Applying the Theory of Planned Behavior in Functional Food Purchasing: a Young Consumers Perception

I G M Y Bakti, S Sumaedi, N J Astrini, T Rakhmawati, M Yarmen, and S Damayanti
Research Center for Testing Technology, Indonesian Institute of Sciences, South Tangerang, Indonesia

E-mail: iged010@lipi.go.id, siks002@lipi.go.id, nidy001@lipi.go.id, trir005@lipi.go.id, medi001@lipi.go.id, sihd001@lipi.go.id

Abstract. The 4.0 industrial era has impact not only on the industrial sector but also on the changes of people's lifestyle, including the healthy lifestyle changes. More specifically, one of the impacts of the 4.0 industrial era is the growth of functional food industry. This research aims to analyze the effect of attitude, subjective norm, and perceived behavioral control on young consumers' purchase intention on functional food. This research focused on young consumers because they are susceptible to consume a food that can cause non-communicable diseases. This study used a quantitative approach. A survey was used to collect data. Questionnaires were spread in a university in South Tangerang. This study obtained 123 students that participated in the survey. Multiple regressions analysis was performed to test the conceptual model and the proposed hypotheses. The findings showed that attitude and subjective norm influence the purchase intention of the young consumers to buy functional foods. In the other hand, this research also revealed that perceived behavioural control has no significant impact on repurchase intention.

1. Introduction
1.1. Background
We are entering the 4.0 industrial era. This era utilizes various intelligent manufacture technology in companies’ value chain, such as the Internet of Things (IoT), cyber-physical systems (CPSs), cloud computing, big data analytics (BDA), and information and communications technology (ICT) [1]. The emergence of those technologies benefitted companies. They (1) drove down production costs; (2) cut time-to-market of new products; (3) enabled a custom mass production without significantly increasing overall production costs; (4) created a more friendly and flexible working environment, and (5) increased the efficiency of natural resource and energy use [2].

The effect of technology arose in the 4.0 industry affected not only affect companies, but also human life [1]. Specifically, the technology development in the 4.0 industrial era also changed people’s lifestyle. One of the notable changes was a healthy lifestyle. People now are more aware of the importance of a healthy lifestyle [3]. In addition, this modern era has seen many new products including functional food products [4,5].

Generally, functional foods are food or beverage which can give health benefits beyond basic nutrition [6]. The consumption of functional food is a new way for consumers in expressing health [7].
The health benefits include reducing the risk of certain diseases, improving body condition, and even healing diseases [8].

In the last several years, the functional food industry has grown considerably [9]. Even in 2020, the market for this industry was projected to reach $192bn [3,10]. Even though the trend was significantly positive, the growth of this industry was not evenly spread. The industry tended to grow in developed countries, such as Japan, China, the US, and European countries [3]. For example, in the Asia-Pacific region, 78% of the total sales of functional foods came from the US, Canada, and Europe [11, 12]. On the other hand, in the developing country, this industry did not grow as expected even though developing countries have rich biodiversity [13]. One of the causes of this predicament was because functional food products have not been accepted. Based on that condition, one of the efforts that can be done to understand the consumers was to study the determinants of functional food consumers’ purchase intention.

1.2. Research Gap and Objective

The research on functional food have been done for more than two decades [14]. Several researchers have studied the behavior of functional food consumer. Studies on the consumption of functional food have also been done in many countries, like Europe [15], Japan [16], Canada [17], Australia [18], Croatia [19], Mexico [12], Turkey [3], Lebanon [20], Iran [21], Malaysia [22], etc. On the other hands, many researchers also studied the antecedents of functional foods consumers’ purchase intention [23-26].

From multiple consumers behavior theories, one of the most used was the theory of planned behavior (TPB). The theory explained that purchase intention was influenced by three determinants, which are attitude, subjective norm, and Perceived Behavioural Control (PBC). Several researchers who applied this theory in the context of functional food consumers’ behavior. [27-29].

