THE INTENTION TO PURCHASE PLANT-BASED MEAT AMONG GENERATION Y IN MALAYSIA

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FACULTY OF BUSINESS AND FINANCE

MAY 2023

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This dissertation/thesis entitled "**THE INTENTION TO PURCHASE PLANT-BASED MEAT AMONG GENERATION Y IN MALAYSIA**" was prepared by YAP WAI HOONG and submitted as partial fulfillment of the requirements for the degree of Master of Business Administration (Corporate Management) at Universiti Tunku Abdul Rahman.

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Date: 7/7/2023

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THE INTENTION TO PURCHASE PLANT-BASED MEAT AMONG GENERATION Y IN MALAYSIA

By

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A thesis submitted to

Faculty of Business and Finance,

Universiti Tunku Abdul Rahman,

in partial fulfillment of the requirements for the degree of

Master of Business Administration

(Corporate Management)

MAY 2023

ABSTRACT

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YAP WAI HOONG

The objective of this research was to investigate the factors that influence the intention to purchase plant-based meat among Generation Y in Malaysia. To achieve this objective, the study employed the Theory of Planned Behavior (TPB) as a theoretical framework and examined the impact of five independent variables: attitude, subjective norms, perceived behavioral control, food safety, and environmental concern on the purchase intention of plant-based meat. The target respondents for this study were Generation Y in Malaysia. A total of 384 sets of survey questionnaires were collected to gather data for analysis. The Statistical Package for the Social Sciences (SPSS) software was utilized to assist in the analysis of the collected data. The data analysis involved examining the demographic profile distribution, conducting a reliability test, using Q-Q plots, calculating Pearson's correlation coefficient, performing multiple regression, conducting ANOVA, assessing variance inflation factor (VIF), and analyzing t-statistics. The results of the analysis indicated that all five independent variables had a significant influence on the purchase intention of plant-based meat among Generation Y in Malaysia. These findings suggest that the five independent variables are important factors in shaping the intention to purchase plant-based meat among this demographic. The study also highlights the limitations and offers recommendations for future researchers, marketers, and policymakers to improve the adoption of plant-based meat in Malaysia.

ACKNOWLEDGEMENTS

By here, I would like to take this opportunity to express my heartfelt gratitude to Dr. Chen-I Chi, who served as our research project supervisor. Her invaluable support and guidance were instrumental in assisting and directing me throughout the completion of this research. I am truly grateful for her unwavering dedication and the confidence she placed in me, especially during the times when I encountered challenges throughout the entire process. I am incredibly fortunate to have had her as our supervisor.

Additionally, I would like to extend my thanks to Universiti Tunku Abdul Rahman (UTAR) for providing the necessary infrastructure and facilities. These resources played a crucial role in enabling me to access the data, journal articles, and information required to conduct this research effectively. Without these facilities, it would have been significantly more challenging to gather the necessary resources for the project. Therefore, I am deeply appreciative of the support and opportunities provided by UTAR.

I would also like to acknowledge the unwavering support and motivation my friends and parents provided throughout this research project. Their encouragement and belief in my abilities were invaluable in keeping me motivated during these challenging times. I am sincerely grateful for their constant support and understanding. Lastly, I would like to express my apologies to anyone whom I may have unintentionally omitted in this acknowledgment. I am truly thankful for the assistance and contributions of all individuals who have played a role in the successful completion of this research project.

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LIST OF ABBREVIATIONS

ATT	Attitude
DV	Dependent Variable
EC	Environmental Concern
FS	Food Safety
H	Hypothesis
IV	Independent Variable
IVs	Independent Variables
PBC	Perceived Behavioural Control
PI	Purchase Intention
SPSS	Statistical Package for the Social Sciences
SN	Subjective Norms
TRA	Theory of Reasoned Action
TPB	Theory of Planned Behavior
VIF	Variance Inflation Factor

CHAPTER 1

INTRODUCTION

1.0 Introduction

Chapter 1 of the study presents a comprehensive overview of the entire research project. It is structured into multiple sections, including a comprehensive introduction to the study's background, research objectives, and questions. It also highlights the significance of the research. Furthermore, the chapter concludes by briefly summarizing the layout of each subsequent chapter in the research.

1.1 Research Background

Despite Malaysia's meat-centric culture, there is a growing demand for plant-based meat products in the country. Evidence of this trend can be seen in the increasing availability of these products in major grocery stores (Ravimalar, 2022). In response to the surging demand, restaurants are now offering meat-free options on their menus, and international brands: Vegetarian Butchers are importing meat alternatives into the country (Hashem, 2021; Online,

2023). According to the research from Statista (2023), the meat substitutes segment in Malaysia is projected to generate revenue of US$15.34m in 2023, with an expected annual growth rate of 29.10% from 2023 to 2027. It shows that Malaysian is starting to change their diet habit from traditional-based to plant-based meat at least they are resisting accepting it. Despite the increasing demand for plant-based meat and food products in Malaysia, the country's meat-centric culture and lack of familiarity and understanding with information about plant-based meat pose challenges to increase to consumers purchase intention.

The term "plant-based meat" refers to vegetarian alternatives to conventional meat and is produced directly from plants. These alternatives are crafted using plant-based ingredients and other non-animal components to replicate the appearance, flavor, and texture of animal-based meat. In many instances, plant-based meats offer a greener and more sustainable option compared to traditional meat products, making them an environmentally friendly choice (Sewell, n.d.). In general, plant-based meat is a more efficient method of producing meat without utilizing animals by just converting plant resources into meat form. Plant-based meat contains the same essential nutrients as animal-based meat, including protein, fat, vitamins, minerals, and water (Richards, 2021). Animal-derived meat products, such as beef, bacon, and sausage, are obtained from animal sources such as cows, pigs, and chickens (Manaker, 2022). Conversely, plant-based meat mimics the look and taste of animal-based meat products but is crafted from meatless ingredients such as wheat gluten, soy, peas, pulses, or even jackfruit (Manaker, 2022). Today, vegetarian-friendly meat and fish substitutes include burgers, ground meat, sausages, chicken, scampi, prawn, salmon, and tuna (Richards, 2021). Some naturally occurring plant-based meat substitutes have similar texture and protein content to meat. Plants and mushrooms can produce a texture similar to meat through their fibrous material structure,

which gives them a "fleshy" appearance and feel. An example of this is jackfruit, which is commonly used as a substitute for pulled pork (Sewell, n.d.).

The introduction of plant-based meat provides people with a safe, sustainable, and ecological alternative to traditional meat products (The Good Food Institute, 2019a). Plant-based meat products are manufactured in a cruelty-free environment, have zero cholesterol, and have a protein content almost equivalent to that of traditional meat. Besides, the production of plant-based meat could help to reduce greenhouse gas emissions, contributing to a cleaner and healthier environment for all (R. Singh, 2022). Plant-based meat is a win-win solution for both people and the planet. By replacing meat-based meat with plant-based meat, individuals can reduce their intake of saturated fats and increase their intake of fiber and vitamins, which can decrease their risk of developing chronic diseases such as diabetes, cancer, and heart disease (Richards, 2021). Additionally, plants require fewer resources to grow, such as water and space, which can help mitigate the effects of climate change (Unilever Food Solutions, 2023). By choosing plant-based meat products, individuals can also feel good about their food choices, knowing that they are consuming food sources that are cruelty-free and sustainable.

The research targets for this study will be Generation Y, commonly referred to as Millennials, who are a group of relatively young adults known for their heightened awareness and concern regarding environmental issues compared to previous generations (Tyson et al., 2021). Even though the term "millennial" has yet to be agreed upon, it is commonly used to refer to those who entered adulthood in the early 21st century. Typically, this includes those born during the 1980s and 1990s. In detail, a Millennial is a person who was born between 1981 and 1996 (or between the ages of 27 to 42 years), while a member of a new generation is someone who was born in 1997 or later (Dimock, 2019). Millennials hold significant value as a consumer group

due to a considerable proportion of them transitioning into parenthood and raising young children. A parent's role in directing their child's food selections and influencing their child's food consumption habits is critical (Erhardt & Olsen, 2021; Devitt, 2022). As Generation Y continues to age and have children, they will have a significant impact on the attitudes and behaviors of future generations. By studying their attitudes and behaviors towards plant-based meat products, researchers can gain insights into how to promote healthy and sustainable eating habits among younger generations. Moreover, Generation Y is the largest demographic group in Malaysia, comprising 40% of the country's total population (Muda et al., 2016). It implies that there is a sizable market with lots of room to introduce plant-based meat to the next generation. Therefore, studying the intention to purchase plant-based meat among are important.

Nevertheless, Malaysia has a wealth of environmental problems and challenges rooted in its history. Environmental deterioration has been a serious issue in Malaysia since the 1980s when the country first began pursuing rapid development and industrialization. These developments have contributed to the impact of climate change in Malaysia. Global warming is the root cause of climate change, which has resulted in an increase of several degrees Celsius in average yearly temperatures during the past million years. Research indicates that Malaysia is responsible for 0.52% of carbon emissions worldwide and has emerged as the fourth-largest greenhouse gas (GHG) emitter among ASEAN countries (Rahman, 2018). Climate change is already affecting Malaysia, with negative consequences on increases in temperature, rainfall and floods, deforestation, coastal areas, food production, urbanization, and energy (Lum, 2022). The pursuit of rapid development and industrialization in Malaysia has led to detrimental environmental consequences and amplified the impact of climate change. The country has been experiencing rising sea levels and temperatures, which contribute to increased instances of

flooding and water shortages (Aliagha et al., 2013). Moreover, Malaysia has frequently faced haze events caused by forest and peatland fires, particularly during periods of prolonged dry weather associated with the El-Niño phenomenon (The Star Online, 2023).

On the flip side, meat production within the livestock sector makes a substantial contribution to greenhouse gas emissions (Milman, 2021; Moran & Wall, 2011; Grossi et al., 2018). Animal agriculture, which demands considerable natural resources, plays a significant role in global greenhouse gas emissions. Methane and nitrous oxide are the primary greenhouse gases emitted by the livestock industry (Grossi et al., 2018). Recent research by Batchelor in 2020 indicates that around 40 percent of the Earth's land surface is utilized for cultivating food crops, with a significant portion allocated to animal feed production. This emphasizes the substantial land requirement of the livestock sector (Batchelor, 2020). Globally, the emissions generated by livestock farming surpass those produced by the entire transportation sector by 18 percent, establishing it as the second-largest contributor to greenhouse gas emissions, following the fossil fuel industry (Sandler, 2022).

Moreover, livestock animals generate a substantial amount of waste, including nitrogen, phosphorus, potassium, drug residues, disease-causing organisms, and heavy metals, which contribute to the contamination of water sources (Batchelor, 2020). In Malaysia, per capita meat consumption has witnessed a significant increase over the years. It escalated from 13.2kg in 1961 to almost 55kg in 2017 (Consumers' Association of Penang, 2020). Considering the rise in income and prosperity, it is projected that Malaysian consumers will continue to augment their meat consumption in the future. In fact, as of 2022, Malaysia consumes around 3,800 metric tonnes of chicken daily (Rodzi, 2022).

To address these challenges listed above, Malaysia should consider embracing plant-based meat as a sustainable and healthier alternative. Transitioning to plant-based diets can reduce carbon emissions, mitigate the effects of livestock farming on the environment, and offer health benefits to the population. Moreover, the shift towards plant-based diets can also offer health benefits to humans. Therefore, understanding the intention to purchase plant-based meat among Generation Y in Malaysia is important for the country because they constitute the largest demographic group in the country and have a significant impact on shaping the future dietary habits of the upcoming generation. On the other side, an increase in the intention to purchase plant-based meat will help Malaysia lessen the impact of climate change and contribute to lower greenhouse gas emissions globally.

1.2 Problem Statement

In fact, Malaysia has been grappling with a range of environmental problems and challenges that have their roots in the country's history. The pursuit of rapid development and industrialization since the 1980s has significantly contributed to environmental deterioration in Malaysia. As a result, Malaysia has been experiencing the impacts of climate change. The primary cause of climate change is global warming, which has led to a notable rise in average yearly temperatures by several degrees Celsius over the past million years. Recent research indicates that Malaysia accounts for 0.52% of global carbon emissions, ranking it as the fourth-largest emitter of greenhouse gases among ASEAN countries (Rahman, 2018). The consequences of climate change are already being felt in Malaysia, affecting various aspects of the country. For example, negative consequences of increases in temperature, rainfall and floods, deforestation, coastal areas, food production, urbanization, and energy (Lum, 2022).

Based on the information presented, it is clear that Malaysia is facing the adverse impacts of climate change. Climate change is primarily caused by greenhouse gas emissions, and the livestock sector plays a significant role in contributing to these emissions (Llonch et al., 2017). Raising animals for meat production, also known as livestock farming, is unsustainable practice because of the significant greenhouse gas emissions it generates (Swann, 2021). Compared to traditional-based meat, plant-based meat emits significantly lower levels of greenhouse gas, ranging from 30% to 90% less, measured in kg-CO2-eq/kg-meat. Globally, the contribution of animal agriculture to climate change exceeds that of the entire transportation sector combined (The Good Food Institute, 2019b). Meat production, particularly beef, and lamb, is associated with high greenhouse gas emissions due to the number of resources required for production, including land, water, and feed (Sandler, 2022). In fact, Malaysia consumes almost 3,800 metric tonnes of chicken a day in 2022 (Rodzi, 2022).

According to Statista Research Department (2022), in 2015, the average global per capita consumption of poultry meat was 13.8 kg, while in Malaysia, it was an astonishing 49 kg. Although poultry meat has lower greenhouse gas emissions than beef, it still produces the second-highest number of emissions per kilocalorie compared to other agricultural products. As of 2021, Malaysians consume approximately 49.7 kg of poultry per capita, making Malaysia one of the world's top poultry meat consumers. The production of meat has been shown to negatively impact the ecology and global climate, and scientists have suggested a severe reduction in meat consumption. Yet, Malaysian consumers remained unwilling to give up meat consumption (Statista Research Department, 2022).

To combat and reduce the negative impact of climate change, it is important for Malaysia to explore alternative food sources that have a lower environmental impact. Plant-based meat is one such alternative that has gained popularity in recent years as a more sustainable and preferred protein source (Rabb, 2021). Plant-based meat is a viable substitute for animal-sourced meat as it has comparable and similarity of nutritional value (Ahmad et al., 2022; Bryant, 2022). Choosing meat substitutes can have a considerable impact in mitigating the detrimental effects of livestock farming on the environment and human health (Ahmad et al., 2022). A seminal report by IPCC highlights the impact of land use on climate change and recommends a shift towards plant-based diets while reducing meat consumption. The report highlights that transitioning from animal products to plant-based diets has the potential to significantly decrease carbon emissions and aid in the fight against climate change (IPCC,2022).

On the other hand, the intention behind consuming plant-based meat substitutes can vary among individuals and may not always be clearly defined. While some people choose plant-based meats for ethical reasons, such as reducing animal suffering or promoting environmental sustainability, but others may opt for these products due to health considerations or personal dietary preferences. Additionally, some individuals may simply be curious about trying new food options or exploring different culinary experiences. Consequently, there is a lack of extensive and well-defined research on the factors that influence consumers' purchase intentions or decisions regarding plant-based meat products, especially within the Malaysian context and specify target population.

In short, more comprehensive research is required to gain a deeper understanding of the intentions behind consuming plant-based meat and the factors that influence consumers'

purchasing intentions and choices, specifically within Malaysia. Given the pressing environmental concerns, particularly the challenges of climate change faced by Malaysia, it becomes crucial to investigate the motivations behind consuming plant-based meat substitutes. These environmental issues also pose significant challenges that must be addressed to mitigate the environmental impacts and ensure a sustainable future for Malaysia.

1.3 Research Objectives

Below are the objectives which aimed by this research:

i. To examine the effects created by ATT, SN and PBC on the intention to purchase plant-based meat among Generation Y in Malaysia.
ii. To examine the effect created by FS and EC on the intention to purchase plant-based meat among Generation Y in Malaysia.

1.4 Research Questions

Based on the statement of problems presented above, the below research questions arise:

i. How do ATT, SN and PBC relate to the intention to purchase plant-based meat among Generation Y in Malaysia?
ii. How does FS and EC relate to the intention to purchase plant-based meat among Generation Y in Malaysia?

1.5 Significance of the Study

1.5.1 To Academics

From an academic standpoint, this study provides valuable insights into the factors that shape Generation Y's purchase intention for plant-based meat products. This information can serve as a resource for future researchers who wish to explore this area further and contribute to filling gaps in the literature. The study's problem statement highlights the lack of research on the purchase intention of Generation Y in Malaysia, as well as the factors that drive it. As such, the conceptual framework developed in this study can be a useful reference point for future researchers who seek to understand Generation Y's positive and negative reactions for current or potential behavioral variables that can affect their purchase intention. By building on this study's insights, academic and future researchers can be a more in-depth comprehension understanding of the purchase intention of Generation Y for plant-based meat products in Malaysia and contribute to the academic literature on this topic.

As there is currently a lack of research on the intention of Malaysian consumers to purchase plant-based meat, this study has the potential to offer significant insights to future researchers in this field. By implementing the suggested framework, researchers can attain a more profound comprehension of the fundamental factors that affect consumers' readiness to buy plant-based meat. Additionally, future studies can reference the research methodologies utilized in this study to validate or modify the consistency of variables. Hence, this study can provide and serve as a valuable point of reference for researchers undertaking similar research.

1.5.2 To Policymakers

Critiquing the existing policies of public and private agencies in Malaysia regarding the promotion of meat-based products over plant-based alternatives is crucial in light of the country's rising health and environmental concerns (Prudential Malaysia, n.d.; CodeBlue, 2023; Dermawan, 2022). Malaysian policymakers have been promoting the consumption of meat-based products through various channels, including advertising, subsidies, and tax incentives (Zulkifli, 2023). However, the promotion of such products has led to numerous negative consequences, including increased rates of obesity, cancer, heart disease, and environmental degradation. In fact, Malaysia's policies primarily emphasize food staples and fail to shift the focus toward prioritizing nutritional categories (Kearney, 2022).

This research aims to shed light on the knowledge gap that policymakers in Malaysia may not be aware of regarding the health and environmental impacts of meat-based product consumption. Through an in-depth analysis of the existing literature, this research will highlight the significant negative consequences of meat consumption and argue for promoting plant-based alternatives instead. Moreover, this study will provide valuable insights into the public's perceptions and attitudes toward plant-based diets in Malaysia. This information will be vital in developing effective policies that encourage the adoption of plant-based diets in the country. Overall, this research is significant as it provides policymakers with the knowledge necessary to design and implement policies that promote plant-based diets while mitigating the negative impacts of meat consumption. Also, this research will help to bridge the knowledge gap between

policymakers and the public, providing insights into people's food choices and attitudes towards plant-based meat and diets.

Apart from this, the primary objective of this study is to examine the determinants that impact the purchasing intention of plant-based meat among Malaysian Generation Y. First, the study's findings can be instrumental in expanding the plant-based meat and food sector in Malaysia, and the government can utilize the framework to improve awareness about the benefits of plant-based meat and encourage businesses to offer subsidies to increase visibility. The study can also assist business practitioners in developing relevant marketing strategies to attract and retain more consumers. To be more specific, one possible action that the government could take is to initiate campaigns aimed at increasing public awareness about the environmental hazards linked with intensive farming.

Additionally, businesses could be encouraged to enhance the promotion of plant-based meat products (Mousel & Tang, 2016). Furthermore, this study has the potential to assist marketers in identifying effective marketing tactics that could entice more Malaysian consumers towards plant-based meat products. Ultimately, the outcomes of this study have the potential to enhance the health and environmental outcomes related to food production and consumption in Malaysia. Therefore, further research on this topic is of great value.

1.5 Organization of the Project

The aim of this project is to examine the factors that influence the intention to purchase plant-based meat among Generation Y in Malaysia. The study will utilize the TPB, FS, and EC constructs as the theoretical framework. Chapter 1 outlines the background of plant-based meat, presents the problem statement, outlines the research objectives and questions, and emphasizes the significance of the study. In Chapter 2, the conceptual framework used in this project is discussed, including a review of past literature, a review of past relevant conceptual frameworks, the proposed research framework, and the hypotheses developments. Finally, Chapter 3 focuses on the methodology used to examine and address the research questions. This includes a presentation of the research design, sampling design, research method, and questionnaire used in the study. By following this approach, the project aims to provide a comprehensive understanding of the factors influencing Generation Y's purchase intention toward plant-based meat products in Malaysia.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

In the chapter 2, a comprehensive analysis and review of previous journals and research studies are conducted to explore their relevance and provide support for the current research on food safety, environmental concern, and intention to purchase plant-based meat. The specific focus lies on studies that have utilized the TPB as a theoretical framework. The objective of this analysis is to identify any existing gaps in the literature and subsequently develop a conceptual model and hypotheses that can address these gaps effectively.

2.1 The Theoretical Framework of Theory of Planned Behaviour (TPB)

TPB is a cognitive model designed to predict intention and behaviour (Ajzen, 1991). It has been widely used to explain why people engage in certain actions. The model has been widely applied in various fields, including environmental behavior (Yuriev et al., 2020), diet and food choice intention (McDermott et al., 2015), and green consumption (Emekci, 2019). TPB was

created by extending the Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen in 1975. According to the TRA, an individual's actual behaviour in carrying out a specific action is largely influenced by their behavioural intention, which is determined by their subjective norm and attitude towards the behaviour (Fishbein & Ajzen, 1975). TPB builds on this foundation by adding perceived behavioural control as a third determinant of intention and behaviour. This cognitive model has proven to be a valuable tool in understanding and predicting human behaviour in numerous studies.

In TPB, it posits that intention is the key determinant of behaviour and that intention is influenced by three factors: ATT towards the behaviour, SN, and PBC (Ajzen, 1991). The objective of this project is to investigate the intention of Malaysian residents to purchase plant-based meat products, especially Generation Y. While the study does not examine actual consumer behavior, understanding consumer perception and behavioral intention is essential. This information can be utilized by the government to develop strategies that are acceptable to the Malaysian population. Additionally, businesses can use the results of this research to forecast customer behavior and plan the adoption of plant-based meat products in Malaysia.

On the other hand, this study will be expanded upon and sought to enrich the TPB theory by incorporating two extra independent variables, namely food safety and environmental concern, into the existing framework. Through the integration of TPB constructs with the newly introduced factors of food safety and environmental concern, this study will establish a distinctive conceptual framework that comprehensively captures various factors influencing consumer behavior towards plant-based meat products.

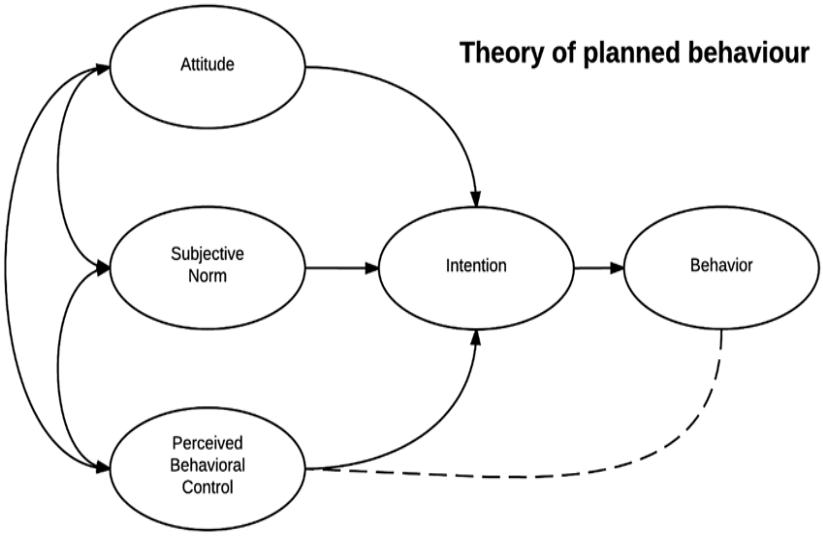


Figure 2.1: The theoretical framework of the TPB

Source: Ajzan, 1991

2.1.1 Relevant Past TPB Studies

TPB is a popular framework utilized in a variety of research fields to understand and predict human behavior. Besides, it offers a structured framework for exploring the factors that impact behavioral decision-making. Previous research has utilized TPB to examine environmental behaviors (Yuriev et al., 2020), diet and food choice intention (McDermott et al., 2015), green consumption (Emekci, 2019), green consumer behavior (Kumar, 2021), as well as consumer intention and actual behavior (Pandey et al., 2021).

To enrich the existing TPB framework, more and more researchers have tested additional independent variables that may influence human behavior. The variables under consideration encompass environmental concerns, which implies the degree to which individuals are

conscious of environmental issues, support measures to address them and demonstrate a willingness to contribute to their resolution (Paul et al., 2016). Moreover, scholars define environmental concerns as having knowledge of environmental issues and taking action to tackle environmental challenges (Maichum et al., 2016). For example, there is a study that has investigated the impact of ecological and environmental concerns, as well as consumer purchase intentions, on the consumption of organic foods and green products (Hoang et al., 2019; Maichum et al., 2016; Joshi & Rahman, 2015). Several studies have also indicated that environmental concerns influence both behavioral will and behavioral attitudes (Li et al., 2019). Consumers who exhibit greater environmental concern tend to develop a more favorable attitude towards environmental issues, leading to an increased propensity to act (Joshi & Rahman, 2015).

Against the background of plant-based meat, the TPB is a popularly recognized social psychology theory that can be utilized to gain an appreciation and comprehension of consumer behavior, specifically in terms of their intention to purchase such products. TPB has been considered as an important model for studying the purchase intention of plant-based meat, as it considers an individual's ATT, SN, and PBC, which are all influential factors in shaping their intentions and subsequent actions (Chen, 2022; Bakr et al., 2022).

As depicted in figure 2.1, the TPB model forms the framework for this study, consistent with the theoretical approach adopted by prior research. These models have served as a framework for investigating a wide range of topics, from health-related behaviors to environmentally conscious decision-making. Building upon the established body of knowledge and previous case studies conducted by researchers, this study seeks to provide further insights into the factors that influence the intention to purchase plant-based meat in Malaysia.

Table 2.1: The relevant studies of Conceptual Models in Past TPB Studies

Authors (Year)	Research Area & Variables	Main results
Stollar et al. (2022)	Plant-Based Meat Dependent variable (DV): purchasing intent toward conventional, plant-based, and cultured meats. Independent variable (IV): IV1: Attitude IV2: Social Norms IV3: Perceived Behavioral Control	IV1, IV2, & IV3 are positively affect DV.
Teixeira et al. (2021)	Organic Food DV: Purchase Intention of Organic Food. IV1: Attitude IV2: Subjective Norm IV3: Perceived Behavioral Control IV4: Consumers' Environmental Concerns IV5: Health Concerns IV6: Perceived Quality IV7: Product Availability	IV1 is positively affect DV. IV2, & IV3 is not significant to DV. IV4 is not positively affect to IV1. IV5 & IV6 is positively affect to IV1. IV7 is positively affect IV3.
Zhu (2018)	Organic Food DV: Intention to purchase organic food. IV1: Attitude IV2: Subjective Norm IV3: Perceived Behavioral Control IV4: Self-identity IV5: Ecological motive	IV1 & IV5 are positively affect DV. IV2, IV3, & IV4 not positively affect DV.
Maichum et al. (2016)	Green Products DV: Purchase Intention for Green Product IV1: Attitude IV2: Subjective Norm IV3: Perceived Behavioral Control IV4: Environmental Concern IV5: Environmental Knowledge	IV1, IV2, & IV3 have significant positive effects on DV. IV4 & IV5 has positive relationship to IV1, IV2 & IV3. IV5 did not yield a positive impact on DV

Source: Stollar et al. (2022); Teixeira et al. (2021); Zhu (2018); Maichum et al. (2016).

