Journal of MANAGEMENT & MUAMALAH
Jurnal Pengurusan dan Muamalah e-ISSN: 2180-1681

Vol. 16, No. 2 (2026) eISSN 2180-1681
https://doi.org/10.53840/jmm.v16i2.343

Consumer Preferences in Purchasing Bamboo Products among the Community in Taman Sri Serdang, Selangor

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ABSTRACT

Bamboo product marketing requires a comprehensive understanding of consumer evaluations of product attributes, preferences, and intended expenditure. This exploratory cross-sectional study examined purchasing factors, spending preferences and demographic associations among residents of Taman Sri Serdang, Selangor, Malaysia. A bilingual structured questionnaire was administered physically and online between late July and late October 2025, involving a purposive sample of 385 residents aged 19 years and above. Data were analysed using descriptive statistics, Pearson's chi-square tests, Cramér's V and conditional Monte Carlo tests with 199,999 simulations. Pilot reliability coefficients for the five purchasing factors ranged from 0.744 to 0.811, indicating acceptable internal consistency. A total of 340 respondents (88.3%) reported previous experience purchasing or using bamboo products, with kitchenware and furniture emerging as the most preferred product categories. Quality recorded the highest mean agreement, followed by functionality, price, aesthetics and design. Regarding intended expenditure, 215 respondents (55.8%) selected the lowest spending category of below RM200. Significant associations were identified between spending preferences and marital status and monthly income. However, the association with educational attainment was not statistically significant based on the Monte Carlo test ($p = 0.0796$). These findings provide empirical insights for developing targeted marketing strategies that emphasize product quality, functionality, affordability and consumer-oriented product positioning. Nevertheless, purposive sampling, self-reported responses and unadjusted exploratory comparisons limit the generalisability and causal interpretation of the findings. Environmental impacts were beyond the scope of this study.

Keywords: Bamboo Products; Consumer Behaviour; Purchasing Factors; Spending Preferences; Product Attributes; Sustainable Marketing

Received: May 14, 2026

Revised: November 26, 2026

Accepted: November 27, 2026

Online Published: November 27, 2026

INTRODUCTION

Bamboo offers a range of applications in household goods, furniture and other value-added products. Malaysian research has identified market opportunities alongside constraints in investment, land policy and industrial adoption (Kamarubahrin et al., 2026a). These opportunities do not by themselves establish consumer demand. Producers also need to understand how buyers evaluate product attributes and whether intended expenditure is compatible with the products offered (Kamarubahrin et al., 2026b).

Recent evidence illustrates the difference between industrial potential and consumer acceptance. Kamaruddin et al. (2026), drawing on nine Malaysian industry stakeholders, identified market uncertainty and supply-chain concerns affecting adoption. Wang et al. (2025), surveying 318 Chinese consumers about bamboo furniture, found that favourable cultural and environmental perceptions coexisted with quality and maintenance concerns. Together, these studies suggest that the commercial prospects of bamboo depend on conditions on both sides of the market. Stakeholder readiness cannot substitute for evidence about household preferences.

Consumer studies also differ in their products and settings. Shi et al. (2025) examined visual attention and purchase intentions under controlled bamboo-versus-plastic comparisons, whereas Wei et al. (2025) analysed feedback about bamboo-woven fashion accessories in Chinese e-commerce. Such studies identify relevant mechanisms, but they do not establish the product mix, attribute priorities or spending categories of residents in a Malaysian neighbourhood. The gap addressed here is therefore specific: the cited literature does not provide this combination of community-level evidence for Taman Sri Serdang. This is a contextual extension rather than a claim that Malaysian green-consumption research is absent.

Taman Sri Serdang was selected as a bounded residential setting with a diverse residential population and a mixture of landed houses and apartments. This setting permits a focused examination of preferences for everyday bamboo products at community level. The locality is not treated as representative of Selangor or Malaysia; its residential context and the purposive recruitment strategy define the scope of the findings. A Malaysian-authored furniture purchasing review also identifies limitations in the methodological and geographical coverage of the studies within its restricted selection (Kamarubahrin et al., 2025). This reinforces the value of specifying the setting and evidence boundaries of the present study.