Even though there are several researches on functional foods that focused on TPB, there has not been a study that applied this theory to young consumers, especially in Indonesia. This research has become important because younger consumers have different behavior compared to the older generation. This was because they have a different experience and faced different condition. The differences have also been proven by some researchers [30-32].

This research focused on younger consumers because of two reasons. First, the younger generation was susceptible to an unhealthy lifestyle that would lead to the probability of the increased incidence of non-communicable diseases (NCD). Septiana et al. stated that the younger generation has a habit of consuming junk food [33]. Second, the younger generation was in a transition between living under their parents’ roof and living independently.

Based on the above gap, this research aims to analyze the effect of attitude, subjective norm and PBC on younger consumer’s purchase intention.

2. Literature Review

2.1. Functional food

The concept of functional food was first popularized in Japan in 1984 [8]. Even though the concept has been studied by researchers for some time, there was no single standardized definition. One of the most referred definition was one offered by Siró et al. [8]. Functional foods are foods that have been enriched with important and physiologically useful effects. Siró et al. [8] added that a product was called as a functional food when the food: (1) could improve the human health, condition in general (e.g., prebiotic or probiotic), (2) reduce the risk of certain diseases (e.g., reducing cholesterol or blood sugar level), or (3) foods that can cure diseases.
2.2. Theory of planned behavior (TPB)

One of the most popular theories that explain consumers’ behavior was TPB. This theory was first developed by Icek Ajzen in 1985 [34]. According to TPB, a consumer’s real behavior can be predicted by their behavioral intention. In other words, the strength of their intentions will determine their real behavior. In the context of purchase intention, a stronger intention would lead to a higher probability of purchasing behavior. Aside from the importance of behavioral intention, TPB also explained that there were three important factors that affected behavioral intention, namely attitude, subjective norm, and PBC [34].

2.3. Purchase Intention (behavioral intention)

In the context of consumer behavior, one of the behavioral intention forms was repurchase intention [35]. Morinez et al. defined purchase intention as a situation when a consumer prefer a certain product [36]. According to Halim and Hameed, purchase intention was related to a plan to buy a certain product in the future [37]. In this study, we defined purchase intention as a condition when a young consumer has a plan to buy a functional food product in the near future.

2.4. Attitude

Attitude is an important factor in the product purchasing process. Generally, this factor is a factor that represented consumers’ perception of a product. In TPB, attitude was defined as how far someone has a favorable or unfavorable evaluation on a product [34]. In the context of this study, attitude was viewed as young consumers’ favorable or unfavorable evaluation on functional food products.

TPB explained that attitude can affect behavioral intention. It means that higher attitude will increase consumers’ attention to buy a functional food product. Empirical evidence related to the effect of attitude on behavioral intention has been found by several researchers [35, 38-41]. In the context of functional food, that relationship applies [27, 41]. Given this, the first hypothesis of this study is proposed as follows:

H1. Attitude toward functional food influences purchase intention positively

2.5. Subjective Norm

Subjective norm was one of the factors that affect consumers’ behavior. More specifically, the subjective norm was a factor that illustrated the effect of the social environment [42]. According to Ajzen, a subjective norm was a consumer’s perception of peers’ pressures to do or not to do something [34]. Based on the definitions, we defined subjective norm as young consumers’ perception of functional food consumption based on the reference group that is considered important for them.

According to TPB, consumers would be willing to consume functional foods when there was a subjective norm to support the consumption of functional food. Several studies have proven the positive relationship of subjective norm and behavioral intention [35, 38-40, 43, 44]. In the context of functional food, O’Connor and White have proven the effect of subjective norm on behavioral intention 28]. The second hypothesis of this study is formulated as follows:

H2. Subjective norm influences intention to purchase functional food positively

2.6. Perceived Behavioral Control (PBC)

One of the important factors that affect consumers’ behavior was PBC. Ajzen defined PBC as “people’s perception of the ease or difficulty of performing the behavior of interest” [34]. This factor was a factor that showed consumers’ abilities to act. In other words, this factor was related to resource, opportunities, and barriers. Furthermore, bigger resources or opportunity to act or lower barriers would result in a stronger intention to act. More briefly, we defined PBC as young consumers’ perception of the ease or difficulty of consuming functional food.

