

These are findings from an Ipsos poll conducted for Thomson Reuters August 19-September 8, 2015. For the survey, a sample of 6,390 adults 18+, including 1,399 that identified as Catholic and 4,911 that identified as non-Catholic; and 2,570 Democrats, 2,247 Republicans, and 845 Independents, 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 1.4 percentage points for all respondents, 3.0 percentage points for Catholics, and 1.6 percentage points for non-Catholics; and 2.2 percentage points for Democrats, 2.4 percentage points for Republicans, and 3.8 percentage points for Independents. 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. To see more information on this and other Reuters/Ipsos polls, please visit <http://polling.reuters.com/>.

### PRE-PAPAL VISIT

Q1. Do you support or oppose the death penalty?

	Total	Catholics	Non-Catholics	Democrats	Republicans	Independents
Strongly support	32%	31%	32%	21%	48%	36%
Somewhat support	34%	37%	33%	36%	34%	32%
Somewhat oppose	14%	14%	14%	20%	9%	10%
Strongly oppose	10%	10%	11%	15%	4%	12%
Don't know	10%	8%	10%	8%	5%	10%
<b>TOTAL SUPPORT</b>	<b>66%</b>	<b>68%</b>	<b>65%</b>	<b>57%</b>	<b>82%</b>	<b>68%</b>
<b>TOTAL OPPOSE</b>	<b>24%</b>	<b>24%</b>	<b>24%</b>	<b>35%</b>	<b>13%</b>	<b>22%</b>

Q2. When you think about the planet and global warming, which of the following comes closest to your personal opinion? The planet has been getting warmer because of...

	Total	Catholics	Non-Catholics	Democrats	Republicans	Independents
Natural patterns in the earth's environment	14%	13%	15%	7%	27%	15%
Mostly natural patterns but some impact from human activity	21%	23%	20%	16%	31%	22%
Mostly human activity but some natural patterns in the earth's environment	29%	31%	29%	37%	22%	33%
Human activity such as burning fossil fuels	22%	21%	22%	32%	12%	17%
Unsure	13%	11%	14%	9%	9%	13%

Q3. Do you believe global warming is happening?

	Total	Catholics	Non-Catholics	Democrats	Republicans	Independents
Yes	69%	72%	68%	85%	52%	69%
No	15%	14%	16%	6%	31%	14%
Unsure	16%	14%	16%	9%	17%	16%

Q4. When you think about the planet and global warming, which of the following comes closest to your personal opinion:

	Total	Catholics	Non-Catholics	Democrats	Republicans	Independents
The government should take aggressive steps to curb global warming by cutting carbon dioxide emissions and subsidizing clean energy sources like wind and solar	58%	61%	58%	79%	38%	55%
The government should stay out of the energy marketplace	23%	23%	23%	9%	45%	28%
Unsure	19%	16%	19%	12%	17%	17%

Q5. When you think about immigration, which of the following solutions come closest to your opinion?

	Total	Catholics	Non-Catholics	Democrats	Republicans	Independents
All illegal immigrants should be able to stay in the US legally	6%	7%	6%	11%	2%	5%
Most illegal immigrants should be able to stay in the US, with some exceptions	27%	31%	26%	43%	13%	21%
Most illegal immigrants should be deported, with some exceptions	29%	28%	29%	23%	40%	32%
All illegal immigrants should be deported	27%	25%	27%	14%	42%	32%
Unsure	11%	9%	12%	9%	4%	10%

Q6. Do you support or oppose allowing same-sex couples to legally marry?

	Total	Catholics	Non-Catholics	Democrats	Republicans	Independents
Support	51%	53%	50%	69%	31%	50%
Oppose	35%	31%	36%	21%	57%	33%
Unsure	14%	16%	14%	9%	12%	17%

Q7. When you think about abortion, which of the following is closest to your personal opinion?

	Total (n=6,886)	Catholics (n=1,500)	Non-Catholics (n=5,386)	Democrats (n=2,790)	Republicans (n=2,397)	Independents (n=920)
Abortion should be illegal in all cases	16%	14%	17%	12%	21%	16%
Abortion should be illegal in most cases	28%	33%	26%	20%	42%	29%
Abortion should be legal in most cases	25%	28%	24%	31%	20%	26%
Abortion should be legal in all cases	21%	16%	23%	32%	10%	18%
Unsure	10%	9%	10%	6%	6%	11%

Q8. Please indicate whether you agree or disagree with each of the following statements:

Total	Agree	Disagree	Not sure
The government should be doing more to reduce the gap between the rich and poor.	63%	24%	13%
Wealth in this country should be more evenly distributed among more people.	61%	25%	14%

Q8. Please indicate whether you agree or disagree with each of the following statements:

Catholics	Agree	Disagree	Not sure
The government should be doing more to reduce the gap between the rich and poor.	62%	26%	12%
Wealth in this country should be more evenly distributed among more people.	61%	24%	15%
Non-Catholics	Agree	Disagree	Not sure
The government should be doing more to reduce the gap between the rich and poor.	63%	24%	14%
Wealth in this country should be more evenly distributed among more people.	61%	25%	14%
Democrats	Agree	Disagree	Not sure
The government should be doing more to reduce the gap between the rich and poor.	82%	9%	9%
Wealth in this country should be more evenly distributed among more people.	80%	9%	11%
Republicans	Agree	Disagree	Not sure
The government should be doing more to reduce the gap between the rich and poor.	39%	49%	12%
Wealth in this country should be more evenly distributed among more people.	36%	52%	12%
Independents	Agree	Disagree	Not sure
The government should be doing more to reduce the gap between the rich and poor.	60%	24%	15%
Wealth in this country should be more evenly distributed among more people.	62%	23%	15%

