

Can price sensitivity override health motivation? Extending the Theory of Planned Behaviour with perceived value to explain Malaysian youths' purchase intention for plant-based meat

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ABSTRACT

The rising interest in plant-based meat as a sustainable and ethical protein alternative has gained scholarly and industry attention worldwide. However, research on consumer behavioural responses in Southeast Asia, particularly among youth in Malaysia, remains limited. This conceptual paper critically examines how social background, cultural background, health perception, and price sensitivity influence the purchase intentions of Malaysian youths toward plant-based meat products. Drawing on the Theory of Planned Behaviour (TPB) as a guiding theoretical foundation, this paper synthesises current literature to highlight how socio-cultural influences and economic considerations interact with individual health beliefs in shaping purchase decisions for sustainable food alternatives. The paper argues that while health perception and social influences may drive interest in plant-based meat, cultural food identity and price sensitivity remain significant barriers to actual purchase intention, contributing to the persistent attitude-behaviour gap. By contextualising TPB within a multicultural and emerging economy setting, this paper advances theoretical understanding of sustainable food consumption and identifies key directions for future empirical research. The discussion offers practical implications for policymakers, alternative protein producers, and sustainability advocates

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seeking to enhance the acceptance and adoption of plant-based meat among young consumers in Malaysia and similar contexts.

1. INTRODUCTION

The global food landscape is undergoing a significant transformation as consumers increasingly shift from animal-based to plant-based diets, driven by growing concerns about health, environmental sustainability, and ethical considerations (Andreani et al., 2023; Boukid, 2020). Plant-based meat products, which mimic the sensory attributes of conventional meat through the use of plant proteins such as soy, wheat, and pea, have emerged as a prominent innovation in this shift (Vliet et al., 2020; Dai et al., 2022). These alternatives offer potential health advantages, including lower levels of saturated fat and higher fibre content, alongside reduced environmental impacts relative to livestock production (McClements et al., 2021; Tso & Forde, 2021).

In Malaysia, dietary transitions are increasingly evident, particularly among youths who are becoming more receptive to alternative protein sources as part of evolving food values and lifestyles (Koning et al., 2020; Abu Bakar et al., 2023). Youths, defined in Malaysia as individuals aged 15 to 30 under the Youth Societies and Youth Development Act, represent a critical consumer group due to their openness to innovation and their influence on broader societal food trends (Joha et al., 2022). As in other parts of Asia and the West, Malaysian youths' purchasing decisions are shaped by health motivations, environmental awareness, and changing cultural norms (Stanley et al., 2023; Villiers et al., 2024; Kamal, 2024).

A growing body of literature has identified several factors influencing the adoption of plant-based meat products. Social influences—including family practices, peer networks, and social media—play a substantial role in shaping food perceptions and behaviours (Ares & Gambaro, 2018; de Boer et al., 2017; Vidal et al., 2020). Cultural traditions and religious dietary requirements can either support or constrain the acceptance of plant-based products, depending on their alignment with familiar flavours and practices (Hoek et al., 2011; Zhu et al., 2021). Health perceptions further mediate purchasing decisions, as plant-based diets are increasingly linked to reduced risks of non-communicable diseases such as obesity and cardiovascular conditions (Mohd Azman et al., 2023; Liu et al., 2025). However, price sensitivity remains a notable barrier, as plant-based products are often priced higher than conventional meat, limiting access among price-conscious consumers (Mäkinen et al., 2020; Tuncer et al., 2021).

While international studies have examined these factors extensively (e.g., White et al., 2022; Stanley et al., 2023), empirical research focusing on Malaysian youths remains limited. Existing work has largely emphasised either general consumer attitudes or health motivations, with less attention given to the interplay between social, cultural, health-related, and economic factors in shaping purchase intentions in this demographic. Moreover, there is limited application of robust theoretical frameworks, such as the Theory of Planned Behaviour (TPB), to systematically explain how these determinants interact in a Malaysian context.

