### **Summary of the Vote Wise Survey Methodology Report**

#### **1. Introduction**

The methodology report provides an overview of the **weighting adjustments** and **sampling techniques** used to ensure the survey data better represents the voter population. The **Bureau of Sociological Research (BOSR) at the University of Nebraska-Lincoln** conducted the analysis.

#### **2. Weighting Adjustments**

To correct for **nonresponse bias** and make the sample more representative of the target population, **two types of weighting were applied**:

1. **Nonresponse Weighting (NRwt):** Adjusted for **age group and political party** to address response bias.
2. **Poststratification Weighting (post\_cat):** Applied based on **age group proportions** in the full voter population.

* **Hotdeck imputation** was used to fill in missing age data, ensuring every respondent had a valid age category for weighting.
* The **final weight (Pwate)** was derived by multiplying the nonresponse and poststratification weights, then rescaling them.

**Key Representativeness Adjustments by Age Group:**

| **Age Group** | **Population (%)** | **Unweighted Survey Data (%)** | **Weighted Survey Data (%)** |
| --- | --- | --- | --- |
| **18-39** | 47.2% | 24.5% | 47.2% |
| **40-64** | 38.5% | 44.5% | 38.5% |
| **65+** | 14.4% | 30.9% | 14.4% |

**Takeaway:** The unweighted data **overrepresented older voters (65+) and underrepresented younger voters (18-39)**. After weighting, the distribution aligns with actual population proportions.

#### **3. Design Effects & Statistical Adjustments**

* **Design Effect Due to Weighting:** **1.46**
  + This means that weighting **reduces statistical efficiency**, meaning standard errors and confidence intervals must be adjusted accordingly.
* **Formula Used for Design Effect Calculation:**
  + 1+CV2(w)1 + CV^2(w)1+CV2(w), where **CV** is the coefficient of variation of weights.
* **Statistical Adjustments:**
  + Proper adjustments must be made when using this data in statistical tests.

#### **4. Sampling Error & Margins of Error**

The report outlines **estimated sampling errors** both **with and without weighting adjustments**.

1. **Without Weighting Adjustments:**
   * **Margin of Error for Full Sample (n=110) at 95% Confidence Level:** **±9.34%**
   * **Smaller sample sizes have larger margins of error.**
2. **With Weighting Adjustments (Design Effect Applied):**
   * **Adjusted Margin of Error for Full Sample (n=110):** **±11.31%**
   * This accounts for **the loss in precision due to weighting**.

**Takeaway:** Weighting increases the **margin of error**, meaning small differences in survey responses should be interpreted with caution.

#### **5. Contact Information for Methodology Questions**

For further inquiries regarding the weighting process, the **Bureau of Sociological Research at the University of Nebraska-Lincoln** can be contacted via:

* **Phone:** (402) 472-3672
* **Email:** bosr@unl.edu

### **Final Takeaways**

1. **The survey was weighted to correct for response bias**, ensuring the data reflects the **age distribution of the voter population**.
2. **Weighting increased the margin of error (from ±9.34% to ±11.31%)**, meaning **results should be interpreted with slightly less precision**.
3. **Older voters were overrepresented in the raw data**, but weighting corrected this to match the full voter population.
4. **Statistical adjustments are necessary when analyzing the data**, as weighting impacts efficiency.

Would you like me to refine this further for a specific audience (e.g., internal report, public release, or academic presentation)?