

Assignment 1@Week2: Submission Format Template

Group Information

- Group Number: 15
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- Slack Channel: #15-project-1---revisit--tackling-conventional-wisdom--from-sem1-227
- Date of Discussion: 2025.09.13

Part A: Conventional Wisdom Statement

Topic Selected: Order people use online shopping less than young generations.

Part B: Hypothesis Development

Null Hypothesis (H_0): Middle aged people use online shopping less than young generations.

- Mathematical notation (if applicable): $\mu_1 < \mu_2$

Alternative Hypothesis (H_1): Middle aged people use online shopping and services as same as young generations or even more.

- Mathematical notation (if applicable): $\mu_1 \geq \mu_2$

Part C: Evidence Framework

What evidence would convince us to reject H_0 ?

1. data on the number of purchases in online shopping malls by different ages.
2. the number of using internet shopping delivery services by different ages and year.
3. A statistically significant difference ($p < 0.05$) in average use frequency for online shopping between middle aged people and the young.

Potential confounding (associated) variables identified:

1. Some data of brand shoppingmall, it shows and analyzes both the on/offline shopping rate of people.
2. The data that demands on a specific product or category can provide biased analysis.
3. The income level of people makes the topic confusing because it impacts the purchase number regardless of age.

Part D: Socratic Questioning Process

Key Questions That Shaped Our Thinking:

1. Question: How can we define “middle aged” vs “young generation”?
 - Type: Clarification
 - Impact: The question helped us to define 40-50s as a middle aged group.
2. Question: Does online shopping usage simply mean the number of purchases or the amount of money?
 - Type: Clarification
 - Impact: The question helped us to think online shopping usage means the number of purchases, making us question whether it was appropriate to define it solely.
3. Question: How should we set the analysis period? Should we divide it into holidays, such as Chuseok, and regular periods, or is it better to look at it on an annual basis?
 - Type: Viewpoints
 - Impact: The question made us compare both seasonal effects(holidays vs regular period) and one year period.
4. Question: How can companies make middle aged people shop online more?
 - Type: Implications
 - Impact: The question helped us think from a company's perspective. From a company's perspective, simpler design, discounts on products preferred by middle aged customers, and seasonal promotions could be used to attract middle aged customers.

Part E: Creative Insights

"What if..." Scenario (topic/hypothesis) Explored: What if middle-aged people make fewer online purchases, but their average spending per transaction is significantly higher due to economic power differences?

How Our Final Hypothesis Differs from Initial Ideas:

This scenario began from the Pareto Principle(the 80/20 rule) that roughly 80% of effects come from 20% of the causes. We started to wonder if it could be applied to the online shopping market.

This single question reframed the entire problem. It shifted our topic from simply identifying the busiest user group to identifying the most influential and economical one.

Our initial topic was started with a simple conventional wisdom - a comparison of online shopping frequency. We questioned “Are the most active, frequent buyers truly the core of the market? and we arrived at the hypothesis that perhaps the less frequent, but high-spending customers could be responsible for the majority of the total market revenue.

For our final hypothesis, it is no longer a simple comparison. It posits that the middle-aged demographic, despite lower frequency, constitutes an equally or even more valuable customer segment due to significantly higher purchasing power.

Our final topic is "The core of the online shopping market is the digitally-native young generation, whose high purchase frequency and active engagement drive market growth. Therefore, corporate marketing and strategy should be focused on this group as the 'most valuable customer segment'."

Part F: Group Reflection

Our collaborative process was driven by Socratic questions especially about clarification. We questioned core terms in our initial hypothesis like clear definitions for internet shopping use, middle aged and young generations. These simple questions make us consider different metrics beyond just frequency.

A key challenge was Socratic dialogue because we are not familiar enough with these methods that verify each idea deeply. However, we realized that it improved our topic.

Building on each other's ideas, we could develop our topic. For example, when deciding on the period for data collection and analysis, there could be special circumstances like Christmas day, which can have an impact on shopping usage. We solved this problem by considering the whole year. Another example is the point about economic power differences among different generations. We'd better consider them not just comparing the usage, because the impact on a market is related to money they spent.