



Ipsos Poll Conducted for Reuters

Approval Ratings, Abortion and Gay Marriage 3.12.13

These are findings from an Ipsos poll conducted for Thomson Reuters from March 9-12, 2013. For the survey, a sample of 1,158 Americans ages 18+ were interviewed online. The precision of the Reuters/Ipsos online polls is measured using a [credibility interval](#).

In this case, the poll has a credibility interval of plus or minus 3.3 percentage points. For more information about credibility intervals, please see the appendix.

The data were weighted to the U.S. current population data by gender, age, education, and ethnicity. Statistical margins of error are not applicable to online polls. All sample surveys and polls may be subject to other sources of error, including, but not limited to coverage error and measurement error. Figures marked by an asterisk (*) indicate a percentage value of greater than zero but less than one half of one per cent. Where figures do not sum to 100, this is due to the effects of rounding.

APPROVAL RATINGS, ABORTION AND GAY MARRIAGE

Q1. Generally speaking, would you say things in this country are heading in the right direction, or are they off on the wrong track?

Right direction	27%
Wrong track	57%
Don't know	16%

Q2. Overall, do you approve or disapprove about the way Barack Obama is handling his job as President?

Q2a. Is that strongly (approve/disapprove) or somewhat (approve/disapprove)? (Asked of those who selected "approve" or "disapprove") Q2b. If you had to choose, do you lean more towards approve or disapprove? (Asked of those who selected "don't know")

Strongly approve	25%
Somewhat approve	17%
Lean towards approve	4%
Lean towards disapprove	4%
Somewhat disapprove	13%
Strongly disapprove	33%
Not sure	3%
Total approve	47%
Total disapprove	50%

Q3. When you think about abortion, which of the following is closest to your personal opinion?

Abortion should be illegal in all cases	15%
Abortion should be illegal in most cases	24%
Abortion should be legal in most cases	28%
Abortion should be legal in all cases	22%
Unsure	10%

Q4. Regardless of your opinion about abortion, do you think the federal government should decide whether abortion should be legal or not, or should each state government decide?

Federal Government	37%
Each State Government	39%
Unsure	24%



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Q5. And which if the below is closest to your view about where abortion laws should be made in this country?

Abortion laws should be made at the state level by state legislators	11%
Abortion laws should be made at the state level by voter referendum	24%
Abortion laws should be made at the national level by Congress	11%
Abortion laws should be made by the U.S. Supreme Court declaring a nationwide constitutional right	31%
Don't know	23%

Q6. And which if the below is closest to your view about where same-sex marriage laws should be made in this country?

Same-sex marriage laws should be made at the state level by state legislators	10%
Same-size marriage laws should be made at the state level by voter referendum	25%
Same-marriage laws should be made at the national level by Congress	11%
Same-size marriage laws should be made by the U.S. Supreme Court declaring a nationwide constitutional right	32%
Don't know	22%

Q7. As you may know, there are some federal benefits associated with marriage, which include things like health insurance for a spouse and Social Security payments from a deceased working spouse. In your view, should same-sex married couples receive the federal benefits that heterosexual married couples receive, or not?

Same-sex married couples should receive these federal benefits	56%
Same-sex married couples should not receive these federal benefits	28%
Don't know	16%

How to Calculate Bayesian Credibility Intervals

The calculation of credibility intervals assumes that Y has a binomial distribution conditioned on the parameter θ , i.e., $Y|\theta \sim \text{Bin}(n, \theta)$, where n is the size of our sample. In this setting, Y counts the number of “yes”, or “1”, observed in the sample, so that the sample mean (\bar{y}) is a natural estimate of the true population proportion θ . This model is often called the likelihood function, and it is a standard concept in both the Bayesian and the Classical framework. The Bayesian ¹ statistics combines both the prior distribution and the likelihood function to create a posterior distribution. The posterior distribution represents our opinion about which are the plausible values for θ adjusted after observing the sample data. In reality, the posterior distribution is one’s knowledge base updated using the latest survey information. For the prior and likelihood functions specified here, the posterior distribution is also a beta distribution ($\pi(\theta|y) \sim \beta(y+a, n-y+b)$), but with updated hyper-parameters.

Our credibility interval for ϑ is based on this posterior distribution. As mentioned above, these intervals represent our belief about which are the most plausible values for ϑ given our updated knowledge base. There are different ways to calculate these intervals based on . Since we want only one measure of precision for all variables in the survey, analogous to what is done within the Classical framework, we will compute the largest possible credibility interval for any observed sample. The worst case occurs when we assume that $a=1$ and $b=1$ and . Using a simple approximation of the posterior by the normal distribution, the 95% credibility interval is given by, approximately:

$$\bar{y} \pm \frac{1}{\sqrt{n}}$$

For this poll, the Bayesian Credibility Interval was adjusted using standard weighting design effect $1+L=1.3$ to account for complex weighting²

Examples of credibility intervals for different base sizes are below. Ipsos does not publish data for base sizes (sample sizes) below 100.

Sample size	Credibility intervals
2,000	2.5
1,500	2.9
1,000	3.5
750	4.1
500	5.0
350	6.0
200	7.9
100	11.2

¹ *Bayesian Data Analysis, Second Edition, Andrew Gelman, John B. Carlin, Hal S. Stern, Donald B. Rubin, Chapman & Hall/CRC | ISBN: 158488388X | 2003*

² *Kish, L. (1992). Weighting for unequal Pi. Journal of Official, Statistics, 8, 2, 183200.*