

Customer Preference Analysis on Tahu Benjo Product Attributes: Conjoint Approach

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Abstract

The growing popularity of plant-based snacks among Indonesian consumers—particularly Gen Z and Millennials—presents both opportunities and challenges for local brands. Tahu Benjo, a tofu-based snack brand in Solo, seeks to revitalize its market presence amid declining competitiveness. This study aims to identify the most preferred product attributes of Tahu Benjo using a conjoint analysis approach. Data were collected through an online survey completed by 191 respondents and analyzed using the Choice-Based Conjoint (CBC) method and the Multinomial Logit Model (MNL). The results indicate that packaging is the most important attribute (31%), followed by price (23%), cooking method (21%), ingredient composition (18%), and flavor (7%). The optimal product profile identified consists of a tofu-mushroom mix, savory flavor, fried preparation, eco-friendly packaging, and a price range level 1. This configuration achieved the highest utility score and market preference. Based on these insights, strategic recommendations include launching a flagship product with the preferred attributes, reformulating underperforming SKUs, and implementing targeted digital marketing campaigns. The study contributes to consumer behavior literature in emerging plant-based markets and offers actionable guidance for brand repositioning.

INTRODUCTION

Indonesia is one of the most dynamic and fast-growing food and beverage markets in Southeast Asia. The country's large population of over 270 million people and its young, urbanized consumer base drive continuous demand for fast-moving consumer goods, particularly in the snack food category (Winarno et al., 2022; Apriliyanti et al., 2023). According to the Central Statistics Bureau of Indonesia (2024), the food and beverage industry contributed 7.15% to Indonesia's national GDP in the first half of 2024, making it one of the largest economic contributors after the trade and construction sectors. In parallel, the sector's GDP has steadily increased from RP 459.28 trillion in 2013 to RP 887.36 trillion in 2024, with a projected annual growth rate of 4.53%, rebounding after the COVID-19 slump in 2020 (Purwanegara et al., 2021; Nugroho & Siregar, 2020). These indicators signal the strong and resilient role of the food sector in Indonesia's economy (Rahmawati & Permana, 2023).

A key factor supporting this growth is the country's favorable demographic structure. Based on the 2020 Population Census, Gen Z (aged 8–23) and Millennials (aged 24–39) together account for over 53% of Indonesia's population. These segments are digitally savvy, open to culinary experimentation, and highly influenced by social media trends (Purwanegara et al., 2021; Dewi & Prawira, 2022). They also demonstrate strong preferences for food that combines health, affordability, cultural relevance, and visual appeal, particularly when exploring snacks (Chambers & Yeomans, 2022; Fernqvist et al., 2020). Digital platforms and influencer marketing play a crucial role in shaping their food preferences and purchasing behavior (Suryadi & Hendrayati, 2021; Suryadi et al., 2023).

In addition to demographic shifts, global consumer behavior trends are also reshaping the snack industry. According to Euromonitor International's 5 Snack Trends to Track (2023),

modern consumers are increasingly treating snacks not merely as indulgent treats but as essential daily staples, choosing products based on convenience, affordability, and their ability to meet nutritional needs, such as being fortified or fiber-rich (Apriliyanti et al., 2023; Bogue & Ryan, 2021). In addition, there is a growing preference for snacks that reflect personal values, such as being vegan or locally sourced, while also offering emotional or sensory appeal through nostalgic elements or unique textures and flavors (Fernqvist et al., 2020; Ares et al., 2021). Product innovation is therefore increasingly driven by consumer demand for personalization, health functionality, and sensory novelty (Grunert, 2020; Clicerì et al., 2022). Indonesian SMEs in particular are adopting hybrid strategies that mix traditional flavors with modern formats to capture these evolving demands (Winarno et al., 2022; Raharjo & Adi, 2021).

For Indonesian consumers, these preferences translate into growing interest in plant-based snacks such as tofu, tempeh, or mushroom-based alternatives.

The rise of “snack as lifestyle” also drives demand for products that not only taste good but are perceived as healthy, socially relevant, and Instagrammable.

This evolving market landscape offers both opportunities and challenges for snack brands in Indonesia. On one hand, businesses that align with these demographic and behavioral shifts can grow significantly. On the other hand, brands that fail to innovate in product development and digital engagement risk being left behind.

One such case is Tahu Benjo, a tofu-based snack business founded in Solo in 2019. While the brand initially resonated with local consumers by offering familiar tastes in convenient formats, it now faces pressure to reinvent its offerings, reconnect with younger markets, and stay competitive in a food industry driven by dynamic consumer expectations.

Located in Central Java, the city of Solo (Surakarta) is widely recognized as a cultural capital, rich in culinary traditions and known for its creative food innovations. According to BPS Surakarta (2020), more than 16.33% of the city’s micro and small enterprises are engaged in the food and beverage sector, a statistic that underscores Solo’s importance as a regional culinary hub. Among the staple foods commonly consumed in Solo is tofu, a plant-based protein that is affordable, versatile, and deeply embedded in daily dietary habits.

Solo's food scene has gradually evolved, giving rise to modern adaptations of traditional products that cater to young urban consumers. Tofu, once associated primarily with home-cooked meals, is now increasingly being marketed in innovative forms, such as modern street food, functional snacks, and healthy fast food. This transformation aligns with a broader global trend toward *plant-based eating*, which blends health consciousness, environmental sustainability, and cultural familiarity.

Established in 2019, Tahu Benjo emerged to capitalize on this momentum. The brand introduced vegan snacks offered in several variants (original, mushroom, and mix), targeting mall visitors, office workers, and young adults in Solo. Tahu Benjo positioned itself as a modern interpretation of a classic street snack, drawing from local taste preferences while seeking a broader urban appeal.

Initially, the business attracted positive attention, leading to the expansion of several outlets in Solo. However, over the years, the company was struggling to sustain its growth. While newer snack brands aggressively pursued digital marketing, introduced novel products, and engaged directly with youth culture, Tahu Benjo remained largely unchanged in its product line and marketing strategies. As a result, its competitiveness began to decline, and its market penetration stagnated.

The novelty of this research lies in its holistic and context-specific approach, which distinguishes it from previous studies. Unlike earlier research that applied conjoint analysis to products such as hybrid yogurt, mushroom-based foods, or traditional snacks in general, this study focuses specifically on a localized vegan tofu product—Tahu Benjo—in the urban setting

of Solo, Indonesia. It goes beyond identifying preferred product attributes by integrating demographic variables such as age, gender, occupation, and income to generate deeper consumer insights. Additionally, the study employs a practical implementation strategy using the PDCA (Plan-Do-Check-Act) cycle, which is rarely incorporated in similar consumer preference analyses. Another distinctive aspect is the alignment of product development recommendations with sustainability values (e.g., eco-friendly packaging), affordability, and digital consumer behavior, especially among young female consumers aged 17–25. Thus, this research contributes not only to the academic literature on plant-based product preference analysis but also offers actionable strategies for small and medium enterprises (SMEs) to develop competitive and consumer-driven products in a rapidly evolving urban market.

