



The Determinants of Sustainable Consumption Behaviors in Economic Dimension: Empirical Evidence from Young Thai Consumers

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Abstract

This study aims 1) to investigate sustainable consumption behaviors in the economic dimension among university-aged Thai consumers and 2) to examine the determinants of sustainable consumption behaviors in economic dimension. The theory of planned behavior (TPB) was used as a theoretical framework. A multistage sampling technique was used to select 1,000 young consumers (18-24 years old) from 5 regions in Thailand. Data were collected using a self-administered questionnaire. Descriptive statistics and multiple regression analysis (MRA) at the .05 level of statistical significance were used to analyze the data. The results showed that 1) sustainable consumption behaviors in economic dimension among young Thai consumers was in the high level (Mean = 3.88, SD. = 0.48) from 5-point rating scale measurement, and 2) attitude ($b = .312$), subjective norm ($b = .249$), and perceived behavioral control ($b = .364$) can co-predict sustainable consumption behaviors in economic dimension at 23 percent. The findings strongly suggested that these determinants should be applied for taking plans to promote sustainable consumption behaviors in economic dimension among young Thai consumers to create sustainability in Thailand more effectively.

Keywords: Sustainable Consumption Behaviors in Economic Dimension, Young Thai Consumers, Theory of Planned Behavior



1. Introduction

Since the past decade, the concept of sustainable consumption behaviors in the economic dimension has received more attention among social science or behavioral sciences academicians and practitioners in Thailand. In theory, it was considered as a part of the concept of sustainable consumption which was an important approach to mobilize the country into a sustainable development country according to the Agenda 21 action plan of United Nations Conference on the Environment and Development [1-4]. This Agenda emphasized that the major causes of deterioration of the global environment are the unsustainable pattern of consumption and production, excess demands, and luxurious lifestyles [5]. In order to achieve the goals in Agenda 21, changing in consumption patterns toward more sustainability is urgently needed. In international literatures, sustainable consumption was often defined by United Nations Department of Economic and Social Affairs [6] as the use of goods and services which meet the needs of present and future generations in ways that are economically, socially, and environmentally sustainable. From this definition, it showed that sustainable consumption can consist of three components: economic dimension, social dimension, and environmental dimension.

In Thailand, the Office of the National Economic and Social Development Board (NESDB) defines sustainable consumption as “the consumption which responds to basic needs and bring a better quality of life with the consideration of the carrying capacity of the ecological system, creating a balance between the happiness of being self-sufficient and sharing with others, and continuously preserving the resource base for the production and consumption activities of future generations” [7]. There are three strategies of NESDB to promote sustainable consumption: change in consumption patterns into sufficiency; promotion of socially responsible marketing; and promotion of effective production and recycling of resources [3, 8-9]. Like international contexts, this definition also showed the balance of consumption in those three dimensions: economic dimension, social dimension, and environmental dimension.

In Thailand, it was found that the economic dimension of sustainable consumption behaviors has been emphasized and promoted in various media both national and local level for a long time because this dimension was consistent with the Sufficiency Economy Philosophy by His Majesty King Bhumibol Adulyadej of Thailand. Furthermore, this dimension was related to 17 Sustainable Development Goals (SDGs) as the world framework for sustainable country development initiated by United Nations Department of Economic and Social Affairs [9-10]. As a result, the economic dimension of sustainable consumption behaviors has widely been promoted to the public, especially in young consumers, in Thailand from governmental organizations, NGOs, Non-profit organizations, and businesses that adopted the concept of 17 Sustainable Development Goals, the Sufficiency Economy Philosophy, or Sustainability Marketing into core values of organizations [4, 8, 11-13]. Therefore, youth should be considered as an appropriate target group to promote sustainable consumption behaviors in economic dimension in Thailand. Besides, the National Economic and Social Development Board (NESDB) [7] and several academicians [2-4, 8, 11-13] also supported that one significant strategy to change consumption patterns among populations is to promote sustainability into young consumers who are preparing to enter adulthood and become potential consumers in the near future.

To promote sustainable consumption behaviors in economic dimension in this population group more effectively, it is important that understanding in current situation and the determinants of behaviors be explored. Therefore, research questions of this study are: 1) What is the level of sustainable consumption behaviors in economic dimension among young Thai consumers?, and 2) What are the determinants of sustainable consumption behaviors in economic dimension among young Thai consumers? In this study, sustainable consumption behaviors in economic dimension was defined as the consumption behaviors which show moderation, reasonableness, self-immunity, and self-dependency in buying goods and services among



young consumers. This definition clearly reflects practicing the middle path in economically sustainable consumption behaviors. This definition was based on the Sufficiency Economy Philosophy and also consistent with descriptions from United Nations Department of Economic and Social Affairs [14].