The study has three objectives: (1) to describe the five reported purchasing factors, namely quality, functionality, price, aesthetics and design; (2) to describe stated purchasing willingness through spending categories; and (3) to examine relationships between those categories and demographic characteristics. Product experience and category preferences provide supporting context. The contribution is a local descriptive baseline for product development and marketing. Because the design is cross-sectional and the measures are self-reported, the study does not estimate causal effects, actual demand or environmental outcomes.

LITERATURE REVIEW

Perceived Value as a Conceptual Lens

Perceived value provides a useful lens for interpreting the five purchasing factors. Zeithaml (1988) connects consumers' assessments of price, quality and value, highlighting the relationship between what a product offers and what the consumer gives up to obtain it. Applied here, quality and functionality represent performance-related evaluations, price represents monetary sacrifice, and aesthetics and design capture aspects of product appeal. These links are an interpretive framework for the existing questionnaire; perceived value itself was not measured as a separate construct.

For conceptual clarity, quality concerns expected product performance and consistency; functionality concerns suitability for use; price concerns affordability; aesthetics concerns visual appeal; and design concerns the product's overall configuration. These domains can overlap. For example, a shape may be both attractive and convenient to use. The present reliability coefficients cannot establish that the five domains are empirically distinct, so their mean scores are interpreted as separate descriptive summaries rather than validated paths in a structural model.

Functional and Monetary Considerations

Ansu-Mensah (2021), using an online survey of 478 university students, identified perceived quality as an important predictor of green purchase intentions. In Malaysia, Wei et al. (2022) analysed 216 purposively recruited respondents and found a negative association between price and green purchase intention, alongside positive associations for product knowledge and the theory-of-planned-behaviour variables. These findings support examining performance and affordability together. Their outcome was purchase intention, however, whereas this study's spending categories describe an intended monetary range across bamboo products. The measures are related but are not interchangeable. Bamboo-specific evidence adds a product context. Wang et al. (2025) identified concerns about sturdiness, maintenance and stylistic fit in furniture acceptance. Those concerns imply that a material's favourable image may coexist with uncertainty about its everyday performance. For the present study, this makes quality and functionality relevant attributes to describe. It does not justify if respondents' agreement with these attributes predicts actual purchases, because that relationship was not estimated.

Aesthetics and Design in Bamboo Acceptance

Shi et al. (2021) used a controlled experiment to show that design aesthetics affect neural responses associated with product evaluation and price expectations. More specifically, Wei et al. (2025) identified functional, emotional, social and green dimensions of perceived value in bamboo-woven accessories, with aesthetic experience and innovation prominent in emotional value. These studies suggest that appearance can be commercially important. They also caution against a single attribute hierarchy across products: fashion accessories invite symbolic and aesthetic judgements that may differ from the judgements applied to kitchenware. The practical implication of this synthesis is to examine design and aesthetics alongside function and price, rather than assume that bamboo's material identity is sufficient for acceptance. The five-factor questionnaire allows that descriptive comparison. Nevertheless, attributing a small difference between mean scores to a statistically significant preference would require an appropriate comparison using respondent-level data.

Green Consumption and the Scope of the Study

Shi et al. (2025) found that green consumption values were associated with stronger attention and purchase intentions for bamboo products in an eye-tracking experiment involving 70 participants. This offers evidence for a mechanism under a controlled material comparison. The present survey does not measure green consumption values, environmental knowledge, material substitution or life-cycle impacts. Its findings can inform questions about responsible consumption but cannot test that mechanism or demonstrate an environmental benefit. Accordingly, the conceptual connection to the objectives is limited and explicit. Attribute evaluations inform the first objective; stated spending categories inform the second; and demographic cross-tabulations address the third. The five factors are not tested as causes of spending willingness. For the demographic comparisons, the exploratory null hypothesis is that the distribution of spending categories is independent of each demographic variable. Formal inference requires valid observed cross-tabulations and adequate treatment of sparse cells.