This research aims to identify the key attributes that influence customer preferences for Tahu Benjo products. By understanding which product characteristics—such as ingredients, flavor, packaging, cooking method, and price—are most valued by consumers, the study seeks to uncover the decision-making patterns that drive purchasing behavior. Furthermore, the research intends to determine the most preferred combinations of these attributes to formulate an ideal product profile that aligns with customer expectations. Based on these insights, the study also aims to provide strategic recommendations that can be implemented by Tahu Benjo to enhance its sales performance and strengthen its brand relevance in the competitive vegan snack market of Solo. This research contributes by enriching the literature on consumer preference analysis in the context of plant-based snack products, particularly in emerging urban markets like Solo. Practically, it provides Tahu Benjo with data-driven insights into the combinations of product attributes most valued by consumers, offering a strategic foundation to improve sales performance and strengthen brand relevance in support of its vision to become the leading vegan snack brand in the city.

RESEARCH METHOD

Research Methodology

This study employed conjoint analysis (CA) and the choice-based conjoint (CBC) method to identify consumer preferences for plant-based snack products, particularly Tahu Benjo. The findings will highlight the most preferred product configurations and provide a ranked utility value for each attribute level combination.

The Conjoint Analysis (CA) Model

Conjoint Analysis (CA) was originally introduced by Luce and Tukey (1964) in the field of mathematical psychology and has since been widely applied in marketing research (Green & Srinivasan, 1978). This method enables researchers to uncover how consumers make decisions by decomposing product preferences into the utility derived from individual attributes and levels.

In this study, CA is used to analyze the trade-offs consumers are willing to make among various snack attributes such as ingredient, flavor, cooking method, packaging, and price. Through this method, we can determine

- Which attributes matter most?
- Which combinations are most preferred?
- How consumers rank different product profiles.

The technique is particularly relevant in new product development and repositioning strategies, such as the one currently pursued by Tahu Benjo to rejuvenate its product offerings in Solo.

CA assumes that product utility can be represented by the sum of part-worth utilities (also known as attribute-level utilities). These are computed based on respondents' simulated choices, rather than direct ratings, making the method closer to real-world purchasing behavior

(Orme, 2013).

This study used Survey Analytics® to conduct the CBC survey and estimated the utilities using the Multinomial Logit Model (MNL), following the Random Utility Theory (Ben-Akiva & Lerman, 1985). For each individual n , the utility of option i is defined as

$$U_{ni} = V_{ni} + \epsilon_{ni}$$

Where:

U_{ni} = total utility for option i by respondent n

V_{ni} = systematic, observable utility (from attribute levels)

ϵ_{ni} = random, unobserved utility component

The probability of respondent n choosing option i among J alternatives is

$$P_{ni}(i) = \frac{e^{V_{ni}}}{\sum_{j \in Cn} e^{V_{nj}}}$$

Where:

Cn = choice set available to respondent n

V_{ni} = sum of part-worths in option i

Part-worth Utilities Estimation

The estimation of part-worth utilities is a critical step in Conjoint Analysis, as it quantifies the implicit preferences of respondents for each attribute level of Tahu Benjo products. In this study, the most common analytical approach was to calculate the relative importance of each attribute (Segal, 1995; Wu et al., 2014). This was complemented by exploratory cross-tabulation with socio-demographic variables such as age, income, and openness to plant-based food (Kabaday et al., 2013), allowing for potential market segmentation insights.

Several prior studies have demonstrated the use of Multinomial Logit (MNL) model coefficients to estimate utility values (Ewing and Sarigollu, 2000). However, in many applications, including this study, these coefficients were rescaled using zero-centered normalization, such that:

$$\sum_{j=1}^{k_i} \alpha_{ij} = 0$$

Where:

α_{ij} = utility of level j in attribute i

k_i = number of levels in attribute i

This step ensures that utility values are interpretable and comparable across attributes. Here, each of the five product attributes ingredient, flavor, cooking method, packaging, and price consisted of three levels, and their part-worth utilities were estimated accordingly.

The utility results were then visualized using utility plots to illustrate how each level (e.g., “fried” vs. “baked” vs. “frozen”) contributed to the overall product preference. Following the practice of Wu et al. (2014), part-worth utilities were rescaled to aid interpretation and support relative importance estimation.

In the case of Tahu Benjo, only three levels per attribute were used to maintain a manageable design and minimize respondent fatigue, consistent with Eggers and Eggers (2011), who showed that three-level utility ranges can still effectively reflect differentiated consumer preferences across fractional levels of value perception.

Ranking Analysis

Once the part-worth utilities for each attribute level have been estimated, the next step is to compute the total utility of each product profile (i.e., snack alternative). This enables a ranking of the 13 conjoint scenarios that were presented to respondents, based on overall preference strength.

The total utility of a product alternative is calculated as the sum of the part-worth utilities of its specific attribute levels:

$$U(\alpha) = \sum_{i=1}^m \sum_{j=1}^{ki} \alpha_{ij} x_{ij}$$

Where:

$U(\alpha)$ = total utility of snack alternative α

α_{ij} = utility of level j for attribute i

$x_{ij} = 1$ if level j of attribute i is present in α ; 0 otherwise

These scores were used to rank the 13 product profiles presented to respondents, identifying which combinations yielded the highest preference utility.

RESULTS AND DISCUSSION

During the period of May 21–22, 2025 (2 days), an online Preference Survey for Tahu Benjo, a plant-based snack product, was conducted with the assistance of Survey Analytics®. This survey aimed to understand customer preferences, behavior, and digital interaction patterns to inform future product development and marketing strategy.

Out of the 345 users who viewed the survey, 209 respondents began answering the questions. A total of 191 respondents successfully completed the entire survey, while 18 dropped out midway, resulting in a 91.39% completion rate. Each respondent spent an average of 4 minutes to complete the questionnaire, indicating that the survey was concise and user-friendly.

Device data shows that 96% of respondents used smartphones, with 81% using Android devices and 20% using iPhones. Only 4% accessed the survey via desktop or laptop, of which 44% used Windows and 56% used Linux. No respondents participated using tablets.

The survey's completion timeline indicates that response activity peaked during key periods early morning (around 08:00), lunchtime (12:00), and afternoon (16:00) suggesting ideal times for future marketing campaigns or digital outreach.

Analysis

The following figures and metrics summarize the survey statistics, processed using Survey Analytics®, Tableau and Microsoft Excel for further analysis:

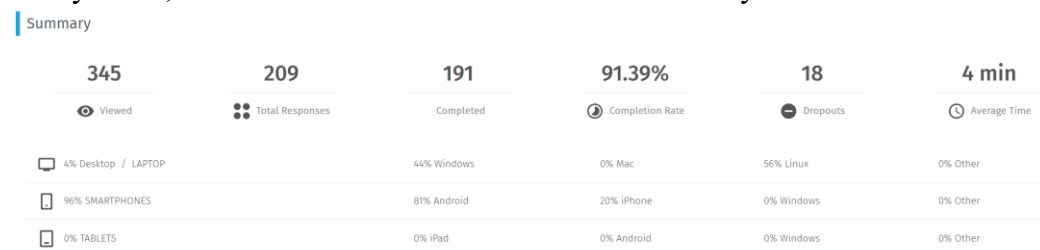


Figure 1. Device and Response Summary of the Tahu Benjo Survey.

Source : Data by Researcher

For further analysis, only the 191 completed responses will be utilized, as they represent valid and usable data aligned with the study objectives.

