



## Factors affecting Environmentally Sustainable Consumption Behavior (ESCB) among Thai Youth through the Theory of Planned Behavior

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### Abstract

This study aims to investigate environmentally sustainable consumption behavior (ESCB) among Thai youth and to examine factors affecting ESCB by using the theory of planned behavior (TPB) as a research framework. The samples were 1,000 youths (18-24 years old) by using a multistage sampling technique from 5 regions in Thailand. A self-administered questionnaire was employed in data collection. Multiple regression analysis (MRA) was used for examining factors affecting ESCB at the .05 statistically significant level. The findings showed that ESCB among Thai youths was in the moderate level (Mean = 3.46, SD. = 0.59) from 5-point rating scale measurement. After MRA analysis, it showed that attitude toward the behavior ( $\beta = .292$ ), subjective norm ( $\beta = .159$ ), and perceived behavioral control ( $\beta = .203$ ) can explain ESCB at 24.8 percent. The author suggested that these factors should be taken into planning for promoting ESCB among Thai youths. The contribution of this research is to increase and expand knowledge of consumer behavior in the aspect of ESCB among young consumers in Thailand and its implications to build a sustainable consumption society.

**Keywords:** *Environmentally sustainable consumption behavior, Youth, Thailand, Theory of planned behavior*

### 1. Introduction

Since the past decade, the concept of environmentally sustainable consumption behavior (ESCB) has received more attention among social science 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 (Dahlstrom, 2011; Murr, 2008; Vantamay, 2017). 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 (Blanc, 2010). In order to achieve the goals in Agenda 21, changes in consumption patterns toward more sustainability is urgently needed. In international literature, sustainable consumption was often defined by United Nations Department of Economic and Social Affairs (2003) 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 response 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" (Thailand Environment Institute Foundation, 2016). 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 (Vantamay, 2017, 2018; Thailand Environment Institute Foundation, 2016). Like international contexts, this definition also showed the



balance of consumption in those three dimensions: economic dimension, social dimension, and environmental dimension.

Especially, in Thailand, it was found that the environmental dimension of sustainable consumption was emphasized in various media both national and local level. Besides, the environmental dimension of sustainable consumption has also been promoted to the public, especially in young consumers, in Thailand for a long time from NGOs, Non-profit organizations, businesses, and even retailers that adopted the concept of green marketing, environmental marketing, or sustainability marketing into core values of organizations (Peattie, 1995; Emery, 2012; Belz & Peattie, 2012; Vantamay, 2018). Therefore, youth should be considered as an appropriate target group to promote environmentally sustainable consumption behavior (ESCB) in Thailand. Besides, Thailand Environment Institute Foundation (2016) and Vantamay (2018) supported that one significant strategy to change consumption patterns among the Thai population is to promote ESCB among Thai youths who are preparing to enter adulthood and become potential consumers in the near future.

To promote ESCB in this group more effectively, it is important that understanding in the current situation of ESCB and factors affecting ESCB be explored. Therefore, research questions of this study are: 1) What is the level of environmentally sustainable consumption behavior (ESCB) among Thai youth?, and 2) What factors affect environmentally sustainable consumption behavior (ESCB) among Thai youth? In this study, environmentally sustainable consumption behavior (ESCB) was defined as the consumption behaviors which 1) support environmentally-friendly goods or services, 2) aware environmental problems in all consumption procedures, and 3) show energy-saving and conservation. This definition comes from based on the Office of the National Economic and Social Development Board (NESDB) in Thailand. From reviewing the literature on the factors affecting ESCB, the author found that all related studies suggested that the variables the theory of planned behavior can affect sustainable consumption behavior (Luchs & Mooradian, 2012; McCabe, Corona, & Weaver, 2013; Scholl, Rubik, Kalimo, Biedenkopf, & Soebach, 2010; Staniskis, Arbaciauskas, & Varzinskas, 2012; Thøgersen & Schrader, 2012). 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 (1988). He developed this conceptual framework from the theory of reasoned action (TRA) by Fishbein & Ajzen (1975). According to the theory of reasoned action (TRA), actual behavior was affected by the intention to perform a behavior (INT) which was the individual's perceived level of intent to practice 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 less complicated behavior. 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 (1988) 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 on 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 complicated behavior more accurately (Vantamay, 2019), as shown in Figure 1.