Several researchers have empirically proven that PBC had impacts on behavioral intention [35, 38, 41]. In the context of functional food, Some researchers have also studied likewise [27, 28]. The final hypothesis of this study is formulated as follows:

H3. PBC influences intention to purchase functional food positively
3. Methodology

3.1. Research design
This is a quantitative research. Data was gathered through a survey with a questionnaire as the instrument. A survey was done in April 2019. Questionnaires were spread in a university in South Tangerang.

3.2. Research object
Because functional foods have various categories, the object of this research only focused on the ones that prevent hypertension. This study chose this type of functional food because of three reasons. First, hypertension is the leading mortality cause in Indonesia [45]. Second, the number of hypertension incidence was growing over the years [45]. Third, the younger generation tended to prefer junk food [46] and this habit increased the risk of hypertension.

3.3. Respondents
The respondents of this research are young consumers. In this study, we defined young consumer as undergraduate student. The respondents of this research were selected by using a convenience sampling technique. Questionnaires were distributed among regular students in a university in South Tangerang. This study obtained 123 students. The demographic profile can be seen in Table 1.

| Characteristics       | Category                     | %   |
|-----------------------|------------------------------|-----|
| Sex                   | Male                         | 76.4|
|                       | Female                       | 23.6|
| Age                   | 18 Years old                 | 7.6 |
|                       | 19 Years old                 | 37.3|
|                       | 20 Years old                 | 24.6|
|                       | 21 Years old                 | 20.3|
|                       | 22 Years old                 | 5.9 |
|                       | 23 Years old                 | 2.5 |
|                       | 24 Years old                 | 0.8 |
|                       | 25 Years old                 | 0.8 |
| Residency status      | With family                  | 65.9|
|                       | Boarding house               | 24.4|
|                       | Other                        | 9.8 |
| Location of resident  | The District of Tangerang    | 19.2|
|                       | The City of South Tangerang  | 44.2|
|                       | Other                        | 36.7|
| Monthly allowance     | < Rp600,001                  | 54.8|
|                       | Rp600,000-Rp1,200,000        | 35.7|
|                       | > Rp1,200,000                | 9.6 |
| Source of monthly     | Parents                      | 71.9|
| allowance             | Scholarship                  | 0.8 |
|                       | Wage/salary                  | 20.7|
|                       | Other                        | 6.6 |

Table 1. Respondents’ demographic profile
3.4. Questionnaire

This research questionnaire was divided into two parts. The first one asked about the respondents’ demographic profile, such as sex, age, residency status, resident location, allowance, and the source of their allowance. The second part is filled with questions related to the variables used in this research, namely attitude, subjective norm, PBC, and purchase intention.

Based on the previous research, those variables were categorized as latent variables. A latent variable was a variable that could not be measured directly but through several indicators. Those indicators were taken from previous studies \cite{46, 38, 40}. The variables and indicators used in this research can be seen in Table 2. This study employed a five-point Likert scale to measure each indicator.

| Variables         | Indicators                                                                 |
|-------------------|-----------------------------------------------------------------------------|
| Attitude          | AT1: I like functional food that can prevent hypertension                    |
|                   | AT2: A functional food that can prevent hypertension is good                |
|                   | AT3: Consuming functional food that can prevent hypertension is a beneficial behavior for me |
|                   | AT4: It is interesting to consume functional food that can prevent hypertension |
| Subjective Norm   | SN1: The people that are important for me agreed that I need to consume functional food that can prevent hypertension |
|                   | SN2: My family members want me to consume functional food that can prevent hypertension |
|                   | SN3: My friends suggest me to consume functional food that can prevent hypertension |
| PBC               | PBC1: I believe that I can consume functional food that can prevent hypertension easily |
|                   | PBC2: I have a full control (not dependent on others) for consuming functional food that can prevent hypertension |
|                   | PBC3: My money allows me to buy functional food that can prevent hypertension |
|                   | PBC4: I can decide when I want to consume functional food that can prevent hypertension |
| Purchase Intention| PI1: I plan to consume functional food that can prevent hypertension in the future |
|                   | PI2: I expect to consume functional food that can prevent hypertension       |
|                   | PI3: I want to try functional food that can prevent hypertension            |