2.2 Variables in this Study

2.2.1 Attitude (ATT)

ATT is the first crucial factor that determines behavioral intention which refers to an individual's positive or negative evaluation or appraisal of a specific behavior. Essentially, a person's mental state reflects their overall ATT towards performing a particular action. ATT is shaped by a collection of particular behavioral beliefs that represent the perceived outcomes linked to the behavior in question. These beliefs refer to an individual's comprehension of the ramifications that result from participating in a particular behavior (Ajzen, 1991; Kim et al., 2013). In the context of plant-based meat, individuals' attitudes towards these products can be influenced by various factors such as FS and EC.

2.2.1 Subjective Norm (SN)

SN is considered the second crucial factor in determining an individual's behavioral intention. According to Ajzen (1991), SN can be understood as an individual's perception of the social pressure they experience regarding the adoption or avoidance of a specific behavior. Put simply, SN encompasses the opinions and impact of significant individuals who are close to a person, influencing their decision-making and subsequent actions. The subjective norm in the context of plant-based meat refers to individuals' perceptions of the social pressure or influence from important others (e.g.,

family, friends, or peers) regarding the decision to purchase and consume plant-based meat products.

2.2.3 Perceived Behavioral Control (PBC)

PBC is the third factor that affects behavioral intention, as described by Ajzen (1991), and defined as an individual's perception of the level of ease or difficulty in carrying out a particular behavior. The reason why TPB emphasizes perceived behavioral control is due to the difficulty in accurately measuring the actual resources and opportunities that are available when performing a behavior. In line with the TPB, PBC is influenced by an individual's attainable set of control beliefs. These beliefs stem from an individual's perception of the resources and opportunities necessary to execute a specific behavior and the degree to which these resources and opportunities are deemed vital for achieving the desired outcomes (Ajzen, 1998).

According to the concept of TPB described by Ajzen (1991), PBC is particularly relevant to the intention to purchase plant-based meat because individuals' perceptions of control can significantly impact their motivation and likelihood to engage in the behavior. If individuals feel confident and perceive a high level of control over their ability to find and purchase plant-based meat, they are more likely to form a stronger intention to do so. In contrast, if individuals perceive barriers or constraints that hinder their control, such as limited availability or higher prices compared to conventional meat, their intention to purchase may be weaker.

2.2.4 Food Safety (FS)

FS studies have been examined in some research disciplines related to plant-based meat and organic food purchase intention. The term " Food Safety " is used to describe the procedures followed by businesses during the production and distribution of food to guarantee that it is free of harmful substances (Hanson, 2021). In previous studies, FS was often considered as an experimental variable in the context of plant-based meat. Santo et al. (2020) have highlighted potential allergenicity and adverse reactions associated with certain ingredients commonly found in plant-based substitutes. Additionally, the use of food additives and gums, such as carrageenan, in plant-based substitutes raises concerns about their safety (Kyriakopoulou et al., 2021). Besides, in the context of organic food, there have been several investigations exploring the correlation between FS and the intention to purchase organic food.

In the studies of Waqas and Hong (2019), they found that attitudes toward organic food and FS were significant predictors of intentions to purchase organic food. Besides, consumers who buy organic products are more proactive in addressing the physical risks of food consumption. Another study indicated that food safety knowledge influenced the relationship between organic labeling awareness and buying intentions (Wong & Tzeng, 2021). Concerns about FS were revealed to be indirect drivers of consumers' intentions to purchase and consume organic food (Carzedda et al., 2021). According to Huo et al.'s (2023) studies, consumers' motivations for purchasing organic food include a strong emphasis on FS and the concerns about FS have been identified

as the primary driving factor for consumers when choosing to purchase organic food (Hemmerling et al., 2015).

Moreover, some studies have investigated the relationship between FS concerns and purchase intentions toward organic food (Iqbal et al., 2021; Teng & Lu, 2016; Wong & Tzeng, 2021; Carzedda et al., 2021; Waqas & Hong, 2019; Hemmerling et al., 2015). Hence, the inclusion of FS as an additional variable in this study serves to enhance the existing theoretical framework of the TPB and explore its relationship with the purchase intention of plant-based meat. This is particularly relevant considering that plant-based meat shares similarities with organic food, which is often associated with FS regulations and concerns (Magkos et al., 2003; Santo et al., 2020).

2.2.5 Environmental Concern (EC)

EC has been extensively examined in various research disciplines pertaining to the intention to purchase plant-based meat, organic food, or other green consumption. Numerous studies have identified consumers' environmental concerns as a significant determinant of their attitudes toward purchasing organic food. The term "environmental concern" refers to the awareness, attitudes, and worries that individuals have regarding the state and well-being of the natural environment (Cruz & Manata, 2020).

In their study, Wojciechowska-Solis and Barska (2021) concluded that individuals who believe that human behavior substantially impacts the environment, leading to its destruction, are more inclined to buy organic food. Likewise, Ahmed et al. (2021)

emphasized the crucial role of environmental concern, particularly among environmentally conscious young consumers, in explaining their intention to purchase organic food. A study conducted by Katare et al. (2022) explores consumers' inclination to pay higher prices for meat products that are produced in an environmentally sustainable manner, as well as for plant-based meat alternatives. Furthermore, some studies have investigated the relationship between environmental concerns and purchase intentions toward organic food (Singh & Verma, 2017; Teixeira et al., 2021; Chen, 2022).

Therefore, the EC as an additional variable in this study enhances the existing theoretical framework of the TPB and examines its relationship with the purchase intention of plant-based meat. This is especially significant because both plant-based meat and organic food are commonly associated with environmental concerns and the promotion of sustainability.

2.2.6 Purchase Intention (PI)

PI refers to the likelihood or willingness of consumers to plan or make a future purchase of a specific product or service (Wu et al., 2011). In detail, PI can be categorized as a form of behavioral intention. It reflects an individual's personal evaluation or subjective assessment of their intention or plans to engage in a future purchase (Cahyanaputra et al., 2022; Kotler et al., 2021). An increase in PI signifies a higher probability of making a purchase (Dodds et al., 1991; Schiffman & Kanuk, 2007). PI is often used by

researchers as a significant indicator for predicting consumer behavior. When consumers possess a positive purchase intention, it reflects a favorable brand commitment that motivates them to take actual purchasing actions (Fishbein and Ajzen, 1975; Schiffman & Kanuk, 2007).

Bagozzi and Burnkrant (1979) differentiate PI from purchase desire, as it represents consumers' subjective inclination to pay for a product or service. According to the research conducted by Somervuori (2023), as indicated by the study findings, purchase intention and recommendation responses were identified as robust predictors of actual food purchases. These results highlight the significance of assessing purchase intention and the responses elicited from recommendations as valuable predictors of actual consumer purchasing behavior. Besides, Egorova et al. (2007) described PI as the tendency of consumers to buy a certain product in specific conditions. Consumers make purchases based on situational factors that encourage their desire to fulfill their needs through the product or service. The purchase decision is a complex process influenced by consumer behavior, perceptions, and attitudes when evaluating and accessing specific products (Cahyanaputra et al., 2022). Based on Kotler and Keller (2012), purchase intention reflects consumers' behavior characterized by their desire, usage experience, and longing for a particular product.

Although TPB has demonstrated its effectiveness in predicting behavior in various studies (Alhamad & Donyai, 2021; Kim et al., 2013), but the theory has not stopped evolving. Researchers from different domains have proposed the inclusion of additional variables into the model to enhance its predictive capacity for specific behaviors and

contexts. Hence, this research focuses on examining purchase intentions as the only dependent variable of interest.

2.4 Development of Current Research's Hypothesis

2.4.1 Attitude and Purchase Intention

Previous studies have consistently indicated that attitude (ATT) plays a mediating role in the effects of internal, external, and environmental factors on behavioral intention, such as the intention to purchase organic food (Curvelo et al., 2019; Canova et al., 2020) and plant-based products (Pandey et al., 2021). Research has shown that positive attitudes toward plant-based alternatives are significant predictors of consumers' intentions to consume these products (Pandey et al., 2021).

ATT has been identified as the most important factor in determining consumers' purchase of organic food, with a positive and significant relationship between attitude and behavioral intention being reported (Kozup et al., 2003; Nosi et al., 2017). Furthermore, studies have found that motives for organic consumption positively impact ATT, which in turn positively influences purchase intention (Lian, 2017). Positive attitudes are formed when individuals are attracted to a product, influenced by social norms to use it, and find it convenient and easy to consume, which makes them more likely to purchase plant-based meat products. Younger consumers are found to

hold more positive ATT toward organically grown food, making them more likely to purchase plant-based meat products (Hoang et al., 2019).

Recent research by Ma and Chang (2022) has established that the link between ATT and behavioral intention depends on whether the impact of underlying factors is favorable or unfavorable. If a product's green value meets consumer expectations, it can lead to positive attitudes and purchase behavior (Ma & Chang, 2022). In the case of plant-based meat products, Chen (2022) discovered that consumers' attitudes significantly impact their intentions to purchase and consume these products.

However, Wicker's (1969) study suggests that the relationship between ATT and intention behavior is not always supported by research, as positive attitudes may lead to undesirable outcomes if any hurdles are present (Wicker, 1969). The influence of ATT on the purchase intention can be limited when individuals do not perceive a compelling necessity for the product or service. Even if their attitude towards it is positive, they may not consider it indispensable or suitable for their present circumstances. While this has been explored in other contexts, there is limited research examining this relationship in the Malaysian context. Therefore, this study aims to fill this gap in the literature. Based on previous research, it can be assumed that the relationship between ATT and intention to purchase plant-based meat is similar to that found in other food-related studies. Therefore, we propose the following hypothesis that:

H1: Attitude has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia.

2.4.2 Subjective Norms and Purchase Intention

According to Hoang et al. (2019), it stated that there has a positive relationship that affects the purchase intention of organic foods towards subjective norms (SN). Numerous studies have demonstrated positive correlations between SN and purchase intentions for organic food (Ahmed et al., 2021). Scalco et al. (2017) discovered that SN has positive importance and favorable effects on purchasing intentions based on TPB and green food purchase intention. Subjective norm showed the strongest positive associations with intention (Canova et al., 2020). Furthermore, research has indicated that friends and family members' influence has contributed to consumers buying green products for a variety of reasons (Maichum et al., 2016). When SN has a positive impact, it implies that the expectations surrounding food purchases that are shared with influential individuals, such as family and friends, have a favorable effect on consumers' inclination to buy organic food.

Nevertheless, recent research by Pandey et al. (2021) has shown subjective norms have no significant influence and relationship on the intention to consume plant-based products, such as yoghurt alternatives. Perceived social pressure from others and an individual's level of motivation to conform to those views collectively shape subjective norms. These norms reflect the degree to which others' opinions influence an individual's behavior (Ham et al., 2015). In this case, this is due to the low adoption rate of yoghurt alternatives and weak social pressure to consume them, which implies that a lower social pressure may lead to a significant negative impact on consumption

behavior intention. Besides, Zhu (2018) conducted a study on the intention to purchase organic food and found that subjective norms may not necessarily have a positive impact on behavioral intention. Similarly, another study on the purchase of organic food by Yazdanpanah and Forouzani (2015) found that the relationship between subjective norms and intention was insignificant. One possible explanation for this could be that subjective norms may not always exert a strong influence on intention if they are perceived to be weak or inconsistent. In such cases, individuals may not be significantly impacted by the social norm for a particular behavior if it is unclear or not strongly established.

However, most studies have reported that subjective norms stated a significant positive relationship between the intention to purchase green products (Ham et al., 2015; Maichum et al., 2016), organic food, and green hotel revisit intention (Han et al., 2010). When actions related to the environment and health concerns are adopted by individuals, it can lead to an increase in social pressure from family and friends, which creates a positive feedback loop and reinforces environmentally friendly and health-conscious behavior. Thus, it can be hypothesized that the relationship between subjective norms and the intention to purchase plant-based meat is like other organic food and green consumption research. Therefore, we propose the following hypothesis:

H2: Subjective norms has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia.

2.4.3 Perceived Behavior Control and Purchase Intention

Perceived behavioral control (PBC) considers both internal and external barriers and facilitators to performing a behavior, and it is crucial in determining individuals' intentions (Ajzen, 1991). The presence of resources and self-confidence is necessary for individuals to follow through with their intentions. Previous studies have shown a positive correlation between PBC and intention in various contexts, including green products, organic food, and green hotels (Stollar et al., 2022; Maichum et al., 2016; J. Paul et al., 2016; Saleki et al., 2020; Ahmed et al., 2021; Aitken et al., 2020; Han et al., 2010). For instance, Ahmed et al. (2021) found that PBC significantly influences the purchase intention of organic food among young consumers. Control beliefs, which include beliefs about factors that may support or hinder the behavior, contribute to determining the perceived behavioral control, and their strength is weighted by the perceived power of the control factor (Watts & Chi, 2019).

On the other hand, some studies have found that the relationship between PBC and the intention to purchase organically grown food as well as actual organic food purchase is often insignificant (Yazdanpanah & Forouzani, 2015; Zhu, 2018). While there are some studies reporting a significant relationship, these tend to focus on specific organic food products where individuals feel more in control over their purchasing decisions. In contrast, when individuals are faced with an abstract concept with no detailed information to support it, they may find it challenging to make up their minds, which may explain the lack of significant relationships in other studies.

Also, Al-Swidi et al. (2014) have found no significant relationship between PBC and organic food buying intentions. This study is suggested that individuals with low levels of self-efficacy may lack confidence in their ability to make autonomous decisions about organic food consumption. Nonetheless, this lack of a substantial link between PBC and intention is uncommon in research contexts. In fact, Gen-Y in Malaysia are highly educated, benefiting from increased access to education, resulting in higher knowledge and skills compared to previous generations (Leaderonomics, 2020). Their self-efficacy is demonstrated through adaptability and confidence in utilizing digital technologies, and actively engaging in online activities like social media, e-commerce, and content creation (Muda et al., 2016; Dalol et al., 2021). Their proficiency in navigating digital platforms reflects their competence and self-assurance in utilizing technology. Based on previous research, it is reasonable to assume that the association between PBC and the purchase intention of plant-based meat is similar to other food and green consumption research. Therefore, we propose the following hypothesis:

H3: Perceived behavioral control has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia.

2.4.4 Food Safety and Purchase Intention

Previous research in the field of organic food has explored the significance of food safety (FS) concerns in shaping consumer purchase intentions (PI). These studies have consistently found that FS is a critical factor influencing consumer behavior and their

intention to purchase organic food products. For instance, Iqbal et al. (2021) discovered a positive relationship between health consciousness, FS concerns, and the intention to purchase organic food products. Additionally, there is a growing body of evidence indicating that consumers who prioritize FS are more likely to seek out safe, pure, and natural food options (Teng & Lu, 2016). The impact of FS concerns on PI is shown to be strongly influenced by specific conditions. Moreover, prior empirical research has demonstrated a positive association between consumers' FS concerns and their intentions to buy organic food (Bartholomew et al., 2011). In the context of Malaysia, Alam et al. (2022) presented compelling empirical evidence highlighting the substantial impact of FS concerns on buying intentions. These findings underscore the influential role played by food safety concerns in shaping consumers' intentions to make purchases.

It is important to note that no studies were found in our search that contradicts the relationship between FS concerns and PI toward plant-based meat or others related topic. After checking Emerald Journals, JSTOR, SAGE Journals, ScienceDirect, and UTAR journal databases, we cannot find studies that did not support any of currently tested hypotheses. Apart from that, there is a dearth of research in the Malaysian context that looks at this relationship between food safety and the intention to purchase plant-based meat. Thus, this hypothesis is important, and this research fills a void in the existing literature. According on the above discussion, we hypothesize the following:

H4: Food safety has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia

2.4.5 Environmental Concern and Purchase Intention

In today's consumer landscape, the significance of environmental concern in purchase intention (PI) and shopping decisions is on the rise. In previous studies, environmental concern (EC) is shown as positively impact on attitude toward organic food (Pagiaslis & Krontalis, 2014; Ahmed et al., 2021; Wojciechowska-Solis & Barska, 2021). Additional studies also have shown that EC have a noteworthy positive impact on consumers' willingness to purchase environmentally friendly products. (Arisal & Atalar, 2016; Newton et al., 2015). These findings highlight the growing influence of environmental considerations on consumer behavior and their inclination towards sustainable and eco-friendly choices.

However, a contrasting perspective emerges from the study conducted by Angwyn et al. (2022), which revealed no direct or indirect effects of environmental concern on the PI of plant-based food products in Malaysia. Moreover, this influence was not found to be mediated by attitude. These findings diverge from previous studies, suggesting a potential explanation for this disparity could be the lack of awareness or education regarding the relationship between EC and plant-based meat consumption among Malaysian consumers.

The extensive body of prior research consistently demonstrates a positive correlation between EC and PI toward organic food and engage in green consumption practices. Based on this evidence, it is reasonable to assume that the relationship between EC and the intention to purchase plant-based meat follows a similar pattern observed in other studies on food and green consumption behavior. Given the limited research conducted

in the Malaysian context specifically examining this association in the context of plant-based meat, it becomes crucial to formulate a research hypothesis to address this gap. Consequently, the following research hypothesis is proposed for this study, aiming to explore the relationship between EC and the intention to purchase plant-based meat in Malaysia.

H5: Environmental concern has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia.

2.5 The Proposed of Conceptual Framework

To establish the correlation between the variables under study, the conceptual framework of this project has been designed by incorporating the existing constructs of the TPB along with an additional independent variable, which is food safety. This framework will help to validate the relationship between each variable and justify the problem statement and discussion.

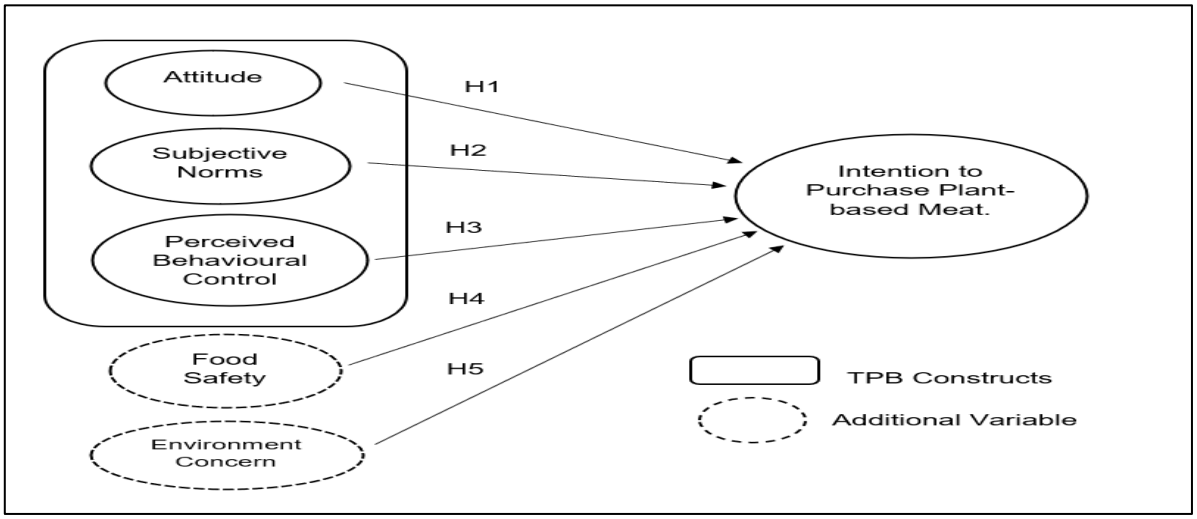


Figure 2.2: The Proposed Conceptual Framework

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

This chapter provides a comprehensive overview of the methods employed to collect and analyze data for the study. The research design, target population, and sample size are discussed in detail, along with the sampling design and data collection methods. Additionally, the chapter delves into the development of the questionnaire, from pre-testing and pilot study, up to the final questionnaire design for the main study. Finally, the proposed data analysis tool is also covered. Overall, this chapter serves as a guide for the reader in understanding the various steps involved in conducting the study and the methodologies used to collect and analyse data.

3.1 Research Design

Although this theory has been used frequently in other studies, but a limited amount of information has been provided regarding past TPB studies relating to plant-based meat in a Malaysian context. By reviewing past studies' methodologies, the current researcher is able to design this research in the most effective manner. A quantitative approach is being used in this study as the methodology of previous studies provides a reliable and valid framework for measuring the TPB variables. Since the TPB has been the subject of numerous quantitative studies over the past few decades, there is no need for exploratory data to confirm the validity of the TPB variables. Therefore, the questions used to measure the TPB, and additional variables will be adjusted based on the item statements from prior studies. In summary, the methodology of previous TPB studies will guide the design of this research, allowing for a rigorous and comprehensive analysis of the TPB variables. In fact, numerous past researchers (see Table 3.1) are using the quantitative approach.

Table 3.1: The Source of Data for Past Studies that used Theory of Planned Behaviour

Authors' name (year)	The source of data	Reasons of using the sources of data
Pandey et al (2021)	Quantitative	To investigate the relationship between TPB constructs and the intention to consume plant-based yogurt alternative.
J. Paul et al. (2016)	Quantitative	To investigate the relationship between TPB constructions and the intention to purchase green products for environmental concerns.

Maichum et al. (2016)	Quantitative	To investigate the relationship between each of the following variables: attitude, subjective norms, perceived behavioural control, environmental concerns, and the intention to purchase green products among Thai consumers.
Saleki et al. (2020)	Quantitative	To investigate the relationship between each of the following variables: attitude, subjective norms, perceived behavioural control, environmental concerns, and the consumer intention to purchase organic food in Malaysia.
Ahmed et al. (2021)	Quantitative	To investigate the relationship between each of the following variables: attitude, subjective norms, perceived behavioural control, environmental concerns, environmental awareness the purchase intention to purchase organic food among young consumers

Source**:** Pandey et al (2021); J. Paul et al. (2016); Maichum et al. (2016); Saleki et al. (2020); Ahmed et al. (2021).

3.2 Sampling Design

3.2.1 Target Population

This study will focus on Generation Y, also known as Millennials, who are recognized for their heightened awareness and interest in environmental issues compared to earlier

generations (Sánchez-Bravo et al., 2020). Food sustainability has been a subject of recent research among Millennials (Bollani et al., 2019). Therefore, this study's target population will be individuals born between 1981 and 1996 and currently between the ages of 27 to 42 in 2023 (Dimock, 2019), all of whom fall within the Millennial generation. Millennials are an important consumer group because many of them are parents of young children. A parent's role in directing their child's food selections and influencing their child's food consumption habits is critical (Erhardt & Olsen, 2021; Devitt, 2022). As Generation Y continues to age and have children, they will have a significant impact on the attitudes and behaviors of future generations. Moreover, Generation Y is the largest demographic group in Malaysia, comprising 40% of the country's total population (Muda et al., 2016). It implies that there is a sizable market with lots of room to introduce plant-based meat to the next generation. Therefore, studying the intention to purchase plant-based meat among are important. The questionnaire will be distributed evenly among Generation Y to obtain a more accurate result from this generation.

3.2.2 Sample Size

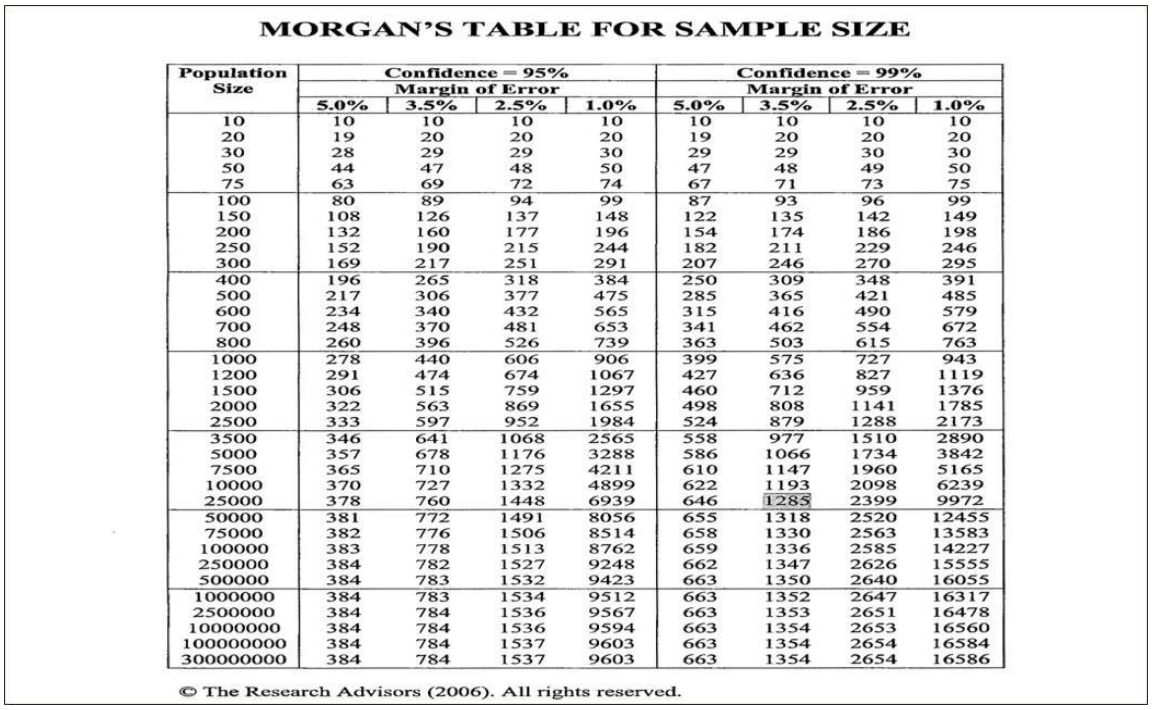
This study proposes to determine the sample size using Morgan's table for sample size to address the lack of population count data that has been released (see Figure 3.1). Given that Malaysia's population includes a significant proportion of Generation Y, accounting for 40% of the population and being the largest segment (Muda et al., 2016), it is expected that the population size for this study will be over 100,000 individuals.

According to Krejcie and Morgan's (1970) research, a target sample size of 384 can provide sufficient clarity on a population size of 100,000. To ensure an appropriate and representative sample size for this population, the target sample size for this study is 384 Generation Y respondents.

3.2.3 Sampling Method

To address the challenge of contacting respondents who are difficult to reach due to anonymity or their location, snowball sampling is recommended to collect data for this study. Snowball sampling is a type of non-probability sampling method that is well-suited for such situations (Frost, 2022b). As a non-probability sampling method, the researcher will request surveyed respondents to introduce the study to their family members, social networks, or colleagues who meet the target population's definition. The current researcher initiated the snowball sampling process by contacting their family members, friends, and social networks and requesting them to complete the questionnaire. After completing the e-survey, the first group of respondents will be requested to forward the questionnaire to other individuals in their networks who may also meet the target population's criteria. This process will continue with each subsequent batch of respondents until the required sample size of 384 is achieved. This snowball sampling method will enable the researcher to reach a larger number of potential respondents who may not have been reached through traditional sampling methods. It will also facilitate the recruitment of respondents who share common characteristics with the initial survey respondents (Naderifar et al., 2017).