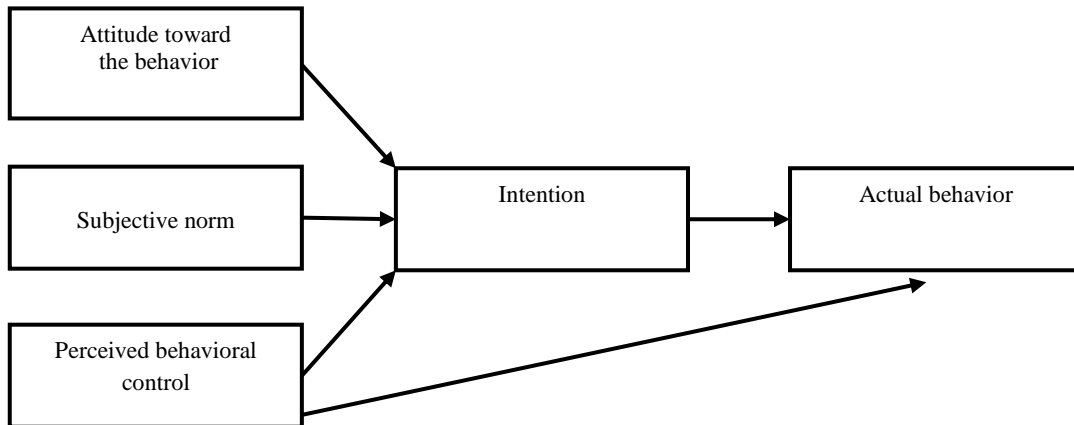


Figure 1 Theory of Planned Behavior (Ajzen, 1988)

Subsequently, this research aims to study environmentally sustainable consumption behavior (ESCB) and its predictors among youth in Thailand by using the theory of planned behavior as a conceptual framework as shown in Figure 2. The result of this study is expected to help explore variables affecting ESCB among Thai youth and then organizations related to promote ESCB can take these variables into planning for creating a sustained success in the next step respectively.

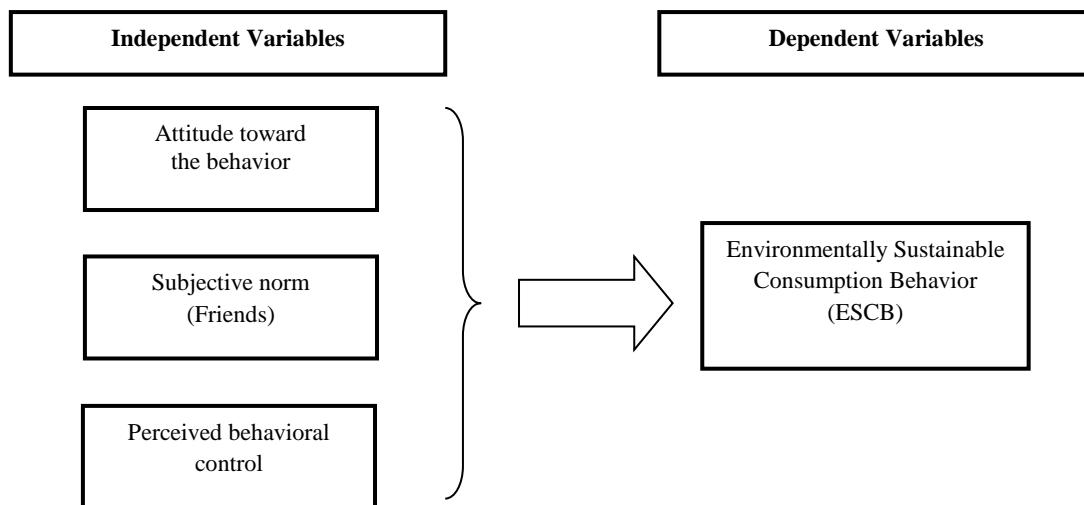


Figure 2 Conceptual framework

## 2. Objectives

This study aims to investigate environmentally sustainable consumption behavior (ESCB) among youth in Thailand and to examine factors affecting ESCB by applying the theory of planned behavior (TPB) as a research framework.



