

# **Functional Foods Intention: The Role of Procurement Goals in Retailing Context**

Norazah Mohd SUKI<sup>1</sup>, Muhammad Farooq AKHTAR<sup>2</sup>, Norbayah Mohd SUKI<sup>3</sup>

Received: August 29, 2023. Revised: September 08, 2023. Accepted: November 05, 2023.

#### **Abstract**

**Purpose:** The purpose of this study is twofold: to examine the impact of procurement goals (i.e., health concern, price, and sensory appeal goals) on consumers' attitudes towards functional foods, and to investigate the effect of extrinsic motivation, subjective norm, and perceived behavioural control on consumers' intentions to purchase functional foods. **Research design, data, and methodology:** Data gathered among 400 Malaysian consumers was analysed using the partial least squares-structural equation modelling (PLS-SEM). **Results:** The result reveals that the procurement goal of price is the strongest predictor of consumers' attitudes towards functional food, followed by the health concern goal and the sensory appeal goal as purchasing functional foods is affordable. Further tests confirmed that subjective norm is the predominant predictor of consumers' intention to purchase functional foods, trailed by perceived behavioural control. People who matter to the customer will support and endorse their decision to buy functional foods over others. **Conclusion:** Food manufacturers and marketers should emphasise the important aspects of procurement goals such as health concern, sensory appeal, and price, and the extrinsic motivation of the consumers in their segmenting, targeting, and positioning strategies to boost consumers' positive attitude towards functional foods that aid in curing non-communicable diseases caused by malnutrition.

Keywords: Procurement Goals; Theory of Reasoned Goal to Pursuit (TRGP), Retailing, Channel Management

JEL Classification Code: M0, M1, M2, M3

# 1. Introduction

Functional foods are beneficial for health as they are supplemented with vitamins, minerals, and fatty acids to live a healthy life and develop the immune system against chronic diseases (Arnold et al., 2021; Nagaraj, 2021; Srivastava et al., 2022). However, demand for functional foods is not encouraging as less than half of the population

has a strong tendency to purchase them, as stressed by Statista (2021) that 35% of South Koreans purchase or consume functional foods once every three months, with the least common frequency being less than once a year. In Pakistan, a large portion of the population is inclined to consume hedonistic foods, which leads to noncommunicable diseases and has become a behavioural problem (Ali & Rahut, 2019; Jawad et al., 2020). The link

Email: qecmanagement@yahoo.com

<sup>1</sup> First Author. Professor, Othman Yeop Abdullah Graduate School of Business, Universiti Utara Malaysia, Malaysia; Distinguished Fellow Institute of Sustainable, Growth and Urban Development, Universiti Utara Malaysia, Sintok, Malaysia; Fellow Institute for Biodiversity and Sustainable Development, Universiti Teknologi MARA, Shah Alam, Malaysia. Email: azahsuki@yahoo.com

Second Author. Assistant Professor, National Business School, The University of Faisalabad.

<sup>3</sup> Third Author. Associate Professor, UUM Kuala Lumpur Campus, Universiti Utara Malaysia, Malaysia; Senior Fellow Institute of Sustainable, Growth and Urban Development, Universiti Utara Malaysia, Sintok, Malaysia. Email: bayasuki@yahoo.com

<sup>©</sup> Copyright: The Author(s)

This is an Open Access article distributed under the terms of the Creative Commons
Attribution Non-Commercial License (http://Creativecommons.org/licenses/by-nc/4.0/)
which permits unrestricted noncommercial use, distribution, and reproduction in any
medium, provided the original work is properly cited.

between unhealthy food and the development of noncommunicable diseases demands further research to assess the antecedents of consumers' intention towards functional foods.

The existing literature on functional foods prevalently uses the basic theory of planned behaviour (TPB) model to examine the impact of attitude, subjective norms, and perceived behavioural control on the intention to consume functional foods (Nystrand & Olsen, 2020). These concerns reflect testing more factors associated with consumer buying behaviour that would contribute to enrich extant discoveries, including the utilization of the theory of reasoned goal pursuit (TRGP) introduced by Ajzen and Kruglanski (2019). TRGP is a goal-oriented theory that follows a top-down approach, whereas the TPB model established by Ajzen (1991) has a bottom-up approach to predict human social behaviours. According to TPB model, attitude towards functional foods, subjective norms, and perceived behavioural control are antecedents of intention. However, previous research has shown that attitude alone is insufficient to predict intention (Ajzen & Kruglanski, 2019). In this regard, they put forward TRGP, which proposes that procurement goals are antecedents of attitudes towards behaviour, and that attitude is an antecedent of motivation Finally, motivation influences intention. Ajzen and Kruglanski (2019) suggested that the procurement goals and motivation aspect should be examined further in order to increase the robustness of the TPB model and its findings. Consequently, there is a need to examine how procurement goals (i.e., health concerns, sensory appeal, and price) and extrinsic motivation influence consumers' intention to purchase functional foods. This study aims to provide answers to the following research questions:

RQ1. What is the impact of procurement goals (i.e., health concern, price, and sensory appeal goals) on consumers' attitude towards functional foods?