Figure 3.1: Morgan's Table for Sample Size



MORGAN'S TABLE FOR SAMPLE SIZE

Population Size	Confidence = 95% Margin of Error				Confidence = 99% Margin of Error			
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
1000	278	440	606	906	399	575	727	943
1200	291	474	674	1067	427	636	827	1119
1500	306	515	759	1297	460	712	959	1376
2000	322	563	869	1655	498	808	1141	1785
2500	333	597	952	1984	524	879	1288	2173
3500	346	641	1068	2565	558	977	1510	2890
5000	357	678	1176	3288	586	1066	1734	3842
7500	365	710	1275	4211	610	1147	1960	5165
10000	370	727	1332	4899	622	1193	2098	6239
25000	378	760	1448	6939	646	1285	2399	9972
50000	381	772	1491	8056	655	1318	2520	12455
75000	382	776	1506	8514	658	1330	2563	13583
100000	383	778	1513	8762	659	1336	2585	14227
250000	384	782	1527	9248	662	1347	2626	15555
500000	384	783	1532	9423	663	1350	2640	16055
1000000	384	783	1534	9512	663	1352	2647	16317
2500000	384	784	1536	9567	663	1353	2651	16478
10000000	384	784	1536	9594	663	1354	2653	16560
100000000	384	784	1537	9603	663	1354	2654	16584
300000000	384	784	1537	9603	663	1354	2654	16586

Source: The Research Advisors (2006)

3.3 Development of Questionnaire and Data Collection Method

3.3.1 Pre-test and Pilot Study

Pre-testing and pilot testing are critical steps in ensuring that the questionnaire is properly prepared before distribution to the main study respondents. The initial draft of the questionnaire item statements is based on modified versions of past studies' item statements, as shown in Table 3.3. To ensure construct validity, an academic expert or

the author's supervisor is involved in the pre-test to review and refine the drafted item statements. Based on their feedback, the sentences are modified to improve their clarity and accuracy. In response to the academic expert’s feedback, the first drafted item statements were refined.

Next, the revised questionnaire is pilot tested with a small group of respondents to identify any issues and reduce the likelihood of measurement errors and survey non-response (In, 2017). The revised item statements were shared with a pilot study group consisting of 38 representatives from the main study respondents. As mentioned in Connelly's (2008) and Hertzog (2008) study, existing literature indicates that a common recommendation for pilot study samples is to have a size of 10% of the sample projected for the larger parent study. In the event that the pilot study participants provide any concerns or comments, the questionnaire will be further revised and amended accordingly.

To ensure the reliability of the questionnaire, the current author requested respondent representatives to answer the questionnaire. This allowed the author to compute the reliability coefficient or Cronbach alpha score for each variable. Table 3.2 presents the findings of the reliability analysis, which reveal that all the reliability coefficient scores surpass the threshold value of 0.6, despite a small sample size. These results indicate that the questionnaire items exhibit solid internal consistency and can be considered reliable measures of the assessed constructs. The high-reliability scores affirm that the questionnaire is appropriate for data collection in the present study, allowing for a confident interpretation of the results.

Table 3.2 Cronbach's Coefficient Scores for Pilot Test Variables

Variables	Cronbach's Alpha	Items
Intention to purchase plant-based meat (DV)	0.936	5
Attitude (IV1)	0.882	4
Subjective norms (IV2)	0.875	4
Perceived Behavior Control (IV3)	0.833	4
Food Safety (IV4)	0.936	4
Environment Concern (IV5)	0.880	4

After the completion of these steps, the initial survey is disseminated to the public to gather data. As the study relies on questionnaires for data collection, it is of utmost importance that the respondents comprehend the purpose behind each statement in the survey.

3.3.2 Questionnaire Design for Main Study

Before initiating the design of the questionnaire for this study, the current researcher obtained a letter of ethical approval for the research project from the Universiti Tunku Abdul Rahman (refer to Appendix 3.2). This approval signifies that the necessary permission and protocols have been put in place to collect personal data from participants for research purposes. It also ensures that the study adheres to ethical

guidelines and safeguards the privacy and confidentiality of the participant's personal information during data collection**.**

A finalized questionnaire that was amended based on the suggestions received from pilot study participants will be shown once the pre-test and pilot study has been completed. A master copy of the questionnaire consists of three sections, Section A, Section B, and Section C, which are designed in the English language (refer to Appendix 3.1). Section A includes questions regarding the respondents' demographic profile, while Section C focuses on evaluating the respondents' views on the items used to measure each variable by using a 5-point Likert scale. The 5-point Likert scale is a widely used psychometric response method that enables respondents to express their level of agreement with questions using five possible points ranging from 1 to 5, such as "(1) Strongly Disagree," "(2) Disagree," "(3) Neither Agree nor Disagree," "(4) Agree," and "(5) Strongly Agree." (Tripathi, 2022). This response method is commonly used in research on purchase intention, particularly in the field of marketing and consumer behavior, as it makes it easier for individuals to estimate their personal characteristics and perceptions (Carrington et al., 2010; Ahmed et al., 2021; Maichum et al., 2016). Its simplicity and ease of use make it accessible to a wide range of respondents, and its effectiveness in predicting actual behavior has been demonstrated in numerous studies.

To ensure that only individuals from Generation Y participated in the research, a screening statement was included at the top of the questionnaire before Section A. This statement advised respondents who were either below the age of 27 or above the age of

42 that their participation was not required. Additionally, respondents were requested to provide their age in the demographic profile section (Part A) to confirm that they belonged to Generation Y. This screening question helped to eliminate any unqualified responses, allowing the researchers to obtain accurate and reliable data.

The most important is the questionnaire item statement needs to be drafted based on the item statement from past studies. Based on Table 3.3, illustrates how the current researcher modifies and adapts the statement such that the item still measures the same concept and is in the context of related to plant-based meat. Once the draft is complete, the item statements must undergo two procedures to ensure their validity: a pre-test and a pilot study.

Table 3.3: Modified Item Statements Based on Related Past Studies Variables

Variable	Measuring items	Source of adoption
Attitude (ATT)	• I think that purchasing plant-based meat products is a good idea. • I think that purchasing plant-based meat products is beneficial. • I like the idea of purchasing plant-based meat products. • I think that plant-based meat products are wise.	Hoang et al. (2019
Subjective norms (SN)	• Most of my friends who value dietary opinions recommend plant-based foods like plant-based meat products. • People who are important to me generally recommend that I buy plant-based meat products. • My decision to purchase plant-based meat products is heavily influenced by the extent of an individual or group's influence. • My family believes that I should purchase plant-based meat products.	Woon (2019)
Perceived behavior	• I am willing to pay more money for plant-based meat to protect the environment. • I believe that plant-based meat products can improve the	Hwang et al. (2020)

control (PBC)	surrounding environment. • I would choose plant-based meat in a fast-food restaurant if any. • I can decide for myself whether to choose plant-based meat products.	
Food Safety (FS)	• I am concerned about the number of artificial additives and preservatives in plant-based meat product. • I am concerned about the safety and quality of food today. • I am concerned about the process of food processing. • I am concerned about food product labelling and transparency.	Teng and Lu (2016)
Environment Concern (EC)	• Plant-based meat products are more ecologically sound than conventional meat products. • I believe plant-based meat consumption contributes to environmental protection. • The food products produced by "plants" are made from sustainable resources and discharge less pollution into the air, water, and soil. • It is very important that plant-based meat products have been prepared and packaged in an environmentally friendly way.	Chen (2022)
Intention to Purchase (IP)	• I intend to purchase plant-based meat if it is available in my area. • I plan to purchase plant-based meat if the price is affordable. • I will try to purchase plant-based meat if it is healthier and safer. • I intend to purchase plant-based meat if they are good for our environment. • I plan to purchase plant-based meat products frequently in the future.	Teng and Lu (2016)

3.3.3 Distribution of Main Study's Questionnaire

The author of the study provided a softcopy version which is an online survey of the finalized questionnaire to accommodate the respondents' preferences. A Google Survey Form was utilized to create an electronic questionnaire, which was then disseminated to numerous respondents via various online channels such as email and social media (e.g.,

Gmail, Outlook, WhatsApp, WeChat, Facebook, and Instagram). The distribution was facilitated by providing an accessible link to the form. This was done to ensure that respondents could conveniently answer the questionnaire at their preferred time and location. The researcher's family members and friends will assist in distributing the questionnaires after being briefed about the study's purpose and the meaning of each measuring item.

To ensure that respondents could contact the researcher for clarification, the researcher will upload their personal contact details on the cover page of the e-questionnaire. This will facilitate communication between the researcher and the respondents and will ensure that the necessary information is conveyed. The estimated duration for data collection is approximately one month. This timeline was determined based on various factors, such as the expected number of responses and the reach of the distribution channels. Additionally, it takes time for respondents to receive and complete the questionnaire. Moreover, allowing a sufficient time for data collection ensures that adequate sample size is achieved, which can improve the accuracy and reliability of the results.

3.4 Data Analysis Tool

This study involves two types of statistical analysis: descriptive and inferential. Descriptive analysis is utilized to describe the distribution of respondents' demographic data, including age,

gender, academic qualifications, and current residential area, through frequency counts. Meanwhile, inferential analysis is utilized to provide a detailed analysis of a larger population based on a representative sample, which enables the research to confirm the hypothesis. However, before conducting inferential analysis, it is necessary to ensure the data's reliability by testing it through a reliability test. At least 0.6 Cronbach's alpha is required for the data to be considered reliable and acceptable (Ursachi et al., 2015; Raharjanti et al., 2022). Figure 3.2 displays a spectrum of reliability indications based on Cronbach's alpha scores. A higher value of Cronbach's alpha implies that the respondents have demonstrated more consistency in their responses to all items utilized for assessing variables.

Figure 3.2: **Rule of Thumb Measures for Cronbach's Alpha**

Cronbach's Alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Source: Habidin et al. (2015)

To investigate the association between the DV and IVs, the current researchers calculated the Pearson correlation coefficient after evaluating the reliability of the variables. A positive correlation coefficient indicates a positive relationship between the variables, while a negative correlation coefficient suggests a negative relationship. Additionally, the correlation coefficient between the DV and IVs should exceed 0.6 to establish a strong association (Frost, 2022a). Figure 3.3 illustrates the range of correlation coefficients and their corresponding levels of association between the variables.

Figure 3.3: Rule of Thumb for Interpreting the Size of a Correlation Coefficient

Correlation Coefficient Range	Strength
±0.00 to ±0.10	Negligible correlation
±0.10 to ±0.39	Weak correlation
±0.40 to ±0.69	Moderate correlation
±0.70 to ±0.89	Strong correlation
±0.90 to ±1.00	Very strong correlation

Source: Schober et al. (2018)

To determine the relationship between IVs, a multicollinearity analysis should be conducted. It is crucial to ensure that the IVs are not strongly correlated with one another, as otherwise they cannot be considered independent. According to Vatcheva et al. (2016) in their study on regression analyses in epidemiology, the partial correlation value between any two independent variables should not exceed 0.70.

The linear regression equation is shown in below.

$$\mathbf{Y = a + bX1 + cX2 + dX3 + eX4 + fX5}$$

Where,

Y: Dependent Variable (Intention to plant-based meat in Malaysia);

X1: IV1 - ATT.

X2: IV2 - SN.

X3: IV3 – PBC.

X4: IV4 – FS

X5: IV5 – EC.

a: The intercept point of the regression line or constant; *and*

b, c, d, e & f: The coefficient of regression for X1. X2. X3. X4 & X5.

During the linear regression process, ANOVA analysis will be performed. In the event that the result is significant, at least one independent variable can explain the variation in the DV (Kenton, 2022). In the regression analysis, the t-tests will indicate which independent variables explain the dependent variable's changes, as well as the regression results. A significant level of 0.05 will be used to determine the statistical significance of the t-test results. If the t-test result is less than 0.05, the hypothesis is considered supported, whereas if the significant level is greater than 0.05, the hypothesis is not supported (Bevans, 2022).

3.5 Ethical Considerations

For collecting the data from respondents, the researcher will make sure the participations are voluntary. In addition, the questionnaire will explicitly state that it is being used for research purposes solely within UTAR. To minimize any potential risks associated with completing the survey, a Personal Data Protection Statement will be included in the questionnaire to protect the respondents' data. In this case, the Personal Data Protection Act 2010 will be employed to safeguard the interests of the data subjects (Pesuruhjaya Perlindungan Data Peribadi Malaysia, 2022)

3.6 Summary of Present Research Methodology

The research project will employ quantitative methodology to obtain the study results. Prior to disseminating the questionnaire to the respondents, a pre-test and pilot test will be conducted to ensure that the items' statements within the questionnaire are measurable. Furthermore, past research studies have been reviewed to guide the questionnaire design process. The targeted sample size for this study is 384 participants, and the questionnaire will be distributed through online and offline modes. In addition, the snowball sampling method is recommended to collect data for this research. The collected data will be subjected to both descriptive and inferential analysis for further exploration. Finally, a Personal Data Protection Statement will be included in the questionnaire to minimize any potential risks to the respondents. The use of pre-testing ensures the quality of the data collected through the questionnaire. It allows for any necessary modifications to be made before data collection, thereby enhancing the accuracy and reliability of the results. Additionally, the incorporation of a Personal Data Protection Statement is crucial in ensuring that the research adheres to ethical principles, which safeguard the privacy and confidentiality of the respondents' personal data.

CHPATER 4

INTERPRETATION OR DISCUSSION OF DATA FINDINGS

4.0 Introduction

This chapter focuses on presenting and discussing the descriptive and inferential results obtained in the study, with a specific emphasis on the findings derived from the questionnaire. The research approach employed is quantitative, as it relies on numerical or measured variables for analysis. The current researcher utilizes SPSS software to interpret the questionnaire data. SPSS is selected due to its user-friendly interface, comprehensive documentation, and ease of use (Rahman & Muktadir, 2021). Its implementation facilitates the exploration of relationships between variables within the study.

4.1 Descriptive Result

4.1.1 Respondent's Demographic Profile

A total of 384 questionnaires were collected, and it is important to note that no data was excluded from the analysis. This is because all the respondents willingly provided their demographic information and diligently completed the questionnaire by responding to each measuring item.

4.1.2 Demographic Characteristics of the Sample

Section A and B is associated with the respondent's demographic profile. In Section A, there are 6 questions, including age, gender, ethnicity, marital status, income, education, and occupation. Table 4.1 shows that male respondents represent 189 (49.2%), while female respondents stand for 195 (50.8%). Next, the table illustrates that the age group between 27 and 30 represents the most significant proportion, accounting for 42.7% of the respondents, with 164 participants in the questionnaire. Subsequently, the age group between 31 and 34 comprises 111 respondents (28.9%) who participated in the questionnaire. This is followed by 71 respondents (19.3%) in the age range of 35-38. Lastly, the age group between 41 and 50 consists of 34 respondents (9.1%).

Thirdly, it is worth noting that the Chinese respondents make up the largest portion, with a total of 269 individuals, comprising a significant 70.1% of the entire sample. Following closely behind are the Malay respondents, with 73 participants, forming the second largest group. The Indian group constitutes the third largest segment, consisting of 42 respondents, making up 10.9% of the overall sample. Among the 384 respondents, 53.1% were single and 46.9% were married.

Fourthly, the data presented in Table 4.2 indicates a diverse range of educational attainment levels among the respondents. Specifically, the findings show that 4 participants had successfully completed SPM, 6 individuals had achieved STPM, 30 respondents held a Diploma, 291 had obtained a degree, and 53 had pursued postgraduate studies.

Additionally, when considering the respondents' monthly spending allowance, it is observed that the majority, comprising 204 respondents (53.1%), fall within the range of RM 3000 to RM 5000. The next category includes 87 respondents (22.7%) who earn an income ranging from RM 1500 to RM 3000, while the remaining 92 respondents (24%) have a monthly income of RM 5000 and above. It is worth noting that one respondent (0.3%) reported an income below 1500, as they had recently resigned from their full-time position and were currently working part-timer.

Lastly, the data reveals that a significant portion of the respondents, totalling 305 respondents (79.4%), are employed under a contract of service or apprenticeship in the private sector, engaging in various professions such as office work, engineering, auditing, marketing, and more. In addition, 55 respondents (11.9%) are self-employed, indicating that they are managing their own businesses or working as freelancers. At the same time, approximately 24 respondents (6.3%) are private owners, indicating that they possess ownership of private businesses or establishments, which are not operated by the state or any public entity.

In Section B of the study, three questions were included: familiarity with plant-based meat products, purchase experience, purchase frequency, as well as dietary habits. Out

of the total 384 respondents, 346 respondents (90.1%) indicated that they had heard of plant-based meat products before, while 38 respondents (9.9%) stated they had not. In terms of the purchase experience, 281 respondents (73.2%) reported having purchased plant-based meat products, while 103 respondents (26.8%) had not. Besides, in relation to purchase frequency, 2 respondents (0.5%) reported purchasing plant-based meat products every day, while 26 respondents (6.8%) said they bought them sometimes. Additionally, 64 respondents (16.7%) stated they purchased plant-based meat products frequently, while 189 respondents (49.2%) reported doing so rarely. A total of 26.8% indicated that they had never purchased plant-based meat products.

Finally, 2.9% of respondents considered themselves non-vegetarians who preferred meat-based diets. Most participants (78.9%) reported that they were not vegetarians, but they stressed the importance of eating a balanced diet. Intriguingly, 9.9% of respondents classified themselves as non-vegetarians who ate predominantly vegetable-based meals. The percentage of vegetarians was smaller, accounting for 8.3%.

Table 4.1: Demographic Profile Distribution

	Frequency	Percent (%)
Gender		
Male	189	49.2
Female	195	50.8
Age		
27 - 30 years old	164	42.7
31 - 34 years old	111	28.9
35 - 38 years old	74	19.3
39 - 42 years old	35	9.1
Ethnicity		
Malay	73	19.0
Chinese	269	70.1
Indian	42	10.9

Marital Status		
Single	204	53.1
Married	180	46.9
Education Level		
SPM	4	1.0
STPM	6	1.6
Diploma	30	7.8
Bachelor's Degree	291	75.8
Postgraduate	53	13.8
Monthly Income		
Below RM 1,500	1	.3
RM 1,500 - RM 3,000	92	24.0
RM 3,000 - RM 5,000	204	53.1
RM 5000 above	87	22.7
Occupation		
Employed	305	79.4
Self-employed	55	14.3
Private Owner	24	6.3
Familiarity with plant-based meat products		
Yes	346	90.1
No	38	9.9
Purchase Experience		
Yes	281	73.2
No	103	26.8
Purchase Frequency		
Everyday	2	.5
Sometimes	26	6.8
Frequently	64	16.7
Rarely	189	49.2
None	103	26.8
Dietary Habit		
Non-vegetarian: Mainly meat	11	2.9
Non-vegetarian: Balance diet	303	78.9
Non-vegetarian: Mainly vegetable	38	9.9
Vegetarian	32	8.3
Total	384	100.0

4.2 Inferential Analysis Result

Prior to confirming the current study's hypotheses, an inferential analysis will be performed to ensure the reliability of the questionnaire data.

4.2.1 Scale Measurement: Reliability Test

To ensure the reliability of the collected data, a reliability test was conducted in using Cronbach's Alpha score. According to Taber (2018), reliability is considered satisfactory when all reliability coefficients for the variables are higher than the threshold value of 0.7. The results of the reliability test are presented in Table 4.2, revealing that the mean of Cronbach's Alpha score for all standardized items exceeded the threshold value of 0.6, indicating a satisfactory level of reliability. Hence, this suggests that the respondents consistently rated the items measuring the same construct, providing confidence in the reliability of the collected data. It is worth noting that Cronbach's Alpha scores for all variables surpassed the threshold value of 0.7 and below 0.95, further strengthening the reliability of the data (Tavakol & Dennick, 2011). These results demonstrate that the variables, including ATT, SN, PBC, FS, EC, and intention to purchase plant-based meat, are reliable measures for the study.

Table 4.2 Reliability Test's Results of Studied Variables in the Main Survey

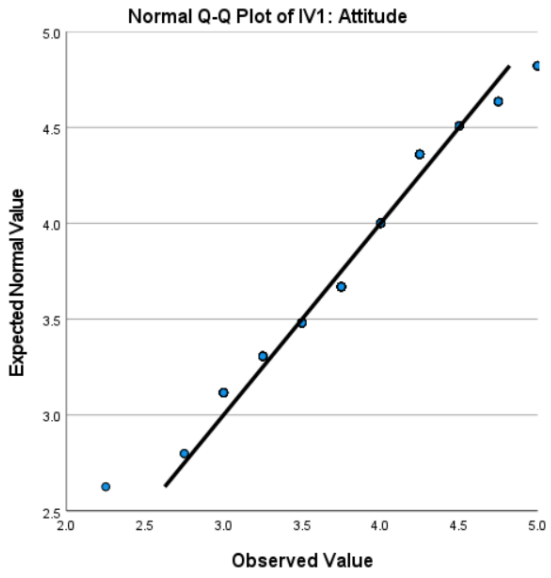
Variable's Name	Cronbach's Alpha Score	No of Items
IV1: Attitude	0.777	4
IV2: Subjective Norms	0.719	4
IV3: Perceived Behavioural Control	0.721	4
IV4: Food Safety	0.830	4
IV5: Environmental Concern	0.791	4
DV: Intention to purchase plant-based meat	0.803	5

4.3 Normality of Data Distribution

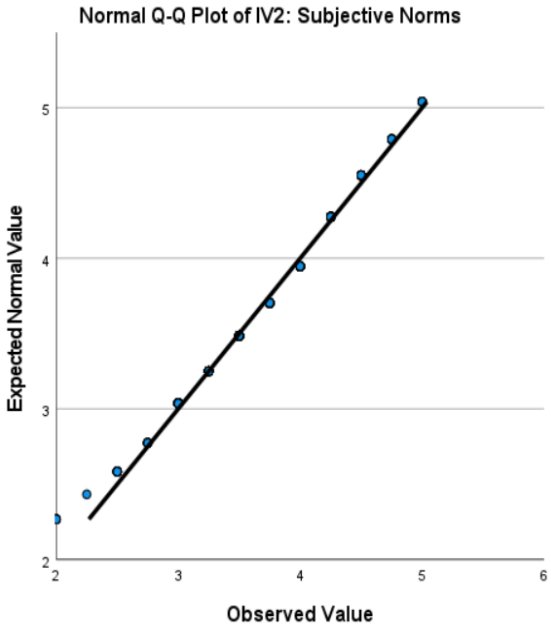
To verify that the assumption of this study was not violated, Q-Q plots were created for both independent and dependent variables under investigation. Figure 4.1 displays the Q-Q plots for each independent variable and dependent variable, which confirmed their normal distribution. The data can be considered as normally distributed when the plots are close to the line if the data given by respondents is similar (Huang et al., 2019). Although there have been a few outliers that did not align precisely with the plotted line, possibly due to respondents disagreeing with certain measurement items for specific variables, Nevertheless, the observed data can still be considered normally distributed since the absence of distinct U-shaped or inverted U-shaped patterns in the plots further supports this conclusion. Moreover, the distribution patterns of both independent and dependent variables were comparable, indicating a linear correlation between them.

Figure 4.1: The Normality of Data Distribution for Each Studied Variable

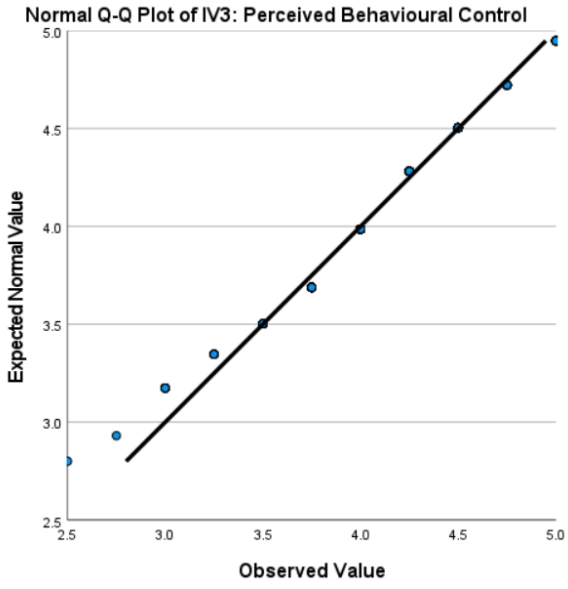
IV1: Attitude



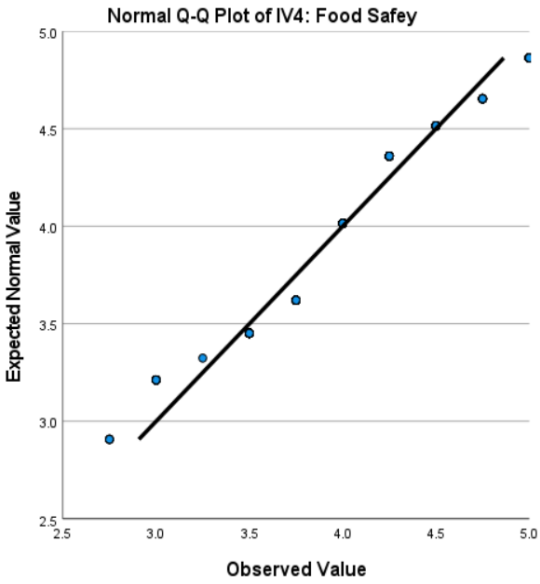
IV2: Subjective Norms

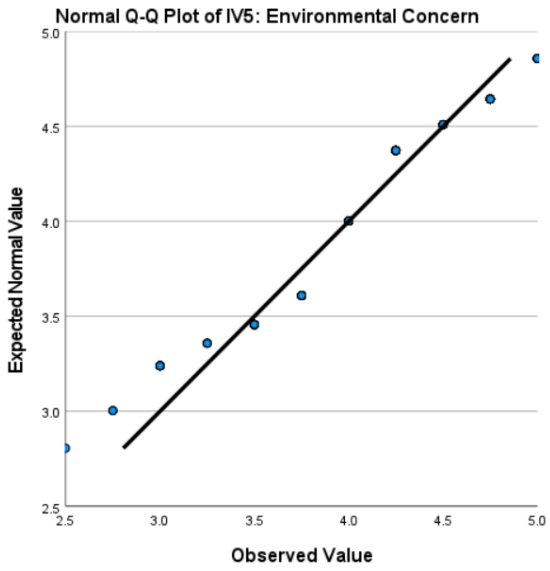
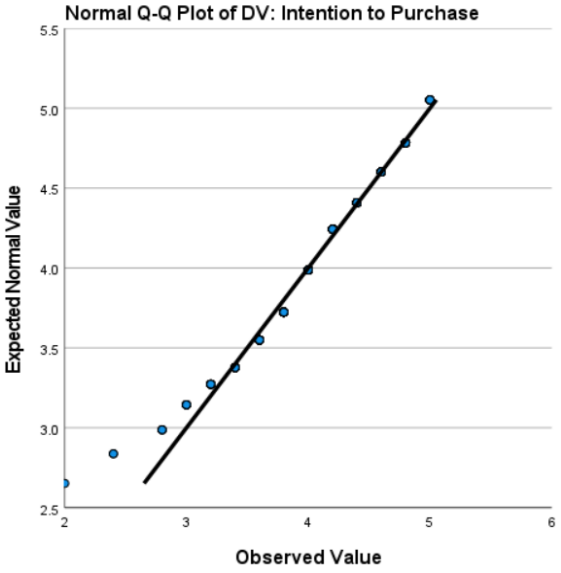


IV3: Perceived Behavioural Control



IV4: Food Safety



IV5: Environmental Concern	DV: Intention to Purchase Plant-based Meat.
	

