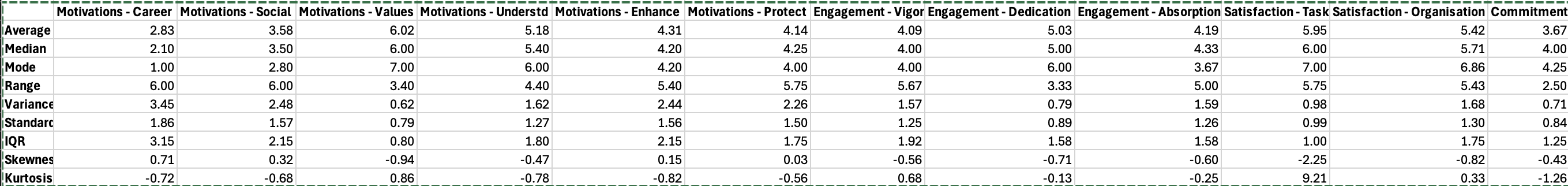
# **Suggestions for our Research**

1. **Sample Size, Population, and Reliability Checks**
   * Sample Description
     + Sample Size: The survey collected responses from 50 volunteers, representing approximately 33% of the total Sustainable Merton volunteer population (150 individuals).
     + Demographics:
       1. The dataset includes key demographic variables such as age, gender identity, and ethnic background, which allow for an assessment of diversity within the sample.
       2. Volunteers’ levels of involvement are reflected through engagement and commitment measures.
   * Representativeness
     + The sample size is moderate, covering one-third of the population, providing a snapshot of the target group. However:
     + Strength: A third of the population is significant for volunteer studies.
     + Limitations: The small sample size limits generalizability to the broader Sustainable Merton volunteer base. There may also be potential response bias, as more engaged volunteers might be overrepresented.
   * Reliability Checks
     + To calculate Cronbach’s Alpha, I used Python, leveraging statistical libraries to ensure accuracy and efficiency. First, I gathered responses for all items within each scale (e.g., Motivation, Engagement, Satisfaction) and ensured the data was properly aligned. Using the variance formula, I computed the variance for each individual item and the total variance across all items. These were then applied to the Cronbach’s Alpha formula, where is the number of items in the scale. The resulting Alpha value, 0.872, indicates high internal consistency, confirming the reliability of the scales used in the survey.
     + Cronbach’s Alpha for the scales is 0.872, indicating excellent internal consistency. This suggests that the scales used to measure Motivation, Engagement, and Satisfaction are reliable.
   * Summary of Average Scores
     + Motivation (scale: 1–7):
       1. Career: 2.83 - Relatively low, indicating less career-oriented motivation.
       2. Social: 3.58 - Moderate, reflecting some social motivations.
       3. Values: 6.02 - Very high, showing strong alignment with personal values.
       4. Understanding: 5.18 - High, suggesting volunteers seek knowledge or self-development.
       5. Enhancement: 4.31 - Moderate, reflecting some desire for self-growth.
       6. Protection: 4.14 - Moderate, showing some concern for self-protection.
     + Engagement (scale: 1–7):
       1. Vigor: 4.09 - Moderate, suggesting average energy levels in volunteering.
       2. Dedication: 5.03 - High, indicating strong emotional commitment.
       3. Absorption: 4.19 - Moderate, reflecting moderate involvement in activities.
     + Satisfaction (scale: 1–7):
       1. Task: 5.95 - Very high, showing satisfaction with the tasks performed.
       2. Organization: 5.42 - High, indicating satisfaction with Sustainable Merton’s management.
     + Commitment (scale: 1–5): 3.67 - Moderate, reflecting some intent to continue volunteering.
   * Conclusions
     + The sample is diverse enough to provide insights into the volunteer population’s motivations, engagement, and satisfaction.
     + High reliability of scales ensures robust findings.
2. **Overview of Core Constructs**