METHODOLOGY

Research Design and Study Setting

This study adopted an exploratory quantitative cross-sectional design using a structured questionnaire. Data were collected from late July to late October 2025 in Taman Sri Serdang, Selangor. The design described residents' product preferences and stated spending at one point in time and examined demographic associations without manipulating conditions. It cannot establish changes over time or causal relationships.

Sampling and Data Collection

The study involved 385 respondents aged 19 years and above residing in Taman Sri Serdang. Non-probability purposive sampling was used to select residents meeting these eligibility criteria. Previous purchase or use of bamboo products was not compulsory, allowing potential consumers to participate. Questionnaires were distributed face to face and online through WhatsApp and Facebook. These recruitment modes may nevertheless have introduced self-selection and differences in participation opportunities. A target of approximately 384 respondents was guided by the large-population benchmark in Krejcie and Morgan (1970), and 385 responses were obtained. The original planning reference concerned the wider Seri Serdang state constituency rather than a verified population count for the neighbourhood itself. The numerical benchmark does not make purposive recruitment probabilistically representative, and no population margin-of-error claim is made. A total of 385 valid cases were included in each demographic association test, with consistent sample totals across all cross-tabulations. Statistical analyses were conducted using the documented aggregate frequencies without imputing missing observations.

Questionnaire and Operational Measures

The questionnaire was presented in English and Bahasa Malaysia and contained four sections. Section A comprised seven demographic questions. Section B asked about previous purchase or use, the types previously encountered, and a ranking of five product categories. Section C contained 30 agreement items in six groups of five: price, design, quality, aesthetics, functionality and purchasing behaviour. This article reports the 25 items belonging

to the five purchasing factors; the additional five-item behaviour block is not analysed here. Agreement was coded from 1 (strongly disagree) to 5 (strongly agree).

Section D asked which price range respondents would be willing to pay when purchasing bamboo products. The five options were less than RM200, RM201–RM400, RM401–RM600, RM601–RM800 and more than RM801. The four non-empty categories were used in the association analyses. This is a broad stated spending measure without a specified purchase quantity or time horizon, rather than an exact maximum willingness-to-pay estimate or a premium relative to another material.

In the product ranking, 1 represented first choice and 5 represented fifth choice, so a lower mean rank indicates greater preference. The categories were furniture, kitchenware, décor and handicraft, musical instruments, and other products such as fabrics, pulp and paper. The purchasing-factor items combined beliefs about bamboo products with the importance of attributes and stated purchasing inclinations. Their means therefore summarise agreement with these item groups rather than separate causal effects or experimentally elicited attribute weights.

A pilot test preceded the main survey to assess internal consistency. Cronbach's alpha coefficients for the five purchasing factors ranged from 0.744 to 0.811 (Table 1), indicating acceptable internal consistency. Participants were informed through the questionnaire introduction that their responses would be used exclusively for academic purposes and that their information would be kept confidential. However, acceptable internal consistency alone does not establish construct validity or confirm the unidimensionality of the measurement scales (Tavakol & Dennick, 2011).

Statistical Analysis and Diagnostic Checks

The analyses were conducted in JAMOVI statistical software. Frequencies and percentages described demographics, previous product experience and stated spending; means and standard deviations summarised product ranks and purchasing-factor ratings. Pearson's chi-square tests examined demographic associations using a 0.05 significance threshold, as reflected in the original results.

For this study, documented cross-tabulations were analysed in SciPy 1.17.0. Row totals, column totals and N were checked before calculating Pearson's χ^2, degrees of freedom, asymptotic p-values, likelihood-ratio statistics and Cramér's V. The effect size was calculated as $V = \sqrt{[\chi^2/\{N \times \min(r - 1, c - 1)\}]}$, where r and c are the numbers of row and column categories. Interpretation requires independent respondent observations and mutually exclusive categories.