4.4 Pearson's Correlations Coefficient Scores/Results

Before establishing a causal relationship between the IVs and DV, it is recommended to examine the correlation between the IVs and DV. Using Pearson's correlation coefficient score makes it possible to determine whether the relationship between variables is positive or negative (Turney, 2022). In Table 4.3, the Pearson's correlation coefficients were calculated for the IVs and the DV. The findings reveal several interesting patterns. Firstly, ATT exhibits a strong positive correlation (0.610) with the DV, indicating that an increase in attitude is associated with an increase in the DV. Secondly, SN displays a weaker positive correlation (0.408) with the DV, suggesting a less pronounced relationship between these variables.

Additionally, PBC (0.512), FS (0.510) and EC (0.589) demonstrate moderate positive correlations with the DV.

Table 4.3 The Pearson's Correlations Coefficient Scores/Result

Model		ATT	SN	PBC	FS	EC	PI
ATT	Pearson Correlation	1					
SN	Pearson Correlation	0.464**	1				
PBC	Pearson Correlation	0.469**	0.426**	1			
FS	Pearson Correlation	0.421**	0.204**	0.360**	1		
EC	Pearson Correlation	0.475**	0.277**	0.448**	0.577**	1	
PI	Pearson Correlation	0.610**	0.408**	0.512**	0.519**	0.588**	1

Note: ATT = Attitude;
SN = Subjective Norm;
PBC = Perceived Behavioural Control;
FS = Food Safety;
EC = Environmental Concern.

**. Correlation is significant at 0.01 level (2-tailed)

4.5 Multiple Regression Results

Multiple regression is a statistical tool and report commonly used to assess the relationship between two or more IVs and one DV (Bevans, 2022). This model uses a "stepwise method"

to eliminate any IVs that does not have a significant relationship with the DV by conducting a few rounds of analysis. In the model summary presented in Table 4.4, the R-squared value was 0.539. This indicates that 53.9% of the variation in the DV, which is the intention to purchase plant-based meat had been explained by five IVs: ATT, SN, PBC, FS, and EC. Meanwhile, the remaining 46.1% of the variation was explained by other variables not investigated in this research.

Table 4.4 Model summary of Regression Result:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.735[a]	.539	.533	.31544

a. Predictors: (Constant), IV5: Environmental Concern, IV2: Subjective Norms, IV3: Perceived Behavioural Control, IV4: Food Safety, IV1: Attitude

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44.062	5	8.812	88.566	<.001[b]
	Residual	37.612	378	.100		
	Total	81.674	383			

a. Dependent Variable: DV: Purchase Intention

b. Predictors: (Constant), IV5: Environmental Concern, IV2: Subjective Norms, IV3: Perceived Behavioural Control, IV4: Food Safety, IV1: Attitude

4.6 ANOVA Regression Result

ANOVA is a statistical method used to examine potential differences in a dependent variable measured on a scale level across a nominal-level variable with two or more categories (Statistics Solutions, 2022). Table 4.5 demonstrates that all the IVs have a statistically significant positive relationship with this study's DV. The significance level (p-value) for each IV is less than 0.001, meaning there is less than a one in a thousand chance that the relationship between the IV and the DV is due to chance (Beers, 2023). Therefore, we can conclude that all the IVs can effectively explain the changes in the DV in this study.

Table 4.5 ANOVA of Regression Result:

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.426	1	30.426	226.795	<.001[b]
	Residual	51.248	382	.134		
	Total	81.674	383			
2	Regression	39.838	2	19.919	181.401	<.001[c]
	Residual	41.836	381	.110		
	Total	81.674	383			
3	Regression	42.044	3	14.015	134.382	<.001[d]
	Residual	39.630	380	.104		
	Total	81.674	383			
4	Regression	43.501	4	10.875	107.973	<.001[e]
	Residual	38.173	379	.101		
	Total	81.674	383			
5	Regression	44.062	5	8.812	88.566	<.001[f]
	Residual	37.612	378	.100		
	Total	81.674	383			

a. Dependent Variable: DV: Purchase Intention
b. Predictors: (Constant), IV1: Attitude
c. Predictors: (Constant), IV1: Attitude, IV5: Environmental Concern
d. Predictors: (Constant), IV1: Attitude, IV5: Environmental Concern, IV3: Perceived Behavioural Control
e. Predictors: (Constant), IV1: Attitude, IV5: Environmental Concern, IV3: Perceived Behavioural Control, IV4: Food Safety
f. Predictors: (Constant), IV1: Attitude, IV5: Environmental Concern, IV3: Perceived Behavioural Control, IV4: Food Safety, IV2: Subjective Norms

4.7 Regression Coefficient Result

Multicollinearity is high intercorrelations between two or more independent variables in a regression model (Indeed Editorial Team, 2022). The VIF value is used to measure multicollinearity. Based on Table 4.6, VIF values are less than 2.0 and suggest that only a low to moderate level of multicollinearity is present in the regression model. A VIF of 2 or below is generally considered a strong acceptable level of multicollinearity and is not a cause for concern. As the VIF increases beyond this threshold, it suggests that there may be increased levels of multicollinearity among the independent variables in the regression model (Team, 2023). As a rule of thumb, a VIF value greater than 5 or 10 is often considered high and may indicate a serious problem with multicollinearity (Kim, 2019).

Table 4.6 Regression Coefficient Result for Each Significant Variable:

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	-.031	.196		-.160	.873		

	ATT	.322	.048	.301	6.713	<.001***	.604	**1.655**
	SN	.078	.033	.097	2.376	.018**	.727	**1.375**
	PBC	.170	.047	.156	3.628	<.001***	.662	**1.510**
	FS	.169	.043	.173	3.937	<.001***	.633	**1.579**
	EC	.278	.051	.249	5.392	<.001***	.571	**1.752**

a. Dependent Variable: DV: Purchase Intention

***. p<0.001. **. p<0.01

Moreover, the t-statistic in table 4.6 is used to examine the influence that each IVs create. It can determine whether there is a significant relationship between two variables and how they are related (Hayes, 2022b). For example, the t-test shows significance if the relationship between IVs and DV hypothesis is supported. Hence, below is the multiple regression equation for this research:

$$Y = a + bX1 + cX2$$

$$\rightarrow Y = 0.332 + 0.078\ X1 + 0.170\ X2 + 0.169\ X3 + 0.278\ X4$$

Where;

Y = Dependent variable = Purchase Intention

X1 = IV1 = ATT

X2 = IV2= SN

X3 = IV3 = PBC

X4 = IV4 = FS

X5 = IV5 = EC

4.8 Confirmation of Hypotheses Results

Based on the regression coefficient result indicates that all five hypotheses related to each IV are supported, as all the regression IVs are displayed in the table 4.5 and the corresponding significant value is below 0.001. The summary of confirmation hypotheses is displayed in table 4.7. The data is evaluated by the survey answers from 384 respondents.

Table 4.7: Summary of the confirmation of current hypotheses:

	Details of Hypotheses	Remarks
H1	Attitude has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia	Supported
H2	Subjective norm has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia	Supported
H3	Perceived behavioral control has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia	Supported
H4	Food safety has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia	Supported
H5	Environmental concern has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia	Supported

CHAPTER 5

DISCUSSION, CONCLUSION AND IMPICATIONS

5.0 Introduction

In Chapter 5, the study presents and discusses the findings of the research, along with a summary of the statistical analyses conducted in the preceding chapter. The chapter provides an in-depth analysis of the major findings, exploring their implications for managerial decision-making. Moreover, the chapter addresses the research limitations and provides recommendations for future research to further advance the understanding of the topic.

5.1 Summary of Statistical Analysis

According to the statistical analysis conducted in chapter 4, several important findings were revealed about the respondents. Firstly, it was observed that most of the participants were female, indicating a higher level of interest in purchasing plant-based meat among women. Secondly, a significant proportion of the sample consisted of individuals of Chinese ethnicity. Additionally, although most of the respondents were single, it is noteworthy that almost half of them were married (46.9%). Previous research conducted by Riefer and Hamm (2011) supports the notion that households with children or new parents tend to exhibit more interest in buying plant-based food.

Moreover, this study revealed that a significant number of respondents had attained higher levels of education. This finding is consistent with the research conducted by Aslihan Nasir and Karakaya (2014), who observed a greater interest in plant-based food among consumers with higher educational attainment. In this study, most respondents held bachelor's degrees, making up 75.8% of the sample. Also, the second largest group of respondents held postgraduate degrees, making up 13.8% of the sample. Besides, employed individuals with higher income levels were more inclined to become customers of plant-based meat products, as they had greater purchasing power and were more willing to spend more on such products. Within the realm of marketing research, the findings of this study indicate that most respondents were already familiar with plant-based meat products and had prior purchase experience, albeit with a low purchase frequency. It is worth noting that their dietary habits leaned towards a non-vegetarian lifestyle but with an emphasis on maintaining a balanced diet. These insights shed light on the prevailing trends and attitudes among Generation Y in Malaysia concerning plant-based meat products.

The reliability of the questionnaire variables was also assessed in Chapter 4, and the results indicated high reliability across all variables. Furthermore, the analysis further explored the relationship between five IVs (ATT, SN, PBC, FS, and EC) and the intention to purchase plant-based meat among Generation Y. The findings presented in Table 4.4 demonstrated that all the IVs showed statistically significant relationships with the DV. These findings provide robust evidence of the positive associations between the IVs and the intention to purchase plant-based meat. From another perspective, these findings contribute to a better understanding of Generation Y's preferences and motivations when it comes to consuming plant-based meat, thereby offering valuable insights for businesses and policymakers in promoting sustainable and ethical food choices.

5.2 Discussions of Major Findings

5.2.1 The Relationship between Attitude (ATT) and Intention to Purchase Plant-based Meat Among Generation Y in Malaysia.

H1: There is a positive significant relationship between Attitude and intention to purchase plant-based meat among Generation Y in Malaysia.

According to the research findings presented in Chapter 4, there is robust evidence that supports a positive correlation between Generation Y consumers' ATT and their intention to purchase plant-based meat. Hence, H1 has been accepted. In simpler terms,

it means that consumers' attitudes towards plant-based meat have a noteworthy impact on their intention to buy these products, particularly among Generation Y consumers. Besides, the findings of H1 are accepted and align with the earlier studies proving that consumers would have the intention to purchase plant-based meat with a correlation of ATT (Pandey et al., 2021; Jang & Cho, 2022; Kopplin & Rausch, 2021). Collectively, these studies reinforce the notion that consumers with a positive attitude towards plant-based meat are more likely to express a strong intention to include these products in their dietary choices.

Furthermore, Ma and Chang (2022) conducted a study investigating the factors influencing consumers' intention to purchase plant-based meat alternatives, and their findings further supported the positive and significant relationship between attitude and intention to purchase. Overall, the results of this study, along with the cited studies, highlight the importance of attitude as a key predictor in Generation Y consumer decision-making regarding the purchase of plant-based meat products. It suggests that a more positive attitude towards plant-based meat alternatives is likely to lead to a higher intention to purchase them. A positive attitude towards plant-based meat is associated with a higher likelihood of expressing an intention to include them in purchase decisions and dietary choices.

5.2.2 The Relationship between Subjective Norms (SN) and Intention to Purchase Plant-based Meat Among Generation Y in Malaysia.

H2: There is a positive significant relationship between subjective norms and intention to purchase plant-based meat among Generation Y in Malaysia.

Based on the research findings discussed in Chapter 4, revealing a highly significant and strong positive relationship between SN and the intention to purchase plant-based meat among Generation Y consumers, thereby strengthening the acceptance of H5 as proposed in the study. Besides, these findings are in line with earlier studies conducted by the earlier studies (Scalco et al., 2017; Ahmed et al., 2021; Maichum et al., 2016). They indicate that when individuals adopt actions aligned with environmental or health concerns, it can lead to increased social pressure from their family and friends. This social pressure creates a positive feedback loop that reinforces environmentally friendly and health-conscious behaviors, including the intention to purchase plant-based meat.

Furthermore, the outcomes of this study, in conjunction with the findings from the referenced studies, highlight the significance and positive effects of social norms on purchasing intentions based on the TPB and green food purchase intention. In essence, when individuals perceive support and encouragement from their social circles for environmentally friendly and health-conscious choices, it has a favorable impact on their intention to purchase plant-based meat. Hence, the finding of H2 in this study align with previous research that has indicated a significant positive relationship between SN and the intention to purchase plant-based meat among Generation Y consumers.

5.2.3 The Relationship between Perceived Behavioral Control (PBC) and Intention to Purchase Plant-based Meat Among Generation Y in Malaysia.

H3: There is a positive significant relationship between perceived behavioral control and intention to purchase plant-based meat among Generation Y in Malaysia.

According to the research findings discussed in Chapter 4, revealing a highly significant and strong positive relationship between PBC and the intention to purchase plant-based meat. Hence, the findings support the acceptance of H3 proposed in the study. Besides, this research result is also consistent with earlier studies that have explored the significant influence of PBC on purchase intentions in various green contexts, including green products, organic food, and green hotels (Stollar et al., 2022; Maichum et al., 2016; J. Paul et al., 2016; Saleki et al., 2020; Ahmed et al., 2021; Aitken et al., 2020; Han et al., 2010). Their studies have consistently shown that individuals' perceived control over their behavior strongly influences their intentions to purchase environmentally friendly and sustainable products or engage in green practices.

Based on the research findings discussed above, individuals who perceive themselves as having control over their behavior in purchasing plant-based meat are more likely to express positive intentions to make such purchases. This concept aligns with TPB proposed by Ajzen (1991), which suggests that individuals' perceived control over their actions influences their behavioral intentions. The current research indicates that when

individuals perceive that they have control over their actions, including the ability to find and access plant-based meat products, they are more likely to overcome barriers and consciously choose to purchase these products. This finding also highlights the importance of individuals' perceived control in the context of purchasing plant-based meat. When individuals believe they have control over their actions and can easily obtain plant-based meat products, they are more likely to express positive intentions and engage in sustainable consumption behaviors. Therefore, the finding of H3 in this study align with previous research that has indicated a significant positive relationship between PBC and the intention to purchase plant-based meat among Generation Y.

5.2.4 The Relationship between Food Safety (FS) and Intention to Purchase Plant-based Meat Among Generation Y in Malaysia.

H4: There is a positive significant relationship between food safety and intention to purchase plant-based meat among Generation Y in Malaysia.

The research findings presented in Chapter 4 demonstrate a highly significant and strong positive correlation between FS and the intention to purchase plant-based meat. Consequently, the findings provide support for the acceptance of H4 as proposed in the study. Besides, this finding supports the acceptance of H4 and is also consistent with earlier studies which found that food safety concerns significantly influence purchase intentions of plant-based meat as well as other organic food (Hsu et al., 2016; Alam et al., 2022; Iqbal et al., 2021). Like their research, the present study demonstrates that

individuals' food safety concerns play a crucial role in shaping their ATT and PI toward plant-based meat among Generation Y. Moreover, the current findings suggest that Generation Y consumers with higher food safety concerns exhibit a more positive ATT and intention toward purchasing plant-based meat products.

The results of the present study, along with the cited studies, underscore the importance of food safety in influencing Generation Y intentions to purchase plant-based meat products. It suggests that individuals who are more concerned about food safety are more likely to engage in environmentally friendly and health-conscious behavior by choosing plant-based meat product. This finding enhances the explanatory power of purchase intention models and further supports the acceptance of H5 proposed in the study. In summary, the findings of Chapter 4 provide compelling evidence of a significant and positive relationship between food safety concerns and the intention to purchase plant-based meat among Generation Y. This aligns with previous studies and highlights the importance of addressing food safety concerns to promote the adoption of environmentally friendly and health-conscious food choices.

5.2.5 The Relationship between Environmental Concern (EC) and Intention to Purchase Plant-based meat Among Generation Y in Malaysia.

H5: There is a positive significant relationship between environmental concern and intention to purchase plant-based meat among Generation Y in Malaysia.

Based on the research findings discussed in Chapter 4, revealing a highly significant and strong positive relationship between EC and the intention to purchase plant-based meat. Therefore, the findings support the acceptance of H5 proposed in the study. Besides, this finding supports the acceptance of H5 and is also consistent with earlier studies (Pagiaslis & Krontalis, 2014; Ahmed et al., 2021; Wojciechowska-Solis & Barska, 2021). The findings of this study, along with the studies mentioned, suggest that Generation Y consumers who exhibit greater concern for environmental issues are more likely to have a positive intention towards plant-based meat products and other plant-based foods.

According to Ahmed et al. (2021) and Wojciechowska-Solis & Barska (2021), environmental concern has been identified as a significant factor influencing consumers' purchase intention towards plant-based meat. This can be attributed to the perception that plant-based meat offers a more sustainable alternative to conventional meat (Bryant, 2022). The findings of this study indicate that most Generation Y consumers who are environmentally concerned are more likely to choose plant-based meat due to its lower use of natural resources, such as land, water, and energy, in comparison to traditional meat production. This choice contributes to mitigating the impact of climate change. Furthermore, it was observed that consumers with higher levels of environmental concern tend to exhibit more positive attitudes towards environmentally friendly behaviours. In short, the finding of H5 is coherent with those

studies stating that there is a significant positive relationship between EC and intention to purchase plant-based meat among Generation Y in Malaysia.

5.3 Implications of the Study

5.3.1 Implications for Academics

For other academics, our research has provided valuable implications. The intention to purchase plant-based meat products among Generation Y in Malaysia presents an avenue for researchers to explore various aspects related to consumer behavior, attitudes, motivations, and decision-making processes. Academics can conduct surveys, interviews, and experiments to investigate the factors influencing the intention to purchase plant-based meat products, such as health concerns, environmental awareness, taste preferences, social influences, and cultural factors in the future.

Second, few past studies have investigated the relationship between the TPB model, which comprise of ATT, SN and PBC in this topic with the content of Malaysia. This research has equipped academics with the theoretical understanding that helps them comprehend IVs' effects on DV. This research has expanded the model by including food safety and environmental concern as a new variable and the original IVs. The previous researcher agreed that food safety and environmental concern has evolved as

the most crucial factor in influencing their purchase behavior and intention for plant-based meat (Ma & Chang, 2022; Chen, 2022).

Finally, this research is developing the new TPB model with five independent variables and a dependent variable to better understand the factors influencing the intention to purchase plant-based meat among Malaysian Generation Y. As a result, the findings of the study indicate a positive relationship between all the variables and their intended behavior. This suggests that the proposed model holds promise in reliably estimating the intention to purchase plant-based meat among Generation Y. The research contributes to expanding our knowledge of the elements that impact Generation Y's intention to purchase plant-based meat, providing a foundation for further studies in this area.

Specifically, the study identified a positive and high level of attitude, subjective norms, perceived behavioral control, food safety, and environmental concern were identified as influential factors that strengthen consumers' intention to purchase plant-based meat products. In summary, this research provides valuable insights for future studies, as it encourages other researchers to consider and examine factors that have not been previously investigated. Besides future researchers can expand the understanding of the complex dynamics surrounding the intention to purchase plant-based meat and contribute to the advancement of knowledge in this field.

5.3.2 Implications for Policy Makers

The low intention of Malaysian consumers towards buying plant-based meat products, as compared to Japan, Singapore, and the US, has highlighted the need to comprehend the factors that influence their purchasing behavior. Even though Malaysia has a culture that predominantly favors meat, there is an increasing demand for plant-based meat alternatives in the country (Ravimalar, 2022). Also, there is a lack of research and insufficiencies in the Malaysian context pertaining to this study matter. Hence, this study fills a void in the existing literature and underscores the importance of understanding the intention to purchase plant-based meat, which can aid in refining policies aimed at increasing the purchasing rate. This, in turn, can help to reduce the production of the livestock industry, leading to lower greenhouse gas emissions and mitigating the effects of climate change in Malaysia.

As consumers in Malaysia increasingly prioritize their health and environmental concerns, they are reducing their meat consumption and embracing plant-based food options (Mokhtazar, 2022). In light of this trend, policymakers must acknowledge its significance and proactively support its growth as a means of facilitating Malaysia's climate change issues. Hence, while fostering the expansion of the adoption of plant-based meat in Malaysia, policymakers should develop policies that incentivize, and support businesses engaged in this sector. This can be achieved through various measures such as tax breaks, grants, and subsidies aimed at facilitating the expansion of online operations and presence for these businesses.

Moreover, it is crucial for policymakers, such as the Ministry of Agriculture and Food Security of Malaysia, could be prioritize initiatives that raise consumer awareness about the wide range of benefits associated with plant-based meat products. The educational campaign about plant-based meat can be identified as one of the prioritized initiatives. Specifically, implementing educational campaigns can be highly effective in emphasizing the positive environmental impact, health benefits, and animal welfare considerations that come with consuming plant-based alternatives. Ultimately, policymakers can successfully communicate the advantages of plant-based meat to the public, encouraging them to make informed choices and embrace these sustainable and ethical options.

Furthermore, the study revealed that consumers exhibit a high level of concern and that there is a positive relationship between food safety and the intention to purchase plant-based meat. Consequently, policymakers can play a crucial role by establishing and enforcing robust food safety regulations and standards specifically for these products. This would involve implementing stringent guidelines for production, processing, and distribution to ensure that plant-based meat alternatives meet the highest safety standards. By addressing any concerns related to food safety, policymakers can effectively build trust and credibility among consumers, further promoting the adoption of plant-based meat products.

5.4 Limitations of Study

When conducting research in Malaysia, particularly targeting Generation Y as target respondent, researchers may face several limitations that can impact the study's validity and reliability. To mitigate close contact incidents during the Covid-19 pandemic and address the geographical barriers between different states, the researchers opted for an online questionnaire distribution method. While this method offered several benefits, it also introduced certain limitations. One of the main limitations associated with distributing online questionnaires is the challenge of monitoring respondents' attention and ensuring their thorough understanding of the item statements. It is possible that targeted respondents may have hastily completed the questionnaire without carefully reading and comprehending each item statement, which may be subject to response biases. Also, the research focused solely on Generation Y in Malaysia, limiting the generalizability of the findings.

Besides, this study also faced another limitation which is the presence of language barriers. It is important to note that English is widely spoken and understood in Malaysia. While English is commonly spoken and understood in Malaysia, some respondents may prefer to communicate in their native languages, such as Malay, Mandarin, or Tamil. This can present a challenge for researchers who are not fluent in the local languages. The use of translation methods or relying on bilingual individuals may be necessary, but it introduces the risk of misinterpretation or inaccuracies in the data. Hence, there is a possibility that unclear or incorrect information could be conveyed, impacting the reliability and validity of the collected data.

Lastly, imbalanced distribution of respondents across different age groups and ethnicities is also a limitation of this research. The snowball sampling method is used to get enough respondents for this study. Initially, the questionnaires were sent to the researcher's close acquaintances (e.g., friends and family members). Subsequently, these individuals were requested to assist in further disseminating the questionnaires to others to meet the desired number of respondents. Specifically, the results of the questionnaires indicated that most respondents (42.7%) were between the ages of 27 and 30. The second largest group is the 31 to 34 age group, accounting for 28.9% of the respondents. The age groups of the remaining participants were 35 to 38 years (19.3%) and 39 to 42 years (9.1%). When considering ethnicity, most participants (70.1%) identified themselves as Chinese. The Malay group accounted for 19% of the total number of respondents, while the Indian group only accounted for 10.9% of the total number of respondents. Consequently, this uneven distribution of age and ethnicity may have affected the validity and generalizability of the findings. Also, the findings may not be fully representative of the broader population due to the potential lack of diversity in age and ethnicity among the participants.

5.5 Recommendations for Future Study

In future studies, it is recommended to consider conducting in-person data collection by distributing the questionnaire directly to each participant. In-person interviews provide researchers with the opportunity to observe respondents' genuine reactions in real time, allowing for a deeper understanding of their perspectives. Additionally, being present during the questionnaire completion process enables researchers to offer immediate assistance to

participants, addressing any difficulties they may encounter and ensuring a better comprehension of the questionnaire items. This approach allows researchers to verify whether participants have carefully read the item statements, provided accurate responses and understood the goals of the study, ultimately increasing the validity and reliability of the collected data.

Besides, it is recommended that future researchers consider translating the questionnaire into the native language of the participants to maximize its reach and inclusivity. For example, translating the questionnaire into Malay, the national language would enable a broader audience to understand and participate in the survey. If the survey specifically targets certain ethnic groups, translating the questionnaire into relevant languages spoken by those groups would be advantageous. To ensure the translation's accuracy, it is advisable to enlist the services of professional translators or bilingual experts. In addition to translation, the inclusion of visual aids such as pictures, diagrams, and graphics can be beneficial for participants with limited literacy levels or those who are unfamiliar with the language's writing system. These visual aids can help convey the meaning of the questions more effectively, ensuring better comprehension and increasing the likelihood of accurate responses.

Also, it is recommended that respondent-driven sampling (RDS) be used in subsequent research. RDS is a chain-referral sampling technique used in social science research to study hard-to-reach populations (Raifman et al., 2022). This technique aims to overcome the limitations of the traditional snowball sampling method and can reduce sample bias in certain situations. In RDS, participants are incentivized to recruit other participants from their social networks, and the process continues until the desired sample size is achieved (McCreesh et al.,

2013). RDS uses a mathematical model to weigh the collected data based on the participants' social network characteristics to ensure that the sample is representative.

Furthermore, future researchers are encouraged to broaden the scope of their study beyond Generation Y. By including other consumer populations or different generations, researchers can expand the existing literature and enhance knowledge in this area. This broader approach would provide a more comprehensive understanding of the factors that influence plant-based meat purchasing behavior in Malaysia. It would also enable policymakers to develop targeted strategies that cater to the preferences and needs of different consumer segments, facilitating the wider adoption of plant-based meat products in the country.

Lastly, future researchers are also recommended to undertake a re-examination of the main IVs considered in this study, along with any other pertinent additional variables (e.g., price and health concern) into the existing conceptual framework to enhance the TPB and the existing literature. In this case, a preliminary study is also recommended to identify the theoretical and additional variables that need to be examined and the variables' measurement items.

5.6 Conclusion

Upon considering and investigating the five independent variables of ATT, SN, PBC, FS, and EC in this study contributes to a more comprehensive understanding of the intention to

purchase plant-based meat among Generation Y consumers in Malaysia. The collected data, which was carefully analyzed, reveals a strong correlation between these five independent variables and the intention to purchase plant-based meat among Generation Y consumers. To explain the reasons behind Generation Y's inclination toward purchasing plant-based meat in Malaysia, this study employed the existing conceptual framework of the TPB theory while incorporating two additional variables. Overall, this study sheds light on the factors that influence Generation Y's intention to purchase plant-based meat, providing valuable insights for both researchers and practitioners in the field.

