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Sustainable by Choice: What influences university student consumption of local products?

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Abstract
The study aims to identify the factors that influence the consumption of local sustainable food products. A survey was conducted involving 411 students using questionnaires. Descriptive statistics and Spearman's Correlation were used for data analysis. 240 respondents exhibited a high level of attitudes toward local sustainable food. The findings indicated that ethical labels ($\bar{x}$ = 4.13 ± 0.18) and actual consumption ($\bar{x}$ = 4.21 ± 0.14) received the highest agreement. The correlation test revealed a significant positive relationship between all five attitude factors and consumption behaviour, indicating that local food producers should align their offerings with consumers' preferences.

Keywords: Sustainable; Attitudes factors; Consumer behavior; Local food product

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1.0 Introduction

The environment, human and societal health, and community unity, food consumption has been a significant debate in the politics of sustainable consumption and production. Climate change, water pollution, water scarcity, soil degradation, habitat loss, and biodiversity loss are just a few of the significant ecological problems linked to food production and consumption (Ahmed et al., 2023). These changes influence consumer awareness of sustainable food, as people become increasingly exposed to and conscious of the challenges associated with sustainable food production and consumption (Burkert et al., 2023). In the sustainable consumption aspects, it emphasises the importance of reducing consumption, satisfying human needs, providing a good quality of life, and an acceptable standard of living, sharing available resources between rich and poor, considering the needs of future generations to come, and minimising consumption of resources as well as the production of pollutants and waste (Bauerné Gáthy *et al.*, 2022)

1.1 Local food sustainability

Food sustainability is associated with practices such as consuming organic, locally sourced and seasonal products. Choosing seasonal and local food can significantly reduce environmental impacts while strengthening local economies and promoting a healthier ecosystem (Vargas et al., 2021). Consumers who are concerned with environmentally sustainable food products would respond positively to

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products that are sold with environmental sustainability labels, which serve as a crucial sign of low-impact production methods, including pesticide-free and biodiversity-friendly practices (Aprile et al., 2022), which show the importance of promoting transparent labelling and educating consumers to foster a sustainable food system.

Although the concept of sustainable food consumption has been widely studied globally, existing research tends to focus on countries such as Italy, India and others in Europe and Asia (Annuziata & Scarpato, 2014; Sigh & Verma, 2017; Lago et al., 2020). However, in the Malaysian context, studies exploring consumer attitudes and awareness toward sustainable food remain comparatively limited on topics such as consumer knowledge, attitudes and purchasing behaviour (Ganesh et al, 2021), sociodemographic influences on organic food consumption (Jaafar et al., 2024) and consumer willingness to pay (Kalyana Sundram & Matthew, 2025).

1.2 Factors influencing food sustainability

Consumer awareness and knowledge are key drivers of sustainable food production development. As Dupuits et al, (2022) stated that knowledge of sustainable diets has grown in the past few years, there is still a misconceptions on factors that hinder the behaviour changes while Rasool et al., (2021) have find a multidimensional model of consumer awareness encompassing hunger, economic, landfill and water concerns which highlight that structured education can boost ethical purchase intention.

Other studies on sustainable food products focus on consumers' factors that influence attitudes and purchasing behaviour related to sustainable food. These factors encompass values, environmental concerns, knowledge, perceived quality, emotions, health consciousness, and concerns regarding nutrition, food taste, and safety (Lago *et al.*, 2020). At the same time, Jaafar et al. (2024) highlighted that health, nutrition, and food safety influence organic food choice, especially among higher-income groups. Similarly, Loges and Matthew (2025) reported that the willingness to pay for sustainable food products and knowledge on certifications do play a role in consistent sustainable food behaviour. It is essential to identify the attitude factors that influence the consumption of local sustainable food products among students at Universiti Malaysia Sabah (UMS). The study aims to identify the determinants influencing consumer consumption of local sustainable food products