3.5. Data Analysis

Because this is a quantitative research, this study employed several statistical analyses, which were factor analysis, Cronbach’s Alpha analysis, and multiple regressions. The factor analysis was done to test the construct validity. The questionnaire was considered as valid if the factor analysis shows: (1) Kaiser Meyer Olkin (KMO) value $\geq 0.5$; (2) Measure of Sampling Adequacy (MSA) for each indicator $\geq 0.5$; and (3) Factor loading value for each indicator $\geq 0.5$. Cronbach’s Alpha was used to test the questionnaire’s reliability. The questionnaire was deemed as reliable if the value for each variable is higher than 0.6. The multiple regressions were done to test the hypothesis. A hypothesis is accepted if the $t$-test for each variable is more than 1.96 (5% error margin). This research utilized SPSS.

4. Result and discussion

4.1. Validity Test

Based on the factor analysis, this study found that the instrument was valid. The indicators were suitable to measure attitude, subjective norm, perceived behavioral control, and purchase intention. Based on the factor analysis of each variable, it was found that (1) Kaiser Meyer Olkin (KMO) value $\geq 0.5$; (2) Measure of Sampling
Adequacy (MSA) for each indicator ≥ 0.5; and (3) Factor loading value for each indicator ≥ 0.5. The result can be seen in Table 3.

4.2. Reliability Test
Based on the Cronbach’s Alpha analysis, the result showed all variables have alpha values above 0.6. This means the instrument of this study was reliable. In other word, the questionnaire was deemed as consistent in measuring those four variables. The results of reliability test can be seen in Table 4.

| Variables (Indicators) | KMO | % Eigenvalue | MSA | Factor Loading |
|------------------------|-----|--------------|-----|----------------|
| Attitude               | 0.760* | 67.475       | 0.792 | 0.856          |
| AT1                    |     |              | 0.741 | 0.787          |
| AT2                    |     |              | 0.751 | 0.876          |
| AT3                    |     |              | 0.755 | 0.761          |
| AT4                    |     |              | 0.856 | 0.787          |
| AT5                    |     |              | 0.787 | 0.876          |
| AT6                    |     |              | 0.761 | 0.755          |
| Subjective Norm        | 0.694* | 74.766       | 0.758 | 0.830          |
| SN1                    |     |              | 0.645 | 0.904          |
| SN2                    |     |              | 0.704 | 0.859          |
| SN3                    |     |              | 0.830 | 0.758          |
| PBC                    | 0.740* | 54.952       | 0.788 | 0.704          |
| PBC1                   |     |              | 0.704 | 0.796          |
| PBC2                   |     |              | 0.804 | 0.668          |
| PBC3                   |     |              | 0.710 | 0.790          |
| PBC4                   |     |              | 0.790 | 0.710          |
| Purchase Intention     | 0.705* | 75.196       | 0.700 | 0.871          |
| PI1                    |     |              | 0.661 | 0.898          |
| PI2                    |     |              | 0.777 | 0.832          |
| PI3                    |     |              | 0.832 | 0.777          |

Table 4. The result of the reliability test

| Variables               | Cronbach Alpha |
|-------------------------|----------------|
| Attitude                | 0.839          |
| Subjective Norm         | 0.831          |
| PBC                     | 0.724          |
| Purchase Intention      | 0.833          |

4.3. Hypothesis Testing
The result of the hypothesis testing can be seen in Table 5. Hypothesis 1 (H1) and Hypothesis 2 (H2) were accepted. Attitude and subjective norm were positively and significantly affected repurchase intention in the context of a younger generation that consumed functional foods. Based on the multiple regressions, the t-tests of H1 and H2 showed values higher than 1.96 (alpha= 5%). The unstandardized coefficients beta for attitude was 0.466 and 0.222 for subjective norm. This research also shows that PBC has no significant impact on repurchase intention. The t-test was below 1.96 (alpha= 5%). Overall, the multiple regressions’ $R^2$ was 38.8 percent. In other words, 38.8 percent of the variance in purchase intention was explained by the independent variables proposed in the model.