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APPENDICES

Appendix 3.1 The Sample Questionnaire for the Study

PERSONAL DATA PROTECTION STATEMENT

Please be informed that in accordance with Personal Data Protection Act 2010 ("PDPA") which came into force on 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

Notice:

1. The purposes for which your personal data may be used are inclusive but not limited to:-
   - For assessment of any application to UTAR
   - For processing any benefits and services
   - For communication purposes
   - For advertorial and news
   - For general administration and record purposes
   - For enhancing the value of education
   - For educational and related purposes consequential to UTAR
   - For the purpose of our corporate governance
   - For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan
2. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.
3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.
4. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:

1. By submitting this form you hereby authorise and consent to us processing (including disclosing) your personal data and any updates of your information, for the purposes and/or for any other purposes related to the purpose.

2. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.

3. You may access and update your personal data by writing to us at _____.

Acknowledgment of Notice

[ ] I have been notified by you and that I hereby understood, consented and agreed per UTAR above notice.

[ ] I disagree, my personal data will not be processed.

……
Name:
Date:

UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF BANKING AND FINANCE (FBF)

MASTER OF BUSINESS ADMINISTRATION

(Corporate Management)

Survey Questionnaire

Title of Project:

The Intention to Purchase Plant-based Meat among Generation Y in Malaysia

Dear respondents,

I am a Master of Business Administration (MBA) student at Universiti Tunku Abdul Rahman (UTAR) in Malaysia. I am conducting a survey on "the intention to purchase plant-based meat among Generation Y in Malaysia".

It is entirely voluntary for you to participate in this research project. There are no known risks associated with participation beyond those encountered in everyday life. Your response will remain confidential and anonymous. Research data will be kept confidential and reported only as a sum of combined results. Your answers to this questionnaire will be kept confidential by both you and the researchers.

This questionnaire contains three sections, which are **Section A, Section B,** and **Section C**. Please answer **ALL** the questions in **ALL** sections. This questionnaire would take approximately **FIVE (5)** to **TEN (10) minutes** to complete. I greatly appreciate your efforts and time spent on this project.

If you have any other questions or concerns, please feel free to contact us. Thank you.

Yours sincerely,

Yap Wai Hoong +60125049393 22ABM06679

Section A: Demographic Profile

This section requires you to fill in some detailed personal information. Please tick ☑ on the relevant options you selected to complete the following questions. The answers you choose, and all information will be kept strictly confidential.

1)Which generation do you fall under?

- ☐ **Generation Y (1981-1996)**
- ☐ **Other generation (Thanks for your time, this will be end of the questionnaire)**

2) Age (Please terminate if you are not under in this age range. Thanks)

- **27-30** ☐
- **31-34** ☐
- **35-38** ☐
- **39-42** ☐

3) Gender

- **Male** ☐
- **Female** ☐

4) Ethnicity

- **Malay** ☐
- **Chinese** ☐
- **Indian** ☐
- **Others: _____**

5) Marital Status

- **Single** ☐

Married ☐

6) How much is your monthly income?

Below RM1,500 ☐

RM 1,501 – RM 3,000 ☐

RM 3,001 – RM 5,000 ☐

RM 5,001 above ☐

7) What is the highest level of education you have completed?

SPM ☐

STPM ☐

Diploma ☐

Bachelor's Degree ☐

Postgraduate ☐

Others ☐

8) Occupation

Employed ☐

Self-employed ☐

Unemployed ☐

Housewife/ Husband ☐

Private owner ☐

Retired ☐

Others, please specify: _____

Section B: General Questions

*The term "**plant-based meat**" refers to vegetarian alternatives to conventional meat and is produced directly from plants. In other words, plant-based meat is used to describe food that is designed to mimic or imitate animal meat products. Plant-based meat products are made to mimic properties found within natural meats and are meat substitutes.*

1) Have you heard plant-based meat product before?

Yes ☐

No ☐

2) Have you purchase plant-based meat product before? *

Yes ☐

No ☐

3) How often do you purchase plant-based meat product?

Everyday ☐

Sometimes ☐

Frequently ☐

Rarely ☐

None ☐

4) What kind of diet do you follow? (Only <u>one option</u> can be selected for this question)

Non-vegetarian: Mainly meat ☐

Non-vegetarian: Balance diet ☐

Non-vegetarian: Mainly vegetable ☐

Vegetarian ☐

Section C: The Intention to Purchase Plant-based Meat among Generation Y in Malaysia.

Please circle the best answer based on the scale of 1 to 5 [(1) = Strongly Disagree; (2) = Disagree; (3) = Neutral; (4) = Agree; (5) = Strongly Agree].

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Attitude (ATT)						
A1	I think that purchasing plant-based meat products is a good idea.	1	2	3	4	5
A2	I like the idea of purchasing plant-based meat products	1	2	3	4	5
A3	I think that purchasing plant-based meat products is beneficial.	1	2	3	4	5
A4	It is a wise choice to purchase plant-based meat products.	1	2	3	4	5
Subjective norms (SN)						
SN1	Most of my friends who value dietary opinions recommend plant-based foods like plant-based meat products.	1	2	3	4	5
SN2	People who are important to me generally recommend that I buy plant-based meat products.	1	2	3	4	5
SN3	My decision to purchase plant-based meat products is heavily influenced by the extent of an individual or group's influence.	1	2	3	4	5
SN4	My family believes that I should purchase plant-based meat products rather than animal-based meat products.	1	2	3	4	5

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Perceived behavioural control (PBC)						
PBC1	I am able to pay more money for plant-based meat to protect the environment.	1	2	3	4	5
PBC2	I believe that plant-based meat products can improve the surrounding environment	1	2	3	4	5
PBC3	I would choose plant-based meat in a fast-food restaurant if any.	1	2	3	4	5
PBC4	I can decide for myself whether to choose plant-based meat products.	1	2	3	4	5
No.	**Questions**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Food Safety (FS)						
U1	I am concerned about the number of artificial additives and preservatives in plant-based meat product.	1	2	3	4	5
U2	I am concerned about the safety and quality of food today.	1	2	3	4	5
U3	I am concerned about the process of food processing.	1	2	3	4	5
U4	I am concerned about food product labelling and transparency.	1	2	3	4	5

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Environmental Concern (EC)						
EC1	Plant-based meat products are more ecologically sound than conventional meat products.	1	2	3	4	5
EC2	I believe plant-based meat consumption contributes to environmental protection.	1	2	3	4	5
EC3	The food products produced by "plants" are made from sustainable resources and discharge less pollution into the air, water, and soil.	1	2	3	4	5
EC4	It is very important that plant-based meat products have been prepared and packaged in an environmentally friendly way.	1	2	3	4	5
No.	**Questions**	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Intention to Purchase (IP)						
IP1	I intend to purchase plant-based meat if it is available in my area.	1	2	3	4	5
IP2	I plan to purchase plant-based meat if the price is affordable.	1	2	3	4	5

No.	Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
IP3	I will try to purchase plant-based meat if it is healthier and safer.	1	2	3	4	5
IP4	I intend to purchase plant-based meat if they are good for our environment.	1	2	3	4	5
IP5	I plan to purchase plant-based meat products frequently in the future.	1	2	3	4	5

End of the Questionnaire
Thank you for your participation.

Appendix 3.2: Ethical Approval for Research Project

UNIVERSITI TUNKU ABDUL RAHMAN DU012(A)
Wholly owned by UTAR Education Foundation Co. No. 578227-M

Re: U/SERC/91/2023

6 April 2023

Dr Chen I-Chi
Department of Marketing
Faculty of Business and Finance
Universiti Tunku Abdul Rahman
Jalan Universiti, Bandar Baru Barat
31900 Kampar, Perak

Dear Dr Chen,

Ethical Approval For Research Project/Protocol

We refer to your application for ethical approval for your research project (Master student's project) and are pleased to inform you that your application has been approved under Expedited Review.

The details of your research project are as follows:

Research Title	The Intention to Purchase Plant-Based Meat Among Generation Y in Malaysia
Investigator(s)	Dr Chen I-Chi Yap Wai Hoong (UTAR Postgraduate Student)
Research Area	Social Sciences
Research Location	Online Study
No of Participants	384 participants (Age: 27 - 42)
Research Costs	Self-funded
Approval Validity	6 April 2023 - 5 April 2024

The conduct of this research is subject to the following:

(1) The participants' informed consent be obtained prior to the commencement of the research,

(2) Confidentiality of participants' personal data must be maintained; and

(3) Compliance with procedures set out in related policies of UTAR such as the UTAR Research Ethics and Code of Conduct, Code of Practice for Research Involving Humans and other related policies/guidelines.

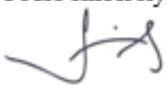
(4) Written consent be obtained from the institution(s)/company(ies) in which the physical or/and online survey will be carried out, prior to the commencement of the research.

Should you collect personal data of participants in your study, please have the participants sign the attached Personal Data Protection Statement for your records.

The University wishes you all the best in your research.

Thank you.

Yours sincerely,



Professor Ts Dr Faidz bin Abd Rahman
Chairman
UTAR Scientific and Ethical Review Committee

c.c Dean, Faculty of Business and Finance
Director, Institute of Postgraduate Studies and Research

Kampar Campus : Jalan Universiti, Bandar Barat, 31900 Kampar, Perak Darul Ridzuan, Malaysia
Tel: (605) 468 8888 Fax: (605) 466 1313
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Report-Plant Meat

by Ken Yap

Submission date: 07-Jul-2023 08:39AM (UTC+0800)
Submission ID: 2127461952
File name: MBA_2023_Yap_Wai_Hoong.docx (1.05M)
Word count: 17376
Character count: 100274

CHAPTER 1

INTRODUCTION

1.0 Introduction

Chapter 1 of the study presents a comprehensive overview of the entire research project. It is structured into multiple sections, including a comprehensive introduction to the study's background, research objectives, and questions. It also highlights the significance of the research. Furthermore, the chapter concludes by briefly summarizing the layout of each subsequent chapter in the research.

1.1 Research Background

Despite Malaysia's meat-centric culture, there is a growing demand for plant-based meat products in the country. Evidence of this trend can be seen in the increasing availability of these products in major grocery stores (Ravimalar, 2022). In response to the surging demand, restaurants are now offering meat-free options on their menus, and international brands: Vegetarian Butchers are importing meat alternatives into the country (Hashem, 2021; Online,

2023). According to the research from Statista (2023), the meat substitutes segment in Malaysia is projected to generate revenue of US$15.34m in 2023, with an expected annual growth rate of 29.10% from 2023 to 2027. It shows that Malaysian is starting to change their diet habit from traditional-based to plant-based meat at least they are resisting accepting it. Despite the increasing demand for plant-based meat and food products in Malaysia, the country's meat-centric culture and lack of familiarity and understanding with information about plant-based meat pose challenges to increase to consumers purchase intention.

The term "plant-based meat" refers to vegetarian alternatives to conventional meat and is produced directly from plants. These alternatives are crafted using plant-based ingredients and other non-animal components to replicate the appearance, flavor, and texture of animal-based meat. In many instances, plant-based meats offer a greener and more sustainable option compared to traditional meat products, making them an environmentally friendly choice (Sewell, n.d.). In general, plant-based meat is a more efficient method of producing meat without utilizing animals by just converting plant resources into meat form. Plant-based meat contains the same essential nutrients as animal-based meat, including protein, fat, vitamins, minerals, and water (Richards, 2021). Animal-derived meat products, such as beef, bacon, and sausage, are obtained from animal sources such as cows, pigs, and chickens (Manaker, 2022). Conversely, plant-based meat mimics the look and taste of animal-based meat products but is crafted from meatless ingredients such as wheat gluten, soy, peas, pulses, or even jackfruit (Manaker, 2022). Today, vegetarian-friendly meat and fish substitutes include burgers, ground meat, sausages, chicken, scampi, prawn, salmon, and tuna (Richards, 2021). Some naturally occurring plant-based meat substitutes have similar texture and protein content to meat. Plants and mushrooms can produce a texture similar to meat through their fibrous material structure,

which gives them a "fleshy" appearance and feel. An example of this is jackfruit, which is commonly used as a substitute for pulled pork (Sewell, n.d.).

The introduction of plant-based meat provides people with a safe, sustainable, and ecological alternative to traditional meat products (The Good Food Institute, 2019a). Plant-based meat products are manufactured in a cruelty-free environment, have zero cholesterol, and have a protein content almost equivalent to that of traditional meat. Besides, the production of plant-based meat could help to reduce greenhouse gas emissions, contributing to a cleaner and healthier environment for all (R. Singh, 2022). Plant-based meat is a win-win solution for both people and the planet. By replacing meat-based meat with plant-based meat, individuals can reduce their intake of saturated fats and increase their intake of fiber and vitamins, which can decrease their risk of developing chronic diseases such as diabetes, cancer, and heart disease (Richards, 2021). Additionally, plants require fewer resources to grow, such as water and space, which can help mitigate the effects of climate change (Unilever Food Solutions, 2023). By choosing plant-based meat products, individuals can also feel good about their food choices, knowing that they are consuming food sources that are cruelty-free and sustainable.

The research targets for this study will be Generation Y, commonly referred to as Millennials, who are a group of relatively young adults known for their heightened awareness and concern regarding environmental issues compared to previous generations (Tyson et al., 2021). Even though the term "millennial" has yet to be agreed upon, it is commonly used to refer to those who entered adulthood in the early 21st century. Typically, this includes those born during the 1980s and 1990s. In detail, a Millennial is a person who was born between 1981 and 1996 (or between the ages of 27 to 42 years), while a member of a new generation is someone who was born in 1997 or later (Dimock, 2019). Millennials hold significant value as a consumer group

due to a considerable proportion of them transitioning into parenthood and raising young children. A parent's role in directing their child's food selections and influencing their child's food consumption habits is critical (Erhardt & Olsen, 2021; Devitt, 2022). As Generation Y continues to age and have children, they will have a significant impact on the attitudes and behaviors of future generations. By studying their attitudes and behaviors towards plant-based meat products, researchers can gain insights into how to promote healthy and sustainable eating habits among younger generations. Moreover, Generation Y is the largest demographic group in Malaysia, comprising 40% of the country's total population (Muda et al., 2016). It implies that there is a sizable market with lots of room to introduce plant-based meat to the next generation. Therefore, studying the intention to purchase plant-based meat among are important.

Nevertheless, Malaysia has a wealth of environmental problems and challenges rooted in its history. Environmental deterioration has been a serious issue in Malaysia since the 1980s when the country first began pursuing rapid development and industrialization. These developments have contributed to the impact of climate change in Malaysia. Global warming is the root cause of climate change, which has resulted in an increase of several degrees Celsius in average yearly temperatures during the past million years. Research indicates that Malaysia is responsible for 0.52% of carbon emissions worldwide and has emerged as the fourth-largest greenhouse gas (GHG) emitter among ASEAN countries (Rahman, 2018). Climate change is already affecting Malaysia, with negative consequences on increases in temperature, rainfall and floods, deforestation, coastal areas, food production, urbanization, and energy (Lum, 2022). The pursuit of rapid development and industrialization in Malaysia has led to detrimental environmental consequences and amplified the impact of climate change. The country has been experiencing rising sea levels and temperatures, which contribute to increased instances of

flooding and water shortages (Aliagha et al., 2013). Moreover, Malaysia has frequently faced haze events caused by forest and peatland fires, particularly during periods of prolonged dry weather associated with the El-Niño phenomenon (The Star Online, 2023).

On the flip side, meat production within the livestock sector makes a substantial contribution to greenhouse gas emissions (Milman, 2021; Moran & Wall, 2011; Grossi et al., 2018). Animal agriculture, which demands considerable natural resources, plays a significant role in global greenhouse gas emissions. Methane and nitrous oxide are the primary greenhouse gases emitted by the livestock industry (Grossi et al., 2018). Recent research by Batchelor in 2020 indicates that around 40 percent of the Earth's land surface is utilized for cultivating food crops, with a significant portion allocated to animal feed production. This emphasizes the substantial land requirement of the livestock sector (Batchelor, 2020). Globally, the emissions generated by livestock farming surpass those produced by the entire transportation sector by 18 percent, establishing it as the second-largest contributor to greenhouse gas emissions, following the fossil fuel industry (Sandler, 2022).

Moreover, livestock animals generate a substantial amount of waste, including nitrogen, phosphorus, potassium, drug residues, disease-causing organisms, and heavy metals, which contribute to the contamination of water sources (Batchelor, 2020). In Malaysia, per capita meat consumption has witnessed a significant increase over the years. It escalated from 13.2kg in 1961 to almost 55kg in 2017 (Consumers' Association of Penang, 2020). Considering the rise in income and prosperity, it is projected that Malaysian consumers will continue to augment their meat consumption in the future. In fact, as of 2022, Malaysia consumes around 3,800 metric tonnes of chicken daily (Rodzi, 2022).

To address these challenges listed above, Malaysia should consider embracing plant-based meat as a sustainable and healthier alternative. Transitioning to plant-based diets can reduce carbon emissions, mitigate the effects of livestock farming on the environment, and offer health benefits to the population. Moreover, the shift towards plant-based diets can also offer health benefits to humans. Therefore, understanding the intention to purchase plant-based meat among Generation Y in Malaysia is important for the country because they constitute the largest demographic group in the country and have a significant impact on shaping the future dietary habits of the upcoming generation. On the other side, an increase in the intention to purchase plant-based meat will help Malaysia lessen the impact of climate change and contribute to lower greenhouse gas emissions globally.

1.2 Problem Statement

In fact, Malaysia has been grappling with a range of environmental problems and challenges that have their roots in the country's history. The pursuit of rapid development and industrialization since the 1980s has significantly contributed to environmental deterioration in Malaysia. As a result, Malaysia has been experiencing the impacts of climate change. The primary cause of climate change is global warming, which has led to a notable rise in average yearly temperatures by several degrees Celsius over the past million years. Recent research indicates that Malaysia accounts for 0.52% of global carbon emissions, ranking it as the fourth-largest emitter of greenhouse gases among ASEAN countries (Rahman, 2018). The consequences of climate change are already being felt in Malaysia, affecting various aspects of the country. For example, negative consequences of increases in temperature, rainfall and floods, deforestation, coastal areas, food production, urbanization, and energy (Lum, 2022).

Based on the information presented, it is clear that Malaysia is facing the adverse impacts of climate change. Climate change is primarily caused by greenhouse gas emissions, and the livestock sector plays a significant role in contributing to these emissions (Llonch et al., 2017). Raising animals for meat production, also known as livestock farming, is unsustainable practice because of the significant greenhouse gas emissions it generates (Swann, 2021). Compared to traditional-based meat, plant-based meat emits significantly lower levels of greenhouse gas, ranging from 30% to 90% less, measured in kg-CO2-eq/kg-meat. Globally, the contribution of animal agriculture to climate change exceeds that of the entire transportation sector combined (The Good Food Institute, 2019b). Meat production, particularly beef, and lamb, is associated with high greenhouse gas emissions due to the number of resources required for production, including land, water, and feed (Sandler, 2022). In fact, Malaysia consumes almost 3,800 metric tonnes of chicken a day in 2022 (Rodzi, 2022).

According to Statista Research Department (2022), in 2015, the average global per capita consumption of poultry meat was 13.8 kg, while in Malaysia, it was an astonishing 49 kg. Although poultry meat has lower greenhouse gas emissions than beef, it still produces the second-highest number of emissions per kilocalorie compared to other agricultural products. As of 2021, Malaysians consume approximately 49.7 kg of poultry per capita, making Malaysia one of the world's top poultry meat consumers. The production of meat has been shown to negatively impact the ecology and global climate, and scientists have suggested a severe reduction in meat consumption. Yet, Malaysian consumers remained unwilling to give up meat consumption (Statista Research Department, 2022).

To combat and reduce the negative impact of climate change, it is important for Malaysia to explore alternative food sources that have a lower environmental impact. Plant-based meat is one such alternative that has gained popularity in recent years as a more sustainable and preferred protein source (Rabb, 2021). Plant-based meat is a viable substitute for animal-sourced meat as it has comparable and similarity of nutritional value (Ahmad et al., 2022; Bryant, 2022). Choosing meat substitutes can have a considerable impact in mitigating the detrimental effects of livestock farming on the environment and human health (Ahmad et al., 2022). A seminal report by IPCC highlights the impact of land use on climate change and recommends a shift towards plant-based diets while reducing meat consumption. The report highlights that transitioning from animal products to plant-based diets has the potential to significantly decrease carbon emissions and aid in the fight against climate change (IPCC,2022).

On the other hand, the intention behind consuming plant-based meat substitutes can vary among individuals and may not always be clearly defined. While some people choose plant-based meats for ethical reasons, such as reducing animal suffering or promoting environmental sustainability, but others may opt for these products due to health considerations or personal dietary preferences. Additionally, some individuals may simply be curious about trying new food options or exploring different culinary experiences. Consequently, there is a lack of extensive and well-defined research on the factors that influence consumers' purchase intentions or decisions regarding plant-based meat products, especially within the Malaysian context and specify target population.

In short, more comprehensive research is required to gain a deeper understanding of the intentions behind consuming plant-based meat and the factors that influence consumers'

purchasing intentions and choices, specifically within Malaysia. Given the pressing environmental concerns, particularly the challenges of climate change faced by Malaysia, it becomes crucial to investigate the motivations behind consuming plant-based meat substitutes. These environmental issues also pose significant challenges that must be addressed to mitigate the environmental impacts and ensure a sustainable future for Malaysia.

1.3 Research Objectives

Below are the objectives which aimed by this research:

i. To examine the effects created by ATT, SN and PBC on the intention to purchase plant-based meat among Generation Y in Malaysia.

ii. To examine the effect created by FS and EC on the intention to purchase plant-based meat among Generation Y in Malaysia.

1.4 Research Questions

Based on the statement of problems presented above, the below research questions arise:

i. How do ATT, SN and PBC relate to the intention to purchase plant-based meat among Generation Y in Malaysia?

ii. How does FS and EC relate to the intention to purchase plant-based meat among Generation Y in Malaysia?

1.5 Significance of the Study

1.5.1 To Academics

From an academic standpoint, this study provides valuable insights into the factors that shape Generation Y's purchase intention for plant-based meat products. This information can serve as a resource for future researchers who wish to explore this area further and contribute to filling gaps in the literature. The study's problem statement highlights the lack of research on the purchase intention of Generation Y in Malaysia, as well as the factors that drive it. As such, the conceptual framework developed in this study can be a useful reference point for future researchers who seek to understand Generation Y's positive and negative reactions for current or potential behavioral variables that can affect their purchase intention. By building on this study's insights, academic and future researchers can be a more in-depth comprehension understanding of the purchase intention of Generation Y for plant-based meat products in Malaysia and contribute to the academic literature on this topic.

As there is currently a lack of research on the intention of Malaysian consumers to purchase plant-based meat, this study has the potential to offer significant insights to future researchers in this field. By implementing the suggested framework, researchers can attain a more profound comprehension of the fundamental factors that affect consumers' readiness to buy plant-based meat. Additionally, future studies can reference the research methodologies utilized in this study to validate or modify the consistency of variables. Hence, this study can provide and serve as a valuable point of reference for researchers undertaking similar research.

1.5.2 To Policymakers

Critiquing the existing policies of public and private agencies in Malaysia regarding the promotion of meat-based products over plant-based alternatives is crucial in light of the country's rising health and environmental concerns (Prudential Malaysia, n.d.; CodeBlue, 2023; Dermawan, 2022). Malaysian policymakers have been promoting the consumption of meat-based products through various channels, including advertising, subsidies, and tax incentives (Zulkifli, 2023). However, the promotion of such products has led to numerous negative consequences, including increased rates of obesity, cancer, heart disease, and environmental degradation. In fact, Malaysia's policies primarily emphasize food staples and fail to shift the focus toward prioritizing nutritional categories (Kearney, 2022).

This research aims to shed light on the knowledge gap that policymakers in Malaysia may not be aware of regarding the health and environmental impacts of meat-based product consumption. Through an in-depth analysis of the existing literature, this research will highlight the significant negative consequences of meat consumption and argue for promoting plant-based alternatives instead. Moreover, this study will provide valuable insights into the public's perceptions and attitudes toward plant-based diets in Malaysia. This information will be vital in developing effective policies that encourage the adoption of plant-based diets in the country. Overall, this research is significant as it provides policymakers with the knowledge necessary to design and implement policies that promote plant-based diets while mitigating the negative impacts of meat consumption. Additionally, this research will help to bridge the knowledge gap between

policymakers and the public, providing insights into people's food choices and attitudes towards plant-based meat and diets.

Apart from this, the primary objective of this study is to examine the determinants that impact the purchasing intention of plant-based meat among Malaysian Generation Y. First, the study's findings can be instrumental in expanding the plant-based meat and food sector in Malaysia, and the government can utilize the framework to improve awareness about the benefits of plant-based meat and encourage businesses to offer subsidies to increase visibility. The study can also assist business practitioners in developing relevant marketing strategies to attract and retain more consumers. To be more specific, one possible action that the government could take is to initiate campaigns aimed at increasing public awareness about the environmental hazards linked with intensive farming. Additionally, businesses could be encouraged to enhance the promotion of plant-based meat products (Mousel & Tang, 2016). Furthermore, this study has the potential to assist marketers in identifying effective marketing tactics that could entice more Malaysian consumers towards plant-based meat products. Ultimately, the outcomes of this study have the potential to enhance the health and environmental outcomes related to food production and consumption in Malaysia. Therefore, further research on this topic is of great value.

1.5 Organization of the Project

The aim of this project is to examine the factors that influence the intention to purchase plant-based meat among Generation Y in Malaysia. The study will utilize the TPB, FS, and EC

constructs as the theoretical framework. Chapter 1 outlines the background of plant-based meat, presents the problem statement, outlines the research objectives and questions, and emphasizes the significance of the study. In Chapter 2, the conceptual framework used in this project is discussed, including a review of past literature, a review of past relevant conceptual frameworks, the proposed research framework, and the hypotheses developments. Finally, Chapter 3 focuses on the methodology used to examine and address the research questions. This includes a presentation of the research design, sampling design, research method, and questionnaire used in the study. By following this approach, the project aims to provide a comprehensive understanding of the factors influencing Generation Y's purchase intention toward plant-based meat products in Malaysia.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

In the chapter 2, a comprehensive analysis and review of previous journals and research studies are conducted to explore their relevance and provide support for the current research on food safety, environmental concern, and intention to purchase plant-based meat. The specific focus lies on studies that have utilized the TPB as a theoretical framework. The objective of this analysis is to identify any existing gaps in the literature and subsequently develop a conceptual model and hypotheses that can address these gaps effectively.

2.1 The Theoretical Framework of Theory of Planned Behaviour (TPB)

TPB is a cognitive model designed to predict intention and behaviour (Ajzen, 1991). It has been widely used to explain why people engage in certain actions. The model has been widely applied in various fields, including environmental behavior (Yuriev et al., 2020), diet and food choice intention (McDermott et al., 2015), and green consumption (Emekci, 2019). TPB was

created by extending the Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen in 1975. According to the TRA, an individual's actual behaviour in carrying out a specific action is largely influenced by their behavioural intention, which is determined by their subjective norm and attitude towards the behaviour (Fishbein & Ajzen, 1975). TPB builds on this foundation by adding perceived behavioural control as a third determinant of intention and behaviour. This cognitive model has proven to be a valuable tool in understanding and predicting human behaviour in numerous studies.

In TPB, it posits that intention is the key determinant of behaviour and that intention is influenced by three factors: ATT towards the behaviour, SN, and PBC (Ajzen, 1991). The objective of this project is to investigate the intention of Malaysian residents to purchase plant-based meat products, especially Generation Y. While the study does not examine actual consumer behavior, understanding consumer perception and behavioral intention is essential. This information can be utilized by the government to develop strategies that are acceptable to the Malaysian population. Additionally, businesses can use the results of this research to forecast customer behavior and plan the adoption of plant-based meat products in Malaysia.