2.0 Methodology

This study employed a quantitative method, using a cross-sectional survey conducted from June to September 2023, involving 411 undergraduate students at the main campus of Universiti Malaysia Sabah. The purposive and snowball sampling methods have been used, with respondents selected based on their knowledge of about food sustainability concepts. The structured questionnaire was adopted from Azzurra et al. (2019), Clonan et al. (2010), Lago *et al.* (2020) and Ahamad & Ariffin (2018). It is comprised of four sections: A (sociodemographic, 4 items), B (consumer Attitude, 5 items), C (attitude factors including concern toward sustainability, healthy lifestyle, price, quality, and ethical labels, 15 items), and D (consumption of local sustainable food products, 4 items). A pilot test was performed to ensure the reliability of the questions. Results showed ($\alpha > 0.80$) show a good internal consistency. The data is interpreted using descriptive statistics (frequency, percentage, mean, standard deviation) and Spearman's.

3.0 Finding and discussion

A total of 411 undergraduate and postgraduate students from the Universiti of Malaysia Sabah (UMS), Kota Kinabalu main campus, aged between 18 and 35 years, are involved in studying the factors that influence their attitudes towards local sustainable food products. The findings showed that respondents' attitudes towards local sustainable food products were categorised based on percentages. Respondents who scored below 60% were classified as having a poor attitude, 60% to 80% indicated a moderate attitude, and ranging from more than 80% to 100% were classified as demonstrating a high attitude. The average mean value of consumer attitudes towards local sustainable food products influenced by concern towards food sustainability factors has been obtained. Lastly, the relationship between consumer attitude and consumption factors is significant ($p<0.05$).

3.1 Respondent Profile

A total of 411 respondents participated in this study, with the majority being female, (72.7%, n = 299), while male respondents comprised 27.3% (n = 112). Most participants fell within the 18–23-year age group (80.3%, n=330). Followed by those aged 24-29 (18.7%, n = 77) and a small portion aged 30-35 (1%, n = 4). In terms of ethnicity, Chinese participants represented the largest ethnic group, at 44.8% (n=184), followed by Malays at 24.3% (n = 100), Bumiputera from Sabah and Sarawak at 20% (n = 82), Indians at 10.5% (n = 43), and others at 0.5% (n=2). Regarding monthly food expenditure, the largest proportion of respondents reported spending between RM 201 and RM300 per month (27.5%, n = 113), followed by RM301-RM400 (24.1%, n = 99), RM501 and above (19.7%, n = 81), RM 401-RM500 (15.1%, n = 62) and below RM200 (13.6%, n = 56).

Table 1. Demographic background

Item		Frequency (n=411)	Percentage (%)
Gender	Male	112	27.3
	Female	299	72.7
Age	18 – 23	330	80.3
	24 – 29	77	18.7
	30 – 35	4	4

Race	Malay	100	24.3
	Chinese	184	44.8
	Indian	43	10.5
	Bumiputera	82	20
	Others	2	0.5
Monthly expenses for food	Below RM 200	56	13.6
	RM 201 – RM 300	113	27.5
	RM 301 – RM 400	99	24.1
	RM 401 – RM 500	62	15.1
	RM 501 and above	81	19.7

These expenditure patterns provide valuable insights into the affordability and access issues that influence young consumers' sustainable food choices (Table 1). These finding provide valuable insights of the younger consumers demographic and expenditure patterns particularly regarding affordability, food access, and potential openness to sustainable food options, aligning with previous study on youth driven sustainable consumption trends in Malaysia (Ganesh et al., 2021; Jaafar et al., 2024).