Q9. From the list below, please indicate the extent to which you agree or disagree with each statement:

Total	<u>% Total Agree</u>
For the most part, I'm colorblind; that is, I don't care about what race people are.	80%
Racism is a major problem in the U.S.	70%
Race plays a major role in the type of social services (such as type of health care or day care) that people receive in the U.S.	58%
Black people do not have the same opportunities as white people in the U.S.	44%
I feel like this country has started to really deal with our difficult racial problems.	34%
Racial problems in the U.S. are rare, isolated situations.	23%
Catholics	<u>% Total Agree</u>
For the most part, I'm colorblind; that is, I don't care about what race people are.	80%
Racism is a major problem in the U.S.	70%
Race plays a major role in the type of social services (such as type of health care or day care) that people receive in the U.S.	58%
Black people do not have the same opportunities as white people in the U.S.	40%
I feel like this country has started to really deal with our difficult racial problems.	38%
Racial problems in the U.S. are rare, isolated situations.	27%

Q9. From the list below, please indicate the extent to which you agree or disagree with each statement: (cont.)

Non-Catholics	% Total Agree
For the most part, I'm colorblind; that is, I don't care about what race people are.	80%
Racism is a major problem in the U.S.	69%
Race plays a major role in the type of social services (such as type of health care or day care) that people receive in the U.S.	58%
Black people do not have the same opportunities as white people in the U.S.	44%
I feel like this country has started to really deal with our difficult racial problems.	33%
Racial problems in the U.S. are rare, isolated situations.	21%
Democrats	% Total Agree
Racism is a major problem in the U.S.	83%
For the most part, I'm colorblind; that is, I don't care about what race people are.	82%
Race plays a major role in the type of social services (such as type of health care or day care) that people receive in the U.S.	69%
Black people do not have the same opportunities as white people in the U.S.	64%
I feel like this country has started to really deal with our difficult racial problems.	39%
Racial problems in the U.S. are rare, isolated situations.	18%
Republicans	% Total Agree
For the most part, I'm colorblind; that is, I don't care about what race people are.	83%
Racism is a major problem in the U.S.	57%
Race plays a major role in the type of social services (such as type of health care or day care) that people receive in the U.S.	52%
I feel like this country has started to really deal with our difficult racial problems.	32%
Racial problems in the U.S. are rare, isolated situations.	32%
Black people do not have the same opportunities as white people in the U.S.	24%
Independents	% Total Agree
For the most part, I'm colorblind; that is, I don't care about what race people are.	80%
Racism is a major problem in the U.S.	69%
Race plays a major role in the type of social services (such as type of health care or day care) that people receive in the U.S.	55%
Black people do not have the same opportunities as white people in the U.S.	39%
I feel like this country has started to really deal with our difficult racial problems.	36%
Racial problems in the U.S. are rare, isolated situations.	25%

Q10. Would you say that you agree or disagree with Pope Francis' views on the following issues?

Total	Agree	Disagree	Not sure
Renewable energy	30%	10%	60%
Climate change	29%	14%	58%
Economic development	28%	11%	61%
Income inequality	28%	13%	59%
Homosexuality	23%	21%	57%
Abortion	21%	23%	55%
Death penalty	18%	19%	63%

Q10. Would you say that you agree or disagree with Pope Francis' views on the following issues?  
(cont.)

Catholics	Agree	Disagree	Not sure
Economic development	42%	12%	46%
Climate change	42%	14%	44%
Renewable energy	42%	12%	46%
Income inequality	40%	15%	45%
Abortion	37%	24%	39%
Homosexuality	36%	20%	44%
Death penalty	31%	23%	46%

Non-Catholics	Agree	Disagree	Not sure
Renewable energy	26%	10%	64%
Climate change	25%	14%	61%
Income inequality	24%	13%	63%
Economic development	23%	11%	66%
Homosexuality	19%	21%	60%
Abortion	17%	23%	60%
Death penalty	15%	18%	67%

Democrats	Agree	Disagree	Not sure
Renewable energy	40%	6%	54%
Climate change	40%	8%	52%
Income inequality	39%	8%	52%
Economic development	36%	8%	56%
Homosexuality	24%	24%	53%
Death penalty	23%	18%	59%
Abortion	19%	30%	51%

Republicans	Agree	Disagree	Not sure
Abortion	29%	20%	51%
Homosexuality	25%	22%	53%
Economic development	22%	17%	61%
Renewable energy	22%	18%	60%
Climate change	20%	25%	56%
Income inequality	18%	23%	58%
Death penalty	15%	25%	59%

Independents	Agree	Disagree	Not sure
Renewable energy	32%	10%	58%
Climate change	30%	14%	56%
Economic development	30%	11%	59%
Income inequality	29%	13%	58%
Homosexuality	22%	22%	56%
Abortion	22%	25%	53%
Death penalty	19%	18%	63%

## How to Calculate Bayesian Credibility Intervals

The calculation of credibility intervals assumes that  $Y$  has a binomial distribution conditioned on the parameter  $\theta$ , 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  $\theta$ . This model is often called the likelihood function, and it is a standard concept in both the Bayesian and the Classical framework. The Bayesian <sup>1</sup> 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  $\theta$  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  $\vartheta$  is based on this posterior distribution. As mentioned above, these intervals represent our belief about which are the most plausible values for  $\vartheta$  given our updated knowledge base. There are different ways to calculate these intervals based on  $\pi(\theta/y)$ . 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  $y=n/2$ . 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 weighting<sup>2</sup>

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

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

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