Expected frequencies were calculated from row and column totals and screened for no count below one and no more than 20% below five (McHugh, 2013). Conditional Monte Carlo Pearson tests addressed sparse cells by sampling tables with fixed margins under independence (Patefield, 1981). Each of the seven tests used 199,999 simulations, batches of 10,000 and seeds 20261124–20261130 in Table 6 order. Simulated upper-tail p-values used the plus-one correction. The 0.05 threshold was retained; p-values are unadjusted and comparisons exploratory.

FINDINGS

Pilot Reliability of the Purchasing Factors

The pilot Cronbach's alpha coefficients ranged from 0.744 for price to 0.811 for functionality (Table 1). Each purchasing factor contained five items. These values support acceptable internal consistency for exploratory use, while not confirming that the five factors are distinct or that the ratings measure actual purchasing behaviour.

Table 1
Pilot Internal Consistency of the Purchasing Factors

Purchasing Factor	Items	Pilot Cronbach's Alpha
Quality	5	0.777
Functionality	5	0.811
Price	5	0.744
Aesthetics	5	0.807
Design	5	0.769

Demographic Profile

A total of 385 respondents participated. Women comprised 59.2% of the sample, respondents aged 19–27 years comprised 52.5%, and Malay respondents comprised 70.1%. Single respondents accounted for 266 (69.1%) and married respondents for 119 (30.9%). Bachelor's degree holders formed the largest education category (59.2%); private-sector employees formed the largest occupational category (38.7%). The most frequently selected income category was below RM2,500 per month (39.5%). These distributions describe the achieved sample rather than the demographic structure of the whole community.

Table 2
Demographic Profile of Respondents

Variable and Category	Frequency	Percentage (%)
Gender		
Male	157	40.8
Female	228	59.2
Age		
19–27 years	202	52.5
28–37 years	120	31.2
38–47 years	46	11.9
48 years and above	17	4.4
Race		
Malay	270	70.1
Chinese	69	17.9
Indian	42	10.9
Others	4	1.0
Marital Status		
Single	266	69.1
Married	119	30.9
Education Level		
Primary school	1	0.3
Secondary school	46	11.9
Diploma/STPM	90	23.4
Bachelor's degree	228	59.2
Postgraduate	18	4.7
Others	2	0.5

Occupation		
Government sector	86	22.3
Private sector	149	38.7
Self-employed	50	13.0
Retiree	4	1.0
Unemployed	15	3.9
Student	81	21.0
Monthly Income		
Less than RM2,500	152	39.5
RM2,501–RM3,170	30	7.8
RM3,171–RM3,970	75	19.5
RM3,971–RM4,850	54	14.0
RM4,851–RM5,880	39	10.1
RM5,881–RM7,100	17	4.4
RM7,101–RM8,700	11	2.9
RM8,701–RM10,970	7	1.8
Total Respondents	385	100.0

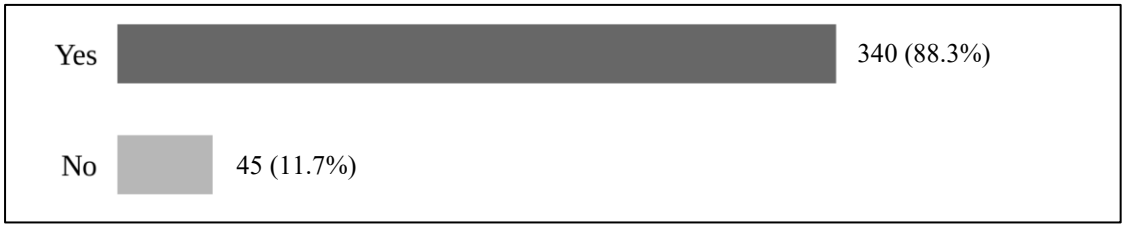
Note. Percentages use N = 385 and are rounded to one decimal place.

Previous Purchase or Use of Bamboo Products

Previous purchase or use was reported by 340 respondents (88.3%), whereas 45 (11.7%) reported no such experience (Figure 1). This indicates familiarity among most participants. Because purchase and use were combined in the reported question, the measure does not identify how many respondents personally bought a product, purchased recently or purchased repeatedly.