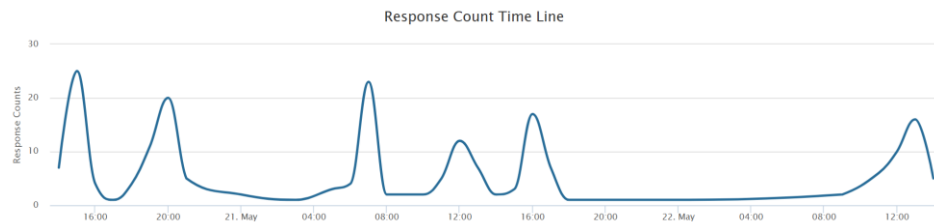


Figure 2. Response Count Time Line for Tahu Benjo Survey.

Source : Data by Researcher

In addition, Figure 2 illustrates the Response Count Timeline, showing that response activity had multiple significant peaks during key times of the day. The highest levels of participation occurred in the early morning (06:00–08:00), midday (12:00–13:00), afternoon (15:00–17:00), and also in the evening (around 20:00). These patterns suggest that respondents were most responsive during typical break periods or after work hours.

Recommendation: For future surveys or digital promotions, it is advisable to schedule releases during 06:00–08:00, 12:00–13:00, 15:00–17:00, and 20:00, especially when targeting working adults or students with structured daily routines.

Demographic of Respondents

This section describes the demographic characteristics of the 191 valid respondents who participated in the Tahu Benjo preference survey. The demographics include gender and age, which provide insights into the key customer segments of the product.

Gender

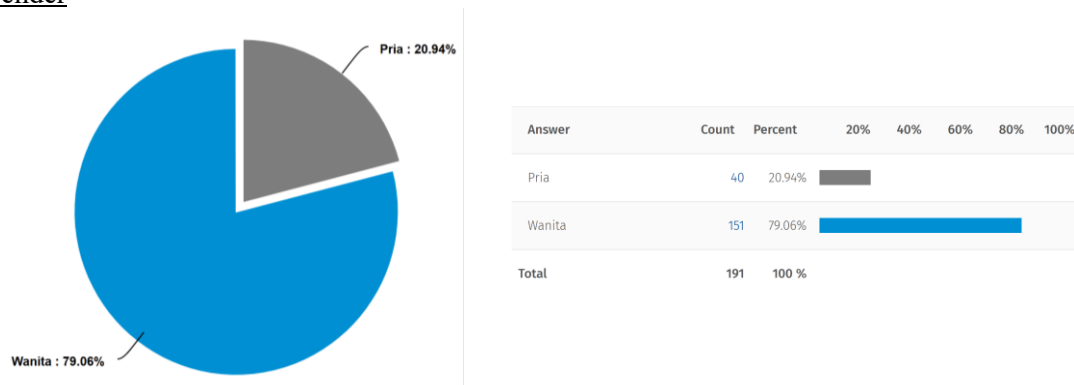


Figure 3 Gender Statistics

Source : Data by Researcher

As illustrated in Figure 3, the vast majority of respondents were women, comprising 79.06% (151 individuals). In contrast, men made up only 20.94% (40 individuals) of the total sample. This gender imbalance suggests that women are significantly more engaged with plant-based snack products like Tahu Benjo. Therefore, marketing strategies and product innovation may benefit from being more aligned with the preferences and habits of female consumers.

Age

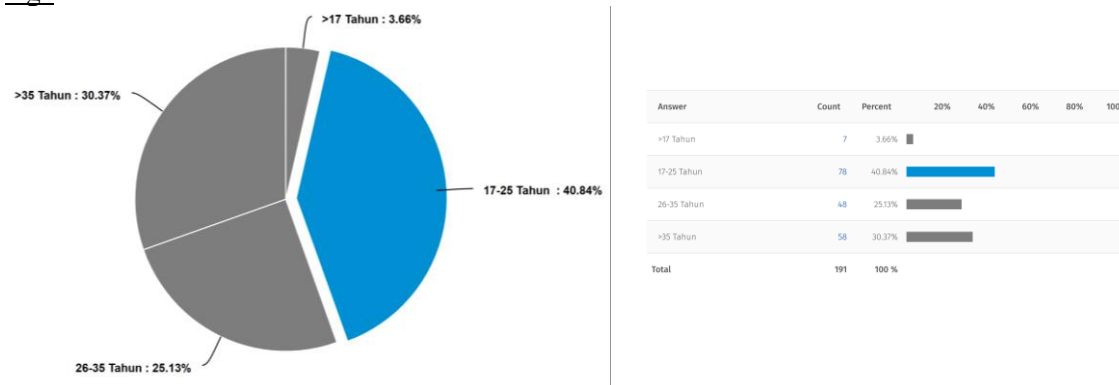


Figure 4. Age Statistics

Source : Data by Researcher

Figure IV.4 shows the age distribution among respondents. The largest age group was 17–25 years old, representing 40.84% (78 individuals). This was followed by:

- >35 years old – 30.37% (58 individuals)
- 26–35 years old – 25.13% (48 individuals)
- <17 years old – 3.66% (7 individuals)

These findings indicate that Tahu Benjo has strong appeal among Gen Z and young millennials, but also maintains significant interest from older age groups, particularly those over 35 years. The diversity in age range presents opportunities to tailor messaging and product positioning based on generational preferences.

Age Dispersions By Gender

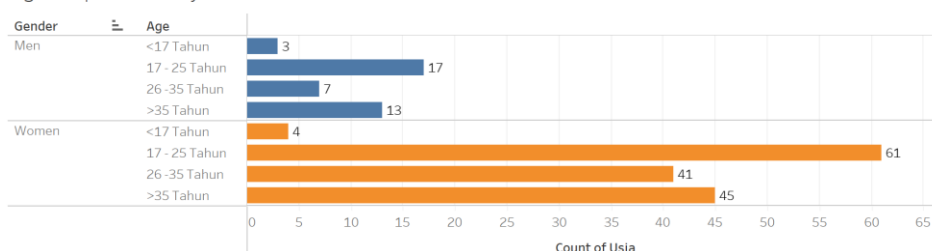


Figure 5. Age Dispersion by Gender

Source : Data by Researcher

As shown in Figure IV.5, the age distribution across gender highlights further insight into the core audience for Tahu Benjo. Among female respondents, the majority were aged 17–25 years (61 individuals), followed by >35 years (45 individuals), and 26–35 years (41 individuals). Meanwhile, male respondents were more concentrated in the 17–25 years group (17 individuals), followed by >35 years (13 individuals), and 26–35 years (7 individuals).

This reinforces the earlier observation that young women aged 17–25 years are the dominant consumer group for Tahu Benjo. However, the presence of older female consumers and young adult males also presents a secondary but relevant market opportunity. These insights suggest that future marketing efforts should prioritize younger female audiences while also developing targeted approaches for the 26–35 and >35-year segments.