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* Motivation (VFI 6 Subscales)
  + Values (Scale: 1–7)
    - Mean: 6.02
    - Standard Deviation: 0.79
    - Range: 3.40
    - Key Insight: Values motivation is the highest-rated subscale, indicating that volunteers align strongly with Sustainable Merton’s values
  + Career
    - Mean: 2.83
    - Standard Deviation: 1.86
    - Range: 6.00
    - Key Insight: Career motivation is the lowest-rated subscale, showing that career development is not a primary driver for volunteering.
  + Social
    - Mean: 3.58
    - Standard Deviation: 1.57
    - Range: 6.00
    - Key Insight: Social motivation is moderate, reflecting some importance placed on social aspects of volunteering.
  + Understanding
    - Mean: 5.18
    - Standard Deviation: 1.27
    - Range: 4.40
    - Key Insight: High understanding scores suggest that volunteers value learning and self-improvement through participation.
  + Enhancement
    - Mean: 4.31
    - Standard Deviation: 1.56
    - Range: 5.75
    - Key Insight: Volunteers moderately value personal growth and self-enhancement from their contributions.
  + Protection
    - Mean: 4.14
    - Standard Deviation: 1.50
    - Range: 5.40
    - Key Insight: Protection motivation is moderate, indicating a balance between altruistic and self-serving motives.
* Engagement (3 Subscales)
  + Vigor
    - Mean: 4.09
    - Standard Deviation: 1.57
    - Range: 5.67
    - Key Insight: Engagement in terms of vigor is moderate, suggesting volunteers are energized but not exceptionally so.
  + Dedication
    - Mean: 5.03
    - Standard Deviation: 0.79
    - Range: 3.33
    - Key Insight: Dedication is high, reflecting strong emotional involvement in volunteering activities.
  + Absorption
    - Mean: 4.19
    - Standard Deviation: 1.59
    - Range: 5.75
    - Key Insight: Moderate absorption suggests volunteers are engaged but not fully immersed.
* Satisfaction (2 Subscales)
  + Task Satisfaction
    - Mean: 5.95
    - Standard Deviation: 0.98
    - Range: 5.75
    - Key Insight: Volunteers are highly satisfied with their tasks, showing alignment between roles and expectations.
  + Organizational Satisfaction
    - Mean: 5.42
    - Standard Deviation: 1.68
    - Range: 5.43
    - Key Insight: High satisfaction with management and organizational aspects indicates effective leadership and communication.
* Commitment
  + Mean: 3.67 (Scale: 1–5)
  + Standard Deviation: 0.71
  + Range: 2.50
  + Key Insight: Moderate commitment indicates volunteers are somewhat likely to continue their engagement or recommend the organization.
* General Observations
  + High Motivation for Values and Understanding: These subscales dominate the motivational profile, indicating a strong alignment with the organization’s mission and learning opportunities.
  + Engagement is High for Dedication: Volunteers feel emotionally committed, though their energy and focus vary.
  + Satisfaction is a Strength: High satisfaction with tasks and management reflects well on Sustainable Merton’s operational practices.

1. **Comparing Scores Across Demographics**
   * Significant differences were observed for Age:
     + Motivations - Career: Indicates career-related motivations vary significantly with age. Younger volunteers might be more focused on career-building, whereas older ones might prioritize other aspects.
     + Motivations - Understd: Suggests that motivations related to gaining knowledge and understanding differ with age.
     + Motivations - Enhance: Reflects differences in the desire for personal growth across age groups.
     + Motivations - Protect: Indicates age-related differences in motivations for self-protection.
     + Commitment: Age influences the level of commitment to volunteering, with older groups potentially more committed due to life stability.
   * Significant differences were found for Gender Identity:
     + Motivations - Social: Social motivations differ by gender, possibly reflecting varied social expectations or experiences in volunteering.
   * Significant differences were observed for Ethnic Background:
     + Motivations - Career: Career-related motivations differ across ethnic backgrounds, potentially reflecting different socio-economic or cultural contexts.
     + Motivations - Understd: Indicates varying importance of knowledge acquisition among different ethnic groups.
     + Motivations - Enhance: Personal growth motivations differ by ethnicity.
     + Motivations - Protect: Self-protection motivations vary across ethnic groups.
     + Engagement - Dedication: Dedication levels are influenced by ethnic background, possibly linked to cultural norms or values about volunteering.
   * Disability Status
     + No significant differences observed across scales, suggesting similar motivations, engagement, satisfaction, and commitment levels irrespective of disability status.
   * Significant differences were found for Education Level:
     + Motivations - Career: Education level influences career-related motivations, with highly educated volunteers possibly less career-focused.
     + Motivations - Enhance: Personal growth motivations vary with education, potentially reflecting differences in self-improvement priorities.
     + Motivations - Protect: Self-protection motivations are linked to education level, possibly due to different life experiences or insecurities.
   * Significant differences were observed for Employment Status:
     + Motivations - Career: Employment status affects career motivations, with unemployed or part-time workers potentially more career-focused.
     + Motivations - Social: Social motivations vary with employment status, possibly due to differences in social networks or work-life balance.
2. **Facilitators and Barriers**