From reviewing the literatures on the determinants of sustainable consumption behaviors in economic dimension, the author found that all related studies suggested that the variables the theory of planned behavior can determine sustainable consumption behaviors [15-20]. Therefore, in this research, the theory of planned behavior (TPB) was applied as a research framework. The theory of planned behavior is a theory developed to explain variables affecting actual behavior. It was developed by Ajzen [21]. He developed this conceptual framework from theory of reasoned action (TRA) by Fishbein & Ajzen [22]. According to the theory of reasoned action (TRA), actual behavior was affected by intention to perform a behavior (INT) which was the individual's perceived level of intent to practice a behavior. At the same time, the intention to perform a behavior was also affected by two factors: the attitude towards the behavior (ATT) and the subjective norm (SN). The attitude towards the behavior is an individual's feeling towards that behavior while the subjective norms are the beliefs that his or her reference groups think the individual ought to perform and how significant their notions are to his or her behavior. The effectiveness of the theory of reasoned action (TRA) is high for explaining a behavior which is less complicated. However, in some behaviors which are likely to be more complicated or difficult to practice, it is still a question. Therefore, to answer this question, Ajzen added another significant variable affecting actual behavior in the framework of TRA. It was called as perceived behavioral control (PBC). According to the theory of planned behavior, perceived behavioral control is the individual's perceived self-efficacy to perform a behavior. It was based from past experiences together with present competencies to determine the perceived self-efficacy to perform a behavior. Hence, this newly revised framework is very beneficial to explain a complicated behavior more accurately [4, 20].

Therefore, this research aims to study sustainable consumption behaviors in the economic dimension among university-aged Thai consumers by applying theory of planned behavior as a conceptual framework as shown in Figure 1. The result of this study is expected to help explore variables affecting sustainable consumption behaviors in economic dimension among young Thai consumers and then organizations, both in local and national level, related to promote sustainable consumption behaviors can take these determinants into planning for creating a sustained success of the country in the next step respectively.

