Core Political Data December 14, 2022



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Ipsos Core Political Data

These are findings from an Ipsos poll conducted <u>December 12-13, 2022.</u> A sample of <u>1,005</u> Americans ages 18+ were interviewed online for this survey.

This included <u>450</u> Democrats, <u>346</u> Republicans, and <u>140</u> independents

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 the following percentage points:

<u>3.8</u> for All Adults, <u>5.7</u> for Democrats, <u>6.5</u> for Republicans, and <u>10.1</u> for independents

The data from this survey was weighted to the U.S. current population data using Gender, Age, Education, Ethnicity, and Region

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

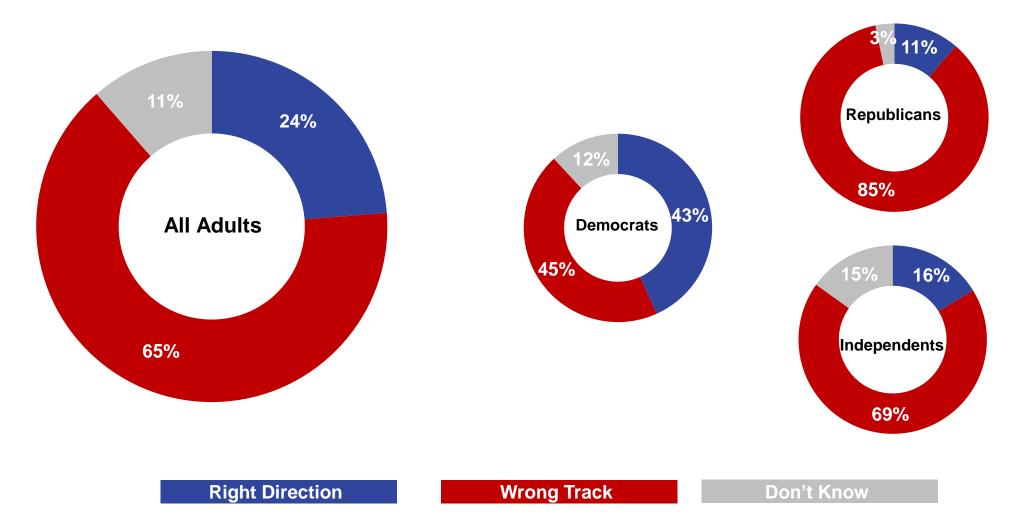
measurement error

Figures marked by an asterisk (*) indicate a percentage value of greater than zero but less than one half of one percent
Where figures do not sum to 100, this is because of rounding



Right Direction/Wrong Track

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

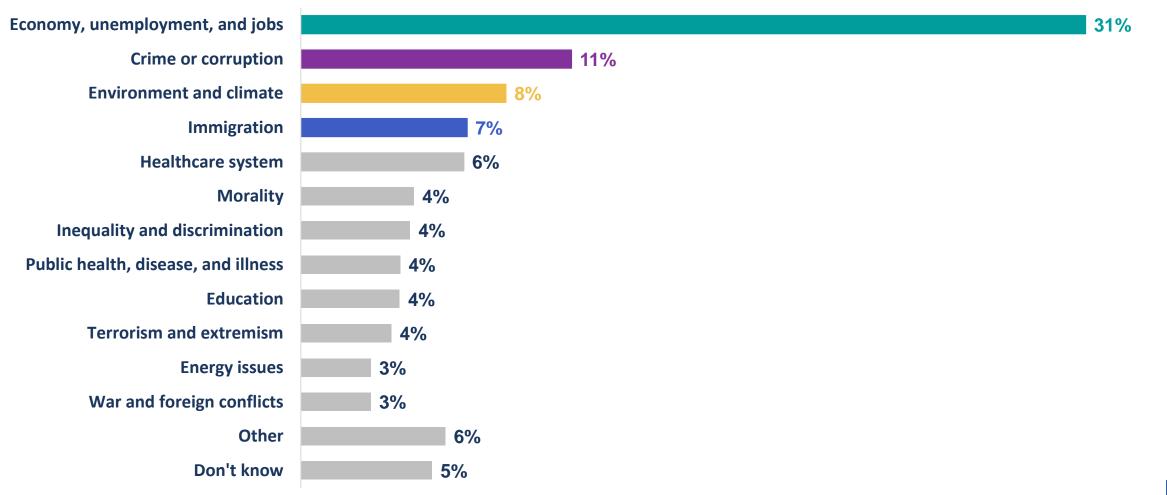




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Most Important Problem Facing America

In your opinion, what is the most important problem facing the U.S. today?