* An overview of **facilitators** and **barriers:** Main facilitators and barriers and their relationships with engagement, satisfaction, and commitment. Introduce clustering or factor analysis to group similar facilitators/barriers into broader themes. Explore the relationship between facilitators/barriers and volunteer demographics using logistic regression.
* Other volunteering demographics overview:
  + Previous experiences and how did they first get into volunteering?
  + What projects are they involved in? relationships with motivations?
  + What kind of projects do they find **most rewarding?** relationships with motivations?
  + Hours of volunteering?
  + Relationships with personal demographics
* Conduct a frequency analysis to identify the most common facilitators and barriers.
* Use logistic regression or chi-square tests to examine relationships between facilitators/barriers and demographic variables or engagement levels.
* Simplify clustering or factor analysis for facilitators/barriers if sample size constraints make these methods impractical.

1. **Volunteering Demographics**
   * **Summarize:**
     + Previous volunteering experience (Yes/No) and how participants started volunteering.
     + Project involvement (e.g., which projects they work on) and most rewarding projects.
     + Hours volunteered (weekly).
   * **Analyze relationships between:**
     + Project involvement and motivations using chi-square tests.
     + Hours volunteered with satisfaction, engagement, and demographic variables using linear regression.
2. **Sustainability Awareness**

* **Sustainability Awareness:** Analysis to explore whether sustainability awareness has a meaningful relationship with motivations, engagement, and satisfaction.
* Use descriptive statistics to summarize sustainability-related responses (e.g., familiarity with sustainability, impact perception).
* Explore relationships between sustainability awareness and motivations, engagement, and satisfaction using correlations or simple regression.
* Frame these analyses as exploratory due to limited survey depth.

1. **Communication Preferences**

* **Communication Preferences:** Regression or correlation analysis to test whether the perceived effectiveness of communication channels predicts satisfaction, engagement, or intent to remain.
* Analyze perceived communication effectiveness as a predictor of satisfaction, engagement, or intent to remain using linear regression.
* Summarize communication challenges (e.g., delayed responses, overwhelming volume) using frequencies and thematic coding.
* Examine relationships between communication preferences and demographic variables using chi-square tests.

1. **Compare new volunteers to old volunteers:**
   * Categorize volunteers into new (<1 year) and old (>1 year) groups.
   * Compare key metrics (satisfaction, engagement, motivations, perceived impact, respect) using:
   * t-tests for two groups (e.g., new vs. old volunteers).
   * ANOVA for more detailed tenure categories (e.g., <6 months, 1-3 years, etc.), supplemented by post-hoc tests if significant.
   * Analyze intent to remain (e.g., "In the next two years, are you likely to continue volunteering?") using logistic regression or chi-square tests.
2. **Decision trees** 
   * Use decision trees to identify demographic predictors of satisfaction or engagement. Simplify models to avoid overfitting.
   * Avoid random forests due to the limited sample size.
   * Present results visually (e.g., feature importance rankings).
3. **Open-Ended Questions**
   * For open-ended questions like "What motivates you in your own words?", you can process responses by first cleaning the text (removing stopwords and standardizing formatting). Use keyword extraction techniques like TF-IDF or word clouds to identify frequently mentioned terms. Apply thematic analysis or clustering methods (e.g., LDA) to group responses into themes such as altruism, career growth, or social connections. Sentiment and emotional analysis tools can gauge emotional tones (positive, neutral, negative), while coding responses into categories enables frequency analysis (e.g., 40% altruism, 30% career). To deepen insights, correlate these themes with variables like engagement or satisfaction using regression or chi-square tests. Finally, visualize findings with bar charts or heatmaps to reveal patterns across demographics or other factors. This approach converts qualitative responses into actionable, quantitative insights.
   * If there are certain limitations like time, prioritise simpler thematic coding and keyword extraction for processing open-ended questions. Start by manually reviewing responses to identify common themes (e.g., "altruism," "career growth," "social connection"). Assign responses to these themes and calculate their frequencies to identify dominant categories. Use basic keyword analysis with tools like Excel or simple Python scripts to extract frequently mentioned words or phrases. This streamlined approach provides meaningful insights without requiring advanced techniques like LDA, making it more practical for immediate analysis and reporting.
4. **Reporting and Practical Implications**
   * Use clear visualizations (bar charts, scatterplots, heatmaps) to present findings.
   * Provide actionable recommendations for:
     + Enhancing facilitators and addressing barriers.
     + Improving communication strategies.
     + Retaining new and old volunteers by targeting motivations and satisfaction.
   * Emphasize limitations (small sample size, lack of validated commitment scale) in your reporting.