RQ2. Does extrinsic motivation, subjective norm, and perceived behavioural control affect consumers' intention to purchase functional foods?

The research produces many contributions. Firstly, the present study uses procurement goals (i.e., health concern, price, and sensory appeal) as antecedents of consumers' attitude towards functional foods. Second, the research used extrinsic motivation as an antecedent of consumers' intention to purchase functional foods. The finding furnishes critical input for marketers to formulate product, price, and promotion strategies by jointly considering procurement goals and extrinsic motivation together with aspects of attitude, subjective norm, and perceived behavioural control as important factors in affecting consumers' functional foods consumption. This study is useful for retailing and channel management decisions.

The ensuing section is a review of the related literature, and the third section describes the study's methodologies. Following that, the fourth section presents the study results, and the fifth section discusses them. The last section provides future research directions.

# 2. Literature Review

#### 2.1. Procurement Goals

Procurement goals are the expected direct personal benefits for engaging in a specific behavior such as health, mood, and sensory appeal (Ajzen & Kruglanski, 2019). It is important to enjoy the beauties of life in good health. Health has become an essential factor in food consumption as customers are concerned with feeling well (Carrillo et al., 2013). In a similar vein, Sun (2008) discovered a significant influence of health concerns on attitudes toward healthy eating among Taiwanese students. In a similar vein, Khanal (2020), and Nagaraj (2021) highlighted the importance of health consciousness towards consumption intentions. Organic food is more likely to be purchased by healthconscious consumers than inorganic food (Hasan & Suciarto, 2020; Jungles et al., 2021; Mohd Suki et al., 2021; Pang et al., 2021; Sadiq et al., 2019). The acceptability of functional food is heavily influenced by belief in health benefits (Carrillo et al., 2013).

Consumers' propensity to buy functional food to keep healthy is affected by lifestyle changes, social media, and food consumption awareness (Hassan et al., 2020). In comparison to healthy people, consumers in poor health were more motivated to consume functional foods (Ali & Rahut, 2019). Because the purchasing power of the people in Pakistan is lower than that of the rest of the developed world, the price of the food matters when forming an attitude toward functional foods (Ali & Rahut, 2019). Pakistani customers are price-sensitive, and thus they are unlikely to pay a premium for purchasing sustainable green food (Mazhar et al., 2022). Individuals in the cities had more awareness of functional foods than people in the villages (Ali & Rahut, 2019).

Sensory appeal refers to the taste and texture of food products, which is one important thing consumers consider when purchasing food products (Ajzen & Kruglanski, 2019). The study by Ahmad et al. (2019) reveals that tourists consider ethnic food to have good taste and texture implying that sensory appeal influences the attitude towards functional foods. This study considers three types of procurement goals, namely health concern, sensory appeal, and price for consumers' attitudes towards functional foods. The rationale for the selection of these factors is that functional foods contain additional nutritional ingredients.

The buying power of Malaysian consumers is limited, which is why price could play a significant role in influencing consumers' attitudes towards functional foods. It is also noted that Malaysian people are a taste-loving community. That is why sensory appeal is considered to assess its role in forming consumers' attitudes towards functional foods. Drawing from this discussion, the following hypotheses are put forward:

H<sub>1</sub>: Health concern has a positive impact on consumers' attitude towards functional foods.

H<sub>2</sub>: Affordable price has a positive impact on consumers' attitude towards functional foods.

**H**<sub>3</sub>: Sensory appeal has a positive impact on consumers' attitude towards functional foods.

# 2.2. Attitude

In theory of planned behavior, the attitude towards behavior is associated with intention (Ajzen, 1991). However, the theory of reasoned goal pursuit (Ajzen & Kruglanski, 2019) proposed the relationship between attitude towards behavior with motivation (internal and external). Internal motivation means that the person is selfmotivated to perform the action. Conversely, externally motivated people get motivation from other stimuli. This study considers external motivation, which is helpful in establishing the behavior of the consumer toward functional foods. In the expectation, motivation, and attitude model, many of the researchers used motivation to predict attitude. For instance, Nugraha and Widyaningsih (2022) examined the association of motivation and attitude when the visitor wants to visit Saudi Arabia for Umrah, which shows a nonsignificant association. Similarly, Rhodes et al. (2006) conducted research on the association of attitude and motivation, which shows a significant association. However, the theory of reasoned goal pursuit suggested the relationship between attitude towards behavior and motivation. Limited literature is available on the association of attitude towards behavior and external motivation. Consequently, the following hypothesis is formulated:

H<sub>4</sub>: Attitude has a positive impact on consumers' external motivation towards functional foods.