4.4. Discussion and Implications
Purchase intention was an important factor explaining why consumers were willing to purchased functional foods. Consumers would not want to buy functional food products because they had low purchase intentions. This research found that the younger generation’s purchase intention to buy
Functional foods was significantly influenced by attitude and subjective norm. On the other hands, the result also stated that PBC did not significantly affect purchase intention.

The effect of attitude on purchase intention was supported by previous studies [27, 28, 35]. The effect of subjective norm on purchase intention was also backed by previous findings [35, 40]. The non-significant effect of PBC no purchase intention was not new. Several previous studies also found that purchase intention was not influenced by PBC [27, 28, 40, 44].

| Independent Variables | Unstandardized Coefficients | Beta | t-test | Sig. | Hypothesis |
|-----------------------|-----------------------------|------|--------|------|------------|
| Attitude              | 0.466                       | 5.429| 0.000  |      | Accepted   |
| Subjective Norm       | 0.222                       | 2.725| 0.007  |      | Accepted   |
| PBC                   | 0.048                       | 0.624| 0.534  |      | Rejected   |

Based on that result, this research created several implications. First, it was important to stimulate consumers so that they have a positive attitude towards functional foods. The younger generation might not know the benefit of functional food. Therefore, the producers must educate young consumers on the health benefits of functional foods. This type of food does not only fill the belly but also provides health benefits. The image of functional food as a healthier choice must be embedded in the mind of the younger generation. Second, in promoting and educating consumers, producers could use important public figures to affect the younger generation’s perception so that they would be willing to consume functional food. The public figure chosen must be the one that represented a healthy lifestyle. Furthermore, producers should position functional foods as family foods. Family members can influence each other in consuming functional foods.

5. Conclusion

This research has tested TPB in explaining the purchase intention of the young generation to buy functional foods. This study showed that the instrument to measure attitude, subjective norm, PBC and purchase intention was valid and reliable. In addition, this research has empirically proven that purchase intention was only influenced by attitude and subjective norm. Attitude has the most significant impact on purchase intention.

Even though this research has generated important findings on the young generation’s behavior related to the consumption of functional foods, there were still several limitations. First, the sample was only taken from one location, in a university. The result of this research cannot be widely generalized to the young generation. Second, the object of this research was limited to functional foods that prevent hypertension. There was a chance of different results if the objects were altered. Third, the research only used variables offered by TPB while there are other theories that can explain consumers’ behavior. The result did show that 61.2 percent of variance in purchase intention was explained by other independent variables. The limitations of this research can be used as considerations for future studies.

References

[1] Zhong R T Xu X Klotz E and Newman S T 2017 Intelligent Manufacturing – Review Intelligent Manufacturing in the Context of Industry 4.0: A Review 3 (5) 616 – 630.
[2] Rojko A 2017 International Journal of Interactive Mobile Technologies Industry 4.0 Concept: Background and Overview 11 (5) 77 – 90
[3] Gok I and Ulu E K 2018 Nutrition and Food Science Functional foods in Turkey: marketing, consumer awareness and regulatory aspects DOI: 10.1108/NFS-07-2018-0198
[4] Sarkar S 2019 Nutrition and Food Science Potentiality of probiotic yoghurt as a functional food – a review DOI: 10.1108/NFS-05-2018-0139
[5] Kraus A 2015 British Food Journal Factors influencing the decisions to buy and consume functional food 117 (6) 1622-1636
[6] Bech-Larsen T and Grunert K G 2003 Appetite The perceived healthiness of functional foods. A conjoint study of Danish, Finnish and American consumers' perception of functional foods 40 (1) 9 – 14.