Addressing this gap is critical, as youths represent both current and future consumers whose dietary choices can influence national food systems and sustainability goals. This study applies the TPB to examine how social background, cultural background, health perceptions, and price sensitivity influence Malaysian youths' intentions to purchase plant-based meat products. By doing so, it aims to advance theoretical understanding of consumer behaviour in emerging markets and provide practical insights for policymakers, food producers, and health advocates seeking to promote sustainable dietary transitions.

2. LITERATURE REVIEW

The growing global shift toward plant-based diets has catalysed a substantial body of research on the determinants of consumer acceptance and purchasing behaviour for plant-based meat products. This literature highlights a complex interplay between social influences, cultural traditions, health perceptions, and economic considerations in shaping dietary choices. To structure this review, the Theory of Planned Behaviour (TPB) is adopted as the guiding theoretical framework. TPB posits that behavioural intention is shaped by three components: attitudes toward the behaviour, subjective norms, and perceived behavioural control (Fleşeriu et al., 2020; Wongsachia et al., 2022). This framework provides a useful lens through which to analyse how these determinants interact to influence Malaysian youths' intentions to purchase plant-based meat products.

2.1 Social Background and Dietary Behaviour

Social influences are among the most powerful predictors of food choice, particularly during adolescence and young adulthood. Early dietary habits are typically shaped within family contexts through parental modelling, mealtime routines, and shared cultural values (Ragelienė & Grønhoj, 2020; Tan et al., 2024). As individuals transition into youth and young adulthood, peer groups and social networks become increasingly influential, often driving food experimentation and alignment with group norms (Chen & Antonelli, 2020). Social media platforms have further intensified these influences by normalising plant-based eating through influencers, targeted advertising, and user-generated content (Abdul Basir et al., 2022; Vidal et al., 2020).

International studies show that social norms and peer acceptance strongly predict intention to consume plant-based products among younger consumers (de Boer et al., 2017; Ares & Gambaro, 2018). In the Malaysian context, where food choices are often collective and socially mediated, family endorsement and peer support may play a decisive role in encouraging or discouraging adoption of plant-based meat (Abu Bakar et al., 2023). However, empirical evidence specific to Malaysian youth remains limited, particularly concerning how social influence interacts with health perceptions and economic considerations to shape purchasing intention.

2.2 Cultural Background and Food Choices

Culture is deeply embedded in dietary practices, influencing taste preferences, food preparation methods, and religious observances (Pienaa et al., 2024; Ramenzoni, 2023). In Malaysia's multicultural society, distinct culinary traditions coexist, with halal certification representing a critical factor for many Muslim consumers (Lindsey, 2024). The compatibility of plant-based meat with these cultural and religious expectations determines its acceptance. Studies have shown that products replicating traditional dishes—

such as rendang or satay—are more likely to be embraced by local consumers (Ramli et al., 2023; Begho et al., 2022).

Research also suggests that acculturation processes influence openness to dietary innovation. Youths in urban areas, exposed to global food trends and marketing, may exhibit more flexible attitudes toward plant-based meat compared to rural populations (Mitri et al., 2025; Deng et al., 2025). Despite these insights, current Malaysian studies tend to treat culture as a static demographic variable rather than exploring its dynamic interaction with social identity and perceived behavioural control, which limits understanding of how cultural values facilitate or constrain adoption.

2.3 Health Perceptions as Drivers of Behaviour

Health consciousness is a central motivator for adopting plant-based diets (Bazzani et al., 2022; González-Ortíz et al., 2020). Evidence from multiple contexts indicates that individuals who perceive plant-based products as healthier alternatives are more likely to form positive attitudes and intentions toward purchase (Ran et al., 2023; Dybvik et al., 2022). Public health campaigns have strengthened awareness of the link between excessive meat consumption and non-communicable diseases, including obesity and cardiovascular disease (Ministry of Health Malaysia, 2020; Liu et al., 2025).

In Malaysia, however, health motivations are often moderated by strong cultural attachments to meat-based cuisine (Sadler et al., 2024; Nor & Fong, 2024). Moreover, youths may possess varying levels of nutritional literacy, influencing their ability to evaluate plant-based meat products critically. While some studies have explored general health attitudes, few have examined how perceived health benefits interact with cultural familiarity and price considerations to shape intention, signalling a key research gap.