# 2.3. Extrinsic Motivation

Extrinsic motivation refers to those external factors that influence the buyer's choices (Brown & Ogden, 2004). This relationship remains inconsistent in previous literature. For example, Dang et al. (2021) assesses this association in drinking products (organic), which shows a significant

association between these variables in the Vietnamese context. In contrast, Brown and Ogden (2004) examined this relation in children's dietary behaviour. The theoretical review paper proposed that motivation is the antecedent of intention (Ajzen & Kruglanski, 2019). In light of this discussion, the study hypothesized that:

**H**<sub>5</sub>: Extrinsic motivation has a positive impact on consumers' intention to purchase functional foods.

# 2.4. Subjective Norm

The theory of reasoned goal pursuit used approval goals as a predictor of subjective norms. However, to avoid the complexity of the model the study mainly took procurement goals and excluded approval goals from the model. Moreover, subjective norms produce a sufficient contribution in the model. Subjective norms are the social pressures exerted by significant others to perform or refrain from performing certain behaviours (Ajzen, 1991). In the functional foods sector, existing literature examined the association between subjective norms and consumer intention (Nystrand & Olsen, 2020; Sumaedi & Sumardjo, 2021; Tai et al. 2022). The empirical study of Tai et al. (2022) assessed the influence of subjective norms on the intention to purchase functional foods. The data collected from Malaysian consumers depict a significant association. Yaksun-food is very popular in South Korea and healthconscious people love this food. to eat this food. Lim and An (2021) assessed subjective norms towards Yak-sun-food and behavioural intention. The results depict significant associations between the variables. Consequently, the following hypothesis is proposed:

**H<sub>6</sub>:** Subjective norm has a positive impact on consumers' intention to purchase functional foods.

# 2.5. Perceived Behavioural Control

Perceived behavioural control is referred to as the person's self-control over the behaviour to perform the task (Ajzen, 1991). Many researchers examined the association between perceived behavioural control and the intention to purchase, which remains inconclusive. In dietary behaviours, Elhoushy (2020) examines the impact of perceived behavioural control on the intention to consume organic food in Egypt. The study concludes that there is a positive association between them. Similarly, to assess the effect of perceived control on behaviour and intention to buy through online apps was assessed by existing literature (Troise et al., 2021). A significant association was found in perceived control over behaviour and intention to buy through online apps. However, the empirical studies of Jun and Arendt (2016), and Kumar and Smith (2018) show insignificant

results for PBC on consumer intention to purchase local food. Moreover, Nystrand and Olsen (2020) assessed this association among Norwegian consumers and found insignificant results in functional foods. Additionally, in a pandemic like COVID-19, the relationship remains nonsignificant. For example, Hamid et al. (2023) assessed ecommerce ordering intention towards food and beverage products in Indian consumers. The respondents provide data through an online survey, which is suitable during COVID-19-like situations. The findings depicted a non-significant relationship association towards ordering food and beverages through online mediums. Consequently, the research postulated that:

H<sub>7</sub>: Perceived behavioural control has a positive impact on consumers' intention to purchase functional foods.

Based on the aforesaid discussion, the proposed conceptual framework for the present study is illustrated in Figure 1.

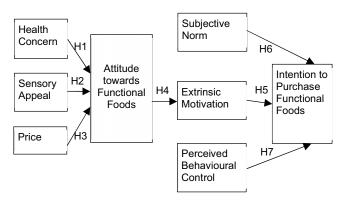


Figure 1: Conceptual Framework

# 3. Material and Methods

#### 3.1. Data Collection

A total of 400 questionnaires were distributed among public in the big shopping malls of Kedah in Malaysia, through a convenience sampling technique. The reason behind the selection of these cities is familiarity with functional foods. Moreover, Krejcie and Morgan (Morgan, 1970) table was used for sampling size. Extensive literature used this technique for sample size estimation (Nwulu, 2021). The significance and purpose of the study was explained to the respondent who received consent to participate in the survey process. The researcher obtained consent from the respondent after describing the purpose and significance of the study. The questionnaire was self-

administered to avoid inconvenience during the survey. However, 20 questionnaires were found unusable due to missing items, and 6 questionnaires did not pass the criterion of normality. Finally, 384 questionnaires were considered valid to perform the analysis, yielding a 96% response rate. Of this, women (55%) outweighed males (45%). The majority of participants (89%) were aged between 30 and 50 years old and married (60%). In terms of monthly income, 65% earned between RM 5001 and RM 10000, while 31% earned less than RM 5000. However, only a small percentage of participants (4%) earned more than RM 10000 per month.

# 3.2. Instrument

The questionnaire was designed in two sections. Section A asked for demographic information such as gender, marital status, age, formal education, and monthly income. Section B recorded the respondent's perception of procurement goals (i.e., health concern, price, and sensory appeal goals), extrinsic motivation, attitude towards functional foods, subjective norm, perceived behavioural control, and intention to purchase functional food. Health concern, sensory appeal, and price were adopted from Januszewska et al. (2011). The research used a 6-item scale for health, a 4-item scale for sensory appeal, and a 3-item scale for price. Similarly, the scales of attitude (3-item scale), subjective norms (4-item scale), and perceived behavioural control (4-item scale) were adopted from Xin and Seo (2019). Extrinsic motivation was measured with a 4-item scale adopted by Brown and Ogden (2004). Consumers' intention to purchase functional foods was measured with the 3-item scale of intention adopted by Nystrand and Olsen (2020).