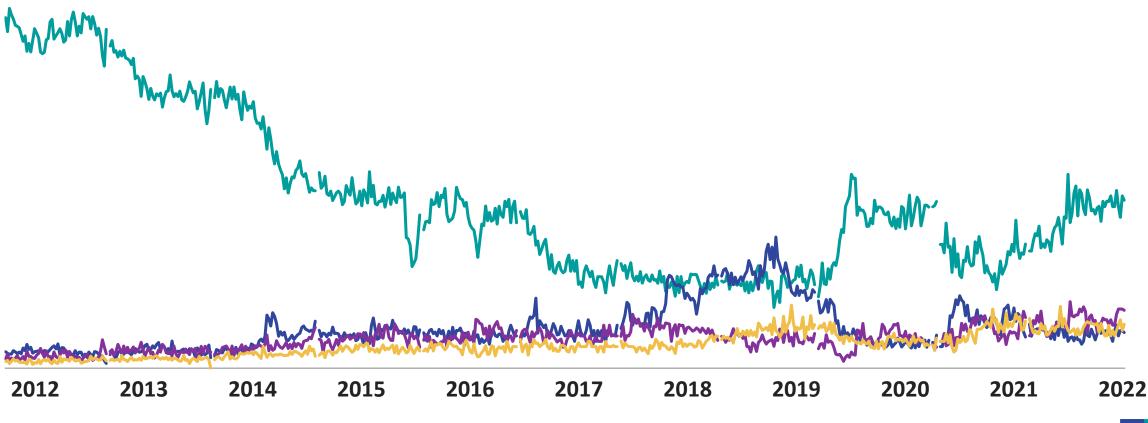


Most Important Problem Facing America

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In your opinion, what is the most important problem facing the U.S. today?

The economy, unemployment and jobs Crime and Corruption Environment and climate Immigration





*Prior to February 2021, "Economy, generally" and "Unemployment/lack of jobs" were asked separately, results on chart display the sum of both issues through that date. Have since been combined to create "Economy, unemployment, and jobs". Other changes include "system" being added to "healthcare", and "Inequality and discrimination" and "Public health, disease, and illness" were added as new issues.

Most Important Problem Facing America

In your opinion, what is the most important problem facing the U.S. today?

	All Americans	Democrats	Republicans	Independents
Economy, unemployment, and jobs	31%	29%	35%	34%
War and foreign conflicts	3%	1%	2%	5%
Immigration	7%	1%	14%	4%
Terrorism and extremism	4%	6%	2%	3%
Healthcare system	6%	10%	5%	3%
Public health, disease, and illness	4%	4%	3%	3%
Energy issues	3%	2%	4%	3%
Morality	4%	2%	7%	5%
Education	4%	4%	3%	5%
Crime or corruption	11%	8%	11%	13%
Environment and climate	8%	15%	4%	5%
Inequality and discrimination	4%	9%	1%	2%
Other	6%	7%	6%	3%
Don't know	5%	3%	3%	9%