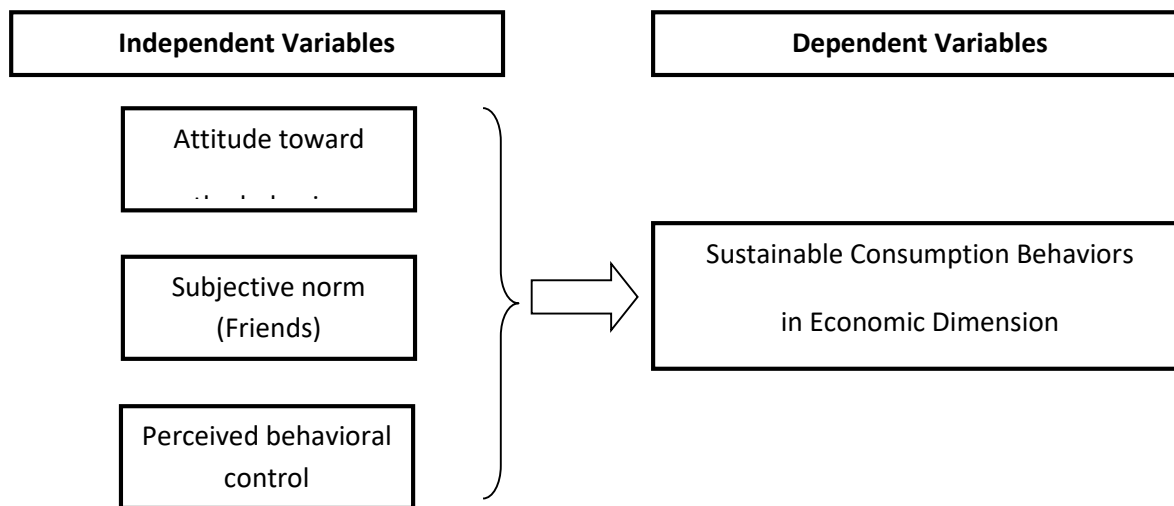


Figure 1: Conceptual framework

2. Research Methodology

A survey research by self-reporting questionnaires was employed to study sustainable consumption behaviors in the economic dimension and its determinants among university-aged Thai consumers. The research proposal was ethically reviewed and approved by the research committee in the Department of Communication Arts and Information Science, Faculty of Humanities, Kasetsart University (No. 0513/10503/088). In this study, young Thai consumers are defined as university students because they are old enough to decide which products and services they will buy. Besides, they tend to have more freedom than any other youth group, especially in school students, who often are influenced by their parents. Furthermore, university students are in the period of preparing to enter adulthood and become potential consumers in the near future. Therefore, university students are suitably considered as a target population for the promotion of sustainable consumption behaviors in economic dimension. Multistage random sampling was used to select university students from 5 regions in Thailand: North, South, Northeast, Centre, and Bangkok. The size of samples in this study was calculated by using formulation of Yamane [23] at the 95% confidence level. Yamane suggested that if the total population is more than 100,000, the 400 samples are enough to represent that population. In this case, the total population of university students are more than 100,000 persons. Therefore, the appropriate size of samples should be 400 samples. However, the author selected 1,000 samples for more reliability. In sampling, multistage random sampling was employed. First, stratified random sampling by area was used in selecting five districts in Thailand; North, South, Northeast, Centre, and Bangkok (200 samples per area). Second, simple random sampling was used to select two universities in each area (100 samples per university). Third, simple random sampling was also used to select two faculties in each university (50 samples per faculty). Fourth, one or two classes in each faculty were selected using simple random sampling, and later all students in each class received an explanation of the details of the study and were invited to participate. The students were asked to complete the questionnaire after they were informed that their participation was voluntary, that their responses were anonymous and confidential. The results would be reported only in a group format. All participants signed informed consent forms that were then separated from their questionnaires to maintain confidentiality.



There were three independent variables in this study: 1) Attitude toward the behavior, 2) Subjective norm from friend, and 3) Perceived behavioral control. Attitude toward the behavior was defined as an individual's positive or negative evaluation of self-performance of sustainable consumption behaviors in economic dimension. It was measured using a 5-point semantic differential scale for three items (Advantage/Disadvantage, Like/Dislike, Admiring/Condemning). Subjective norm was defined as beliefs about what his or her friends think the person should perform regarding economically sustainable consumption behavior and how important their opinions are to his or her economically sustainable consumption behavior. Perceived behavioral control was defined as the person's perceived ease or difficulty to perform economically sustainable consumption behaviors. Subjective norm and Perceived behavioral control were measured using a 5-point Likert scale with three items per variable, ranging from "strongly disagree" (1), "disagree" (2), "neutral" (3), "agree" (4) to "strongly agree" (5). These questions were adapted from past studies [24-28].

The dependent variable in this research was sustainable consumption behaviors in economic dimension. It was defined as performing eight economically sustainable consumption behaviors: moderation, reasonableness, caution, money planning, legal product buying, saving, determination (in studying for having a good job after graduation), and self-dependency. It was measured using a 5-point Likert scale, showing the frequency of performing these behaviors ranging from "never" (1), "rarely" (2), "sometimes" (3), "usually" (4) to "always" (5). Like the independent variables, it was also measured by adapting past studies [4, 8, 20, 24-36]. A pretest was conducted with 50 university students in Bangkok. Cronbach's alpha to evaluate the internal consistency of the summed scale was used for analyzing reliability of this research instrument. The results showed that their alpha levels ranged from 0.74 to 0.86 (Attitude toward the behavior = 0.86; Subjective norm = 0.79; Perceived behavioral control = 0.77; sustainable consumption behaviors in economic dimension = 0.74). Scores within this range (more than 0.7) are considered as an adequate indication of internal consistency [37]. For statistical analyses, the mean, standard deviation, percentage, and multiple regression analysis (MRA) at the .05 level of significance was used in this research.

3. Results

3.1 Characteristics of the study sample

The sample included 1,000 undergraduate students, aged 18-24 years old. Most students were female (60.2%). The average age was 19.89 years, (SD = 1.47). The average income per month was THB 7,763.48 (SD = 9,369.14) and they studied in their first year in the highest proportion (37.8%).

3.2 Descriptions of the studied variables

Mean and standard deviation (SD) were used in describing these variables. The mean of Attitude toward the behavior was 4.17 (SD = 0.69). The mean of the Subjective norm from friends was 3.44 (SD = 0.70), and the mean of Perceived behavioral control was 3.88 (SD = 0.64). The mean of sustainable consumption behaviors in economic dimension was 3.88 (SD = 0.48) as shown in Table 1. Besides, when each item of sustainable consumption behaviors in economic dimension was considered, the result found that moderation had the lowest mean (Mean = 3.56, SD = 0.87) while legal product buying had the highest mean (Mean = 4.46, SD = 0.79) as shown in Table 2.