# 4. Results

# **4.1. Partial Least Square-Structural Equation Modeling**

The partial least squares-structural equation modelling (PLS-SEM) approach was utilised to examine the research model by assessing the measurement model and structural model (Chin et al., 2003). PLS-SEM has been recognised as an excellent analytical tool for handling small samples, and there is less normality assumption in this approach (Ali et al., 2014; Hair et al., 2014).

#### 4.2. Measurement Model

A reflective model was used to assess the internal consistency, convergent validity, and discriminant validity

of the measurement model. Hair et al. (2019) found that internal consistency was adequate when factor item loadings were more than 0.70, while convergent validity was established when values of factor item loadings exceeded 0.70, composite validity (CR) surpassed 0.70, and average variance extracted (AVE) was greater than 0.50 (Hair et al., 2019). Table 1 details that all constructs exceeded the acceptable limit. Thus, the model had adequate internal consistency, reliability, and convergent validity.

Table 1: Reliability and Convergent Validity.

| Construct             | Items | Loadings | CR    | α     | AVE   |  |
|-----------------------|-------|----------|-------|-------|-------|--|
| Health                | H1    | 0.840    | 0.910 | 0.882 | 0.630 |  |
|                       | H2    | 0.851    |       |       |       |  |
|                       | H3    | 0.862    |       |       |       |  |
|                       | H4    | 0.754    |       |       |       |  |
|                       | H5    | 0.777    |       |       |       |  |
|                       | H6    | 0.661    |       |       |       |  |
| Sensory Appeal        | SA1   | 0.881    | 0.891 | 0.837 | 0.672 |  |
|                       | SA2   | 0.780    |       |       |       |  |
|                       | SA3   | 0.838    |       |       |       |  |
|                       | SA4   | 0.775    |       |       |       |  |
| Price                 | P1    | 0.858    | 0.891 | 0.819 | 0.731 |  |
|                       | P2    | 0.834    |       |       |       |  |
|                       | P3    | 0.873    |       |       |       |  |
| Attitude towards      | ATB1  | 0.911    | 0.929 | 0.885 | 0.814 |  |
| Behavior              | ATB2  | 0.934    |       |       |       |  |
|                       | ATB3  | 0.860    |       |       |       |  |
| Extrinsic Motivation  | EM1   | 0.703    | 0.820 | 0.710 | 0.534 |  |
|                       | EM2   | 0.799    |       |       |       |  |
|                       | ЕМ3   | 0.691    |       |       |       |  |
|                       | EM4   | 0.724    |       |       |       |  |
| Subjective Norm       | SN1   | 0.835    | 0.903 | 0.858 | 0.698 |  |
|                       | SN2   | 0.806    |       |       |       |  |
|                       | SN3   | 0.849    |       |       |       |  |
|                       | SN4   | 0.852    |       |       |       |  |
| Perceived Behavioral  | PBC1  | 0.829    | 0.884 | 0.828 | 0.655 |  |
| Control Pi            |       | 0.864    |       |       |       |  |
|                       | PBC3  | 0.781    |       |       |       |  |
|                       | PBC4  | 0.760    |       |       |       |  |
| Intention to Purchase | IP1   | 0.861    | 0.894 | 0.823 | 0.739 |  |
| Functional Food       | IP2   | 0.895    |       |       |       |  |
|                       | IP3   | 0.820    |       |       |       |  |

Note:  $\alpha$ =Cronbach Alpha; CR=Composite Reliability; AVE=Average Variance Extracted

The heterotrait-monotrait (HTMT) ratio was used to check for the discriminant validity of the constructs. Discriminant validity was established when the values were less than 0.85 (Henseler et al., 2015). The results presented in Table 2 show that the values fall below the threshold range. Thus, discriminant validity is adequate in this research.

Table 2: Discriminant Validity (HTMT)

| Construct  | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     |
|--|-------|-------|-------|-------|-------|-------|-------|-------|
| (1) Attitude<br>towards<br>Behavior                | 0.902 |       |       | -     |       |       |       |       |
| (2) Extrinsic<br>Motivation                        | 0.261 | 0.731 |       |       |       |       |       |       |
| (3) Health   | 0.451 | 0.232 | 0.794 |       |       |       |       |       |
| (4) Intention to<br>Purchase<br>Functional<br>Food | 0.469 | 0.207 | 0.299 | 0.860 |       |       |       |       |
| (5) Perceived<br>Behavioral<br>Control             | 0.407 | 0.471 | 0.233 | 0.262 | 0.809 |       |       |       |
| (6) Affordable<br>Price                            | 0.521 | 0.240 | 0.414 | 0.387 | 0.404 | 0.855 |       |       |
| (7) Sensory<br>Appeal                              | 0.305 | 0.334 | 0.419 | 0.111 | 0.253 | 0.274 | 0.820 |       |
| (8) Subjective<br>Norm                             | 0.431 | 0.152 | 0.239 | 0.378 | 0.197 | 0.410 | 0.197 | 0.835 |