Marital Status

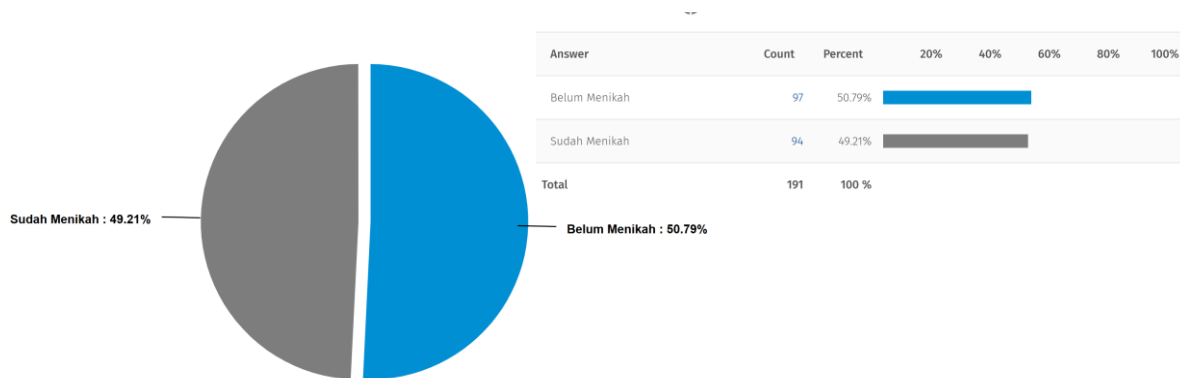


Figure 6. Marital Status Statistics

Source : Data by Researcher

As illustrated in Figure IV.6, the distribution of respondents by marital status is nearly even. A slight majority of participants, 50.79% (97 individuals), reported being unmarried, while 49.21% (94 individuals) identified as married.

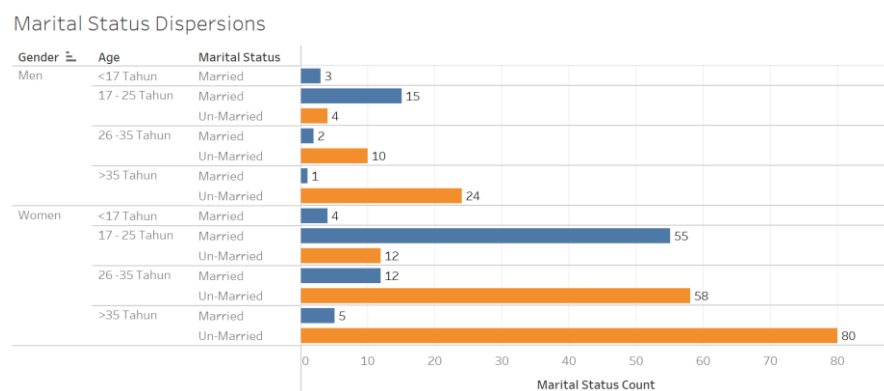


Figure 7. Marital Status Dispersion by Gender and Age

Source : Data by Researcher

The breakdown by gender and age group is shown in Figure IV.7. Among unmarried respondents, the highest representation comes from women aged 17–25 years, accounting for 55 individuals. Similarly, unmarried women over 35 also form a significant group (58 individuals). Among men, most of the unmarried participants are from the >35 and 17–25 age groups.

Married respondents are more evenly distributed, with both young adults (26–35 years) and older adults (>35 years) contributing to the total. Notably, women dominate across both marital categories, reinforcing earlier findings about female dominance in this consumer base.

These insights indicate that both married and unmarried individuals are viable market segments for Tahu Benjo, with slight skew toward unmarried younger women.

Domicile / Location

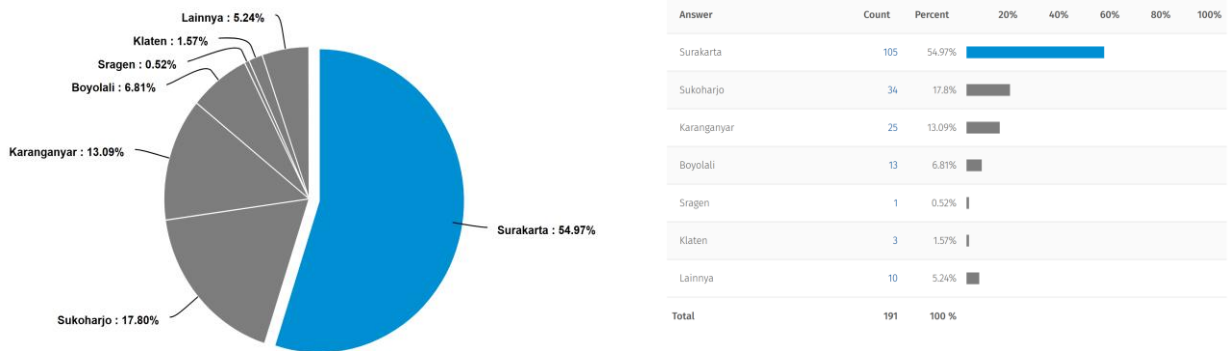


Figure 8. Domicile/Location Statistics

Source : Data by Researcher

Figure 8 presents the distribution of respondents based on their current domicile. The majority of respondents, 54.97% (105 individuals), reside in Surakarta, followed by Sukoharjo (17.80%), and Karanganyar (13.09%). Other locations such as Boyolali (6.81%), Klaten (1.57%), and Sragen (0.52%) contributed smaller portions. The “Others” category accounts for 5.24%, representing respondents from areas outside the core Solo Raya region.

This indicates that Tahu Benjo has a strong local presence in Surakarta and its surrounding regencies, which form the primary market cluster. Marketing strategies, product placement, and offline promotion efforts should focus heavily on this geographic zone, particularly Surakarta, while also tapping into emerging interest in neighboring regions such as Sukoharjo and Karanganyar.

The significant concentration in urban and peri-urban centers also suggests the relevance of mall-based locations and lifestyle-centric promotions for reaching these respondents effectively.

Profession / Activity

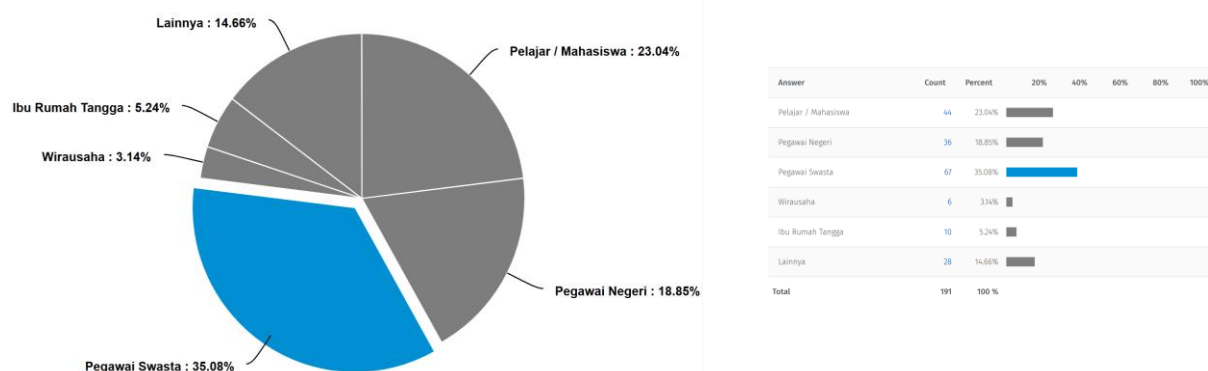


Figure 9 Profession / Activity Statistics

Source : Data by Researcher

As presented in Figure 9, the majority of respondents were private employees (35.08%),

followed by students (23.04%), government employees (18.85%), and other categories such as housewives (5.24%), entrepreneurs (3.14%), and others (14.66%).

This data indicates that Tahu Benjo has a strong audience base among working professionals in both the private and public sectors, as well as among younger student consumers. The diverse profession mix reflects the broad appeal of plant-based snacks across different daily routines ranging from office workers seeking convenient lunch options to students looking for affordable healthy snacks.