Table 1: Mean and standard deviation among the studied variables

Variables	\bar{X}^*	SD
Attitude toward the behavior	4.17	0.69
Subjective norm (Friends)	3.44	0.70
Perceived behavioral control	3.88	0.64
Sustainable consumption behaviors in economic dimension	3.88	0.48

**5-point scale*

Table 2: Mean and standard deviation among 8 items of sustainable consumption behaviors
 in economic dimension

Items	\bar{X}^*	SD
Moderation	3.56	0.87
Reasonableness	3.80	0.87
Caution	3.82	0.89
Money planning	3.59	0.94
Legal product buying	4.46	0.79
Saving	3.72	0.99
Determination	4.08	0.78
Self-dependency	3.98	1.08

**5-point scale*

3.3 Factors affecting sustainable consumption behaviors in economic dimension among young Thai consumers

Multiple regression analysis (MRA) was performed to examine what factors affected sustainable consumption behaviors in economic dimension. The standardized regression coefficients (β), t -statistic, and the overall R^2 for this analysis indicated that all three independent variables affected sustainable consumption behaviors in economic dimension significantly as shown in Table 3. From Table 3, attitude toward the behavior ($\beta = .312$), subjective norm ($\beta = .249$), and perceived behavioral control ($\beta = .364$) can significantly co-predict sustainable consumption behaviors in economic dimension at 23.0 percent (Adjusted $R^2 = 0.230$).

Table 3: Multiple regression analysis of sustainable consumption behaviors in economic dimension among young Thai consumers

(n =1,000)

Independent Variable	β	t
1. Attitude toward the behavior	.312	9.799**
2. Subjective norm (friend)	.249	8.041**
3. Perceived behavioral control	.364	12.007**
Adjusted $R^2 = 0.230$, $F = 100.497$, $p < .01$		

***Statistically significant at .01 significance level.*

4. Discussion and Conclusion

The results of investigating sustainable consumption behaviors in the economic dimension among university-aged Thai consumers showed that this group exhibits sustainable consumption behaviors in economic dimension at the high level (mean = 3.88, SD = 0.48) because the mean score is in the high range (3.51–4.50) from the 5-point scale. This finding might not be surprising because the economic dimension of sustainable consumption behaviors has been emphasized and promoted in various media, including in text books, both national and local level for a long time because this concept was consistent with the Sufficiency Economy Philosophy by His Majesty King Bhumibol Adulyadej of Thailand and also related to 17 Sustainable Development Goals (SDGs) as the world framework for sustainable country development initiated by United Nations Department of Economic and Social Affairs [9-10]. Besides, the economic dimension of sustainable consumption behaviors has widely been promoted to the public, especially in young consumers, in Thailand from governmental organizations, NGOs, Non-profit organizations, and businesses that adopted the concept of 17 Sustainable Development Goals, the Sufficiency Economy Philosophy, or Sustainability Marketing into core values of organizations as well [4, 8, 11-13]. However, when 8 sub-behaviors of this concept were considered, it found that moderation had the lowest mean (Mean = 3.56), followed by money planning (Mean = 3.59), and saving (Mean = 3.72). Therefore, these three sub-behaviors should be more promoted to young Thai consumers. Especially, teaching in class from teachers in school is still needed. Likewise, family should play an important role to teach and recommend their children in practicing these sustainable consumption behaviors in economic dimension as well.

From the findings in studying the determinants of sustainable consumption behaviors in the economic dimension, it found that the results were consistent with the theory of planned behavior (TPB), which supported that actual behavior was affected by the attitude towards the behavior (ATT), the subjective norm (SN), and perceived behavioral control (PBC) [21]. These results were also consistent with the previous studies applying the theory of planned behavior (TPB) as a research framework [3-4, 8, 15-20]. One approach based from this research is designing plans to adjust three determinants: attitude toward the behavior, subjective norm, and perceived behavioral control. If these predictive variables were changed, they will eventually affect sustainable consumption behaviors in economic dimension because these three



