-85 \%$ support.

## Introduction

Legal recognition of marriage for same-sex couples has grown substantially since 2004, ${ }^{1}$ with the vast majority of these states permitting marriage by same-sex couple since 2012. Although national public opinion surveys offer insight into the position of the U.S. as a whole on this issue, no similar polls exist that focus reliably and consistently on public opinion for each of the 50 states and the District of Columbia. ${ }^{2}$ Reliable public opinion polling at the state-level on same sex marriage remains rare and primarily exists in states that have considered the topic at the ballot box or through their state legislatures.

In the absence of data from state-level public opinion polls in each state on legal marriage recognition for same-sex couples, this research brief relies on an established statistical technique that effectively utilizes data from multiple national surveys on this issue to generate reliable estimates of public opinion in each state within the country. Using this technique, we provide updated state level opinion estimates for 2014, highlight how popular opinion varies from state to state, and demonstrate how opinions have changed from 2004 to 2014. We finally turn to projecting statewide support estimates for 2016.

## Estimated level of support for marriage equality in each state in 2014

As represented in Figure 1, public opinion in various states range from an estimated low of 35\% support in Alabama, to a high of $75 \%$ support in Vermont, and $86 \%$ support in the District of Columbia.

In 2014, 36 states -- 72\% of all states -- and the District of Columbia are estimated to have support for same-sex marriage at or above $50 \%$. Of these 36 states, 31 currently perform marriages for same-sex couples. In four of these states, there are court decisions that have overturned prior state bans that are pending appeal.

In those states where same-sex marriages are currently legal, support for marriages for same-sex couples is particularly high. In fact, in 18 of these states ${ }^{3}$ support is over $60 \%$, and it is over $55 \%$ in eight additional states. ${ }^{4}$

In contrast, in seven other states ${ }^{5}$ estimates of support for same-sex marriage are between $35 \%$ and $40 \%$. Three of these seven states, Arkansas, Mississippi, and Tennessee, presently have state constitutional amendments prohibiting same-sex marriage.

Of the four states that are the subject of the current appeal the Supreme Court of the United States, two had majority support for marriage in 2014, Michigan and Ohio and a third, Kentucky, is within $5 \%$ of majority support for marriage. For Tennessee, we estimate support for marriage equality in 2014 at $36 \%$.

Also provided in Figure 1 (in blue text) is the margin of error of each of these estimates. There is a $95 \%$ probability that the actual level of popular support for same sex marriage in each state lies between the smallest number (lower bound) and largest number (upper bound). These intervals show the range of the results one likely finds for opinions on this issue in a single survey, and they also represent the certainty of the current estimates.

Figure 1: Marriage Opinion 2014 Estimates. Ranked from lowest support to highest support with the margin of error in blue.


## Change in support in each state since 2004

In 2004, when not a single state had greater than $50 \%$ support for same-sex marriage, 13 states adopted prohibitions of same-sex marriage by popular vote. As Figure 2 shows, support for same-sex marriage has increased at a rapid pace in every state in the past decade. We project out to 2016, assuming that current trends continue.

Popular support for same-sex marriage recognition has grown by $2.4 \%$ per year over the last decade, and we project this will continue to 2016. Support in Hawaii increased the most with a $43 \%$ change from 2004 to our projections for 2016, or an average change in popular support of $3.6 \%$ a year. Utah increased the least with a $19 \%$ change from 2004 to 2016, or an average change in popular support of $1.6 \%$ a year.

Twenty-three states and the District of Columbia saw support increase by greater than the average of $2.4 \%$ over this period. Notably among the states reflecting a $2.4 \%$ or greater increase per year over the last decade were the following states with state constitutional prohibitions: Michigan, Missouri, and South Dakota.

Even in Alabama, the state with the lowest estimated support for marriage for same-sex couples, support more than doubled between 2004 and 2016, increasing on average by $2 \%$ per year.

Of the four states that are the subject of the current appeal to the U.S. Supreme Court, support for marriage increased from $30 \%$ to $60 \%$ in Michigan; from $29 \%$ to $57 \%$ in Ohio; from $21 \%$ to $48 \%$ in Kentucky; and from $18 \%$ to $45 \%$ in Tennessee. On average, support for marriage in these states increase by $2.3 \%$ per year from 2004 to 2016.

## Support Has Accelerated over Time

As noted in an earlier article in The Washington Post, at the national level, support for same-sex marriage appears to be accelerating in recent years when compared to change since 1992. A similar trend appears in all of the states. Figure 3 shows an accelerated increase in approval of same-sex marriage recognition since 1992.