On the other hand, this study will be expanded upon and sought to enrich the TPB theory by incorporating two extra independent variables, namely food safety and environmental concern, into the existing framework. Through the integration of TPB constructs with the newly introduced factors of food safety and environmental concern, this study will establish a distinctive conceptual framework that comprehensively captures various factors influencing consumer behavior towards plant-based meat products.

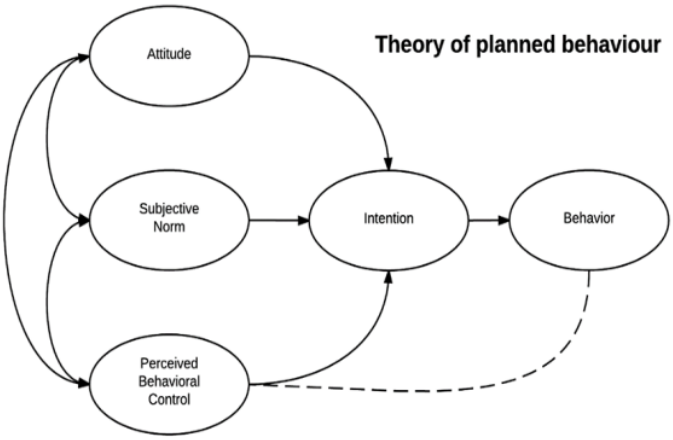

Figure 2.1: The theoretical framework of the TPB

Source: Ajzan, 1991

2.1.1 Relevant Past TPB Studies

TPB is a popular framework utilized in a variety of research fields to understand and predict human behavior. Besides, it offers a structured framework for exploring the factors that impact behavioral decision-making. Previous research has utilized TPB to examine environmental behaviors (Yuriev et al., 2020), diet and food choice intention (McDermott et al., 2015), green consumption (Emekci, 2019), green consumer behavior (Kumar, 2021), as well as consumer intention and actual behavior (Pandey et al., 2021).

To enrich the existing TPB framework, more and more researchers have tested additional independent variables that may influence human behavior. The variables under consideration encompass environmental concerns, which implies the degree to which individuals are

conscious of environmental issues, support measures to address them and demonstrate a willingness to contribute to their resolution (Paul et al., 2016). Moreover, scholars define environmental concerns as having knowledge of environmental issues and taking action to tackle environmental challenges (Maichum et al., 2016). For example, there is a study that has investigated the impact of ecological and environmental concerns, as well as consumer purchase intentions, on the consumption of organic foods and green products (Hoang et al., 2019; Maichum et al., 2016; Joshi & Rahman, 2015). Several studies have also indicated that environmental concerns influence both behavioral will and behavioral attitudes (Li et al., 2019). Consumers who exhibit greater environmental concern tend to develop a more favorable attitude towards environmental issues, leading to an increased propensity to act (Joshi & Rahman, 2015).

Against the background of plant-based meat, the TPB is a popularly recognized social psychology theory that can be utilized to gain an appreciation and comprehension of consumer behavior, specifically in terms of their intention to purchase such products. TPB has been considered as an important model for studying the purchase intention of plant-based meat, as it considers an individual's ATT, SN, and PBC, which are all influential factors in shaping their intentions and subsequent actions (Chen, 2022; Bakr et al., 2022).

As depicted in figure 2.1, the TPB model forms the framework for this study, consistent with the theoretical approach adopted by prior research. These models have served as a framework for investigating a wide range of topics, from health-related behaviors to environmentally conscious decision-making. Building upon the established body of knowledge and previous case studies conducted by researchers, this study seeks to provide further insights into the factors that influence the intention to purchase plant-based meat in Malaysia.

Table 2.1: The relevant studies of Conceptual Models in Past TPB Studies

Authors (Year)	Research Area & Variables	Main results
Stollar et al. (2022)	Plant-Based Meat Dependent variable (DV): purchasing intent toward conventional, plant-based, and cultured meats. Independent variable (IV): IV1: Attitude IV2: Social Norms IV3: Perceived Behavioral Control	☐ IV1, IV2, & IV3 are positively affect DV.
Teixeira et al. (2021)	Organic Food DV: Purchase Intention of Organic Food. IV1: Attitude IV2: Subjective Norm IV3: Perceived Behavioral Control IV4: Consumers' Environmental Concerns IV5: Health Concerns IV6: Perceived Quality IV7: Product Availability	☐ IV1 is positively affect DV. ☐ IV2, & IV3 is not significant to DV. ☐ IV4 is not positively affect to IV1. ☐ IV5 & IV6 is positively affect to IV1. ☐ IV7 is positively affect IV3.
Zhu (2018)	Organic Food DV: Intention to purchase organic food. IV1: Attitude IV2: Subjective Norm IV3: Perceived Behavioral Control IV4: Self-identity IV5: Ecological motive	☐ IV1 & IV5 are positively affect DV. ☐ IV2, IV3, & IV4 not positively affect DV.
Maichum et al. (2016)	Green Products DV: Purchase Intention for Green Product IV1: Attitude IV2: Subjective Norm IV3: Perceived Behavioral Control IV4: Environmental Concern IV5: Environmental Knowledge	☐ IV1, IV2, & IV3 have significant positive effects on DV. ☐ IV4 & IV5 has positive relationship to IV1, IV2 & IV3. ☐ IV5 did not yield a positive impact on DV

Source: Stollar et al. (2022); Teixeira et al. (2021); Zhu (2018); Maichum et al. (2016).

2.2 Variables in this Study

2.2.1 Attitude (ATT)

ATT is the first crucial factor that determines behavioral intention which refers to an individual's positive or negative evaluation or appraisal of a specific behavior. Essentially, a person's mental state reflects their overall ATT towards performing a particular action. ATT is shaped by a collection of particular behavioral beliefs that represent the perceived outcomes linked to the behavior in question. These beliefs refer to an individual's comprehension of the ramifications that result from participating in a particular behavior (Ajzen, 1991; Kim et al., 2013). In the context of plant-based meat, individuals' attitudes towards these products can be influenced by various factors such as FS and EC.

2.2.1 Subjective Norm (SN)

SN is considered the second crucial factor in determining an individual's behavioral intention. According to Ajzen (1991), SN can be understood as an individual's perception of the social pressure they experience regarding the adoption or avoidance of a specific behavior. Put simply, SN encompasses the opinions and impact of significant individuals who are close to a person, influencing their decision-making and subsequent actions. The subjective norm in the context of plant-based meat refers to individuals' perceptions of the social pressure or influence from important others (e.g.,

family, friends, or peers) regarding the decision to purchase and consume plant-based meat products.

2.2.3 Perceived Behavioral Control (PBC)

PBC is the third factor that affects behavioral intention, as described by Ajzen (1991), and defined as an individual's perception of the level of ease or difficulty in carrying out a particular behavior. The reason why TPB emphasizes perceived behavioral control is due to the difficulty in accurately measuring the actual resources and opportunities that are available when performing a behavior. In line with the TPB, PBC is influenced by an individual's attainable set of control beliefs. These beliefs stem from an individual's perception of the resources and opportunities necessary to execute a specific behavior and the degree to which these resources and opportunities are deemed vital for achieving the desired outcomes (Ajzen, 1998).

According to the concept of TPB described by Ajzen (1991), PBC is particularly relevant to the intention to purchase plant-based meat because individuals' perceptions of control can significantly impact their motivation and likelihood to engage in the behavior. If individuals feel confident and perceive a high level of control over their ability to find and purchase plant-based meat, they are more likely to form a stronger intention to do so. In contrast, if individuals perceive barriers or constraints that hinder their control, such as limited availability or higher prices compared to conventional meat, their intention to purchase may be weaker.

2.2.4 Food Safety (FS)

FS studies have been examined in some research disciplines related to plant-based meat and organic food purchase intention. The term " Food Safety " is used to describe the procedures followed by businesses during the production and distribution of food to guarantee that it is free of harmful substances (Hanson, 2021). In previous studies, FS was often considered as an experimental variable in the context of plant-based meat. Santo et al. (2020) have highlighted potential allergenicity and adverse reactions associated with certain ingredients commonly found in plant-based substitutes. Additionally, the use of food additives and gums, such as carrageenan, in plant-based substitutes raises concerns about their safety (Kyriakopoulou et al., 2021). Besides, in the context of organic food, there have been several investigations exploring the correlation between FS and the intention to purchase organic food.

In the studies of Waqas and Hong (2019), they found that attitudes toward organic food and FS were significant predictors of intentions to purchase organic food. Besides, consumers who buy organic products are more proactive in addressing the physical risks of food consumption. Another study indicated that food safety knowledge influenced the relationship between organic labeling awareness and buying intentions (Wong & Tzeng, 2021). Concerns about FS were revealed to be indirect drivers of consumers' intentions to purchase and consume organic food (Carzedda et al., 2021). According to Huo et al.'s (2023) studies, consumers' motivations for purchasing organic food include a strong emphasis on FS and the concerns about FS have been identified

as the primary driving factor for consumers when choosing to purchase organic food (Hemmerling et al., 2015).

Moreover, some studies have investigated the relationship between FS concerns and purchase intentions toward organic food (Iqbal et al., 2021; Teng & Lu, 2016; Wong & Tzeng, 2021; Carzedda et al., 2021; Waqas & Hong, 2019; Hemmerling et al., 2015). Hence, the inclusion of FS as an additional variable in this study serves to enhance the existing theoretical framework of the TPB and explore its relationship with the purchase intention of plant-based meat. This is particularly relevant considering that plant-based meat shares similarities with organic food, which is often associated with FS regulations and concerns (Magkos et al., 2003; Santo et al., 2020).

2.2.5 Environmental Concern (EC)

EC has been extensively examined in various research disciplines pertaining to the intention to purchase plant-based meat, organic food, or other green consumption. Numerous studies have identified consumers' environmental concerns as a significant determinant of their attitudes toward purchasing organic food. The term "environmental concern" refers to the awareness, attitudes, and worries that individuals have regarding the state and well-being of the natural environment (Cruz & Manata, 2020).

In their study, Wojciechowska-Solis and Barska (2021) concluded that individuals who believe that human behavior substantially impacts the environment, leading to its destruction, are more inclined to buy organic food. Likewise, Ahmed et al. (2021)

emphasized the crucial role of environmental concern, particularly among environmentally conscious young consumers, in explaining their intention to purchase organic food. A study conducted by Katare et al. (2022) explores consumers' inclination to pay higher prices for meat products that are produced in an environmentally sustainable manner, as well as for plant-based meat alternatives. Furthermore, some studies have investigated the relationship between environmental concerns and purchase intentions toward organic food (Singh & Verma, 2017; Teixeira et al., 2021; Chen, 2022). Therefore, the EC as an additional variable in this study enhances the existing theoretical framework of the TPB and examines its relationship with the purchase intention of plant-based meat. This is especially significant because both plant-based meat and organic food are commonly associated with environmental concerns and the promotion of sustainability.

2.2.6 Purchase Intention (PI)

PI refers to the likelihood or willingness of consumers to plan or make a future purchase of a specific product or service (Wu et al., 2011). In detail, PI can be categorized as a form of behavioral intention. It reflects an individual's personal evaluation or subjective assessment of their intention or plans to engage in a future purchase (Cahyanaputra et al., 2022; Kotler et al., 2021). An increase in PI signifies a higher probability of making a purchase (Dodds et al., 1991; Schiffman & Kanuk, 2007). PI is often used by researchers as a significant indicator for predicting consumer behavior. When consumers possess a positive purchase intention, it reflects a favorable brand

commitment that motivates them to take actual purchasing actions (Fishbein and Ajzen, 1975; Schiffman & Kanuk, 2007).

Bagozzi and Burnkrant (1979) differentiate PI from purchase desire, as it represents consumers' subjective inclination to pay for a product or service. According to the research conducted by Somervuori (2023), as indicated by the study findings, purchase intention and recommendation responses were identified as robust predictors of actual food purchases. These results highlight the significance of assessing purchase intention and the responses elicited from recommendations as valuable predictors of actual consumer purchasing behavior. Besides, Egorova et al. (2007) described PI as the tendency of consumers to buy a certain product in specific conditions. Consumers make purchases based on situational factors that encourage their desire to fulfill their needs through the product or service. The purchase decision is a complex process influenced by consumer behavior, perceptions, and attitudes when evaluating and accessing specific products (Cahyanaputra et al., 2022). Based on Kotler and Keller (2012), purchase intention reflects consumers' behavior characterized by their desire, usage experience, and longing for a particular product. Although TPB has demonstrated its effectiveness in predicting behavior in various studies (Alhamad & Donyai, 2021; Kim et al., 2013), but the theory has not stopped evolving. Researchers from different domains have proposed the inclusion of additional variables into the model to enhance its predictive capacity for specific behaviors and contexts. Hence, this research focuses on examining purchase intentions as the only dependent variable of interest.

2.4 Development of Current Research's Hypothesis

2.4.1 Attitude and Purchase Intention

Previous studies have consistently indicated that attitude (ATT) plays a mediating role in the effects of internal, external, and environmental factors on behavioral intention, such as the intention to purchase organic food (Curvelo et al., 2019; Canova et al., 2020) and plant-based products (Pandey et al., 2021). Research has shown that positive attitudes toward plant-based alternatives are significant predictors of consumers' intentions to consume these products (Pandey et al., 2021).

ATT has been identified as the most important factor in determining consumers' purchase of organic food, with a positive and significant relationship between attitude and behavioral intention being reported (Kozup et al., 2003; Nosi et al., 2017). Furthermore, studies have found that motives for organic consumption positively impact ATT, which in turn positively influences purchase intention (Lian, 2017). Positive attitudes are formed when individuals are attracted to a product, influenced by social norms to use it, and find it convenient and easy to consume, which makes them more likely to purchase plant-based meat products. Younger consumers are found to hold more positive ATT toward organically grown food, making them more likely to purchase plant-based meat products (Hoang et al., 2019).

Recent research by Ma and Chang (2022) has established that the link between ATT and behavioral intention depends on whether the impact of underlying factors is favorable or unfavorable. If a product's green value meets consumer expectations, it can

lead to positive attitudes and purchase behavior (Ma & Chang, 2022). In the case of plant-based meat products, Chen (2022) discovered that consumers' attitudes significantly impact their intentions to purchase and consume these products.

However, Wicker's (1969) study suggests that the relationship between ATT and intention behavior is not always supported by research, as positive attitudes may lead to undesirable outcomes if any hurdles are present (Wicker, 1969). The influence of ATT on the purchase intention can be limited when individuals do not perceive a compelling necessity for the product or service. Even if their attitude towards it is positive, they may not consider it indispensable or suitable for their present circumstances. While this has been explored in other contexts, there is limited research examining this relationship in the Malaysian context. Therefore, this study aims to fill this gap in the literature. Based on previous research, it can be assumed that the relationship between ATT and intention to purchase plant-based meat is similar to that found in other food-related studies. Therefore, we propose the following hypothesis that:

H1: Attitude has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia.

2.4.2 Subjective Norms and Purchase Intention

According to Hoang et al. (2019), it stated that there has a positive relationship that affects the purchase intention of organic foods towards subjective norms (SN).

Numerous studies have demonstrated positive correlations between SN and purchase intentions for organic food (Ahmed et al., 2021). Scalco et al. (2017) discovered that SN has positive importance and favorable effects on purchasing intentions based on TPB and green food purchase intention. Subjective norm showed the strongest positive associations with intention (Canova et al., 2020). Furthermore, research has indicated that friends and family members' influence has contributed to consumers buying green products for a variety of reasons (Maichum et al., 2016). When SN has a positive impact, it implies that the expectations surrounding food purchases that are shared with influential individuals, such as family and friends, have a favorable effect on consumers' inclination to buy organic food.

Nevertheless, recent research by Pandey et al. (2021) has shown subjective norms have no significant influence and relationship on the intention to consume plant-based products, such as yoghurt alternatives. Perceived social pressure from others and an individual's level of motivation to conform to those views collectively shape subjective norms. These norms reflect the degree to which others' opinions influence an individual's behavior (Ham et al., 2015). In this case, this is due to the low adoption rate of yoghurt alternatives and weak social pressure to consume them, which implies that a lower social pressure may lead to a significant negative impact on consumption behavior intention. Besides, Zhu (2018) conducted a study on the intention to purchase organic food and found that subjective norms may not necessarily have a positive impact on behavioral intention. Similarly, another study on the purchase of organic food by Yazdanpanah and Forouzani (2015) found that the relationship between subjective norms and intention was insignificant. One possible explanation for this could be that subjective norms may not always exert a strong influence on intention if they are

perceived to be weak or inconsistent. In such cases, individuals may not be significantly impacted by the social norm for a particular behavior if it is unclear or not strongly established.

However, most studies have reported that subjective norms stated a significant positive relationship between the intention to purchase green products (Ham et al., 2015; Maichum et al., 2016), organic food, and green hotel revisit intention (Han et al., 2010). When actions related to the environment and health concerns are adopted by individuals, it can lead to an increase in social pressure from family and friends, which creates a positive feedback loop and reinforces environmentally friendly and health-conscious behavior. Thus, it can be hypothesized that the relationship between subjective norms and the intention to purchase plant-based meat is like other organic food and green consumption research. Therefore, we propose the following hypothesis:

H2: Subjective norms has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia.

2.4.3 Perceived Behavior Control and Purchase Intention

Perceived behavioral control (PBC) considers both internal and external barriers and facilitators to performing a behavior, and it is crucial in determining individuals' intentions (Ajzen, 1991). The presence of resources and self-confidence is necessary for individuals to follow through with their intentions. Previous studies have shown a positive correlation between PBC and intention in various contexts, including green

products, organic food, and green hotels (Stollar et al., 2022; Maichum et al., 2016; J. Paul et al., 2016; Saleki et al., 2020; Ahmed et al., 2021; Aitken et al., 2020; Han et al., 2010). For instance, Ahmed et al. (2021) found that PBC significantly influences the purchase intention of organic food among young consumers. Control beliefs, which include beliefs about factors that may support or hinder the behavior, contribute to determining the perceived behavioral control, and their strength is weighted by the perceived power of the control factor (Watts & Chi, 2019).

On the other hand, some studies have found that the relationship between PBC and the intention to purchase organically grown food as well as actual organic food purchase is often insignificant (Yazdanpanah & Forouzani, 2015; Zhu, 2018). While there are some studies reporting a significant relationship, these tend to focus on specific organic food products where individuals feel more in control over their purchasing decisions. In contrast, when individuals are faced with an abstract concept with no detailed information to support it, they may find it challenging to make up their minds, which may explain the lack of significant relationships in other studies.

Also, Al-Swidi et al. (2014) have found no significant relationship between PBC and organic food buying intentions. This study is suggested that individuals with low levels of self-efficacy may lack confidence in their ability to make autonomous decisions about organic food consumption. Nonetheless, this lack of a substantial link between PBC and intention is uncommon in research contexts. In fact, Gen-Y in Malaysia are highly educated, benefiting from increased access to education, resulting in higher knowledge and skills compared to previous generations (Leaderonomics, 2020). Their self-efficacy is demonstrated through adaptability and confidence in utilizing digital

technologies, and actively engaging in online activities like social media, e-commerce, and content creation (Muda et al., 2016; Dalol et al., 2021). Their proficiency in navigating digital platforms reflects their competence and self-assurance in utilizing technology. Based on previous research, it is reasonable to assume that the association between PBC and the purchase intention of plant-based meat is similar to other food and green consumption research. Therefore, we propose the following hypothesis:

H3: Perceived behavioral control has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia.

2.4.4 Food Safety and Purchase Intention

Previous research in the field of organic food has explored the significance of food safety (FS) concerns in shaping consumer purchase intentions (PI). These studies have consistently found that FS is a critical factor influencing consumer behavior and their intention to purchase organic food products. For instance, Iqbal et al. (2021) discovered a positive relationship between health consciousness, FS concerns, and the intention to purchase organic food products. Additionally, there is a growing body of evidence indicating that consumers who prioritize FS are more likely to seek out safe, pure, and natural food options (Teng & Lu, 2016). The impact of FS concerns on PI is shown to be strongly influenced by specific conditions. Moreover, prior empirical research has demonstrated a positive association between consumers' FS concerns and their intentions to buy organic food (Bartholomew et al., 2011). In the context of Malaysia, Alam et al. (2022) presented compelling empirical evidence highlighting the substantial

impact of FS concerns on buying intentions. These findings underscore the influential role played by food safety concerns in shaping consumers' intentions to make purchases.

It is important to note that no studies were found in our search that contradicts the relationship between FS concerns and PI toward plant-based meat or others related topic. After checking Emerald Journals, JSTOR, SAGE Journals, ScienceDirect, and UTAR journal databases, we cannot find studies that did not support any of currently tested hypotheses. Apart from that, there is a dearth of research in the Malaysian context that looks at this relationship between food safety and the intention to purchase plant-based meat. Thus, this hypothesis is important, and this research fills a void in the existing literature. According on the above discussion, we hypothesize the following:

H4: Food safety has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia

2.4.5 Environmental Concern and Purchase Intention

In today's consumer landscape, the significance of environmental concern in purchase intention (PI) and shopping decisions is on the rise. In previous studies, environmental concern (EC) is shown as positively impact on attitude toward organic food (Pagiaslis & Krontalis, 2014; Ahmed et al., 2021; Wojciechowska-Solis & Barska, 2021). Additional studies also have shown that EC have a noteworthy positive impact on consumers' willingness to purchase environmentally friendly products. (Arisal & Atalar, 2016; Newton et al., 2015). These findings highlight the growing influence of

environmental considerations on consumer behavior and their inclination towards sustainable and eco-friendly choices.

However, a contrasting perspective emerges from the study conducted by Angwyn et al. (2022), which revealed no direct or indirect effects of environmental concern on the PI of plant-based food products in Malaysia. Moreover, this influence was not found to be mediated by attitude. These findings diverge from previous studies, suggesting a potential explanation for this disparity could be the lack of awareness or education regarding the relationship between EC and plant-based meat consumption among Malaysian consumers.

The extensive body of prior research consistently demonstrates a positive correlation between EC and PI toward organic food and engage in green consumption practices. Based on this evidence, it is reasonable to assume that the relationship between EC and the intention to purchase plant-based meat follows a similar pattern observed in other studies on food and green consumption behavior. Given the limited research conducted in the Malaysian context specifically examining this association in the context of plant-based meat, it becomes crucial to formulate a research hypothesis to address this gap. Consequently, the following research hypothesis is proposed for this study, aiming to explore the relationship between EC and the intention to purchase plant-based meat in Malaysia.

H5: Environmental concern has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia.

2.5 The Proposed of Conceptual Framework

To establish the correlation between the variables under study, the conceptual framework of this project has been designed by incorporating the existing constructs of the TPB along with an additional independent variable, which is food safety. This framework will help to validate the relationship between each variable and justify the problem statement and discussion.

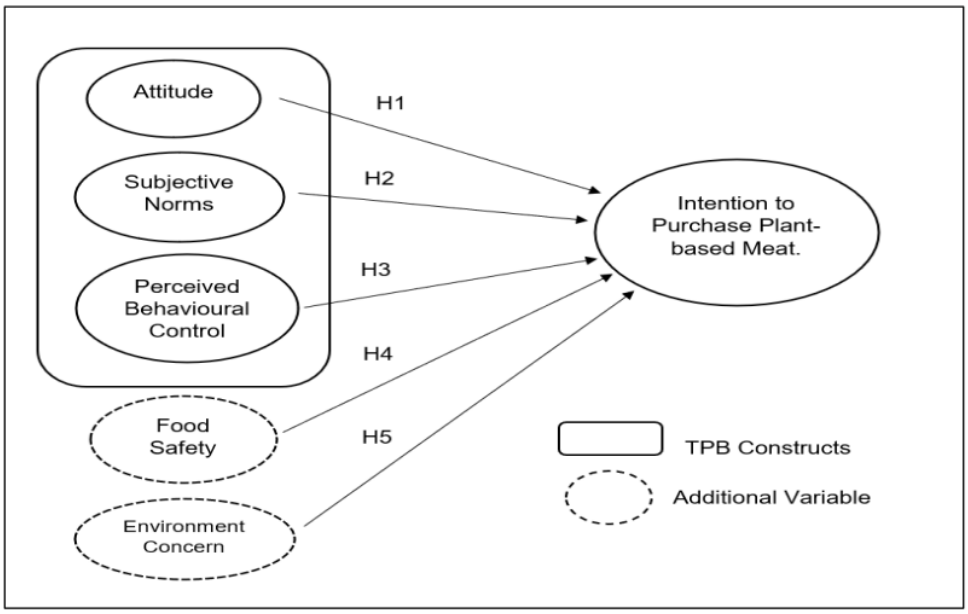

Figure 2.2: The Proposed Conceptual Framework

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

This chapter provides a comprehensive overview of the methods employed to collect and analyze data for the study. The research design, target population, and sample size are discussed in detail, along with the sampling design and data collection methods. Additionally, the chapter delves into the development of the questionnaire, from pre-testing and pilot study, up to the final questionnaire design for the main study. Finally, the proposed data analysis tool is also covered. Overall, this chapter serves as a guide for the reader in understanding the various steps involved in conducting the study and the methodologies used to collect and analyse data.

3.1 Research Design

Although this theory has been used frequently in other studies, but a limited amount of information has been provided regarding past TPB studies relating to plant-based meat in a Malaysian context. By reviewing past studies' methodologies, the current researcher is able to design this research in the most effective manner. A quantitative approach is being used in this study as the methodology of previous studies provides a reliable and valid framework for measuring the TPB variables. Since the TPB has been the subject of numerous quantitative studies over the past few decades, there is no need for exploratory data to confirm the validity of the TPB variables. Therefore, the questions used to measure the TPB, and additional variables will be adjusted based on the item statements from prior studies. In summary, the methodology of previous TPB studies will guide the design of this research, allowing for a rigorous and comprehensive analysis of the TPB variables. In fact, numerous past researchers (see Table 3.1) are using the quantitative approach.

Table 3.1: The Source of Data for Past Studies that used Theory of Planned Behaviour

Authors' name (year)	The source of data	Reasons of using the sources of data
Pandey et al (2021)	Quantitative	To investigate the relationship between TPB constructs and the intention to consume plant-based yogurt alternative.
J. Paul et al. (2016)	Quantitative	To investigate the relationship between TPB constructions and the intention to purchase green products for environmental concerns.
Maichum et al. (2016)	Quantitative	To investigate the relationship between each of the following variables: attitude, subjective norms, perceived behavioural control, environmental

		concerns, and the intention to purchase green products among Thai consumers.
Saleki et al. (2020)	Quantitative	To investigate the relationship between each of the following variables: attitude, subjective norms, perceived behavioural control, environmental concerns, and the consumer intention to purchase organic food in Malaysia.
Ahmed et al. (2021)	Quantitative	To investigate the relationship between each of the following variables: attitude, subjective norms, perceived behavioural control, environmental concerns, environmental awareness the purchase intention to purchase organic food among young consumers

Source: Pandey et al (2021); J. Paul et al. (2016); Maichum et al. (2016); Saleki et al. (2020); Ahmed et al. (2021).