3.2 Attitude level

The study assessed respondents' attitudes toward local sustainable food and categorized them into three levels based on cumulative scores.: High (>80%), Moderate (60-80%), and Poor (<60%). As shown in Table 2, the majority of respondents demonstrated a high level of attitude toward local sustainable food, accounting for 58.4% (n = 240). A further 31.1% (n = 128) exhibited moderate attitudes, while only 10.5% (n = 43) were classified as having poor attitudes. These findings suggest a generally favourable perception among young consumers toward sustainable food, aligning with broader trends reported by Ganesh et al. (2021) and Jaafar et al. (2024), who noted increasing awareness and favourable attitudes toward green and organic food among urban consumers. Meanwhile, Loges and Matthew (2025) highlighted that positive attitudes do not always translate into purchase behaviour due to various factors like affordability, limited access and lack of knowledge about sustainability. However, the presence of a considerable portion with only moderate or poor attitudes indicates a need for targeted awareness campaigns and deeper engagement, particularly addressing gaps and practical barriers to sustainable food practices.

Table 2. Attitude level

	Level	Frequency	Percentage (%)
Attitude (n=411)	High	240	58.4
	Moderate	128	31.1
	Poor	43	10.5

** Score : >80% (High), 60-80% (Moderate), <60% (Poor)*

3.3 Consumer attitude and consumption factors

The descriptive analysis of mean scores for each consumer attitude factor toward local sustainable food is presented in Table 3. Responses were measured on a 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). Among the five attitude dimensions evaluated, ethical labels received an average score ($\bar{x}$ = 4.13 ± 0.18), indicating that clear and trustworthy product labelling strongly influences consumers' perceptions and attitudes. This reflects the growing consumers' demand for transparency and credibility in sustainable claims.

Healthy lifestyle was the second-highest motivator with an average mean of $\bar{x}$ = 3.91 ± 0.08, underscoring the relevance of health consciousness in shaping sustainable food attitudes among young consumers. Similarly, the quality of local sustainable food products was rated highly ($\bar{x}$ = 3.80 ± 0.03), suggesting that consumers associate sustainable options with product excellence and reliability. Concern towards food sustainability was recorded at a moderately high mean score ($\bar{x}$ = 3.77 ± 0.26), reflecting general awareness and interest in the environmental and social aspects of food production, although possibly lacking deeper engagement or understanding. Price, with the lowest mean score ($\bar{x}$ = 3.54 ± 0.20), indicates that while affordability is a factor, it is less dominant compared to ethical, health, or quality considerations.

In terms of behaviour, the mean score for consumption of local sustainable food products was high ($\bar{x}$ = 4.21 ± 0.14), reflecting strong reported engagement among respondents. This result indicates that young consumers, particularly university students, are open and willing to consume sustainable food products when aligned with their values, health goals and ethical considerations. These findings emphasis the multidimensional nature of consumer attitudes, where factors such as ethical values, personal health and perceived quality are more prominent drivers of behaviour than price alone. This pattern is consistent with previous findings which suggest that informed and value-driven consumption is increasing among Malaysia's younger population (Jaafar et al., 2024; Loges & Matthew, 2025).

Table 3. Consumer attitude and Consumption factors

Items	Factors Influencing Consumer Attitudes Towards Local Sustainable Food Products	Average Mean ± std
C1-3	Concern towards food sustainability	3.77±0.26
H1-3	Heathy lifestyle	3.91±0.08
P1-3	Price	3.54±0.20

Q1-3	Quality	3.80±0.03
E1-3	Ethical label	4.13±0.18
Items	Consumption of local sustainable food	Mean ± std
S1-4	Consumption	4.21±0.14

*5 = Strongly agree; 4= Agree; 3=Neutral; 2= Disagree; 1= Strongly disagree

3.4 Correlation

A Spearman's correlation analysis was conducted to examine the relationship between five identified consumer attitude factors and the consumption of local food products. As shown in table 4, all five attitude factors demonstrated significant positive correlations with consumption behaviour with p-value less than 0.05, indicating statistically significant relationship.