2.4 Price Sensitivity and Perceived Value

Price remains a significant determinant of consumer food choices, particularly for youths with limited purchasing power (Shaik et al., 2022). Plant-based meat products are typically priced higher than conventional meat due to production costs and market positioning (Santo et al., 2020). Although consumers may value health and environmental benefits, these positive attitudes often diminish when price differentials are substantial (Lou et al., 2024; Mamia, 2023). Perceived value can mitigate price sensitivity if consumers believe that plant-based meat delivers superior health, ethical, or sensory attributes (Rizzo et al., 2023).

Malaysian research on price sensitivity is still emerging and tends to focus on general consumers rather than youths specifically. Little is known about how price considerations interact with social and cultural influences to determine purchase intention, a critical gap given Malaysia's income disparities and urban–rural differences.

2.5 Synthesis and Research Gap

Overall, the literature demonstrates that social background, cultural context, health perceptions, and price sensitivity all significantly influence plant-based meat adoption. However, three key gaps remain. First, integrated studies examining the combined effects of these factors among Malaysian youths are scarce, despite this group's importance in driving dietary transitions. Second, prior work has rarely applied the TPB to model these factors systematically in a Malaysian context, limiting theoretical development. Third, most existing research remains descriptive, lacking empirical analysis of interaction effects between

determinants, such as how cultural compatibility may moderate the influence of health perceptions or price on behavioural intention.

This study addresses these gaps by employing TPB to investigate the relative and interactive effects of social, cultural, health, and economic factors on Malaysian youths' intentions to purchase plant-based meat products. By doing so, it contributes to a more nuanced understanding of consumer behaviour in emerging markets and provides a theoretically grounded basis for targeted interventions.

3. METHODOLOGY

This study will adopt a quantitative, cross-sectional survey design to examine the factors that will influence Malaysian youths' intentions to purchase plant-based meat products. A quantitative approach will be selected as it will allow the testing of hypothesised relationships among latent variables derived from the Theory of Planned Behaviour (TPB). Specifically, the constructs of social background, cultural background, health perceptions, and price sensitivity will be modelled as antecedents of behavioural intention. This design will enable systematic hypothesis testing and enhance the potential for generalisation to the broader youth population.

The target population will comprise Malaysian youths aged 18 to 30 years, in line with Malaysia's Youth Societies and Youth Development Act. This group will be targeted because youths represent a key segment driving dietary transitions and are highly exposed to both global and local food trends. A stratified random sampling technique will be employed to ensure representativeness across three key strata: (i) age groups (18–21, 22–25, 26–30 years), (ii) gender (male, female), and (iii) geographic location (urban, rural). The minimum required sample size will be calculated using Krejcie and Morgan's (1970) formula for a 95% confidence level and a 5% margin of error, which will yield a required sample of 384 respondents. To account for potential non-response, the target will be set at 385 respondents.

Data will be collected using a structured self-administered questionnaire, which will be designed to capture information across six key sections. The first section will focus on demographic information, including variables such as age, gender, and location. The second section will assess social background, using items that will be adapted from previous studies examining the influence of family, peers, and social media on food choice (Budiman, 2021; Ares & Gambaro, 2018). The third section will examine cultural background, drawing on validated scales that measure cultural food practices and religious compatibility with plant-based products (Hoek et al., 2011; Zhu et al., 2021). The fourth section will measure health perceptions, with items adapted from established instruments that assess perceived health benefits associated with plant-based foods (Bazzani et al., 2022; Ran et al., 2023). The fifth section will focus on price sensitivity, using items derived from prior research on consumers' perceptions of food prices (Mamia, 2023; Shaik et al., 2022). The final section will measure purchase intention, with items developed in line with the Theory of Planned Behaviour to assess respondents' willingness and readiness to purchase plant-based meat products (Katare et al., 2022; Ma & Chang, 2022).

All items will be measured using a seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The questionnaire will be developed initially in English and subsequently translated into Malay. A back-translation procedure (Brislin, 1970) will be employed to ensure linguistic and conceptual equivalence between the two language versions. This process will help maintain measurement accuracy and cultural appropriateness for Malaysian respondents.