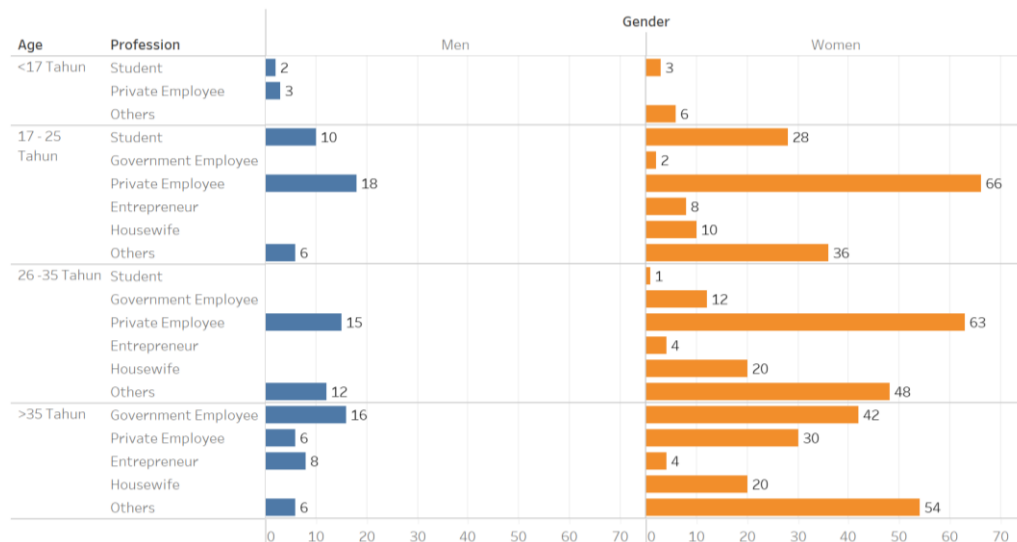


Figure 10 Profession / Activity Dispersions

Source : Data by Researcher

Further breakdown by gender and age in Figure 10 reveals key demographic intersections. Among female respondents, a large portion of private employees are aged 26–35, while most students are aged 17–25. Housewives and government employees are concentrated in the >35 age group, indicating that older women are still an active segment of the brand's audience. For male respondents, private employees and students dominate in the younger segments (17–25 and 26–35 years), whereas men over 35 are more represented among government employees and entrepreneurs.

These insights suggest that students and young professionals represent high-potential target groups for Tahu Benjo. Marketing strategies should therefore focus on practical, on-the-go, and affordable messaging for students and private-sector employees, while also maintaining relevance for older segments like homemakers and civil servants who may value health and convenience in daily meals.

Earnings (Monthly)

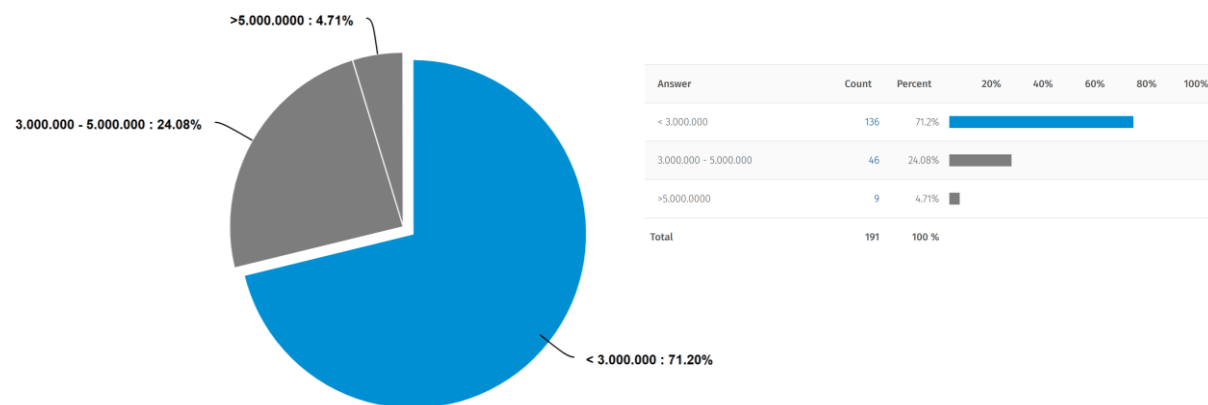


Figure 11 Earnings Statistics

Source : Data by Researcher

As depicted in Figure 11, the majority of respondents, 71.20% (136 individuals), reported having a monthly income of less than Rp 3,000,000. Meanwhile, 24.08% (46 individuals) earn between Rp 3,000,000–5,000,000, and only 4.71% (9 individuals) have earnings of more than Rp 5,000,000 per month.

This income distribution confirms that the majority of Tahu Benjo consumers are low-to-middle income individuals, reinforcing the importance of affordable pricing in product strategy. The data suggests that Tahu Benjo appeals strongly to students and entry-level employees, who generally have limited purchasing power.

Earnings / Profession

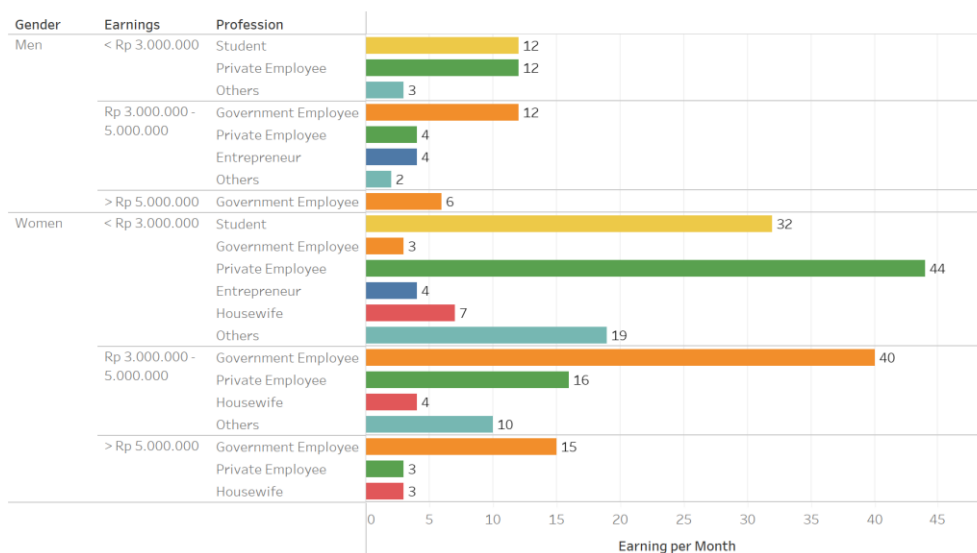


Figure 12 Earnings Dispersions

Soure : Data by Researcher

Further insights are shown in Figure 12, which cross-tabulates earnings with profession and gender. Most female respondents earning less than Rp 3,000,000 are students (32 individuals) or private employees (44 individuals). There's also a significant number of housewives (19 individuals) in this income group. In the next income tier (Rp 3,000,000–5,000,000), the most represented professions are government employees (16) and private employees (10).

Among male respondents, most earn either below Rp 3,000,000 (particularly students and

private employees, each 12 individuals), or between Rp 3,000,000–5,000,000 (dominated by government employees and entrepreneurs).

These patterns suggest that price sensitivity is a key consideration for Tahu Benjo's target market. Therefore, product packaging sizes, promotions, and price points should cater primarily to affordability. Marketing communications should also highlight value-for-money and health benefits, especially to appeal to low- to middle-income working-class segments and students.