States increased their support by $6.2 \%$ a year on average between 2012 and 2014. The most rapid rate of increase in support occurred primarily in states that presently recognize same sex marriage. ${ }^{6}$
Interestingly, though, Missouri and Michigan were also among the states with a rapid rate of increase.
The effect is marked. In 2012, there were 12 states $^{7}$ and the District of Columbia with a majority in support of same sex marriage. In a Williams Institute report, ${ }^{8}$ we noted that, given trends at that time, it was "likely that another 8 states will have majority support for marriage for same-sex couples by the end of 2014 -- for a total of 20 states and the District of Columbia with $50 \%$." Instead as we noted above, by 2016, every state will be at $40 \%$ or higher in support for marriage for same sex couples, with 6 states above $45 \%$ and the remaining states between $50-85 \%$ support.

Figure 2: Marriage Opinions since 2004 and Projecting to 2016 Estimates. Ranked from lowest support to higher support in 2016.


When marriage equality policies are introduced in states, support increases more rapidly. ${ }^{9}$ Table 1 shows the annual rate of change in popular opinion of marriage equality among the states. It is broken down by their policy environments: states that already had marriage equality, states that have had marriage equality newly implemented, and states without marriage equality. We find that the annual rate of change is highest among the states that adopted marriage equality. However, since 2014, all marriage equality states, both those that adopted marriage equality before and after 2014, had similar rates of change - rates which are significantly higher than those states without marriage equality. We also find that regardless of the policy environment, the annual rate of change appears to be increasing over time.

Table 1: Annual rate of attitude change in support of marriage equality since 1992

|  | Average Annual Rate <br> of change up to 2004 | Average Annual Rate <br> of change up to 2014 | Average Annual Rate <br> of change up to <br> 2016* |  |
| :--- | :--- | :--- | :--- | :--- |
| States with Marriage <br> Equality in previous column | -- |  | 1.4 |  |
| New States with Marriage <br> Equality | 0.64 | +0.8 | 0.9 | 1.6 |
| States without Marriage <br> Equality | -0.21 | +1.1 | 0.6 | 1.1 |
| All States | -0.19 |  | 0.98 | 0.9 |

*Estimates are projected to 2016 based on an accelerated model of attitude change.

Figure 3 plots the change in attitudes using 1992 as a baseline for comparison each year. While in the 1990s and early 2000s most states had little or negative changes, all of the states have had substantial increases since then. We provide in Figure 3 projected estimates based upon these accelerated rates for 2016.

If current trends continue as in Figure 3, by 2016: 38 states and the District of Columbia will have support for same-sex marriage at or above $50 \%$ and, 6 more states will be within $5 \%$ or less of majority support. No state will have less than $40 \%$ supportive of legal marriage recognition for same-sex couples

Figure 3: Change in support for marriage since 1992 to 2016 (red is negative change, blue is positive change). Trends are plotted to the right with the projected level of support for 2016 based on an accelerated model.


## Conclusion

This research brief has identified that there are 36 states plus the District of Columbia presently with a majority ( $50 \%$ or above) in support of same sex marriage. And, given trends in public opinion on this issue over the last decade, at least an additional five states will join this group by the start of 2016, with six more states very close to that majority point.