#### 4.3. Structural Model

The structural equation model was assessed to verify the proposed hypotheses via bootstrapping analysis (5000 subsamples) to estimate the path and their significance. The results presented in Table 3 and Figure 2 show the association between independent and dependent variables. To be specific, the relationship between health concern and consumers' attitude towards functional foods is significant  $(\beta_1 = 0.247, t\text{-value} = 4.254, p = 0.000)$ . Hence, H1 is supported. In the subsequent hypothesis, the impact between sensory appeal and consumers' attitude towards functional foods is also significant ( $\beta_2 = 0.095$ , t-value = 2.070, p =0.039). Therefore, retaining H2 as expected. Next, consumers' attitudes towards functional foods are positively and significantly influenced by the aspect of price ( $\beta_3$  = 0.342, t-value = 6.249 at p = 0.000). Thus, maintaining H3 is as predicted. Furthermore, the linkage of attitudes towards functional foods with consumers' extrinsic motivation is positive and significant ( $\beta_4 = 0.209$ , t-value = 3.819, p =0.000). Consequently, H4 is reinforced. On the other hand, the effect of extrinsic motivation on consumers' intention to purchase functional foods is insignificant ( $\beta_5 = 0.076$ , tvalue = 1.396, p = 0.163). Hence, H5 is not supported. In contrast, the ensuing hypothesis, H6, states that the influence between subjective norm and consumers' intention to purchase functional foods is significant ( $\beta_6$  = 0.295, t-value = 5.561, p = 0.000). Therefore, sustaining H6. As for H7, a similar significant discovery was found: that perceived behavioural control has a positive and significant impact on consumers' intention to purchase functional foods  $(\beta_7 = 0.147, t\text{-value} = 2.451, p = 0.014)$ . Accordingly, we are maintaining H7 as predicted.

Table 3: Hypothesis Testing

|    | Relationship  | Std β  | SE    | p-value | LL    | UL    | f²    | VIF   |
|----|---|--------|-------|---------|-------|-------|-------|-------|
| H1 | Health → Attitude towards Behavior                                    | 0.247* | 0.058 | <0.001  | 0.130 | 0.357 | 0.060 | 1.274 |
| H2 | Sensory Appeal → Attitude towards Behavior                            | 0.095* | 0.046 | 0.039   | 0.004 | 0.183 | 0.011 | 1.168 |
| НЗ | Price → Attitude towards Behavior                                     | 0.342* | 0.055 | 0.001   | 0.230 | 0.445 | 0.123 | 1.176 |
| H4 | Attitude towards Behavior → Extrinsic Motivation                      | 0.209* | 0.055 | 0.001   | 0.094 | 0.309 | 0.046 | 1.000 |
| H5 | Extrinsic Motivation → Intention to Purchase Functional Foods         | 0.076  | 0.054 | 0.163   | 0.044 | 0.173 | 0.006 | 1.155 |
| H6 | Subjective Norm → Intention to Purchase Functional Foods              | 0.295* | 0.053 | 0.001   | 0.184 | 0.395 | 0.098 | 1.033 |
| Н7 | Perceived Behavioral Control → Intention to Purchase Functional Foods | 0.147* | 0.060 | 0.014   | 0.030 | 0.261 | 0.021 | 1.174 |

Note: \*p<0.05; Std  $\beta$ =Standardized Beta; SE=Standard Error; LL=Lower Limit; UL=Upper Limit;  $\ell$ =Effect Size; VIF=Variance Inflation Factor

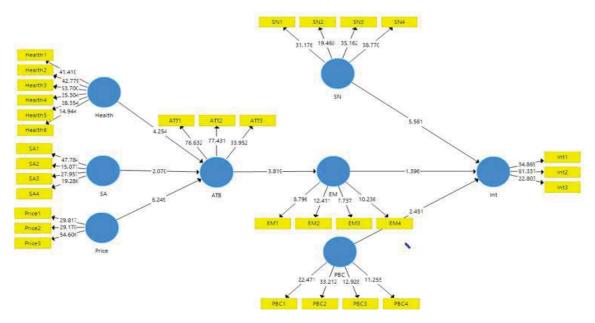


Figure 2: Structural Model

# 5. Discussion

This study examined the impact of procurement goals (i.e., health concern, price, and sensory appeal goals) on consumers' attitudes towards functional foods and investigated the effect of extrinsic motivation, subjective norm, and perceived behavioural control on consumers' intention to purchase functional foods. The results of the PLS-SEM approach revealed that procurement goals (i.e., health concern, price, and sensory appeal goals) significantly impacted consumers' attitudes toward functional foods. The results imply that the greater the concern for their health, price, and sensory appeal, the more likely consumers will actively develop a positive attitude towards functional foods. They are highly concerned that functional foods are healthy, nutritious, high in protein and fibre, and contain a lot of vitamins and minerals as the foods are meant to eradicate diseases and improve the immune system of a person. This substantial discovery advances previous research findings (see Carrillo et al., 2013; Hasan

& Suciarto, 2020; Jungles et al., 2021; Khanal, 2020; Mohd Suki et al., 2021; Nagaraj, 2021; Sadiq et al., 2019). Additionally, sensory appeal of functional foods such as smells, appearance, texture, and taste influence their positive attitude toward functional foods. On top of that, price also really matters as the participants do consider it good to purchase functional foods as they are good value for money and not expensive. These discoveries correspond to the findings of Ahmad et al. (2019) that tourists considered aspects of prices and sensory appeal in their intention to purchase ethnic food in Pakistan.