Among the factors, ethical labels had the strongest correlation with consumption behaviour (r = 0.557, p = 0.001), highlighting the importance of clear, trustworthy labeling and certifications in shaping consumer decisions. This suggests that consumers are more likely to engage in sustainable consumption when sustainability claims are visibly and credibly presented. The second strongest relationship was observed between healthy lifestyle and consumption (r = 0.481, p = 0.001), followed closely by concern toward sustainability (r = 0.459, p = 0.001). These findings indicate that personal health values and environmental consciousness both serve as strong motivators for sustainable food choice among young consumers. Quality also showed a moderate but significant positive correlation with consumption (r = 0.425, p = 0.001), suggesting that perceived quality plays a role in influencing decisions, though perhaps not as decisively as health or ethical labelling. Meanwhile, price was the weakest, though still statistically significant correlation (r = 0.316, p = 0.001). This implies that while costs remain a factor, it is not the primary barrier to the consumption of local sustainable food products in this demographic (Table 4).

The results support previous literature (Ganesh et al., 2021; Loges & Matthew, 2025), which suggests that positive attitudes and value-driven motivations such as ethics labels and healthy lifestyle can outweigh concerns about cost, especially among educated, young consumers. However, strategic interventions such as clearly ethical labeling, greater accessibility, and awareness campaigns can further strengthen these associations and translate positive attitudes into actual behaviour.

Table 4. Correlation

Bil	Consumer attitude factor *Consumption of local sustainable food products	r^2	p value
1	Concern towards food sustainability – Consumption	0.459	0.001*
2	Healthy lifestyle – Consumption	0.481	0.001*
3	Price – Consumption	0.316	0.001*
4	Quality – Consumption	0.425	0.001*
5	Ethical labels – Consumption	0.557	0.001*

* p<0.05

4.0 Conclusion and Recommendations

The study investigated the factors influencing consumer attitudes and consumption of local sustainable food products among undergraduate and postgraduates' students at Universiti Malaysia Sabah (UMS). By employing a quantitative cross-sectional survey involving 411 respondents, the research sought to understand how young consumers perceive sustainable food options, what motivate their attitude and how these facts translate into actual consumption behaviour. The findings provide valuable insights into the multidimensional nature of consumer decision-making, particularly within the context of a younger demographic increasingly exposed to sustainability discourses.

The results showed that a majority of respondents demonstrated a high level of positive attitude toward local sustainable food products. Specifically, 58.4% of the sample fell into the "high attitude" category, while 31.1% showed moderate attitudes and 10.5% poor attitudes. This distribution reflects a generally favourable perception of sustainable food among young consumers consistent with broader national and regional trends that contributes to rising awareness of sustainability issues. These findings highlight the role of youth as potential drivers of sustainable consumption, reinforcing earlier studies (Ganesh et al., 2021; Jaafar et al.,2024) that have underscored the openness of younger generations to environmentally and socially responsible consumption. Further analysis revealed that among the five attitude factors measured, ethical labeling exerted the strongest influence on consumer perception and behaviour, recording the highest means score ($\bar{x}$ = 4.13) and correlation (r = 0.557) with actual consumption. This underscores the importance of transparency, credibility, and trustworthiness is sustainability claims. Consumers are more inclined to purchase sustainable food products when such claims are verified through clear and reliable labelling. Healthy lifestyle ($\bar{x}$ = 3.91, r = 0.481),) and quality ($\bar{x}$ = 3.80, r =0.425) also emerged as strong motivators suggesting that young consumers align sustainability with personal health benefits and high product standards. Concern toward sustainability registered moderately high scores reflecting awareness but perhaps lacking depth of engagement. Interestingly, price ($\bar{x}$ = 3.54, r =0.316), although significant play the least influential role compared to other factors, indicating that affordability is not the primary barrier for this demographic. Instead, values, health motivators, and trust in product quality seem to drive consumer behaviour decisively.

Overall, these findings affirm that young, educated consumers are generally supportive of sustainable food practices, provided that products meet their expectations for authenticity, health, and quality. Such insights have practical implications for policymakers, food producers, and marketers seeking to promote sustainable food systems in Malaysia. For instance, strengthening certification system, promoting health-oriented campaigns, and improving product accessibility may further enhance consumer engagement with local sustainable food products.