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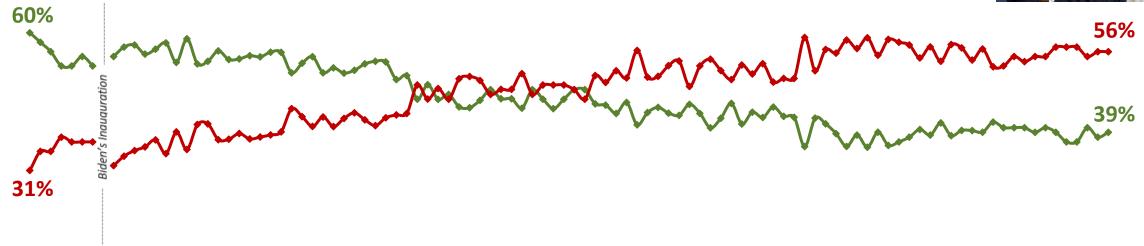
* Starting with 2/4/21 wave, "system" was added to "Healthcare", "extremism" was added to "Terrorism", and "corruption" was added to "Crime". "Public health, disease, and illness" and "Inequality and discrimination" were added as new issues. "Economy, generally" and "Unemployment/lack of jobs" were combined to create "Economy, unemployment, and jobs"

Joe Biden's Weekly Job Approval

Overall, do you approve or disapprove of the way Joe Biden is handling his job as president? (previously 'president-elect')

Total Approve





Total Disapprove

Nov 13-17 Dec 2-8 Dec 2-8 Jan 8-12 Jan 20-21 Feb 24-25 Mar 10-11 Mar 24-25 Mar 24-25 May 19-20 Jun 16-17 Jun 16-17	Jul 14-15 Jul 14-15 Jul 28-29 Aug 25-26 Sep 8-9 Sep 8-9 Sep 22-23 Oct 6-7 Oct 6-7 Nov 17-18 Nov 17-18 Jan 19-20 Jan 19-20 Feb 14-15 Feb 28-Mar 1 Mar 14-15	Mar 25-25 Apr 11-12 Apr 25-26 May 23-24 Jun 6-7 Jul 6-7 Jul 18-19 Aug 15-16 Aug 15-16 Aug 15-16 Aug 15-16 Sep 12-13 Sep 26-27 Oct 10-11 Oct 24-25 Nov 21-22 Nov 27-22
2020	2021 2022	

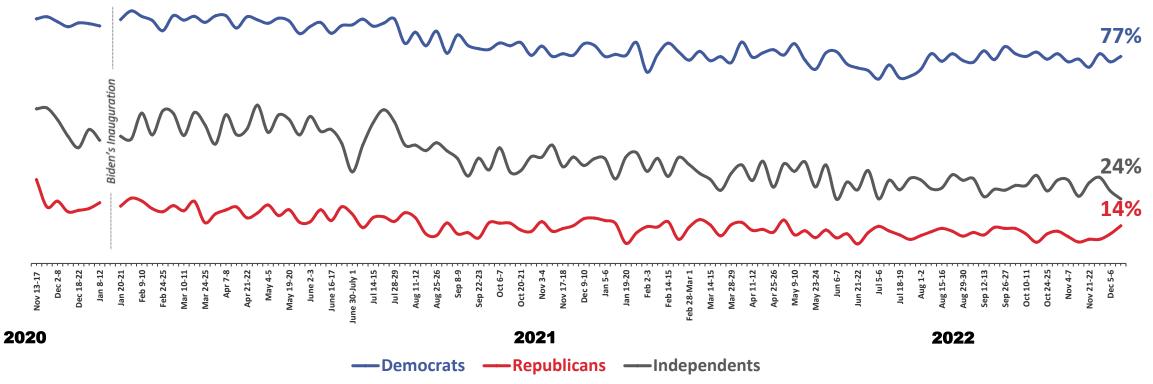


By Partisanship

Joe Biden's Weekly Job Approval by Partisanship

Overall, do you approve or disapprove of the way Joe Biden is handling his job as president? (previously 'president-elect')







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| θ ~bin(n, θ), 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 (\overline{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 bayesian¹ 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 ($\pi(\frac{\theta}{v}) \sim \beta(y+a,n-y+b)$), 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 $\pi \left(\frac{\theta}{y}\right)$. 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: $\overline{Y} \neq \frac{1}{\sqrt{2}}$

For this poll, the Bayesian credibility interval was adjusted using standard weighting design effect 1+L=1.5 to account for complex weighting² **Examples of credibility intervals for different base sizes are below:**

SAMPLE SIZE	CREDIBILITY INTERVALS
2,000	2.7
500	5.4
100	12.0

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.



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