Furthermore, it was found that attitude has a significant association with consumers' extrinsic motivation toward functional foods. The findings indicate that consumers with a positive attitude show more external motivation towards functional foods. The results are in line with TRGP theory (Ajzen & Kruglanski, 2019), which proposed the relationship between these factors. Consumers take care of others' concerns while showing their intention toward functional foods. On the other hand, extrinsic motivation has

an insignificant influence on consumers' intention to purchase functional foods. Consumers are unlikely to be motivated to consume functional foods regularly, though they have seen other people eating them. They are also less likely to develop a positive intention to purchase functional foods when they walk past the functional food shelf, even if it looks, smells, or tastes good. The study corresponds to that of Brown and Ogden (2004), which shows similar significant results. However, the findings are contradictory to the TRGP theory (Ajzen & Kruglanski, 2019).

Moreover, the direct effect of subjective norms on consumers' intention to purchase functional foods was significant. The results suggest that people who matter to the customer will support and endorse their decision to buy functional foods over other sorts of foods. Besides, they have confidence in their ability to form an intention to purchase functional foods regularly because they can afford to buy functional food, as it is good for their health and they are aware of its benefits. These significant results aligned with the work of Hasan and Suciarto (2020), Piroth et al. (2020), and Wang and Chu (2021). Further examination of the empirical results of the PLS-SEM approach led to a comparable finding of a link between perceived behavioural control and consumers' intention to purchase functional foods. The findings indicate that respondents have the control to easily find a place to buy functional foods. The study's findings are analogous to those reported by Akhtar and Suki (2022), and equivalent to those of Ahmad et al. (2019), wherein tourists' perceptions of their ability to control the situation influence their decision to purchase ethnic foods. However, the results from the present study contradict those found in previous research by Lin and Huang (2012), Jun and Arendt (2016), Kumar and Smith (2018), Nystrand and Olsen (2020), and Rahman (2018).

# 6. Conclusion

In a nutshell, the present study adds several important contributions to theory. This research employed TRGP theory as the guiding principle to describe how consumers focus on their goals, which motivates them to perform certain behaviours, that is, their intention to purchase functional foods in Malaysia. This study advanced the extant understanding of the application of TRGP theory by incorporating the aspects of procurement goals (i.e., health concern, price, and sensory appeal goals), extrinsic motivation, subjective norm, and perceived behavioural control simultaneously in a unified framework to predict consumers' intention to purchase functional foods in Malaysia. This study provided answers to the following research questions:

RQ1. What is the impact of procurement goals (i.e., health concern, price, and sensory appeal goals) on consumers' attitude towards functional foods?

RQ2. Do extrinsic motivation, subjective norm, and perceived behavioural control affect consumers' intention to purchase functional foods?

By performing a PLS-SEM approach, this research confirmed that the procurement goal price is the strongest predictor of consumers' attitude towards functional food. This is followed by the other two types of procurement goals, namely the health concern goal and the sensory appeal goal. In addition, attitude also plays a significant role in influencing consumers' extrinsic motivation towards functional foods. Contrary to what was expected, the empirical research found that extrinsic motivation had an insignificant effect on consumers' intention to purchase functional foods regularly. A positive scenario was discovered in further tests, which confirmed that subjective norm and perceived behavioural control had a positive and significant impact on consumers' intention to purchase functional foods regularly. Between the two factors, subjective norm was the predominant predictor of consumers' intention to purchase functional foods. This study applied TRGP theory and addressed the suggestions of Ajzen and Kruglanski (2019) to evaluate the influence of procurement goals and motivation on improving the robustness of the findings. Notably, these discoveries, as per the illustrated proposed model in Figure 2, allow for the advancement of extant literature in the field of consumer behaviour towards functional foods.

The present quantitative research findings offer several noteworthy contributions to retailing and channel management decisions. Food manufacturers and marketers should emphasise the important aspects of procurement goals such as health concern, sensory appeal, and price, and the extrinsic motivation of the consumers in their segmenting, targeting, and positioning strategies to boost consumers' positive attitude towards functional foods that aid in curing non-communicable diseases caused by malnutrition. In addition, their marketing and promotional activities should be centred on these factors to increase demand for functional foods over traditional foods. Further, better consumer education campaigns on the benefits of consuming functional foods in the diet should be another consideration to increase consumer demand for consuming functional foods regularly. Plus, they should furnish relevant information on the package or labelling to guide consumers as a reference on the quality of functional food products (nutrition and health claims). Because consumers in this study place a low value on extrinsic motivation in influencing their intention to purchase functional foods on a

regular basis, food manufacturers and marketers should focus on developing new methods that successfully appeal to consumer attitudes, motivation, and interests in order to encourage this type of purchasing behaviour. Several methods for consideration would be to keep shelves stocked, enhance packaging, and guarantee that functional food products are available at the shops to encourage more purchases of functional food.