Summary of Respondents' Demographics

The demographic profile of the 191 valid respondents provides the following key insights:

Table 1. The Respondents Descriptive Statistics (n=191)

Characteristic	Category	n	%
Gender	Women	151	79,06%
	Men	40	20,94%
Age	<17 years old	7	3,66%
	17-25 years old	78	40,84%
	26-35 years old	48	25,13%
	>35 years old	58	30,37%
Marital Status	Married	94	49,21%
	Unmarried	97	50,79%
Domicile/Location	Surakarta	105	54,97%
	Sukoharjo	34	17,80%
	Karanganyar	25	13,09%
	Boyolali	13	6,81%
	Klaten	3	1,57%
	Sragen	1	0,52%
	Others	10	5,24%
Profession/Activity	Private Employee	67	35,08%
	Student	44	23,04%
	Government Employee	36	18,85%
	Housewife	10	5,24%
	Private Employee	67	35,08%
	Entrepreneur	6	3,14%
	Others	28	14,66%
Earnings - Monthly	< Rp 3,000,000	136	71,20%
	Rp 3,000,000 - 5,000,000	46	24,08%
	> Rp 5,000,000	9	4,71%

Source : Data by Researcher

The Tahu Benjo survey gathered responses from 191 individuals, with 79.06% women and 20.94% men. Most respondents were 17–25 years old (40.84%), followed by >35 years (30.37%) and 26–35 years (25.13%). In terms of marital status, the group was nearly balanced with 50.79% unmarried and 49.21% married.

Geographically, the majority resided in Surakarta (54.97%), followed by Sukoharjo (17.80%), Karanganyar (13.09%), and smaller percentages from surrounding regions. Professionally, most were private employees (35.08%), students (23.04%), or government employees (18.85%).

Regarding income, 71.20% of respondents earned less than Rp 3,000,000 per month, indicating a price-sensitive market.

Choice-based Conjoint (CBC) Analysis Findings

In this part, the findings that were discovered through the analysis of the choice-based conjoint (CBC) survey are explained.

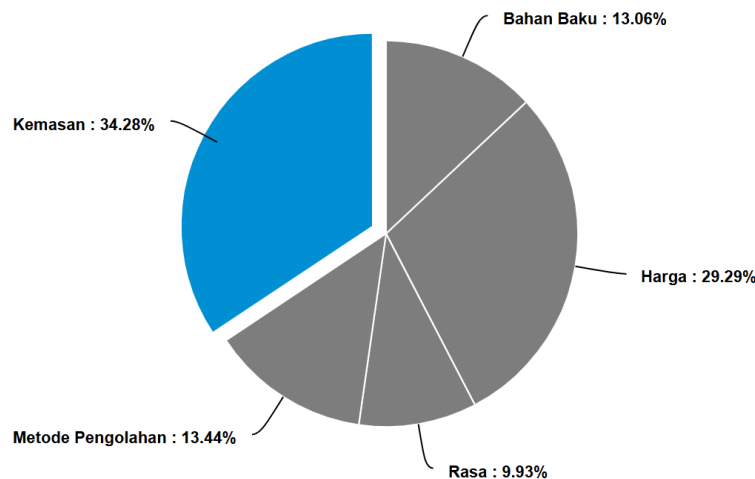


Figure 13 Attributes Importance Pie Chart

Source : Data by Researcher

Figure 13 shows the relative importance of five product attributes in influencing consumer choices when purchasing Tahu Benjo. The most important attribute identified is Packaging (34.28%), followed by Price (29.29%), Processing Method (13.44%), Ingredients (13.06%), and Flavor (9.93%).

This suggests that visual appeal and practicality of packaging are critical drivers in consumer decision-making, potentially more influential than the product's taste or ingredients.

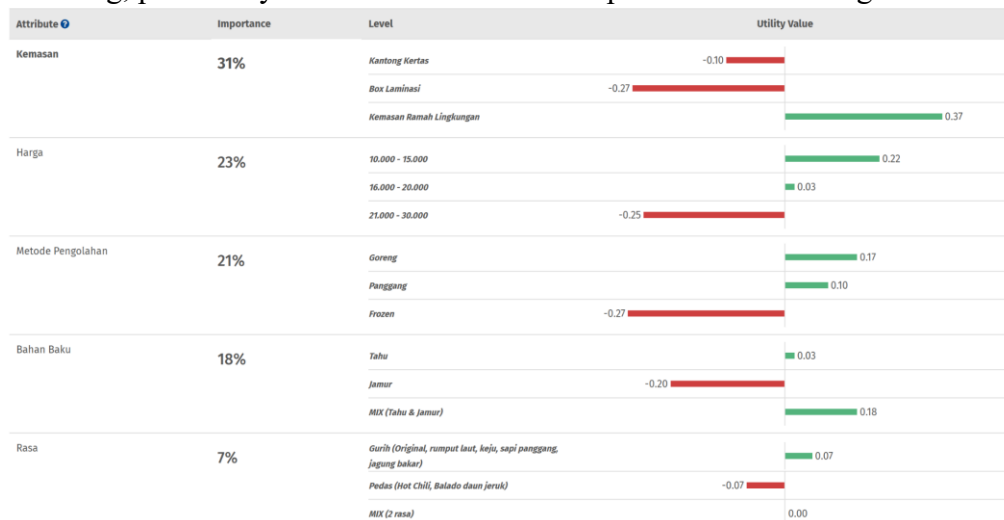


Figure 14 Average Importance Utility Score

Source : Data by Researcher

As detailed in figure 14, consumers show the strongest positive utility for eco-friendly packaging (Utility: +0.37), which outperforms alternatives like laminated boxes or paper bags. In terms of price, the most favored price point is Rp 10,000–15,000 (Utility: +0.22), indicating

clear price sensitivity among the target market.

For cooking method, grilled products are slightly preferred over fried, while frozen products are least favored (Utility: -0.27). Ingredient preferences lean toward plain tofu, while mixes with jamur or spicy flavor show reduced utility. As for flavor, original/savory variants are the most preferred (Utility: +0.18), while spicier options are less desirable.

These findings confirm that affordable pricing, eco-conscious packaging, and familiar, non-spicy flavors are the most effective levers for increasing consumer acceptance and satisfaction with Tahu Benjo products.

SOLUTION AND PROPOSED IMPLEMENTATION PLAN

To respond to the business challenge faced by Tahu Benjo specifically the declining sales and weakened brand relevance in the Solo vegan snack market this chapter presents a set of proposed solutions based on the empirical findings of a conjoint analysis survey involving 191 respondents. The objective is to translate customer preference insights into actionable strategies that are aligned with market expectations.

The attributes in this winning profile are not only statistically significant but also consistent with consumer values regarding taste, affordability & sustainability preference:

- Packaging had the highest importance score at 31%, and within this attribute, “Kemasan Ramah Lingkungan” (eco-friendly packaging) had the highest utility value of +0.37, highlighting customers’ increasing sensitivity toward environmental impact.
- Price ranked second in importance at 23%, and the price point of Rp 10,000–15,000 had the highest utility value at +0.22, indicating that affordability remains a crucial driver in the decision-making process for Tahu Benjo’s target market (primarily students and young professionals with limited income).
- Cooking Method, with 21% importance, showed that fried products (+0.17) are preferred over roasted and frozen, likely due to flavor satisfaction and familiarity in the Indonesian snack market.
- Ingredient base (18%) analysis revealed that the combination of tofu and mushroom yielded the highest utility (+0.18), while mushroom-only profiles scored negatively.
- While Flavor had the lowest relative importance at 7%, savory variants (+0.07) still outperformed spicy ones (−0.07), suggesting a general preference for approachable and comforting flavor profiles over bold or niche tastes.