Content validity will be established through expert evaluation by three academics specialising in consumer behaviour and nutrition. Construct validity will be assessed through exploratory factor analysis (EFA) during pilot testing. A pilot study involving 30 respondents will be conducted to examine the clarity, wording, and reliability of the items. Internal consistency will be evaluated using Cronbach's alpha, with values of 0.70 or higher regarded as acceptable (Nunnally & Bernstein, 1994). Based on pilot feedback, wording adjustments will be made where necessary.

For the data collection, the survey will be distributed online via Telegram, Instagram, and WhatsApp using Google Forms to reach a wide geographical area efficiently. Participation will be voluntary and anonymous. The inclusion criteria will be: (i) Malaysian citizenship, (ii) aged between 18 and 30 years, and (iii) ability to complete the questionnaire in either English or Malay. Ethical approval will be obtained from the relevant university ethics committee prior to data collection.

Data will be analysed using IBM SPSS Statistics Version 28. The analysis will begin with data cleaning, checks for missing values, and normality assessment (skewness and kurtosis). Descriptive statistics will be used to summarise demographic information. Pearson's correlation analysis will be applied to explore bivariate relationships among variables. Subsequently, multiple regression analysis will be conducted to test the hypothesised effects of social background, cultural background, health perceptions, and price sensitivity on purchase intention. This analytical strategy will allow for the assessment of the relative contribution of each predictor while controlling for demographic variables. The assumptions of multicollinearity, linearity, and homoscedasticity will be examined prior to running the regression models. Statistical significance will be determined at $p < 0.05$.

This methodological approach will ensure rigour, transparency, and theoretical alignment, providing a robust basis for examining the factors that will shape Malaysian youths' intentions to purchase plant-based meat products.

4. CONCLUSION

This study will examine the factors that influence Malaysian youths' intentions to purchase plant-based meat products by applying the Theory of Planned Behaviour (TPB) as its guiding framework. Specifically, the study will investigate the roles of social background, cultural context, health perceptions, and price sensitivity in shaping behavioural intention. By integrating these determinants within a single theoretical model, the research aims to provide a more comprehensive understanding of consumer behaviour related to plant-based meat products in the Malaysian context.

From a theoretical perspective, the study is expected to extend the application of TPB to the context of alternative protein consumption in emerging markets. It will contribute to the literature by examining how social and cultural dynamics interact with health perceptions and economic factors to shape intention, thereby offering a more holistic perspective on youth consumer behaviour. From a practical standpoint, the study will offer insights for policymakers, industry stakeholders, and public health advocates seeking to promote plant-based dietary transitions. The results are expected to inform strategies related to product development, pricing, marketing, and communication that are culturally relevant and economically accessible. These strategies may support national efforts to encourage healthier eating patterns and more sustainable food systems.

Overall, this research will address critical gaps in the existing literature by focusing on Malaysian youths. This segment has received limited scholarly attention despite its influence on emerging dietary trends. The outcomes of this study are anticipated to provide both theoretical contributions and practical recommendations that can inform future research, policy development, and industry practices in the domain of sustainable food consumption.

5. CONFLICT OF INTEREST STATEMENT

The authors declare that there is no conflict of interest regarding the publication of this paper.

6. AUTHORS' CONTRIBUTIONS

Nur Aliatul Husna Mohd Zamri: Conceptualisation, methodology, formal analysis, investigation, data curation, visualization, writing—original draft, and project administration; **Rosmaliza Muhammad:** Supervision, validation, writing—review and editing, and funding acquisition; **Norhidayah Abdullah:** Supervision, validation, and writing—review and editing.

7. DECLARATION OF GENERATIVE AI IN THE WRITING PROCESS

The authors used generative artificial intelligence (AI) tools (e.g., ChatGPT) to assist in improving language clarity and readability. The AI tool was not used to generate research content or influence the study's findings. All content has been reviewed and approved by the authors, who take full responsibility for the integrity of the work.

8. ETHICS STATEMENT

The authors declare that this study did not involve human or animal subjects. All data were obtained from publicly available sources, and the research was conducted in accordance with the institutional research guidelines of Universiti Teknologi MARA (UiTM).

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