The study is not free from limitations. Further studies are suggested to be conducted in a broader context to test and validate the findings of this study that assessed consumers' intention to purchase functional foods limited to the context of Malaysia. Moreover, this research considers only three types of procurement goals: extrinsic motivation, and the TPB constructs. Further studies should consider additional procurement goals and intrinsic motivation to assess the intention to purchase functional foods. Future research should also investigate whether demographic information such as gender, level of education, and monthly income have any moderating effect on the relationship between procurement goals (i.e., health concern, price, and sensory appeal goals), extrinsic motivation, subjective norm, and perceived behavioural control, and consumers' intention to purchase functional foods in order to gain better insights.

# Acknowledgment

This research was supported by the Universiti Utara Malaysia through the Universiti Utara Malaysia Research Grant Scheme (Project SO Code 21483).

# References

- Ahmad, M.S., Jamil, A., Latif, K.F., Ramayah, T., Leen, J.Y.A., Memon, M., & Ullah, R. (2019). Using food choice motives to model Pakistani ethnic food purchase intention among tourists. *British Food Journal*, 122(6), 1731-1753. http://doi.org/10.1108/BFJ-01-2019-0024
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Ajzen, I., & Kruglanski, A.W. (2019). Reasoned action in the service of goal pursuit. *Psychological Review*, 126(5), 774-786. http://dx.doi.org/10.1037/rev0000155
- Akhtar, M.F., & Suki, N.M. (2022). Green consumer behaviour: Integration of theory of planned behaviour and technology acceptance model. In Research Anthology on Measuring and Achieving Sustainable Development Goals (pp. 863–871), IGI Global
- Ali, A., & Rahut, D.B. (2019). Healthy food as proxy for functional food: consumers' awareness, perception, and demand for natural functional food in Pakistan. *International Journal of Food Science*, 2019, 6390650.
- Ali, F., Rasoolimanesh, S.M., Sarstedt, M., Ringle, C.M., & Ryu K.

- (2018). An assessment of the use of partial least squares structural equation modeling (PLS-SEM) in hospitality research. *International Journal of Contemporary Hospitality Management*, 30(1), 514-538. http://doi.org/10.1108/IJCHM-10-2016-0568
- Arnold, M., Rajagukguk, Y.V., & Gramza-Michalowska, A. (2021). Functional food for elderly high in antioxidant and chicken eggshell calcium to reduce the risk of osteoporosis A narrative review. *Foods*, 10(3), 1-20. http://doi.org/10.3390/foods10030656
- Brown, R., & Ogden, J. (2004). Children's attitudes and behaviour: A study of the modelling and control theories of parental influence. *Health Education Research*, 19(3), 261-271. http://doi.org/10.1093/her/cyg040
- Carrillo, E., Prado-Gascó, V., Fiszman, S., & Varela, P. (2013).
  Why buying functional foods? Understanding spending behaviour through structural equation modelling. Food Research International, 50(1), 361-368.
- Chin, W.W., Marcolin, B.L., & Newsted, P.R. (2003). A partial least squares latent variable modeling approach for measuring interaction effects: results from a Monte Carlo simulation study and an electronic-mail emotion/ adoption study. *Information Systems Research*, 14(2), 189-217. http://doi.org/10.1287/isre.14.2.189.16018
- Dang, V.T., Wang, J., Nguyen, H.V., Nguyen, Q.H., & Nguyen, N. (2021). A moderated mediation study of consumer extrinsic motivation and CSR beliefs towards organic drinking products in an emerging economy. *British Food Journal*, 124 (4), 1103-1123. http://doi.org/10.1108/BFJ-12-2020-1096
- Elhoushy, S. (2020). Consumers' sustainable food choices: Antecedents and motivational imbalance. *International Journal of Hospitality Management*, 89, 102554. http://doi.org/10.1016/j.ijhm.2020.102554
- Hair, J.F., Risher, J.J., Sarstedt, M., & Ringle, C.M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 1-24. http://doi.org/10.1108/EBR-11-2018-0203
- Hair, J.F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V.G. (2014).
  Partial least squares structural equation modeling (PLS-SEM):
  An emerging too in business research. European Business Review, 26(2), 106-121. http://doi.org/10.1108/EBR-10-2013-0128
- Hasan, H.N., & Suciarto, S. (2020). The influence of attitude, subjective norm and perceived behavioral control towards organic food purchase intention. *Journal of Management and Business Environment*, 1(2), 132. http://doi.org/10.24167/jmbe.v1i2.2260
- Henseler, J., Ringle, C.M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modelling. *Journal of the Academy of Marketing Science*, 43, 115-135. http://doi.org/10.1007/s11747-014-0403-8
- Januszewska, R., Pieniak, Z., & Verbeke, W. (2011). Food choice questionnaire revisited in four countries: Does it still measure the same? *Appetite*, 57(1), 94-98. http://doi.org/10.1016/j.appet.2011.03.014
- Jawad, M., Inam, S., Shah, N., & Shafique, K. (2020). Association of obesity measures and multimorbidity in Pakistan: Findings form the IMPACT study. *Public Health*, 180, 51-56.