Despite this contribution, several limitations must be acknowledged. First, the study's sample was limited to students from a single university, which restricts the generalizability of the findings to other demographic groups, particularly older consumers, rural communities, and individuals with different socioeconomic backgrounds. The reliance on purposive and snowball sampling also increases risk of selection bias, as participants were more likely to be individuals already aware of or interested in sustainability issues. Consequently, the attitudes and behaviour captured in this study may not fully represent the broader Malaysian population. Second, cross-sectional design, which captures data at a single point in time, restricts the ability to draw causal inferences between consumer attitudes and their actual behaviour. While significant correlations were observed, it cannot be assumed that attitudes directly lead to sustainable food consumption in the long term. Longitudinal research is necessary to assess how these attitudes and behaviour evolve over time and whether positive perceptions consistently translate into purchasing decisions. Third, the study relied on self-reported questionnaires, which may introduce social desirability bias or inaccuracies in responses. Participants may have overstated their sustainability. Additionally, while the questionnaire demonstrated high internal reliability ($\alpha > 0.80$), it was adapted from prior studies conducted in different cultural and regional contexts. Although validated, there remains a possibility that cultural nuances specific to Malaysians consumers were not fully captured, limiting the contextual applicability of the instrument beyond the study setting. These limitations, however, open avenues for future research. To enhance the generalizability of findings, subsequent studies should broaden the sample to include diverse demographic group across different regions of Malaysia, encompassing urban and rural populations, varied income levels and different educational backgrounds. Such diversity would provide a more comprehensive understanding of the drivers and barriers to sustainable food consumption at the national level. In addition, expanding the scope beyond university students may reveal generational differences in perceptions and practices, shedding light on how sustainable attitudes evolve across life stages.

Future studies could also benefit from adopting longitudinal research design to track changes in consumer attitudes and behaviour over time. This would provide a more robust basis for identifying causal relationships and assessing the durability of sustainability-driven consumption. For instance, tracking the same cohort of young consumers as they transition into the workforce and face changing financial responsibilities could yield insights into whether sustainability values remain a consistent influence on their purchasing decisions. Moreover, qualitative approaches such as interviews, focus groups, or ethnographic methods could complement quantitative surveys by offering deeper insights into consumer motivations and barriers. Such approaches would help uncover the underlying cultural values, social influences, and personal experiences that shape sustainable food choices. For example, exploring why some consumers remain in the "moderate" or "poor" attitude categories despite widespread awareness may provide critical insights for designing targeted interventions. Expanding the dimensions of consumer attitudes is another promising direction. Future research could incorporate variables such as cultural identity, environmental knowledge, peer influence, and media exposure to develop a more holistic understanding of sustainable consumption. This would allow scholars to examine not only individual-level motivations but also the broader social and cultural forces that shape consumer choices. Finally, future studies could evaluate the effectiveness of specific interventions aimed at promoting sustainable food consumption. For example, researchers could test whether clearer labelling systems, price subsidies, or health-oriented promotional campaigns significantly increase the uptake of local sustainable food products. Such evidence would be valuable for policymakers and industry stakeholders in designing effective strategies to foster sustainable food systems in Malaysia.

In conclusion, this study has demonstrated that young consumers in Malaysia, particularly university students, hold generally positive attitudes toward local sustainable food products, with ethical labelling, health consciousness, and perceived quality emerging as key motivators. However, limitations related to sample scope, design, and measurement must be considered when interpreting the findings. Future research should address these limitations by employing more diverse samples, longitudinal designs, and mixed methods approaches to capture the complexity of consumer decision-making. Collectively, such efforts will contribute to advancing knowledge on sustainable consumption and inform practical strategies to promote responsible food choices, thereby supporting Malaysia's transition toward a more sustainable food system.

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Paper Contribution to Related Field of Study

This paper is related to the fields of study of sustainable marketing, consumer behaviour and food studies

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