Figure 1

Previous Purchase or Use of Bamboo Products



Note. N = 385. Percentages were recalculated from the reported counts.

Product Category Preferences

Kitchenware had the lowest reported mean rank (2.15), followed closely by furniture (2.17), indicating the leading positions in the preference ordering (Table 3). Décor and handicraft, musical instruments and other products had mean ranks of 2.48, 3.83 and 4.38, respectively. These are descriptive rankings; the small difference between kitchenware and furniture was not tested as a statistically significant difference.

Table 3

Product Preferences Based on Mean Rank

Bamboo Product Category	Mean Rank	Standard Deviation
Kitchenware	2.15	1.060
Furniture	2.17	1.170
Décor and handicraft	2.48	1.040
Musical instruments	3.83	1.100
Other products	4.38	0.979

Reported Purchasing Factors

All five purchasing factors had mean agreement scores above four on the five-point scale (Table 4). Quality had the highest reported mean (4.42), followed by functionality (4.37), price (4.36), aesthetics (4.29) and design (4.22). These means describe the relative ordering of agreement in this sample. They are not regression coefficients or estimates of the causal influence of each factor.

Table 4
Descriptive Statistics of the Purchasing Factors

Factor	Mean	Standard Deviation
Quality	4.42	0.546
Functionality	4.37	0.577
Price	4.36	0.560
Aesthetics	4.29	0.589
Design	4.22	0.571

Stated Spending Categories

The lowest reported spending category, below RM200, was selected by 215 respondents (55.8%). A further 126 (32.7%) selected RM201–RM400, 28 (7.3%) selected RM401–RM600 and 16 (4.2%) selected RM601–RM800 (Table 5). Thus, 341 respondents (88.6%, calculated from the combined frequencies) selected one of the two lowest reported categories. This pattern describes intended spending; it does not quantify purchases or a market demand curve.

Table 5
Stated Spending Categories for Bamboo Products

Reported Price Range	Frequency	Percentage (%)
Less than RM200	215	55.8
RM201–RM400	126	32.7
RM401–RM600	28	7.3
RM601–RM800	16	4.2
More than RM801	0	0.0
Total	385	100.0

Note. RM = Malaysian ringgit.

Demographic Relationships

Table 6 presents the complete association results for all seven demographic variables, with a consistent sample size of 385 respondents across all comparisons. The statistical results include Pearson's chi-square and likelihood-ratio tests. For educational attainment, 12 postgraduate respondents were recorded in the RM201–RM400 expenditure category, corresponding to a total of 18 postgraduate respondents and an overall sample of 385 respondents. The observed frequencies for all demographic variables and expenditure categories are presented in Appendix Table A1.

Table 6

Chi Square Tests of Demographic Associations

Demographic Variable	Pearson χ^2	df	Asymp. p	Monte Carlo p	Cramér's V	LR G^2	LR p
Gender	7.251	3	0.064	0.0627	0.137	7.273	0.064
Age	10.700	9	0.297	0.2895	0.096	11.701	0.231
Race	7.529	9	0.582	0.5628	0.081	6.297	0.710
Marital status	12.699	3	0.005	0.0051	0.182	12.413	0.006
Education	27.339	15	0.026	0.0796	0.154	28.636	0.018
Occupation	20.799	15	0.143	0.1450	0.134	27.065	0.028
Monthly income	58.750	21	<0.001	<0.001	0.226	46.379	0.001

Note. N = 385 for every test. LR = likelihood ratio; df applies to both χ^2 and G^2. Monte Carlo p-values use 199,999 fixed-margin simulations and are shown to four decimals; other p-values are shown to three decimals. Values below 0.001 are labelled <0.001. All p-values are unadjusted. Cramér's V is an unadjusted descriptive effect size. For sparse tables, interpretation follows the Monte Carlo Pearson result rather than the asymptotic Pearson or LR p-value.