- http://doi.org/10.1016/j.puhe.2019.10.017
- Jun, J., & Arendt, S.W. (2016). Understanding healthy eating behaviors at casual dining restaurants using the extended theory of planned behavior. *International Journal of Hospitality Management*, 53, 106-115. http://dx.doi.org/10.1016/j.ijhm.2015.12.002
- Jungles, B.F., Garcia, S.F.A., De Carvalho, D.T., Júnior, S.S.B., & Da Silva, D. (2021). Effect of organic food-related lifestyle towards attitude and purchase intention of organic food: Evidence from Brazil. Revista Brasileira de Marketing, 20(4), 267–299. http://doi.org/10.5585/remark.v20i4.19192
- Khanal, S. (2020). Consumers' willingness, behaviors, and attitudes to pay a price premium for local organic foods in Nepal. *International Journal of Environment Agriculture and Biotechnology*, 5(3), 594-609. http://doi.org/10.22161/ijeab.53.11
- Morgan, K. (1970). Sample size determination using Krejcie and Morgan table. Kenya Project Organization (Kenpro).
- Kumar, A., & Smith, S. (2018). Understanding local food consumers: Theory of planned behavior and segmentation approach. *Journal of Food Products Marketing*, 24(2), 196-215. http://doi.org/10.1080/10454446.2017.1266553
- Mazhar, W., Jalees, T., Asim, M., Alam, S.H., & Zaman, S.I. (2022).
  Psychological consumer behavior and sustainable green food purchase. *Asia Pacific Journal of Marketing and Logistics*, 34(10), 2350-2369. http://doi.org/10.1108/apjml-05-2021-0317
- Mohd Suki, N., Majeed, A., & Mohd Suki, N. (2021). Impact of consumption values on consumers' purchase of organic food and green environmental concerns. *Social Responsibility Journal*, 18(6), 1128-1141. http://doi.org/10.1108/srj-01-2021-0026
- Nagaraj, S. (2021). Role of consumer health consciousness, food safety and attitude on organic food purchase in emerging market: A serial mediation model. *Journal of Retailing and Consumer Services*, 59, 102423.
- Nugraha, Y.D., & Widyaningsih. (2022). The moderating role of gender and religiosity on the EMA model: An Indonesian Muslims Pilgrim perspective. *Journal of Islamic Marketing*, 13(6), 1201-1223. https://doi.org/10.1108/JIMA-03-2020-0076
- Nwulu, S. (2022). Analysis of internet-mediated marketing practices and socio security of youths in rivers state. International Journal of Social Sciences, Management and Human Development, 12(4), 73-84.

- https://bwjournal.org/index.php/bsjournal/article/view/230
- Nystrand, B.T., & Olsen, S.O. (2020). Consumers' attitudes and intentions towards consuming functional foods in Norway. *Food Quality and Preference, 80*, 103827. http://doi.org/10.1016/j.foodqual.2019.103827
- Pang, S.M., Tan, B.C., & Lau, T.C. (2021). Antecedents of consumers' purchase intention towards organic food: Integration of theory of planned behavior and protection motivation theory. *Sustainability*, 13(9), 5218. http://doi.org/10.3390/su13095218
- Piroth, P., Ritter, M.S., & Rueger-Muck, E. (2020). Online grocery shopping adoption: Do personality traits matter? *British Food Journal*, 122(3), 957-975. http://doi.org/10.1108/BFJ-08-2019-0631
- Rhodes, R.E., Blanchard, C.M., Matheson, D.H., & Coble, J. (2006). Disentangling motivation, intention, and planning in the physical activity domain. *Psychology of Sport and Exercise*, 7(1), 15-27. https://doi.org/10.1016/j.psychsport.2005.08.011
- Sadiq, M.A., Rajeswari, B., & Ansari, L. (2019). Segmentation of Indian shoppers in the context of organic foods. South Asian Journal of Business Studies, 9(2), 167-192.
- Srivastava, A., Singh, Z., Verma, V., & Choedon, T. (2022). Potential health benefits of fenugreek with multiple pharmacological properties. In Research Anthology on Recent Advancements in Ethnopharmacology and Nutraceuticals (pp. 672-687), IGI Global.
- Statista (2021). Frequency of buying health functional food South Korea 2021. Retrieved from https://www.statista.com/statistics/1269951/south-koreahealth -functional-food-purchase-frequency/
- Sun, Y.C. (2008). Health concern, food choice motives, and attitude towards healthy eating: The mediating role of food choice motives. *Appetite*, 51(1), 42-49. http://doi.org/10.1016/j.appet.2007.11.004
- Wang, ES-T, & Chu, Y-H. (2021). How social norms affect consumer intention to purchase certified functional foods: The mediating role of perceived effectiveness and attitude. *Foods*, 10(6), 1151. http://doi.org/10.3390/foods10061151
- Xin, L., Seo, S.S. (2019). The role of consumer ethnocentrism, country image, and subjective knowledge in predicting intention to purchase imported functional foods. *British Food Journal*, 122(2), 448-464. http://doi.org/10.1108/BFJ-05-2019-0326