All states are presently experiencing a trend reflecting increasing popular support for marriage for same sex couples; the rates of change across states averaged $2.6 \%$ per year over the last ten years. For almost all of the states the rate of change in support has accelerated over the last two years. Since 2012, states increased their support by $6.2 \%$ a year on average.
${ }^{1}$ In the last decade, legislative and popular majorities in 11 states-Delaware, Hawaii, Illinois, Maine, Maryland, Minnesota, New York, New Hampshire, Rhode Island, Vermont and Washington-have passed laws to introduce same sex marriage. And, in that same time period, court rulings in 26 states-Alabama, Alaska, Arizona, California, Colorado, Connecticut, Florida, Idaho, Indiana, Iowa, Kansas, New Jersey, New Mexico, North Carolina, Oklahoma, Oregon, Pennsylvania, South Carolina, Utah, Virginia, West Virginia, Wisconsin, and Wyoming-acted to legalize marriage for same-sex couples.
${ }^{2}$ Recently, the Public Religion Research Institute (PRRI) has begun to change this trend by conducting surveys with a substantially large sample size (approximately 50,000 respondents), which facilitates in having numerous respondents from a single state. We caution, however, that their methodology of disaggregation has been shown to produce estimates that are less reliable than the methods applied here (see Jeffrey R. Lax and Justin H. Phillips. 2009. "How Should Estimate Public Opinion in the States?" American Journal of Political Science 53(1): 107-121.). We also note, to their credit, that our 2014 estimates and the ones provided by PRRI correlate highly: 0.903 (see Methodology for further discussion).
${ }^{3}$ California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Maine, Maryland, Massachusetts, Minnesota, Nevada, New Hampshire, New Jersey, New York, Rhode Island, Vermont, Washington, and Wisconsin-and the District of Columbia.
${ }^{4}$ Arizona, Florida, Iowa, Michigan, Missouri, New Mexico, Oregon, and Pennsylvania
${ }^{5}$ Alabama, Arkansas, Mississippi, Oklahoma, Tennessee, Utah, and West Virginia-
${ }^{6}$,the District of Columbia, Vermont, Rhode Island, Maryland, New York, Hawaii, New Hampshire, Delaware, Minnesota, New Jersey, Illinois and California.
${ }^{7}$ California, Colorado, Connecticut, Hawaii, Maine, Massachusetts, New Jersey, New York, Oregon, Rhode Island, Vermont, and Washington
${ }^{8}$ Andrew R. Flores and Scott Barclay. 2013. Public Support for Marriage for Same-sex Couples by State. Los Angeles, CA: The Williams Institute, p. 1-12.
${ }^{9}$ Andrew R. Flores and Scott Barclay. 2015. "Backlash, Consensus, or Naturalization: The Effect of Same-Sex Marriage Policy on Mass Attitudes." Presented at the annual meeting of the Western Political Science Association, Las Vegas, NV. Rebecca J. Kreitzer, Allison J. Hamilton, and Caroline J. Tolbert. 2014. "Does Policy Adoption Change Opinions on Minority Rights? The Effects of Legalizing Same-Sex Marriage." Political Research Quarterly. doi: 10.1177/1065912914540483. Scott Barclay and Andrew R. Flores. 2014. "Backlash, Consensus or Naturalization: The Impact of Policy Shift on Subsequent Public Opinion Levels." Presented at the annual meeting of the Western Political Science Association, Seattle, WA.

## Methodology

## Data Sources

The analyses aggregate survey data from multiple polling agencies and news sources; all of the data are available on the Roper Center database and ICPSR data archive. All of the data are aggregated into one "megapoll" by year, and respondents’ opinions on marriage equality and basic demographics are coded uniformly. A survey indicator is also used to account for each unique survey.

## Estimation Procedure

First, a regression model estimates how demographic and geographic attributes affect the likelihood someone supports marriage recognition for same-sex couples. The demographic variables include: age (18-29, 30-44, 45-64, 65+), sex (male and female), race (Black and all others), and education (Less than H.S. Diploma, H.S. Diploma, Some College, and College Graduate or more). The geographic variables include: each state including the District of Columbia and the different regions (Midwest, Northeast, South, West, and the District of Columbia). The District of Columbia is included as both a region and a state because it has been known to have distinct political opinions from the rest of the country, making it a unique region in it of itself. Like many surveys that develop survey weights, an interaction between sex and race is included, and we do the same in this brief. A "good" model leverages information about the states in order to add precision to the estimates. Here, we use the percentage the Republican presidential candidate received in the previous election. We show in the following figure that this measure provider further information regarding the differences among states.

Figure 4: The effects of different states plotted against the vote share for the Republican presidential candidate


Second, the results of the model are post-stratified to each age-sex-education-race group using state population estimates from the U.S. Census. This way, the likelihood a person supports marriage is estimated and then the Census indicates how many people fit that profile. Table 2 provides a snapshot of

Census population estimates for each year and age-sex-education-race group for each state. There are 64 unique combinations of the groups in each state, and this provides 3,264 population estimates for the entire country each year. We use these state population estimates to average across all of the demographic groupings. This way, for example, the probability respondents support same-sex marriage among residents of Wyoming who are female, not Black, and over the age of 65 is estimated, and then weighted by the number of people in Wyoming who are female, not black, over the age of 65; this provides a physical number of people who support and do not support same-sex marriage. We sum the number of supporters across all of the groups in the state and then divide this figure by the total amount of people in the state, to determine the proportion of people in a state who are supportive of same-sex marriage. We use 2010 Census estimates for 2012 and 2014 while we use 1990 and 2000 estimates with weights from the American Community Surveys for the 1990s and 2000s.