[7] Badrie N Reid-Foster S Benny-Ollivier C and Roberts H 2007 Nutrition and Food Science Exercise enthusiasts’ perceptions and beliefs of functional foods in Trinidad, West Indies 37 (5) 345 – 357

[8] Siró I Kápolna E Kápolna B Lugasi A 2008 Appetite Functional food. Product development, marketing and consumer acceptance—A review 51 456–467

[9] La Barbera, F Amato M and Sannino G 2016 British Food Journal Understanding consumers’ intention and behaviour towards functionalised food 118 (4) 885-895

[10] Kaur N and Singh D P 2017 Appetite Deciphering the consumer behaviour facets of functional foods: a literature review 112 167-187.

[11] Vicentini A Liberatore L and Mastrocola D 2016 Italian Journal of Food Science Functional foods: trends and development of global market 28 (2) 338-351.

[12] Rojas-Rivas E Espinoza-Ortega A Thomé-Ortiz H and Moctezuma-Pérez S 2019 British Food Journal Consumers’ perception of amaranth in Mexico 121(6) 1190-1202

[13] Rezai G Teng P K Shamsudin M N Mohamed Z and Stanton J L 2017 Journal of Agribusiness in Developing and Emerging Economies Effect of perceptual differences on consumer purchase intention of natural functional food 7 (2) 153-173

[14] Brečić R Gorton M and Barjolle D 2014 British Food Journal Understanding variations in the consumption of functional foods – evidence from Croatia 116 (4) 662 - 675

[15] Menrad K 2003 Journal of Food Engineering Market and marketing of functional food in Europe 56 181–188

[16] Shimizu T 2003 Nutrition Research Reviews Health claims on functional foods: the Japanese regulations and an international comparison 16 241–252

[17] Lu J. 2015 British Food Journal The effect of perceived carrier-ingredient fit on purchase intention of functional food moderated by nutrition knowledge and health claim 117 (7) 1872 - 1885

[18] Williams P Ridges L Batterham M Ripper B Hung M.C 2008 food policy Australian consumer attitudes to health claim – food product compatibility for functional foods 33(6) 640-643

[19] Markovina J Cacic J Kljusuric J G and Kovacic D 2011 British Food Journal Young consumers’ perception of functional foods in Croatia 113(1) 7 – 16

[20] Chammas R Jessy E-H. Mira F Reine M Christelle B-M Nutrition and Food Science Consumer knowledge and attitudes toward functional foods in Lebanon DOI: 10.1108/NFS-09-2018-0263

[21] Bazhan M Keshavarz-Mohammadi N and Hosseini H 2017 British Food Journal Consumers’ awareness and perceptions regarding functional dairy products in Iran: a qualitative research 119 (2) 253 - 266

[22] Hassan S.H. 2011 Managing conflicting values in functional food consumption: the Malaysian experience 113 (8) 1045 - 1059

[23] Lu J 2015 British Food Journal The effect of perceived carrier-ingredient fit on purchase intention of functional food moderated by nutrition knowledge and health claim 117 (7) 1872 – 1885

[24] Krutulyte R Grunert K G Scholderer J Lähteemäki L Hagemann K S Elgaard P S Nielsen B and Graverholt J P 2011 Food Quality and Preference Perceived fit of different combinations of carriers and functional ingredients and its effect on purchase intention 22 (1) 11-16
[25] Huang L Bai L Zhang X Gong S 2018 Food Quality and Preference Re-understanding the antecedents of functional foods purchase: Mediating effect of purchase attitude and moderating effect of food neophobia 73 266 - 275

[26] Ares G Besio M Gimenez A and Deliza R 2010 Appetite Relationship between involvement and functional milk desserts intention to purchase - Influence on attitude towards packaging characteristics 55 (2) 298-304

[27] Patch C Williams P G and Tapsell L C 2005 Journal of Nutrition Education and Behavior Attitudes and intentions toward purchasing novel foods enriched with omega-3 fatty acids 37 235-241

[28] Connor E L and White K M 2010 Food Quality and Preference Willingness to trial functional foods and vitamin supplements: The role of attitudes, subjective norms, and dread of risks 21 75-81

[29] Nolan-Clark D J Neale E P Probst Y C. Charlton K E and Tapsell L C 2011 BMC Public Health Consumers’salient beliefs regarding dairy products in the functional food era: a qualitative study using concepts from the theory of planned behaviour 11 843

[30] Ares G and Gambaro A 2007 Appetite Influence of gender, age and motives underlying food choice on perceived healthiness and willingness to try functional foods 49 148–158.