3.2 Sampling Design

3.2.1 Target Population

This study will focus on Generation Y, also known as Millennials, who are recognized for their heightened awareness and interest in environmental issues compared to earlier generations (Sánchez-Bravo et al., 2020). Food sustainability has been a subject of recent research among Millennials (Bollani et al., 2019). Therefore, this study's target

population will be individuals born between 1981 and 1996 and currently between the ages of 27 to 42 in 2023 (Dimock, 2019), all of whom fall within the Millennial generation. Millennials are an important consumer group because many of them are parents of young children. A parent's role in directing their child's food selections and influencing their child's food consumption habits is critical (Erhardt & Olsen, 2021; Devitt, 2022). As Generation Y continues to age and have children, they will have a significant impact on the attitudes and behaviors of future generations. Moreover, Generation Y is the largest demographic group in Malaysia, comprising 40% of the country's total population (Muda et al., 2016). It implies that there is a sizable market with lots of room to introduce plant-based meat to the next generation. Therefore, studying the intention to purchase plant-based meat among are important. The questionnaire will be distributed evenly among Generation Y to obtain a more accurate result from this generation.

3.2.2 Sample Size

This study proposes to determine the sample size using Morgan's table for sample size to address the lack of population count data that has been released (see Figure 3.1). Given that Malaysia's population includes a significant proportion of Generation Y, accounting for 40% of the population and being the largest segment (Muda et al., 2016), it is expected that the population size for this study will be over 100,000 individuals. According to Krejcie and Morgan's (1970) research, a target sample size of 384 can provide sufficient clarity on a population size of 100,000. To ensure an appropriate and

representative sample size for this population, the target sample size for this study is 384 Generation Y respondents.

3.2.3 Sampling Method

To address the challenge of contacting respondents who are difficult to reach due to anonymity or their location, snowball sampling is recommended to collect data for this study. Snowball sampling is a type of non-probability sampling method that is well-suited for such situations (Frost, 2022b). As a non-probability sampling method, the researcher will request surveyed respondents to introduce the study to their family members, social networks, or colleagues who meet the target population's definition. The current researcher initiated the snowball sampling process by contacting their family members, friends, and social networks and requesting them to complete the questionnaire. After completing the e-survey, the first group of respondents will be requested to forward the questionnaire to other individuals in their networks who may also meet the target population's criteria. This process will continue with each subsequent batch of respondents until the required sample size of 384 is achieved. This snowball sampling method will enable the researcher to reach a larger number of potential respondents who may not have been reached through traditional sampling methods. It will also facilitate the recruitment of respondents who share common characteristics with the initial survey respondents (Naderifar et al., 2017).

Figure 3.1: Morgan's Table for Sample Size

MORGAN'S TABLE FOR SAMPLE SIZE

Population Size	Confidence = 95% Margin of Error				Confidence = 99% Margin of Error			
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763
1000	278	440	606	906	399	575	727	943
1200	291	474	674	1067	427	636	827	1119
1500	306	515	759	1297	460	712	959	1376
2000	322	563	869	1655	498	808	1141	1785
2500	333	597	952	1984	524	879	1288	2173
3500	346	641	1068	2565	558	977	1510	2890
5000	357	678	1176	3288	586	1066	1734	3842
7500	365	710	1275	4211	610	1147	1960	5165
10000	370	727	1332	4899	622	1193	2098	6239
25000	378	760	1448	6939	646	1285	2399	9972
50000	381	772	1491	8056	655	1318	2520	12455
75000	382	776	1506	8514	658	1330	2563	13583
100000	383	778	1513	8762	659	1336	2585	14227
250000	384	782	1527	9248	662	1347	2626	15555
500000	384	783	1532	9423	663	1350	2640	16055
1000000	384	783	1534	9512	663	1352	2647	16317
2500000	384	784	1536	9567	663	1353	2651	16478
10000000	384	784	1536	9594	663	1354	2653	16560
100000000	384	784	1537	9603	663	1354	2654	16584
300000000	384	784	1537	9603	663	1354	2654	16586

Source: The Research Advisors (2006)

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3.3 Data Collection Method

3.3.1 Pre-test and Pilot Study

Pre-testing and pilot testing are critical steps in ensuring that the questionnaire is properly prepared before distribution to the main study respondents. The initial draft of the questionnaire item statements is based on modified versions of past studies' item statements, as shown in Table 3.3. To ensure construct validity, an academic expert or the author's supervisor is involved in the pre-test to review and refine the drafted item statements. Based on their feedback, the sentences are modified to improve their clarity

and accuracy. In response to the academic expert's feedback, the first drafted item statements were refined.

Next, the revised questionnaire is pilot tested with a small group of respondents to identify any issues and reduce the likelihood of measurement errors and survey non-response (In, 2017). The revised item statements were shared with a pilot study group consisting of 38 representatives from the main study respondents. As mentioned in Connelly's (2008) and Hertzog (2008) study, existing literature indicates that a common recommendation for pilot study samples is to have a size of 10% of the sample projected for the larger parent study. In the event that the pilot study participants provide any concerns or comments, the questionnaire will be further revised and amended accordingly.

To ensure the reliability of the questionnaire, the current author requested respondent representatives to answer the questionnaire. This allowed the author to compute the reliability coefficient or Cronbach alpha score for each variable. Table 3.2 presents the findings of the reliability analysis, which reveal that all the reliability coefficient scores surpass the threshold value of 0.6, despite a small sample size. These results indicate that the questionnaire items exhibit solid internal consistency and can be considered reliable measures of the assessed constructs. The high-reliability scores affirm that the questionnaire is appropriate for data collection in the present study, allowing for a confident interpretation of the results.

Table 3.2 Cronbach's Coefficient Scores for Pilot Test Variables

Variables	Cronbach's Alpha	Items
Intention to purchase plant-based meat (DV)	0.936	5
Attitude (IV1)	0.882	4
Subjective norms (IV2)	0.875	4
Perceived Behavior Control (IV3)	0.833	4
Food Safety (IV4)	0.936	4
Environment Concern (IV5)	0.880	4

After the completion of these steps, the initial survey is disseminated to the public to gather data. As the study relies on questionnaires for data collection, it is of utmost importance that the respondents comprehend the purpose behind each statement in the survey.

3.3.2 Questionnaire Design for Main Study

Before initiating the design of the questionnaire for this study, the current researcher obtained a letter of ethical approval for the research project from the Universiti Tunku Abdul Rahman (refer to Appendix 3.2). This approval signifies that the necessary permission and protocols have been put in place to collect personal data from participants for research purposes. It also ensures that the study adheres to ethical

guidelines and safeguards the privacy and confidentiality of the participant's personal information during data collection.

A finalized questionnaire that was amended based on the suggestions received from pilot study participants will be shown once the pre-test and pilot study has been completed. A master copy of the questionnaire consists of three sections, Section A, Section B, and Section C, which are designed in the English language (refer to Appendix 3.2). Section A includes questions regarding the respondents' demographic profile, while Section B focuses on evaluating the respondents' views on the items used to measure each variable by using a 5-point Likert scale. The 5-point Likert scale is a widely used psychometric response method that enables respondents to express their level of agreement with questions using five possible points ranging from 1 to 5, such as "(1) Strongly Disagree," "(2) Disagree," "(3) Neither Agree nor Disagree," "(4) Agree," and "(5) Strongly Agree." (Tripathi, 2022). This response method is commonly used in research on purchase intention, particularly in the field of marketing and consumer behavior, as it makes it easier for individuals to estimate their personal characteristics and perceptions (Carrington et al., 2010; Ahmed et al., 2021; Maichum et al., 2016). Its simplicity and ease of use make it accessible to a wide range of respondents, and its effectiveness in predicting actual behavior has been demonstrated in numerous studies.

To ensure that only individuals from Generation Y participated in the research, a screening statement was included at the top of the questionnaire before Section A. This statement advised respondents who were either below the age of 27 or above the age of

42 that their participation was not required. Additionally, respondents were requested to provide their age in the demographic profile section (Part A) to confirm that they belonged to Generation Y. This screening question helped to eliminate any unqualified responses, allowing the researchers to obtain accurate and reliable data.

The most important is the questionnaire item statement needs to be drafted based on the item statement from past studies. Based on Table 3.3, illustrates how the current researcher modifies and adapts the statement such that the item still measures the same concept and is in the context of related to plant-based meat. Once the draft is complete, the item statements must undergo two procedures to ensure their validity: a pre-test and a pilot study.

Table 3.3: Modified Item Statements Based on Related Past Studies Variables

Variable	Measuring items	Source of adoption
Attitude (ATT)	• I think that purchasing plant-based meat products is a good idea. • I think that purchasing plant-based meat products is beneficial. • I like the idea of purchasing plant-based meat products. • I think that plant-based meat products are wise.	Hoang et al. (2019
Subjective norms (SN)	• Most of my friends who value dietary opinions recommend plant-based foods like plant-based meat products. • People who are important to me generally recommend that I buy plant-based meat products. • My decision to purchase plant-based meat products is heavily influenced by the extent of an individual or group's influence. • My family believes that I should purchase plant-based meat products.	Woon (2019)
Perceived behavior	• I am willing to pay more money for plant-based meat to protect the environment. • I believe that plant-based meat products can improve the	Hwang et al. (2020)

control (PBC)	surrounding environment. • I would choose plant-based meat in a fast-food restaurant if any. • I can decide for myself whether to choose plant-based meat products.	
Food Safety (FS)	• I am concerned about the number of artificial additives and preservatives in plant-based meat product. • I am concerned about the safety and quality of food today. • I am concerned about the process of food processing. • I am concerned about food product labelling and transparency.	Teng and Lu (2016)
Environment Concern (EC)	• Plant-based meat products are more ecologically sound than conventional meat products. • I believe plant-based meat consumption contributes to environmental protection. • The food products produced by "plants" are made from sustainable resources and discharge less pollution into the air, water, and soil. • It is very important that plant-based meat products have been prepared and packaged in an environmentally friendly way.	Chen (2022)
Intention to Purchase (IP)	• I intend to purchase plant-based meat if it is available in my area. • I plan to purchase plant-based meat if the price is affordable. • I will try to purchase plant-based meat if it is healthier and safer. • I intend to purchase plant-based meat if they are good for our environment. • I plan to purchase plant-based meat products frequently in the future.	Teng and Lu (2016)

3.3.3 Distribution of Main Study's Questionnaire

The author of the study provided a softcopy version which is an online survey of the finalized questionnaire to accommodate the respondents' preferences. A Google Survey Form was utilized to create an electronic questionnaire, which was then disseminated to numerous respondents via various online channels such as email and social media (e.g.,

Gmail, Outlook, WhatsApp, WeChat, Facebook, and Instagram). The distribution was facilitated by providing an accessible link to the form. This was done to ensure that respondents could conveniently answer the questionnaire at their preferred time and location. The researcher's family members and friends will assist in distributing the questionnaires after being briefed about the study's purpose and the meaning of each measuring item.

To ensure that respondents could contact the researcher for clarification, the researcher will upload their personal contact details on the cover page of the e-questionnaire. This will facilitate communication between the researcher and the respondents and will ensure that the necessary information is conveyed. The estimated duration for data collection is approximately one month. This timeline was determined based on various factors, such as the expected number of responses and the reach of the distribution channels. Additionally, it takes time for respondents to receive and complete the questionnaire. Moreover, allowing a sufficient time for data collection ensures that adequate sample size is achieved, which can improve the accuracy and reliability of the results.

3.4 Data Analysis Tool

This study involves two types of statistical analysis: descriptive and inferential. Descriptive analysis is utilized to describe the distribution of respondents' demographic data, including age,

gender, academic qualifications, and current residential area, through frequency counts. Meanwhile, inferential analysis is utilized to provide a detailed analysis of a larger population based on a representative sample, which enables the research to confirm the hypothesis. However, before conducting inferential analysis, it is necessary to ensure the data's reliability by testing it through a reliability test. At least 0.6 Cronbach's alpha is required for the data to be considered reliable and acceptable (Ursachi et al., 2015; Raharjanti et al., 2022). Figure 3.2 displays a spectrum of reliability indications based on Cronbach's alpha scores. A higher value of Cronbach's alpha implies that the respondents have demonstrated more consistency in their responses to all items utilized for assessing variables.

***Figure 3.2:* Rule of Thumb Measures for Cronbach's Alpha**

Cronbach's Alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Source: Habidin et al. (2015)

To investigate the association between the DV and IVs, the current researchers calculated the Pearson correlation coefficient after evaluating the reliability of the variables. A positive correlation coefficient indicates a positive relationship between the variables, while a negative correlation coefficient suggests a negative relationship. Additionally, the correlation coefficient between the DV and IVs should exceed 0.6 to establish a strong association (Frost, 2022a). Figure 3.3 illustrates the range of correlation coefficients and their corresponding levels of association between the variables.

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Figure 3.3: Rule of Thumb for Interpreting the Size of a Correlation Coefficient

Correlation Coefficient Range	Strength
±0.00 to ±0.10	Negligible correlation
±0.10 to ±0.39	Weak correlation
±0.40 to ±0.69	Moderate correlation
±0.70 to ±0.89	Strong correlation
±0.90 to ±1.00	Very strong correlation

Source: Schober et al. (2018)

To determine the relationship between IVs, a multicollinearity analysis should be conducted. It is crucial to ensure that the IVs are not strongly correlated with one another, as otherwise they cannot be considered independent. According to Vatcheva et al. (2016) in their study on regression analyses in epidemiology, the partial correlation value between any two independent variables should not exceed 0.70.

The linear regression equation is shown in below.

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$$Y = a + bX1 + cX2 + dX3 + eX4 + fX5$$

Where,

Y: Dependent Variable (Intention to plant-based meat in Malaysia);

X1: IV1 - ATT.

X2: IV2 - SN.

X3: IV3 – PBC.

X4: IV4 – FS

X5: IV5 – EC.

a: The intercept point of the regression line or constant; *and*

b, c, d, e & f: The coefficient of regression for X1. X2. X3. X4 & X5.

During the linear regression process, ANOVA analysis will be performed. In the event that the result is significant, at least one independent variable can explain the variation in the DV (Kenton, 2022). In the regression analysis, the t-tests will indicate which independent variables explain the dependent variable's changes, as well as the regression results. A significant level of 0.05 will be used to determine the statistical significance of the t-test results. If the t-test result is less than 0.05, the hypothesis is considered supported, whereas if the significant level is greater than 0.05, the hypothesis is not supported (Bevans, 2022).

3.5 Ethical Considerations

For collecting the data from respondents, the researcher will make sure the participations are voluntary. In addition, the questionnaire will explicitly state that it is being used for research purposes solely within UTAR. To minimize any potential risks associated with completing the survey, a Personal Data Protection Statement will be included in the questionnaire to protect the respondents' data. In this case, the Personal Data Protection Act 2010 will be employed to safeguard the interests of the data subjects (Pesuruhjaya Perlindungan Data Peribadi Malaysia, 2022)

3.6 Summary of Present Research Methodology

The research project will employ quantitative methodology to obtain the study results. Prior to disseminating the questionnaire to the respondents, a pre-test and pilot test will be conducted to ensure that the items' statements within the questionnaire are measurable. Furthermore, past research studies have been reviewed to guide the questionnaire design process. The targeted sample size for this study is 384 participants, and the questionnaire will be distributed through online and offline modes. In addition, the snowball sampling method is recommended to collect data for this research. The collected data will be subjected to both descriptive and inferential analysis for further exploration. Finally, a Personal Data Protection Statement will be included in the questionnaire to minimize any potential risks to the respondents. The use of pre-testing ensures the quality of the data collected through the questionnaire. It allows for any necessary modifications to be made before data collection, thereby enhancing the accuracy and reliability of the results. Additionally, the incorporation of a Personal Data Protection Statement is crucial in ensuring that the research adheres to ethical principles, which safeguard the privacy and confidentiality of the respondents' personal data.

CHPATER 4

INTERPRETATION OR DISCUSSION OF DATA FINDINGS

4.0 Introduction

This chapter focuses on presenting and discussing the descriptive and inferential results obtained in the study, with a specific emphasis on the findings derived from the questionnaire. The research approach employed is quantitative, as it relies on numerical or measured variables for analysis. The current researcher utilizes SPSS software to interpret the questionnaire data. SPSS is selected due to its user-friendly interface, comprehensive documentation, and ease of use (Rahman & Muktadir, 2021). Its implementation facilitates the exploration of relationships between variables within the study.

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4.1 Descriptive Result

4.1.1 Respondent's Demographic Profile

A total of 384 questionnaires were collected, and it is important to note that no data was excluded from the analysis. This is because all the respondents willingly provided their demographic information and diligently completed the questionnaire by responding to each measuring item.

4.1.2 Demographic Characteristics of the Sample

Section A and B is associated with the respondent's demographic profile. In Section A, there are 6 questions, including age, gender, ethnicity, marital status, income, education, and occupation. Table 4.1 shows that male respondents represent 189 (49.2%), while female respondents stand for 195 (50.8%). Next, the table illustrates that the age group between 27 and 30 represents the most significant proportion, accounting for 42.7% of the respondents, with 164 participants in the questionnaire. Subsequently, the age group between 31 and 34 comprises 111 respondents (28.9%) who participated in the questionnaire. This is followed by 71 respondents (19.3%) in the age range of 35-38. Lastly, the age group between 41 and 50 consists of 34 respondents (9.1%).

Thirdly, it is worth noting that the Chinese respondents make up the largest portion, with a total of 269 individuals, comprising a significant 70.1% of the entire sample. Following closely behind are the Malay respondents, with 73 participants, forming the second largest group. The Indian group constitutes the third largest segment, consisting of 42 respondents, making up 10.9% of the overall sample. Among the 384 respondents, 53.1% were single and 46.9% were married.

Fourthly, the data presented in Table 4.2 indicates a diverse range of educational attainment levels among the respondents. Specifically, the findings show that 4 participants had successfully completed SPM, 6 individuals had achieved STPM, 30 respondents held a Diploma, 291 had obtained a degree, and 53 had pursued postgraduate studies.

Additionally, when considering the respondents' monthly spending allowance, it is observed that the majority, comprising 204 respondents (53.1%), fall within the range of RM 3000 to RM 5000. The next category includes 87 respondents (22.7%) who earn an income ranging from RM 1500 to RM 3000, while the remaining 92 respondents (24%) have a monthly income of RM 5000 and above. It is worth noting that one respondent (0.3%) reported an income below 1500, as they had recently resigned from their full-time position and were currently working part-timer.

Lastly, the data reveals that a significant portion of the respondents, totalling 305 respondents (79.4%), are employed under a contract of service or apprenticeship in the private sector, engaging in various professions such as office work, engineering, auditing, marketing, and more. In addition, 55 respondents (11.9%) are self-employed, indicating that they are managing their own businesses or working as freelancers. At the same time, approximately 24 respondents (6.3%) are private owners, indicating that they possess ownership of private businesses or establishments, which are not operated by the state or any public entity.

In Section B of the study, three questions were included: familiarity with plant-based meat products, purchase experience, purchase frequency, as well as dietary habits. Out

of the total 384 respondents, 346 respondents (90.1%) indicated that they had heard of plant-based meat products before, while 38 respondents (9.9%) stated they had not. In terms of the purchase experience, 281 respondents (73.2%) reported having purchased plant-based meat products, while 103 respondents (26.8%) had not. Besides, in relation to purchase frequency, 2 respondents (0.5%) reported purchasing plant-based meat products every day, while 26 respondents (6.8%) said they bought them sometimes. Additionally, 64 respondents (16.7%) stated they purchased plant-based meat products frequently, while 189 respondents (49.2%) reported doing so rarely. A total of 26.8% indicated that they had never purchased plant-based meat products.

Finally, 2.9% of respondents considered themselves non-vegetarians who preferred meat-based diets. Most participants (78.9%) reported that they were not vegetarians, but they stressed the importance of eating a balanced diet. Intriguingly, 9.9% of respondents classified themselves as non-vegetarians who ate predominantly vegetable-based meals. The percentage of vegetarians was smaller, accounting for 8.3%.

Table 4.1: Demographic Profile Distribution

	Frequency	Percent (%)
Gender		
Male	189	49.2
Female	195	50.8
Age		
27 - 30 years old	164	42.7
31 - 34 years old	111	28.9
35 - 38 years old	74	19.3
39 - 42 years old	35	9.1
Ethnicity		
Malay	73	19.0
Chinese	269	70.1
Indian	42	10.9

Marital Status		
Single	204	53.1
Married	180	46.9
Education Level		
SPM	4	1.0
STPM	6	1.6
Diploma	30	7.8
Bachelor's Degree	291	75.8
Postgraduate	53	13.8
Monthly Income		
Below RM 1,500	1	.3
RM 1,500 - RM 3,000	92	24.0
RM 3,000 - RM 5,000	204	53.1
RM 5000 above	87	22.7
Occupation		
Employed	305	79.4
Self-employed	55	14.3
Private Owner	24	6.3
Familiarity with plant-based meat products		
Yes	346	90.1
No	38	9.9
Purchase Experience		
Yes	281	73.2
No	103	26.8
Purchase Frequency		
Everyday	2	.5
Sometimes	26	6.8
Frequently	64	16.7
Rarely	189	49.2
None	103	26.8
Dietary Habit		
Non-vegetarian: Mainly meat	11	2.9
Non-vegetarian: Balance diet	303	78.9
Non-vegetarian: Mainly vegetable	38	9.9
Vegetarian	32	8.3
Total	384	100.0

4.2 Inferential Analysis Result

Prior to confirming the current study's hypotheses, an inferential analysis will be performed to ensure the reliability of the questionnaire data.

4.2.1 Scale Measurement: Reliability Test

To ensure the reliability of the collected data, a reliability test was conducted in using Cronbach's Alpha score. According to Taber (2018), reliability is considered satisfactory when all reliability coefficients for the variables are higher than the threshold value of 0.7. The results of the reliability test are presented in Table 4.2, revealing that the mean of Cronbach's Alpha score for all standardized items exceeded the threshold value of 0.6, indicating a satisfactory level of reliability. Hence, this suggests that the respondents consistently rated the items measuring the same construct, providing confidence in the reliability of the collected data. It is worth noting that Cronbach's Alpha scores for all variables surpassed the threshold value of 0.7 and below 0.95, further strengthening the reliability of the data (Tavakol & Dennick, 2011). These results demonstrate that the variables, including ATT, SN, PBC, FS, EC, and intention to purchase plant-based meat, are reliable measures for the study.

Table 4.2 Reliability Test's Results of Studied Variables in the Main Survey

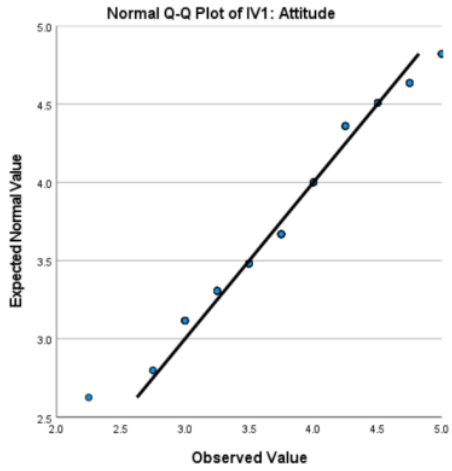
Variable's Name	Cronbach's Alpha Score	No of Items
IV1: Attitude	0.777	4
IV2: Subjective Norms	0.719	4
IV3: Perceived Behavioural Control	0.721	4
IV4: Food Safety	0.830	4
IV5: Environmental Concern	0.791	4
DV: Intention to purchase plant-based meat	0.803	5

4.3 Normality of Data Distribution

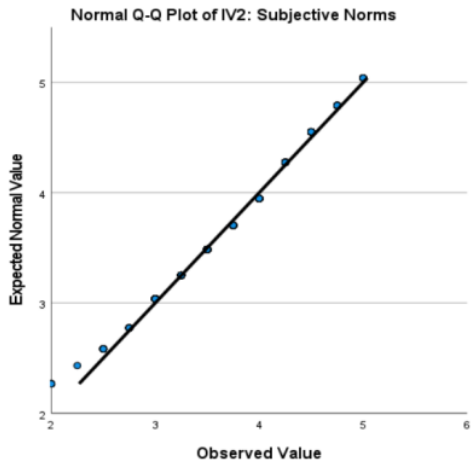
To verify that the assumption of this study was not violated, Q-Q plots were created for both independent and dependent variables under investigation. Figure 4.1 displays the Q-Q plots for each independent variable and dependent variable, which confirmed their normal distribution. The data can be considered as normally distributed when the plots are close to the line if the data given by respondents is similar (Huang et al., 2019). Although there have been a few outliers that did not align precisely with the plotted line, possibly due to respondents disagreeing with certain measurement items for specific variables, Nevertheless, the observed data can still be considered normally distributed since the absence of distinct U-shaped or inverted U-shaped patterns in the plots further supports this conclusion. Moreover, the distribution patterns of both independent and dependent variables were comparable, indicating a linear correlation between them.

Figure 4.1: The Normality of Data Distribution for Each Studied Variable

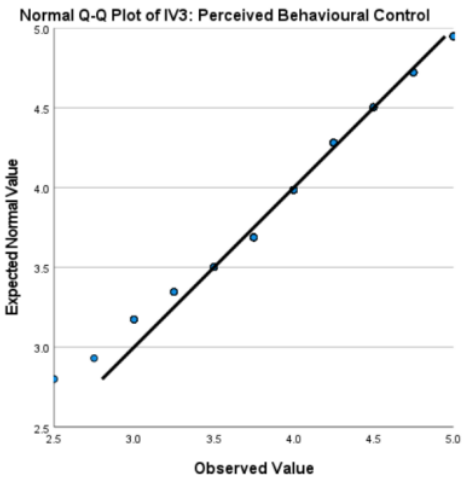
IV1: Attitude



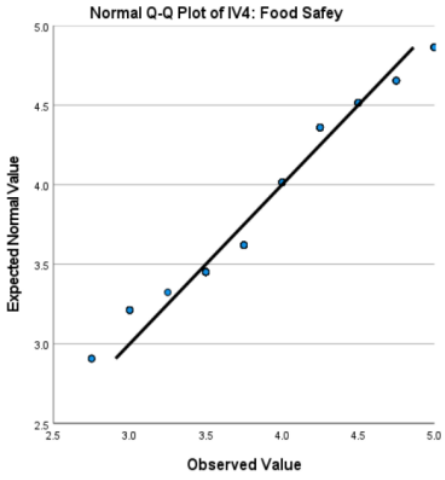
IV2: Subjective Norms

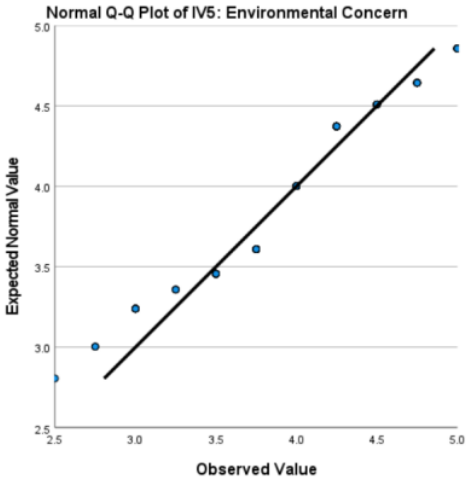
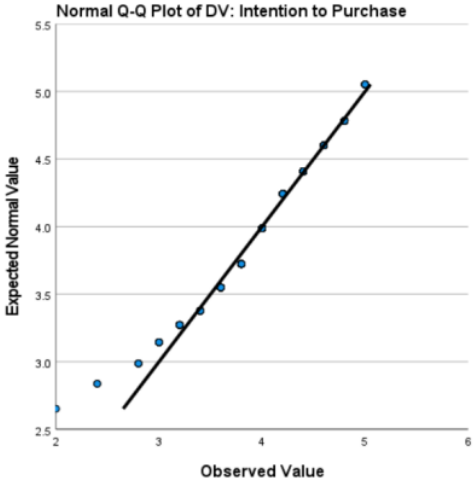


IV3: Perceived Behavioural Control



IV4: Food Safety



IV5: Environmental Concern	DV: Intention to Purchase Plant-based Meat.
	

