RECALCULATION METHODOLOGY

A consistent methodology was used to unify the datasets by recalculating the counts and weights for each category while ensuring that:

1. **Proportions Align Across Categories:** Maintaining the percentage proportions provided in the datasets for each subcategory.
2. **Consistency in Totals:** The recalculated totals (respondents and weighted respondents) did not exceed the original total respondents or weighted population.
3. **Reallocation Across Categories:** Where groupings were changed (e.g., merging or splitting categories), proportional allocation of respondents and weights was maintained.

Here's the general formula used for recalculation:

Formula for Unified Dataset Calculation

For Respondents:

Recalculated Respondents=Total Respondents in Category Group×(Percentage of Subcategory100)\text{Recalculated Respondents} = \text{Total Respondents in Category Group} \times \left(\frac{\text{Percentage of Subcategory}}{100}\right)Recalculated Respondents=Total Respondents in Category Group×(100Percentage of Subcategory)

For Weighted Respondents:

Recalculated Weighted Respondents=Total Weighted Respondents in Category Group×(Percentage of Subcategory100)\text{Recalculated Weighted Respondents} = \text{Total Weighted Respondents in Category Group} \times \left(\frac{\text{Percentage of Subcategory}}{100}\right)Recalculated Weighted Respondents=Total Weighted Respondents in Category Group×(100Percentage of Subcategory)

Steps Followed

1. **Group or Reallocate Categories:**
    - For instance, when merging "Self-employed" into "Employed," we summed both respondent counts and recalculated proportions.
    - When splitting into new groupings (e.g., new income bands), we redistributed based on provided percentage shares.
2. **Adjust Percentages:**

- Percentages provided in the datasets (e.g., Positive Sentiment or Hesitancy) were used to proportionally distribute totals into subcategories.

3. **Check for Totals Consistency:**
    - Ensured that the sum of all subcategories matched the overall totals provided in the dataset.
4. **Weighted Respondent Adjustment:**
    - Used the same percentage split for recalculating weighted respondents, ensuring alignment with the recalculated respondent totals.

Example Application

Given Data:

- Total Respondents: 14,600
- Category A: 60%, Category B: 40%

Recalculated Respondents for Category A:

Category A Respondents=14,600×(60100)=8,760\text{Category A Respondents} = 14,600 \times \left(\frac{60}{100}\right) = 8,760Category A Respondents=14,600×(10060)=8,760

Recalculated Weighted Respondents for Category A:

Category A Weighted Respondents=Total Weighted Respondents in Dataset×(60100)\text{Category A Weighted Respondents} = \text{Total Weighted Respondents in Dataset} \times \left(\frac{60}{100}\right)Category A Weighted Respondents=Total Weighted Respondents in Dataset×(10060)

Why This Method?

This approach ensures proportional representation and maintains consistency with the original dataset structure while adapting to changes in category definitions or groupings. It also helps to align totals across datasets when aggregating multiple sources.