[31] Mullie P Guelinckx I Clarys P Degreve E. Hulens M and Vansant G 2009 European Journal Clinical Nutrition Cultural, socioeconomic and nutritional determinants of functional food consumption patterns 63 (11) 1290 - 1296

[32] De Jong N Ocké M Brandhorst H and Friele R 2003 British Journal of Nutrition, Demographic and lifestyle characteristics of functional food consumers and dietary supplement users 89(2) 273-281.

[33] Septiana P Nugroho F A Wilujeng C S 2018 Jurnal Kedokteran Brawijaya Konsumsi Junk food dan Serat pada Remaja Putri Overweight dan Obesitas yang Indekos 30 (1) 61 - 67

[34] Ajzen I. 1991. Organizational Behavior and Human Decision Processes The theory of planned behavior 50 179-211

[35] Alam S S and Sayuti S M 2011 International Journal of Commerce and Management Applying the Theory of Planned Behavior (TPB) in halal food purchasing 21 (1) 8-20

[36] Mirabi V Akbariyeh H and Tahmase bifard H 2015 Journal of Multidisciplinary Engineering Science and Technology A study of factors affecting on customers purchase intention 2(1) 267-273

[37] Halim W Z W and Hamed A B 2005 Consumer Purchase Intention at Traditional Restaurant and Fast Food Restaurant University Utara Malaysia

[38] Ajzen I 2015 Rivista di Economia Agraria Consumer attitudes and behavior: the theory of planned behavior applied to food consumption decisions 70(2) 121–138

[39] Bakti IGMY Rakhmawati T Sumaedi S Widianti T Yarmen M and Astrini N J 2019 World Conference on Transport Research - WCTR Public transport users’ WOM: an integration model of the theory of planned behavior, customer satisfaction theory, and personal norm theory May 2019.

[40] S umaedi S Yarmen M Bakti IGMY Rakhmawati T Astrini N J and Widianti T 2016 Management of Environmental Quality: An International Journal The integrated model of theory planned behavior, value, and image for explaining public transport passengers’ intention to reuse 27(2) 124 – 135

[41] Conner M Norman P and Bell R 2002 Health Psychology The theory of planned behavior and healthy eating 21(2) 194-201.

[42] Venkatesh V and Davis F D 2000 Management Science A theoretical extension of the technology acceptance model: for longitudinal field studies 46 (2) 186 - 204
[43] Yarmen M Rakhmawati T Bakti IGMY Astrini N J Sumaedi S Widianti T 2016 *International Journal of Quality and Service Sciences* Investigating Patient Loyalty: An Integrated Framework for Trust, Subjective Norm, Image, and Perceived Risk (A Case Study in Depok, Indonesia) *8*(2) 179 – 196.

[44] Sumaedi S Bakti I G M Y Rakhmawati T Astrini N J Yarmen M and Widianti T 2015 *Leadership in Health Services* Patient loyalty model *28*(3) 245-258

[45] Ministry of Health 2018 Hasil Utama Riskesdas Jakarta Kemenkes

[46] Bamberg S Ajzen I and Schmidt P 2003 *Basic and Applied Social Psychology* Choice of travel mode in the theory of planned behavior: the roles of past behavior, habit, and reasoned action *25*(3) 175-187.

**Acknowledgments**

This research is supported by National Incentive Program (INSINAS) 2019 from Indonesia’s Ministry of Research and Higher Education. All Authors are main contributors.