Gender did not show a statistically detectable association with spending category ($\chi^2(3)$ = 7.251, asymptotic p = 0.064, V = 0.137). Marital status was associated with spending category ($\chi^2(3)$ = 12.699, asymptotic p = 0.005, V = 0.182), with a consistent Monte Carlo p-value of 0.0051. Singles selected the lowest band more often (162/266, 60.9%) than married respondents (53/119, 44.5%); married respondents more often selected RM201–RM400 (54/119, 45.4%, versus 72/266, 27.1%). These percentages describe distributions within groups, not greater purchasing willingness overall.

Monthly income was also associated with the spending distribution ($\chi^2(21)$ = 58.750, Monte Carlo p = 0.0002, V = 0.226). Age (Monte Carlo p = 0.2895), race (0.5628), education (0.0796) and occupation (0.1450) did not reach the exploratory 0.05 threshold. For education, the asymptotic p = 0.026 differs materially from the Monte Carlo result, so an education association is not retained. The significant asymptotic LR result for occupation is likewise not used to override the non-significant Monte Carlo Pearson test. Non-significant results do not establish equality between groups.

Table 7

Expected Count Diagnostics for the Demographic Tests

Demographic Variable	Minimum Expected Count	Cells Below 5, n (%)	Cells Below 1	Assessment
Gender	6.525	0 (0.0)	0	Meets count rule
Age	0.706	5 (31.3)	1	Sparse cells
Race	0.166	7 (43.8)	2	Sparse cells
Marital status	4.945	1 (12.5)	0	Meets count rule
Education	0.042	13 (54.2)	8	Sparse cells
Occupation	0.166	11 (45.8)	3	Sparse cells
Monthly income	0.291	16 (50.0)	5	Sparse cells

Note. Expected counts were calculated from the verified joint tables. Gender and marital status meet the screening rule of no expected count below 1 and no more than 20% below 5 (McHugh, 2013). Age, race, education, occupation and income fail it; their Monte Carlo Pearson p-values are therefore used for interpretation. Independent participation cannot be verified from aggregate tables alone.

DISCUSSION

Purchasing Factors and Perceived Value

For the first objective, quality, functionality and price occupy the highest positions in the descriptive ordering. This is compatible with a perceived-value interpretation in which consumers evaluate practical benefits against monetary sacrifice (Zeithaml, 1988). The quality result also accords with Ansu-Mensah's (2021) evidence that perceived quality matters for green purchase intentions. The comparison is suggestive rather than confirmatory: the earlier study estimated relationships with intention, whereas the present study reports mean agreement with attribute statements.

The findings also give a local context to the quality concerns identified for bamboo furniture by Wang et al. (2025). Demonstrating the product's finish, strength under intended use and maintenance requirements may help consumers evaluate its suitability. However, respondents here were not asked to verify technical performance. Agreement that quality matters should not be translated into a claim that the available bamboo products are durable or superior.

Aesthetics and design remain relevant because their means are also above four. Their lower descriptive positions do not show that they are unimportant or statistically weaker than the other factors. The prominence of emotional and aesthetic value in Wei et al.'s (2025) bamboo-accessory study may reflect the fashion context, where self-expression is integral to use. The household product mix in the present survey offers a plausible explanation for the stronger practical emphasis, but this explanation should be tested with product-specific comparisons.

Spending Preferences and Product Categories

For the second objective, the concentration in the two lowest spending categories suggests that affordability deserves attention when developing local product offers. Wei et al. (2022) similarly found that price was negatively associated with green purchase intention among Malaysian respondents. Agreement across these different measures supports investigating price sensitivity more directly; it does not establish a common price elasticity or a maximum price acceptable to residents.

The preference ordering for kitchenware and furniture suggests useful starting points for product trials. It does not identify the quantity consumers would buy, the characteristics of a preferred item or the price of a particular furniture unit. The difference between a small utensil and a large furniture item also means that a pooled spending question can obscure category-specific willingness. Manufacturers should therefore test offers within each product category before applying the aggregate spending pattern to a pricing decision.