Table 2: Sample of the U.S. Census population estimates used in the second step of the estimation procedure

| Age | Sex | Education | Race | State | Year | N |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $18-29$ | Male | Less than H.S. | Black | Alabama | 2004 | $\mathbf{2 6 , 2 8 6}$ |
| $30-44$ | Male | H.S. Diploma | Black | Alabama | 2004 | $\mathbf{4 1 , 5 8 3}$ |
| $\vdots$ | $\vdots$ | $\vdots$ | $\vdots$ | $\vdots$ | $\vdots$ | $\vdots$ |
| $65+$ | Female | Some College | All else | Wyoming | 2010 | $\mathbf{1 0 , 0 1 6}$ |
| $65+$ | Female | College <br>  | Degree | All else | Wyoming | 2010 | $\mathbf{5 , 5 0 1} 9$.

After estimates are generated by year, a curvilinear regression is run on each state to estimate the change over time. The results are then used to project to 2016. Table 3 provides a series of F-tests showing that the accelerated models out-perform stable ones in almost all cases.

Table 3: F-tests comparing accelerated models to stable ones, a significant p-value indicates that the accelerated model performs better

| State | $\boldsymbol{F}_{17}^{17}(\mathbf{P}$-value $)$ | State | $\boldsymbol{F}_{17}^{17}(\mathbf{P}$-value) | State | $\boldsymbol{F}_{17}^{17}(\mathrm{P}$-value) |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Alaska | $11.66(<.01)$ | Kentucky | $40.88(<.01)$ | New York | $12.72(<.01)$ |
| Alabama | $35.98(<.01)$ | Louisiana | $29.72(<.01)$ | Ohio | $29.03(<.01)$ |
| Arkansas | $26.25(<.01)$ | Massachusetts | $16.90(<.01)$ | Oklahoma | $16.21(<.01)$ |
| Arizona | $18.61(<.01)$ | Maryland | $60.81(<.01)$ | Oregon | $44.12(<.01)$ |
| California | $35.40(<.01)$ | Maine | $16.74(<.01)$ | Pennsylvania | $36.74(<.01)$ |
| Colorado | $42.42(<.01)$ | Michigan | $20.49(<.01)$ | Rhode Island | $10.87(<.01)$ |
| Connecticut | $2.79(0.113)$ | Minnesota | $30.55(<.01)$ | South Carolina | $21.70(<.01)$ |
| District of <br> Columbia | $27.60(<.01)$ | Missouri | $23.30(<.01)$ | South Dakota | $26.02(<.01)$ |
| Delaware | $9.39(<.01)$ | Mississippi | $12.54(<.01)$ | Tennessee | $80.06(<.01)$ |
| Florida | $40.37(<.01)$ | Montana | $23.77(<.01)$ | Texas | $21.52(<.01)$ |
| Georgia | $31.86(<.01)$ | North Carolina | $34.10(<.01)$ | Utah | $19.49(<.01)$ |
| Hawaii | $25.81(<.01)$ | North Dakota | $25.48(<.01)$ | Virginia | $34.91(<.01)$ |
| Iowa | $20.21(<.01)$ | Nebraska | $56.24(<.01)$ | Vermont | $87.45(<.01)$ |
| Idaho | $18.16(<.01)$ | New Hampshire | $11.37(<.01)$ | Washington | $46.45(<.01)$ |
| Illinois | $20.03(<.01)$ | New Jersey | $31.58(<.01)$ | Wisconsin | $41.82(<.01)$ |
| Indiana | $28.77(<.01)$ | New Mexico | $7.62(0.013)$ | West Virginia | $65.92(<.01)$ |
| Kansas | $30.10(<.01)$ | Nevada | $14.06(<.01)$ | Wyoming | $5.49(0.032)$ |

## Comparing Estimates for Reliability and Validity

With statewide polls from some states, estimates from the Public Religion Research Institute and the current study, we are able to provide an evaluation how the present estimates compare to other proposed measures. We find that there are very few differences in our estimates when compared to other estimates or statewide polls. The present estimates correlate at 0.90 and 0.86 with the PRRI estimates and available 2014 statewide polls, respectively. The PRRI estimates and 2014 statewide polls correlate at 0.79 . All of these are relatively high correlations, suggesting that the estimates presented are reliable and valid.

Figure 5: Comparisons between different statewide estimates on opinions on marriage equality in 2014 by state


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#### Abstract

About the Institute The Williams Institute on Sexual Orientation and Gender Identity Law and Public Policy at UCLA School of Law advances law and public policy through rigorous, independent research and scholarship, and disseminates its work through a variety of education programs and media to judges, legislators, lawyers, other policymakers and the public. These studies can be accessed at the Williams Institute website.


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