This combination reflects the broader consumer trend in the Solo area toward plant-based yet indulgent snacks that align with their economic, environmental, and taste preferences. Notably, younger female consumers aged 17–25 and students formed the largest segment in the survey. This demographic is known for being responsive to product aesthetics, value-driven pricing, and modern lifestyle compatibility.

Based on these insights, the following proposed solutions are designed to guide Tahu Benjo in realigning its offerings and promotional efforts with current consumer demands, with the goal of revitalizing the brand and increasing sales in its core market.

PURPOSE SOLUTION

Proposed Solution 1: Product Development Based on the Best Combination

According to the conjoint analysis results, the product profile with the highest total utility score (1.01) and the strongest overall appeal includes the following attributes:

- Main Ingredient: MIX (Tofu & Mushroom)
- Price: Rp 10,000 – 15,000

- Flavor: Savory (Original, seaweed, cheese, grilled beef, corn)
- Cooking Method: Fried
- Packaging: Eco-Friendly Packaging

This combination not only achieves the highest score in part-worth utility but also matches the preferences of Tahu Benjo's primary consumer segment young, price-sensitive, and environmentally conscious individuals.

It is recommended that Tahu Benjo launches this combination as a new flagship product. The product should be positioned as a value-oriented, plant-based snack that blends traditional flavors with modern sustainability values. Its branding and promotion should be tailored specifically for Gen Z and millennial consumers through strong visual identity and targeted digital marketing, especially on Instagram and food delivery apps.

Strategic Benefits

- High Market Fit: With the top utility score and the largest projected market share, this variant represents the most desirable product-market fit identified through the research.
- Brand Revitalization: Launching a new product based on the best profile provides an opportunity for Tahu Benjo to refresh its image as a modern, sustainable, and customer-focused brand.
- Operational Synergy: The recommended attributes especially fried cooking and savory flavors align with Tahu Benjo's existing kitchen setup and processes, requiring minimal operational adjustments.
- Youth Market Appeal: The combination of affordable pricing and eco-friendly packaging resonates strongly with Solo's student and young professional demographic the group that dominates mall foot traffic and drives engagement on digital platforms.

Proposed Solution 2: Adjustment of Existing Products Based on Survey Insights

In addition to launching new products, Tahu Benjo must strategically adjust its existing product portfolio to better match customer preferences derived from the conjoint analysis. The comparison between existing products and proposed profiles across tofu, mushroom, and mixed ingredients reveals significant room for product improvement.

Concept	Description	Ingredient	Price	Flavor	Cooking Method	Packaging	Utility Score	Market Share
Product : Tofu								
1	Existing Product	Tofu	10K -15K	MIX	Fry	Paper Pouch	0,196	23,45%
2	Existing Product	Tofu	10K -15K	MIX	Fry	Box Lamination	0,039	16,75%
3	Porposed Product	Tofu	10K -15K	Savory	Fry	Eco Friendly	0,671	59,79%
Product : Mushroom								
4	Existing Product	Mushroom	10K -15K	MIX	Fry	Paper Pouch	0,196	23,71%
5	Existing Product	Mushroom	16K -20K	MIX	Fry	Box Lamination	-0,153	19,07%
6	Porposed Product	Mushroom	10K -15K	Savory	Fry	Eco Friendly	0,739	57,22%
Product : MIX (Tofu & Mushroom)								
7	Existing Product	MIX (Tofu & Mushroom)	21K -30K	MIX	Fry	Box Lamination	-0,164	21,13%
8	Proposed Product	MIX (Tofu & Mushroom)	16K -20K	Savory	Fry	Eco Friendly	0,804	30,67%
9	Porposed Product	MIX (Tofu & Mushroom)	10K -15K	Savory	Fry	Eco Friendly	0,996	48,20%

Figure 15. Adjustment of Existing Products Based on Survey Insights

Source : Data by Researcher

Based on the comparative table above, it is evident that proposed product combinations consistently outperform existing variants in both utility scores and projected market share (Market Share = Individual Vote Count/Total Vote Count *100). This indicates a strong need for reformulation of current SKUs across all product categories Tofu, Mushroom, and Mixed to better meet validated customer preferences.

Tofu-Based Products:

- Concept 1 (Existing): MIX Flavor, Paper Pouch – Utility Score: 0.196, Market Share: 23.45%
- Concept 2 (Existing): MIX Flavor, Box Lamination – Utility Score: 0.039, Market Share: 59.79%
- Concept 3 (Proposed): Savory, Eco-Friendly Packaging – Utility Score: 0.671, Market Share: 59.79%

Mushroom-Based Products:

- Concept 4 (Existing): MIX Flavor, Paper Pouch – Utility Score: 0.196, Market Share: 23.71%
- Concept 5 (Existing): MIX Flavor, Box Lamination – Utility Score: -0.153, Market Share: 19.07%
- Concept 6 (Proposed): Savory, Eco-Friendly Packaging – Utility Score: 0.739, Market Share: 57.22%

MIX (Tofu & Mushroom):

- Concept 7 (Existing): MIX Flavor, Box Lamination – Utility Score: -0.164, Market Share: 21,13%
- Concept 8 (Proposed): Savory, Eco-Friendly, Rp 16K–20K – Utility Score: 0.804, Market Share: 30,67%
- Concept 9 (Proposed): Savory, Eco-Friendly, Rp 10K–15K – Utility Score: 0.996, Market Share: 48,20%

The comparative data clearly demonstrates that proposed products that incorporate eco-friendly packaging, savory flavors, and lower price points consistently outperform the existing variants. Reformulating these underperforming SKUs based on validated insights is imperative for regaining market competitiveness.

Key insights show that eco-friendly packaging is overwhelmingly preferred across all categories, reflected in significantly higher utility values. Consumers also favor savory over mixed flavors, and lower price points (Rp 10,000–15,000) over premium pricing tiers. Among the ingredients, MIX (Tofu & Mushroom) demonstrates the highest potential, especially when aligned with favorable packaging and pricing strategies.

Based on this evidence, Tahu Benjo should reformulate or reposition variants with low utility (Concepts 2, 5, 7) to adopt attributes reflected in Concepts 3, 6, and 9. These high-performing concepts can serve as benchmarks, guiding the alignment of all SKUs with market preferences. This alignment can reduce SKU redundancy, improve customer satisfaction, and boost overall operational efficiency. Ultimately, these actions are likely to result in increased sales and strengthen brand competitiveness in Solo's increasingly discerning snack market.

Proposed Solution 3: Promotion Strategy Optimization

Survey insights reveal that 95.81% of respondents are open to buying vegan-based snacks, and the majority prefer direct promotions, with 73.82% favoring price discounts. However, 27.75% of the audience has never tried Tahu Benjo, indicating low product awareness despite market

interest.

To bridge this gap, Tahu Benjo should implement a targeted digital promotion strategy tailored to the behavioral patterns of its key demographic (female, aged 17–25, students and private employees, primarily located in Surakarta and Sukoharjo).