Demographic Inference and Marketing Implications

For the third objective, the verified cross-tabulations support exploratory associations of stated spending with marital status and income. The marital-status pattern concerns a redistribution between spending bands rather than a uniform increase in willingness. The income result is an omnibus association and does not demonstrate a linear income gradient or identify which pairs of income groups differ. These distinctions prevent a demographic association from being interpreted as a causal effect or an automatic basis for targeting individual consumers.

The Monte Carlo checks also change the interpretation of education. Although the asymptotic Pearson test gives $p = 0.026$, more than half its expected counts are below five and the conditional Monte Carlo p-value is 0.0796. The revised analysis therefore does not claim an education association. This difference illustrates why a low asymptotic p-value cannot resolve sparse-cell concerns. Demographic results remain exploratory because sampling was purposive, multiple comparisons were unadjusted and the analysis cannot verify independent participation from summary tables.

The descriptive evidence supports testing product messages around useful features, clear specifications, care instructions and transparent prices. Small product demonstrations or customer trials could examine whether these messages improve evaluation and purchase conversion. These are proposed applications, not interventions evaluated by this survey. Environmental claims would require separate evidence about sourcing, processing, service life and disposal; the present attribute ratings do not establish those outcomes.

Limitations and Future Research

The study covers one residential community and uses purposive sampling. Its findings therefore cannot be generalised statistically to Selangor or Malaysia. The sample is concentrated among young adults, women, Malay respondents and bachelor's degree holders. Physical and online recruitment may introduce mode and self-selection effects, and cross-sectional self-reports are subject to recall and social-desirability limitations. No causal inference is possible.

Measurement-related limitations should also be considered when interpreting the findings. Previous purchase and product use were assessed jointly, while the general expenditure question did not specify product categories, quantities, or a defined time frame. Certain expenditure categories also contained gaps between boundary values, potentially affecting response classification. Furthermore, the purchasing factor items encompassed product beliefs, perceived attribute importance, and behavioural intentions. Consequently, their mean scores should be interpreted as descriptive indicators rather than independent causal determinants of purchasing behaviour. Although the pilot reliability coefficients demonstrated acceptable internal consistency, they do not establish construct validity. Sparse cell frequencies also limited the reliability of asymptotic statistical inference for certain demographic associations. While conditional Monte Carlo tests addressed these statistical limitations, they could not account for potential recruitment bias, possible duplicate responses, or undocumented procedures for handling item-level missing data. Future studies should incorporate broader geographical coverage, clearly documented sampling frames where feasible, mutually exclusive and contiguous product-specific expenditure categories, and validated measurement scales. Discrete choice experiments and actual transaction data are also recommended to determine whether stated consumer preferences translate into purchasing behaviour, thereby strengthening the empirical foundation for bamboo product marketing strategies.

CONCLUSION

This exploratory study provides a descriptive account of bamboo product preferences among 385 respondents in Taman Sri Serdang. Addressing the first objective, quality recorded the highest mean agreement score, followed by functionality, price, aesthetics and design. These are reported attribute priorities rather than estimated effects on purchasing. Addressing the

second objective, 55.8% selected the spending category below RM200, and kitchenware and furniture led the reported category ordering. These findings identify topics for local product and pricing tests without establishing actual demand.

For the third objective, marital status and monthly income were associated with stated spending, with Cramér's V values of 0.182 and 0.226, respectively. Education's apparent asymptotic significance was not supported by the Monte Carlo test, and no statistically detectable association was found for gender, age, race or occupation at the exploratory 0.05 threshold. These findings describe this purposively recruited sample and do not imply causation or population-wide differences. The study's practical contribution is a local baseline for testing bamboo offers around product performance and affordability; environmental impact was not measured.

ACKNOWLEDGEMENT

The authors gratefully acknowledge the support and cooperation of all respondents who participated in this study. Appreciation is also extended to the Faculty of Forestry and Environment, Universiti Putra Malaysia, for supporting the development of this research. This research did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sectors.

CONFLICT OF INTEREST STATEMENT

The authors declare that they have no known competing financial interests or personal relationships that could have influenced this research.

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