independent variables can determine sustainable consumption behaviors in economic dimension significantly. Besides, when beta (β) scores were ordinaly considered, it found that perceived behavioral control (PBC) was the highest positive determinant on sustainable consumption behaviors in economic dimension ($\beta = .364$). It was defined as the perceived ease to perform sustainable consumption behaviors in economic dimension. From the result, it showed that PBC has positively affected sustainable consumption behaviors in economic dimension. That is, if young Thai consumers have more PBC on economically sustainable consumption behaviors, they will be likely to have more sustainable consumption behaviors in economic dimension. Ajzen [21] added this variable in the framework of TRA. He believed that this variable can explain complicated or difficult behaviors more accurately. Therefore, the result of this research supported his notion. There are many ways to increase PBC on economically sustainable consumption behaviors. Using extra activities, courses, curriculum, and even manuals to diffuse knowledge of sustainable consumption, including moderation, money planning, and saving, to young Thai consumers can increase their self-efficacy in economically sustainable consumption behaviour (8, 15-21]. Besides, using social marketing campaign [32] or community-based social marketing campaign (CBSM) [38] to promote sustainable consumption behaviors in economic dimension by any relevant organizations in Thailand should be implemented to young consumers because of their effectiveness to increase knowledge and self-efficacy in sustainable behaviors significantly [38-40]. The effectiveness of the concept of a community-based social marketing (CBSM) in changing perceived behavioural control was proposed by Doug Mckenzie-Mohr [39-40] and several previous studies [41-44]. For example, in Cole and Fieselman's study, they designed CBSM campaign to alter sustainable behavior in paper reduction, commingled recycling, and purchasing environmentally friendly products with faculty and staff teams at the Pacific University Oregon in the USA [41]. The name of the campaign was entitled "Greening Pacific!" After intervention, an increase in perceived behavioural control and campus-wide purchasing of recycled content paper and environmentally friendly products was found. Post-survey results found that 74 percent of the staff and faculty had changed their knowledge and behavior because of the CBSM campaign.

Another determinant of economically sustainable consumption behavior was the attitude towards the behavior ($\beta = .312$). Attitude toward the behavior was defined as an individual's positive or negative evaluation of self-performance of economically sustainable consumption behaviors. That is, if young Thai consumers have more positive feeling on economically sustainable consumption behaviors, they will be likely to have more economically sustainable consumption behaviors. Especially, personal sources can increase positive feeling effectively [3,8]. Therefore, parents, teachers, and even celebrities should play an important. role to promote economically sustainable consumption behaviors among young consumers. Besides, communication campaign can be effectively used for promoting sustainable behaviors by presenting messages about negative outcomes of economically unsustainable consumption. Likewise, presenting messages about positive outcomes of performing economically unsustainable consumption should be emphasized and presented in communication campaign continuously. When the attitude towards the behavior (ATT) was adjusted or changed, it affected actual behavior significantly.

Lastly, another variable which had the significantly lowest impact ($\beta = .249$) on economically sustainable consumption behaviors, compared to all independent variables, is subjective norm from friends. Ajzen [21] noted that the subjective norms are the beliefs about what his or her reference groups think the person should perform and how important their opinions are to his or her behavior. In this study, the subjective norm was defined as the beliefs that his or her friends think the individual ought to perform and how significant their notions are to his or her behavior. This is because friends are likely to be reference



groups affecting any behaviors in every aspect among youths more than any other groups [15]. There are many ways to adjust or change subjective norms from friends such as using national regulations or academic institutions' regulations to change social norms about economically sustainable consumption behaviors among young consumers, using student leaders or senior students as a role model [4, 8, 29], student dormitories' regulations to promote economically sustainable consumption behaviors [27, 30], and building cooperation networks in economically sustainable consumption behaviors among students from several academic institutions [2, 20, 33]. These approaches will help make a stronger norm in economically sustainable consumption behaviors among youth group.

From the results of this study and other past studies mentioned above, it can assess that all three variables in the theory of planned behavior (TPB) [21]; the attitude towards the behavior (ATT), the subjective norm (SN), and perceived behavioral control (PBC), can determine sustainable consumption behaviors in the economic dimension among university-aged Thai consumers significantly. Besides, these variables can be applied as the effectiveness indicators of social marketing communication campaign to change other sustainable behaviors and health behaviors among youth as well [45]. Therefore, the author believes that if Thailand continuously promotes economically sustainable consumption behaviors among young consumers through the approaches of changing or adjusting these three independent determinants as mentioned above, consumption patterns toward economic sustainability among young Thai consumers will be better. This outcome will be in keeping with the goals of Agenda 21 and a strategy of the Office of the National Economic and Social Development Board (NESDB) that desires to change consumption patterns among consumers toward moderations and sufficiency for a sustained success. There is a research limitation to declare. That is, the study's target population is university students who are a group of highly educated individuals. Therefore, this population group may not represent the entire young generation of Thai consumers. However, this research gives a strongly beneficial picture for understanding in sustainable consumption behaviors in the economic dimension among university-aged Thai consumers. For the direction in the next research about this issue, the author suggests that interventions to promote sustainable consumption behaviors in economic dimension among Thai youth in academic institutions should be developed, tried out, and evaluated in scientific validation. It will help expand knowledge in promoting sustainable consumption in economic dimension in Thailand more effectively.

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