Table 2. Promotional Channel and Timing

Source : Data by Researcher

Time Slot	Description	Recommended Action
06:30–08:30	Pre-work/student routine	Post product tips or vegan-friendly content
13:00–15:00	Lunch break browsing peak	Launch stories with discount codes or reels
19:30–21:00	Evening scroll & relax time	Push paid ads, giveaways, or limited-time deals

The selection of the three time slots 06:30–08:30, 13:00–15:00, and 19:30–21:00 was based on observed peak user activity during the survey distribution and the lifestyle rhythm of Tahu Benjo's target demographic (students and young professionals).

Strategic Actions:

- Focus social media efforts (Instagram) on visual storytelling and daily engagement at optimal time slots.
- Emphasize price-based promotions (discounts and bundles) which have shown highest appeal.
- Introduce targeted sampling to the 27.75% who have not yet tried Tahu Benjo, especially during mall peak hours.
- Highlight sustainability values (eco-packaging) in content, as Solo's urban consumers show increasing eco-awareness.

By aligning promotional efforts with demographic habits and preferences, Tahu Benjo can amplify brand exposure, improve conversion rates, and deepen loyalty within its core market.

JUSTIFICATION OF IMPLEMENTATION PLAN

To ensure the implementation of the proposed business solutions is thorough and structured, a 5W+1H framework is used. This strategic tool outlines the Why, What, Who, Where, When, and How of the action plan to guide execution clearly and logically.

Table 3. 5W + 1H Strategy

No	Criteria	Description
1	WHY	Why is the action necessary?
2	WHAT	What specific action are they required to undertake?
3	WHO	Who is involved with doing the required actions?
4	WHERE	Where must the actions be conducted?
5	WHEN	When are the actions required to be carried out?
6	HOW	How should the actions be completed?

Source : Data by Researcher

WHAT	Action plan for Product Development Based on the Best Combination							
WHY	The best combination profile has the highest utility score (1.01), making it the top consumer choice. Developing it can strengthen market position, attract buyers, and revive brand relevance.							
NO	HOW	WHERE	WHO	WHEN				
	ACTION	PLACE	STAKEHOLDER INVOLVED	2025				
				M8	M9	M10	M11	M12
1	Conduct product development Based on the Best Combination	Kitchen & outlet	R&D team					
2	Design eco-friendly packaging visual	Vendor workshop	Marketing, graphic designer					
3	Align pricing and SKU planning	Office	Finance, operations					
4	Launch pilot at selected outlet	Mall outlet	Sales team					
5	Evaluate sales and customer response	POS + digital	Marketing, sales analyst					

Figure 16. Implementation Plan for Proposed Solution 1

Source : Data by Researcher

To respond directly to shifting customer preferences, Tahu Benjo will develop a new variant that reflects the most preferred combination from the conjoint analysis Mix (Tofu & Mushroom), savory flavor, fried, eco-friendly packaging, and priced at Rp 10K–15K. With the highest utility score (1.01), this profile promises strong market fit and brand revitalization.

The PDCA-based plan begins with R&D and packaging design, followed by pricing and SKU alignment. A controlled launch will be executed at selected mall outlets, and the pilot's performance will be evaluated using sales and feedback data. This new product will target Gen Z and young professionals, supported by eco-positioning and value-based pricing.

WHAT	Action plan to Adjustment the Existing Products Based on Survey Insights							
WHY	To align Tahu Benjo's existing products with validated consumer preferences in order to boost market relevance, eliminate underperforming variants, and improve sales performance.							
NO	HOW	WHERE	WHO	WHEN				
	ACTION	PLACE	STAKEHOLDER INVOLVED	2025				
				M8	M9	M10	M11	M12
1	Audit current SKU performance	Kitchen & outlet	R&D team					
2	Reformulate existing kombination product	Vendor workshop	Marketing, graphic designer					
3	Align pricing and SKU planning	Office	Finance, operations					
4	Relaunch updated variants	Mall outlet	Sales team					
5	Measure sales impact and feedback	POS + digital	Marketing, sales analyst					

Figure 17. Implementation Plan for Proposed Solution 2

Source : Data by Researcher

To align with validated consumer preferences, Tahu Benjo will reformulate underperforming SKUs especially those with low utility packaging, flavor, and pricing. Existing MIX-flavored tofu and mushroom variants using laminated boxes will be phased out or adjusted to adopt savory flavor profiles, eco-friendly packaging, and competitive pricing (Rp 10K–15K).

The PDCA action plan includes reviewing utility gaps, modifying recipes and packaging, updating the product catalog, and relaunching with clear communication. Post-launch, performance metrics will be monitored to ensure improved acceptance. This adjustment minimizes waste, strengthens brand equity, and supports consistent messaging across product lines.

WHAT	Action plan to optimize Tahu Benjo’s promotional strategy through targeted digital marketing and time-based campaign alignment							
WHY	To increase product awareness and conversion, especially among potential consumers who have not tried Tahu Benjo, and to capitalize on the most preferred promotional type (price discounts), based on survey insights.							
NO	HOW	WHERE	WHO	WHEN				
	ACTION	PLACE	STAKEHOLDER INVOLVED	2025				
				M8	M9	M10	M11	M12
1	Design time-based digital promotion plan aligned with user behavior	Instagram stories, reels, posts, and ads	Marketing Team & Social Media Manager					
2	Create engaging content and promo materials (stories, reels, flash deals)	Instagram stories, reels, posts, and ads	Marketing Team & Social Media Manager					
3	Launch digital campaign during optimal time slots	Instagram stories, reels, posts, and ads	Marketing Team & Social Media Manager					
4	Evaluate engagement and conversion metrics weekly	Instagram stories, reels, posts, and ads	Marketing Team & Social Media Manager					
5	Adjust promotion strategy and scale based on performance	Instagram stories, reels, posts, and ads	Marketing Team & Social Media Manager					

Figure 18. Implementation Plan for Proposed Solution 3

Source : Data by Researcher

To improve brand awareness and product trials, especially among the 27.75% of potential customers who have never tried Tahu Benjo, a digital promotion plan will be deployed. Key time slots (06:30–08:30, 13:00–15:00, 19:30–21:00) were chosen based on the highest user engagement trends from survey data.

The campaign will follow a PDCA cycle: develop digital content (discounts, reels, polls), launch across Instagram and WhatsApp, monitor impressions and conversions, and refine creatives based on feedback. This approach ensures high visibility, engages the most responsive customer segments (young, female, Surakarta-based), and reinforces value and sustainability messages.

CONCLUSION

The study reveals that among various product attributes, packaging holds the highest importance (31%) for Tahu Benjo customers, with a strong preference for eco-friendly materials, followed by price (23%) favoring the Rp 10,000–15,000 range, and processing method (21%) where fried snacks are preferred over frozen options. Ingredient combinations of tofu and mushrooms rank fourth in importance (18%), and flavor, though the least influential (7%), slightly favors savory profiles. The optimal product profile—comprising tofu and mushroom mix, savory flavor, fried processing, eco-friendly packaging, and a price of Rp 10,000–15,000—achieved the highest utility and market preference score. To enhance its sales and brand relevance in the Solo vegan snack market, Tahu Benjo should introduce a flagship product reflecting this profile, reformulate existing underperforming variants to align with consumer preferences, and deploy personalized, digitally driven promotional strategies focusing on Instagram engagement and student demographic segments.

This study reinforces the importance of aligning product development with emerging consumer expectations in urban plant-based markets. By adopting data-driven strategies informed by conjoint analysis, SMEs like Tahu Benjo can enhance competitiveness while advancing sustainable and affordable food innovation in Indonesia.

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