4.4 Pearson's Correlations Coefficient Scores/Results

Before establishing a causal relationship between the IVs and DV, it is recommended to examine the correlation between the IVs and DV. Using Pearson's correlation coefficient score makes it possible to determine whether the relationship between variables is positive or negative (Turney, 2022). In Table 4.3, the Pearson's correlation coefficients were calculated for the IVs and the DV. The findings reveal several interesting patterns. Firstly, ATT exhibits a strong positive correlation (0.610) with the DV, indicating that an increase in attitude is associated with an increase in the DV. Secondly, SN displays a weaker positive correlation (0.408) with the DV, suggesting a less pronounced relationship between these variables.

Additionally, PBC (0.512), FS (0.510) and EC (0.589) demonstrate moderate positive correlations with the DV.

Table 4.3 The Pearson's Correlations Coefficient Scores/Result

Model		ATT	SN	PBC	FS	EC	PI
ATT	Pearson Correlation	1					
SN	Pearson Correlation	0.464**	1				
PBC	Pearson Correlation	0.469**	0.426**	1			
FS	Pearson Correlation	0.421**	0.204**	0.360**	1		
EC	Pearson Correlation	0.475**	0.277**	0.448**	0.577**	1	
PI	Pearson Correlation	0.610**	0.408**	0.512**	0.519**	0.588**	1

Note: ATT = Attitude;
SN = Subjective Norm;
PBC = Perceived Behavioural Control;
FS = Food Safety;
EC = Environmental Concern.

**. Correlation is significant at 0.01 level (2-tailed)

4.5 Multiple Regression Results

Multiple regression is a statistical tool and report commonly used to assess the relationship between two or more IVs and one DV (Bevans, 2022). This model uses a "stepwise method"

to eliminate any IVs that does not have a significant relationship with the DV by conducting a few rounds of analysis. In the model summary presented in Table 4.4, the R-squared value was 0.539. This indicates that 53.9% of the variation in the DV, which is the intention to purchase plant-based meat had been explained by five IVs: ATT, SN, PBC, FS, and EC. Meanwhile, the remaining 46.1% of the variation was explained by other variables not investigated in this research.

Table 4.4 Model summary of Regression Result:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.735[a]	.539	.533	.31544

a. Predictors: (Constant), IV5: Environmental Concern, IV2: Subjective Norms, IV3: Perceived Behavioural Control, IV4: Food Safety, IV1: Attitude

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44.062	5	8.812	88.566	<.001[b]
	Residual	37.612	378	.100		
	Total	81.674	383			

a. Dependent Variable: DV: Purchase Intention

b. Predictors: (Constant), IV5: Environmental Concern, IV2: Subjective Norms, IV3: Perceived Behavioural Control, IV4: Food Safety, IV1: Attitude

4.6 ANOVA Regression Result

ANOVA is a statistical method used to examine potential differences in a dependent variable measured on a scale level across a nominal-level variable with two or more categories (Statistics Solutions, 2022). Table 4.5 demonstrates that all the IVs have a statistically significant positive relationship with this study's DV. The significance level (p-value) for each IV is less than 0.001, meaning there is less than a one in a thousand chance that the relationship between the IV and the DV is due to chance (Beers, 2023). Therefore, we can conclude that all the IVs can effectively explain the changes in the DV in this study.

Table 4.5 ANOVA of Regression Result:

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.426	1	30.426	226.795	<.001[b]
	Residual	51.248	382	.134		
	Total	81.674	383			
2	Regression	39.838	2	19.919	181.401	<.001[c]
	Residual	41.836	381	.110		
	Total	81.674	383			
3	Regression	42.044	3	14.015	134.382	<.001[d]
	Residual	39.630	380	.104		
	Total	81.674	383			
4	Regression	43.501	4	10.875	107.973	<.001[e]
	Residual	38.173	379	.101		
	Total	81.674	383			
5	Regression	44.062	5	8.812	88.566	<.001[f]
	Residual	37.612	378	.100		
	Total	81.674	383			

a. Dependent Variable: DV: Purchase Intention
b. Predictors: (Constant), IV1: Attitude
c. Predictors: (Constant), IV1: Attitude, IV5: Environmental Concern
d. Predictors: (Constant), IV1: Attitude, IV5: Environmental Concern, IV3: Perceived Behavioural Control
e. Predictors: (Constant), IV1: Attitude, IV5: Environmental Concern, IV3: Perceived Behavioural Control, IV4: Food Safety
f. Predictors: (Constant), IV1: Attitude, IV5: Environmental Concern, IV3: Perceived Behavioural Control, IV4: Food Safety, IV2: Subjective Norms

4.7 Regression Coefficient Result

Multicollinearity is high intercorrelations between two or more independent variables in a regression model (Indeed Editorial Team, 2022). The VIF value is used to measure multicollinearity. Based on Table 4.6, VIF values are less than 2.0 and suggest that only a low to moderate level of multicollinearity is present in the regression model. A VIF of 2 or below is generally considered a strong acceptable level of multicollinearity and is not a cause for concern. As the VIF increases beyond this threshold, it suggests that there may be increased levels of multicollinearity among the independent variables in the regression model (Team, 2023). As a rule of thumb, a VIF value greater than 5 or 10 is often considered high and may indicate a serious problem with multicollinearity (Kim, 2019).

Table 4.6 Regression Coefficient Result for Each Significant Variable:

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	-.031	.196		-.160	.873		

ATT	.322	.048	.301	6.713	<.001***	.604	**1.655**
SN	.078	.033	.097	2.376	.018**	.727	**1.375**
PBC	.170	.047	.156	3.628	<.001***	.662	**1.510**
FS	.169	.043	.173	3.937	<.001***	.633	**1.579**
EC	.278	.051	.249	5.392	<.001***	.571	**1.752**

a. Dependent Variable: DV: Purchase Intention

***. p<0.001. **. p<0.01

Moreover, the t-statistic in table 4.6 is used to examine the influence that each IVs create. It can determine whether there is a significant relationship between two variables and how they are related (Hayes, 2022b). For example, the t-test shows significance if the relationship between IVs and DV hypothesis is supported. Hence, below is the multiple regression equation for this research:

$$Y = a + bX1 + cX2$$

$$\rightarrow Y = 0.332 + 0.078\ X1 + 0.170\ X2 + 0.169\ X3 + 0.278\ X4$$

Where;

Y = Dependent variable = Purchase Intention

X1 = IV1 = ATT

X2 = IV2= SN

X3 = IV3 = PBC

X4 = IV4 = FS

X5 = IV5 = EC

4.8 Confirmation of Hypotheses Results

Based on the regression coefficient result indicates that all five hypotheses related to each IV are supported, as all the regression IVs are displayed in the table 4.5 and the corresponding significant value is below 0.001. The summary of confirmation hypotheses is displayed in table 4.7. The data is evaluated by the survey answers from 384 respondents.

Table 4.7: Summary of the confirmation of current hypotheses:

	Details of Hypotheses	Remarks
H1	Attitude has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia	Supported
H2	Subjective norm has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia	Supported
H3	Perceived behavioral control has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia	Supported
H4	Food safety has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia	Supported
H5	Environmental concern has significant influence on purchase intention of plant-based meat among Generation Y in Malaysia	Supported

CHAPTER 5

DISCUSSION, CONCLUSION AND IMPICATIONS

5.0 Introduction

In Chapter 5, the study presents and discusses the findings of the research, along with a summary of the statistical analyses conducted in the preceding chapter. The chapter provides an in-depth analysis of the major findings, exploring their implications for managerial decision-making. Moreover, the chapter addresses the research limitations and provides recommendations for future research to further advance the understanding of the topic.

5.1 Summary of Statistical Analysis

According to the statistical analysis conducted in chapter 4, several important findings were revealed about the respondents. Firstly, it was observed that most of the participants were female, indicating a higher level of interest in purchasing plant-based meat among women. Secondly, a significant proportion of the sample consisted of individuals of Chinese ethnicity. Additionally, although most of the respondents were single, it is noteworthy that almost half of them were married (46.9%). Previous research conducted by Riefer and Hamm (2011) supports the notion that households with children or new parents tend to exhibit more interest in buying plant-based food.

Moreover, this study revealed that a significant number of respondents had attained higher levels of education. This finding is consistent with the research conducted by Aslihan Nasir and Karakaya (2014), who observed a greater interest in plant-based food among consumers with higher educational attainment. In this study, most respondents held bachelor's degrees, making up 75.8% of the sample. Also, the second largest group of respondents held postgraduate degrees, making up 13.8% of the sample. Besides, employed individuals with higher income levels were more inclined to become customers of plant-based meat products, as they had greater purchasing power and were more willing to spend more on such products. Within the realm of marketing research, the findings of this study indicate that most respondents were already familiar with plant-based meat products and had prior purchase experience, albeit with a low purchase frequency. It is worth noting that their dietary habits leaned towards a non-vegetarian lifestyle but with an emphasis on maintaining a balanced diet. These insights shed light on the prevailing trends and attitudes among Generation Y in Malaysia concerning plant-based meat products.

The reliability of the questionnaire variables was also assessed in Chapter 4, and the results indicated high reliability across all variables. Furthermore, the analysis further explored the relationship between five IVs (ATT, SN, PBC, FS, and EC) and the intention to purchase plant-based meat among Generation Y. The findings presented in Table 4.4 demonstrated that all the IVs showed statistically significant relationships with the DV. These findings provide robust evidence of the positive associations between the IVs and the intention to purchase plant-based meat. From another perspective, these findings contribute to a better understanding of Generation Y's preferences and motivations when it comes to consuming plant-based meat, thereby offering valuable insights for businesses and policymakers in promoting sustainable and ethical food choices.

5.2 Discussions of Major Findings

5.2.1 The Relationship between Attitude (ATT) and Intention to Purchase Plant-based Meat Among Generation Y in Malaysia.

H1: There is a positive significant relationship between Attitude and intention to purchase plant-based meat among Generation Y in Malaysia.

According to the research findings presented in Chapter 4, there is robust evidence that supports a positive correlation between Generation Y consumers' ATT and their intention to purchase plant-based meat. Hence, H1 has been accepted. In simpler terms,

it means that consumers' attitudes towards plant-based meat have a noteworthy impact on their intention to buy these products, particularly among Generation Y consumers. Besides, the findings of H1 are accepted and align with the earlier studies proving that consumers would have the intention to purchase plant-based meat with a correlation of ATT (Pandey et al., 2021; Jang & Cho, 2022; Kopplin & Rausch, 2021). Collectively, these studies reinforce the notion that consumers with a positive attitude towards plant-based meat are more likely to express a strong intention to include these products in their dietary choices.

Furthermore, Ma and Chang (2022) conducted a study investigating the factors influencing consumers' intention to purchase plant-based meat alternatives, and their findings further supported the positive and significant relationship between attitude and intention to purchase. Overall, the results of this study, along with the cited studies, highlight the importance of attitude as a key predictor in Generation Y consumer decision-making regarding the purchase of plant-based meat products. It suggests that a more positive attitude towards plant-based meat alternatives is likely to lead to a higher intention to purchase them. A positive attitude towards plant-based meat is associated with a higher likelihood of expressing an intention to include them in purchase decisions and dietary choices.

5.2.2 The Relationship between Subjective Norms (SN) and Intention to Purchase Plant-based Meat Among Generation Y in Malaysia.

H2: There is a positive significant relationship between subjective norms and intention to purchase plant-based meat among Generation Y in Malaysia.

Based on the research findings discussed in Chapter 4, revealing a highly significant and strong positive relationship between SN and the intention to purchase plant-based meat among Generation Y consumers, thereby strengthening the acceptance of H5 as proposed in the study. Besides, these findings are in line with earlier studies conducted by the earlier studies (Scalco et al., 2017; Ahmed et al., 2021; Maichum et al., 2016). They indicate that when individuals adopt actions aligned with environmental or health concerns, it can lead to increased social pressure from their family and friends. This social pressure creates a positive feedback loop that reinforces environmentally friendly and health-conscious behaviors, including the intention to purchase plant-based meat.

Furthermore, the outcomes of this study, in conjunction with the findings from the referenced studies, highlight the significance and positive effects of social norms on purchasing intentions based on the TPB and green food purchase intention. In essence, when individuals perceive support and encouragement from their social circles for environmentally friendly and health-conscious choices, it has a favorable impact on their intention to purchase plant-based meat. Hence, the finding of H2 in this study align with previous research that has indicated a significant positive relationship between SN and the intention to purchase plant-based meat among Generation Y consumers.

5.2.3 The Relationship between Perceived Behavioral Control (PBC) and Intention to Purchase Plant-based Meat Among Generation Y in Malaysia.

H3: There is a positive significant relationship between perceived behavioral control and intention to purchase plant-based meat among Generation Y in Malaysia.

According to the research findings discussed in Chapter 4, revealing a highly significant and strong positive relationship between PBC and the intention to purchase plant-based meat. Hence, the findings support the acceptance of H3 proposed in the study. Besides, this research result is also consistent with earlier studies that have explored the significant influence of PBC on purchase intentions in various green contexts, including green products, organic food, and green hotels (Stollar et al., 2022; Maichum et al., 2016; J. Paul et al., 2016; Saleki et al., 2020; Ahmed et al., 2021; Aitken et al., 2020; Han et al., 2010). Their studies have consistently shown that individuals' perceived control over their behavior strongly influences their intentions to purchase environmentally friendly and sustainable products or engage in green practices.

Based on the research findings discussed above, individuals who perceive themselves as having control over their behavior in purchasing plant-based meat are more likely to express positive intentions to make such purchases. This concept aligns with TPB proposed by Ajzen (1991), which suggests that individuals' perceived control over their actions influences their behavioral intentions. The current research indicates that when

individuals perceive that they have control over their actions, including the ability to find and access plant-based meat products, they are more likely to overcome barriers and consciously choose to purchase these products. This finding also highlights the importance of individuals' perceived control in the context of purchasing plant-based meat. When individuals believe they have control over their actions and can easily obtain plant-based meat products, they are more likely to express positive intentions and engage in sustainable consumption behaviors. Therefore, the finding of H3 in this study align with previous research that has indicated a significant positive relationship between PBC and the intention to purchase plant-based meat among Generation Y.

5.2.4 The Relationship between Food Safety (FS) and Intention to Purchase Plant-based Meat Among Generation Y in Malaysia.

H4: There is a positive significant relationship between food safety and intention to purchase plant-based meat among Generation Y in Malaysia.

The research findings presented in Chapter 4 demonstrate a highly significant and strong positive correlation between FS and the intention to purchase plant-based meat. Consequently, the findings provide support for the acceptance of H4 as proposed in the study. Besides, this finding supports the acceptance of H4 and is also consistent with earlier studies which found that food safety concerns significantly influence purchase intentions of plant-based meat as well as other organic food (Hsu et al., 2016; Alam et al., 2022; Iqbal et al., 2021). Like their research, the present study demonstrates that

individuals' food safety concerns play a crucial role in shaping their ATT and PI toward plant-based meat among Generation Y. Moreover, the current findings suggest that Generation Y consumers with higher food safety concerns exhibit a more positive ATT and intention toward purchasing plant-based meat products.

The results of the present study, along with the cited studies, underscore the importance of food safety in influencing Generation Y intentions to purchase plant-based meat products. It suggests that individuals who are more concerned about food safety are more likely to engage in environmentally friendly and health-conscious behavior by choosing plant-based meat product. This finding enhances the explanatory power of purchase intention models and further supports the acceptance of H5 proposed in the study. In summary, the findings of Chapter 4 provide compelling evidence of a significant and positive relationship between food safety concerns and the intention to purchase plant-based meat among Generation Y. This aligns with previous studies and highlights the importance of addressing food safety concerns to promote the adoption of environmentally friendly and health-conscious food choices.

5.2.5 The Relationship between Environmental Concern (EC) and Intention to Purchase Plant-based meat Among Generation Y in Malaysia.

H5: There is a positive significant relationship between environmental concern and intention to purchase plant-based meat among Generation Y in Malaysia.

Based on the research findings discussed in Chapter 4, revealing a highly significant and strong positive relationship between EC and the intention to purchase plant-based meat. Therefore, the findings support the acceptance of H5 proposed in the study. Besides, this finding supports the acceptance of H5 and is also consistent with earlier studies (Pagiaslis & Krontalis, 2014; Ahmed et al., 2021; Wojciechowska-Solis & Barska, 2021). The findings of this study, along with the studies mentioned, suggest that Generation Y consumers who exhibit greater concern for environmental issues are more likely to have a positive intention towards plant-based meat products and other plant-based foods.

According to Ahmed et al. (2021) and Wojciechowska-Solis & Barska (2021), environmental concern has been identified as a significant factor influencing consumers' purchase intention towards plant-based meat. This can be attributed to the perception that plant-based meat offers a more sustainable alternative to conventional meat (Bryant, 2022). The findings of this study indicate that most Generation Y consumers who are environmentally concerned are more likely to choose plant-based meat due to its lower use of natural resources, such as land, water, and energy, in comparison to traditional meat production. This choice contributes to mitigating the impact of climate change. Furthermore, it was observed that consumers with higher levels of environmental concern tend to exhibit more positive attitudes towards environmentally friendly behaviours. In short, the finding of H5 is coherent with those

studies stating that there is a significant positive relationship between EC and intention to purchase plant-based meat among Generation Y in Malaysia.

5.3 Implications of the Study

5.3.1 Implications for Academics

For other academics, our research has provided valuable implications. The intention to purchase plant-based meat products among Generation Y in Malaysia presents an avenue for researchers to explore various aspects related to consumer behavior, attitudes, motivations, and decision-making processes. Academics can conduct surveys, interviews, and experiments to investigate the factors influencing the intention to purchase plant-based meat products, such as health concerns, environmental awareness, taste preferences, social influences, and cultural factors in the future.

Second, few past studies have investigated the relationship between the TPB model, which comprise of ATT, SN and PBC in this topic with the content of Malaysia. This research has equipped academics with the theoretical understanding that helps them comprehend IVs' effects on DV. This research has expanded the model by including food safety and environmental concern as a new variable and the original IVs. The previous researcher agreed that food safety and environmental concern has evolved as

the most crucial factor in influencing their purchase behavior and intention for plant-based meat (Ma & Chang, 2022; Chen, 2022).

Finally, this research is developing the new TPB model with five independent variables and a dependent variable to better understand the factors influencing the intention to purchase plant-based meat among Malaysian Generation Y. As a result, the findings of the study indicate a positive relationship between all the variables and their intended behavior. This suggests that the proposed model holds promise in reliably estimating the intention to purchase plant-based meat among Generation Y. The research contributes to expanding our knowledge of the elements that impact Generation Y's intention to purchase plant-based meat, providing a foundation for further studies in this area.

Specifically, the study identified a positive and high level of attitude, subjective norms, perceived behavioral control, food safety, and environmental concern were identified as influential factors that strengthen consumers' intention to purchase plant-based meat products. In summary, this research provides valuable insights for future studies, as it encourages other researchers to consider and examine factors that have not been previously investigated. Besides future researchers can expand the understanding of the complex dynamics surrounding the intention to purchase plant-based meat and contribute to the advancement of knowledge in this field.

5.3.2 Implications for Policy Makers

The low intention of Malaysian consumers towards buying plant-based meat products, as compared to Japan, Singapore, and the US, has highlighted the need to comprehend the factors that influence their purchasing behavior. Even though Malaysia has a culture that predominantly favors meat, there is an increasing demand for plant-based meat alternatives in the country (Ravimalar, 2022). Also, there is a lack of research and insufficiencies in the Malaysian context pertaining to this study matter. Hence, this study fills a void in the existing literature and underscores the importance of understanding the intention to purchase plant-based meat, which can aid in refining policies aimed at increasing the purchasing rate. This, in turn, can help to reduce the production of the livestock industry, leading to lower greenhouse gas emissions and mitigating the effects of climate change in Malaysia.

As consumers in Malaysia increasingly prioritize their health and environmental concerns, they are reducing their meat consumption and embracing plant-based food options (Mokhtazar, 2022). In light of this trend, policymakers must acknowledge its significance and proactively support its growth as a means of facilitating Malaysia's climate change issues. Hence, while fostering the expansion of the adoption of plant-based meat in Malaysia, policymakers should develop policies that incentivize, and support businesses engaged in this sector. This can be achieved through various measures such as tax breaks, grants, and subsidies aimed at facilitating the expansion of online operations and presence for these businesses.

Moreover, it is crucial for policymakers, such as the Ministry of Agriculture and Food Security of Malaysia, could be prioritize initiatives that raise consumer awareness about the wide range of benefits associated with plant-based meat products. The educational campaign about plant-based meat can be identified as one of the prioritized initiatives. Specifically, implementing educational campaigns can be highly effective in emphasizing the positive environmental impact, health benefits, and animal welfare considerations that come with consuming plant-based alternatives. Ultimately, policymakers can successfully communicate the advantages of plant-based meat to the public, encouraging them to make informed choices and embrace these sustainable and ethical options.

Furthermore, the study revealed that consumers exhibit a high level of concern and that there is a positive relationship between food safety and the intention to purchase plant-based meat. Consequently, policymakers can play a crucial role by establishing and enforcing robust food safety regulations and standards specifically for these products. This would involve implementing stringent guidelines for production, processing, and distribution to ensure that plant-based meat alternatives meet the highest safety standards. By addressing any concerns related to food safety, policymakers can effectively build trust and credibility among consumers, further promoting the adoption of plant-based meat products.

5.4 Limitations of Study

When conducting research in Malaysia, particularly targeting Generation Y as target respondent, researchers may face several limitations that can impact the study's validity and reliability. To mitigate close contact incidents during the Covid-19 pandemic and address the geographical barriers between different states, the researchers opted for an online questionnaire distribution method. While this method offered several benefits, it also introduced certain limitations. One of the main limitations associated with distributing online questionnaires is the challenge of monitoring respondents' attention and ensuring their thorough understanding of the item statements. It is possible that targeted respondents may have hastily completed the questionnaire without carefully reading and comprehending each item statement, which may be subject to response biases. Also, the research focused solely on Generation Y in Malaysia, limiting the generalizability of the findings.

Besides, this study also faced another limitation which is the presence of language barriers. It is important to note that English is widely spoken and understood in Malaysia. While English is commonly spoken and understood in Malaysia, some respondents may prefer to communicate in their native languages, such as Malay, Mandarin, or Tamil. This can present a challenge for researchers who are not fluent in the local languages. The use of translation methods or relying on bilingual individuals may be necessary, but it introduces the risk of misinterpretation or inaccuracies in the data. Hence, there is a possibility that unclear or incorrect information could be conveyed, impacting the reliability and validity of the collected data.

Lastly, imbalanced distribution of respondents across different age groups and ethnicities is also a limitation of this research. The snowball sampling method is used to get enough respondents for this study. Initially, the questionnaires were sent to the researcher's close acquaintances (e.g., friends and family members). Subsequently, these individuals were requested to assist in further disseminating the questionnaires to others to meet the desired number of respondents. Specifically, the results of the questionnaires indicated that most respondents (42.7%) were between the ages of 27 and 30. The second largest group is the 31 to 34 age group, accounting for 28.9% of the respondents. The age groups of the remaining participants were 35 to 38 years (19.3%) and 39 to 42 years (9.1%). When considering ethnicity, most participants (70.1%) identified themselves as Chinese. The Malay group accounted for 19% of the total number of respondents, while the Indian group only accounted for 10.9% of the total number of respondents. Consequently, this uneven distribution of age and ethnicity may have affected the validity and generalizability of the findings. Also, the findings may not be fully representative of the broader population due to the potential lack of diversity in age and ethnicity among the participants.

5.5 Recommendations for Future Study

In future studies, it is recommended to consider conducting in-person data collection by distributing the questionnaire directly to each participant. In-person interviews provide researchers with the opportunity to observe respondents' genuine reactions in real time, allowing for a deeper understanding of their perspectives. Additionally, being present during the questionnaire completion process enables researchers to offer immediate assistance to

participants, addressing any difficulties they may encounter and ensuring a better comprehension of the questionnaire items. This approach allows researchers to verify whether participants have carefully read the item statements, provided accurate responses and understood the goals of the study, ultimately increasing the validity and reliability of the collected data.

Besides, it is recommended that future researchers consider translating the questionnaire into the native language of the participants to maximize its reach and inclusivity. For example, translating the questionnaire into Malay, the national language would enable a broader audience to understand and participate in the survey. If the survey specifically targets certain ethnic groups, translating the questionnaire into relevant languages spoken by those groups would be advantageous. To ensure the translation's accuracy, it is advisable to enlist the services of professional translators or bilingual experts. In addition to translation, the inclusion of visual aids such as pictures, diagrams, and graphics can be beneficial for participants with limited literacy levels or those who are unfamiliar with the language's writing system. These visual aids can help convey the meaning of the questions more effectively, ensuring better comprehension and increasing the likelihood of accurate responses.

Also, it is recommended that respondent-driven sampling (RDS) be used in subsequent research. RDS is a chain-referral sampling technique used in social science research to study hard-to-reach populations (Raifman et al., 2022). This technique aims to overcome the limitations of the traditional snowball sampling method and can reduce sample bias in certain situations. In RDS, participants are incentivized to recruit other participants from their social networks, and the process continues until the desired sample size is achieved (McCreesh et al.,

2013). RDS uses a mathematical model to weigh the collected data based on the participants' social network characteristics to ensure that the sample is representative.

Furthermore, future researchers are encouraged to broaden the scope of their study beyond Generation Y. By including other consumer populations or different generations, researchers can expand the existing literature and enhance knowledge in this area. This broader approach would provide a more comprehensive understanding of the factors that influence plant-based meat purchasing behavior in Malaysia. It would also enable policymakers to develop targeted strategies that cater to the preferences and needs of different consumer segments, facilitating the wider adoption of plant-based meat products in the country.

Lastly, future researchers are also recommended to undertake a re-examination of the main IVs considered in this study, along with any other pertinent additional variables (e.g., price and health concern) into the existing conceptual framework to enhance the TPB and the existing literature. In this case, a preliminary study is also recommended to identify the theoretical and additional variables that need to be examined and the variables' measurement items.

5.6 Conclusion

Upon considering and investigating the five independent variables of ATT, SN, PBC, FS, and EC in this study contributes to a more comprehensive understanding of the intention to

purchase plant-based meat among Generation Y consumers in Malaysia. The collected data, which was carefully analyzed, reveals a strong correlation between these five independent variables and the intention to purchase plant-based meat among Generation Y consumers. To explain the reasons behind Generation Y's inclination toward purchasing plant-based meat in Malaysia, this study employed the existing conceptual framework of the TPB theory while incorporating two additional variables. Overall, this study sheds light on the factors that influence Generation Y's intention to purchase plant-based meat, providing valuable insights for both researchers and practitioners in the field.

Report-Plant Meat

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