### 3. Material and Methods

Survey research by self-reporting questionnaires was employed to study ESCB and its predictors among Thai youth. 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, Thai youths 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 ESCB. 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 the formulation of Yamane (1973) at the 95% confidence level. Yamane (1973) 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 is 2,139,868 persons (National Statistical Office of Thailand, 2016), which are more than 100,000 persons. Therefore, the appropriate size of the 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 a friend, and 3) Perceived behavioral control. Attitude toward the behavior was defined as an individual's positive or negative evaluation of self-performance of environmentally sustainable consumption behavior. 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 environmentally sustainable consumption behavior and how important their opinions are to his or her environmentally sustainable consumption behavior. Perceived behavioral control was defined as the person's perceived ease or difficulty to perform environmentally sustainable consumption behavior. 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 (Ferdous, 2010; Heiskanen & Pantzar, 1997; Hobson, 2004; Jones, Hillier, & Comfort, 2011; Tanner & Kast, 2003).

The dependent variable in this research was Environmentally Sustainable Consumption Behavior (ESCB). It was defined as performing eight environmentally sustainable consumption behaviors: environmentally-friendly goods (or services) consumption, air-conditioner usage with environmental awareness, electric saving, water saving, bicycle use, walking instead of using the elevator, waste sorting, and plastic bag avoidance. It was measured using a 5-point Likert scale, showing the frequency of performing ESCB 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 (Ferdous, 2010; Hoque, 2014; Kanayo, Nancy, & Jumare, 2012; Luchs & Mooradian, 2012; McCabe, Corona, & Weaver, 2013; Pape, Rau, Fahy, & Davies, 2011; Tanner & Kast, 2003; Vantamay, 2018; Wang, Liu, & Qi, 2014; Wolff & Schönherr, 2011; Zhao, 2010). 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 the reliability of this research instrument. The results showed that their alpha levels ranged from 0.76 to 0.90 (Attitude toward the behavior = 0.90; Subjective norm = 0.87; Perceived behavioral control = 0.83; environmentally sustainable consumption behavior = 0.76). Scores within this range (more than 0.7) are considered as an adequate indication of internal consistency (Cottrell & McKenzie, 2005). For statistical analyses, the mean, standard deviation, percentage, and multiple regression analysis (MRA) at the .05 level of significance was used in this research.

## 4. Results and Discussion

### 4.1 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%).

### 4.2 Descriptions of the studied variables

Mean and standard deviation (SD) were used in describing these variables. The mean of Attitude toward the behavior was 4.25 (SD = 0.72). The mean of the Subjective norm was 3.54 (SD = 0.79), and the mean of Perceived behavioral control was 3.79 (SD = 0.65). The mean of Environmentally sustainable consumption behavior (ESCB) was 3.46 (SD = 0.59) as shown in Table 1. Besides, when each item of ESCB was considered, the result found that bicycle using behavior had the lowest mean (Mean = 3.23, SD = 1.21) while electric saving behavior had the highest mean (Mean = 4.07, SD = 0.91) as shown in Table 2.

**Table 1** Mean and standard deviation among the studied variables

Variable	$\bar{X}^*$	SD
Attitude toward the behavior	4.25	0.72
Subjective norm (Friends)	3.54	0.79
Perceived behavioral control	3.79	0.65
Environmentally Sustainable Consumption Behavior (ESCB)	3.46	0.59

\*5-point scale

**Table 2** Mean and standard deviation among 8 items of ESCB

Items	$\bar{X}^*$	SD
Environmentally-friendly goods (or services) consumption	3.03	0.83
Air-conditioner usage with environmental awareness	3.40	0.94
Electric saving	4.07	0.91
Water saving	3.81	0.91
Bicycle use	3.23	1.21
Walking instead of using elevator	3.35	0.95
Waste sorting	3.37	0.94
Plastic bag avoidance	3.41	1.02

\*5-point scale

The results of investigating Environmentally Sustainable Consumption Behavior (ESCB) among Thai youth showed that these youths exhibit sustainable consumption behavior in the environmental dimension at the moderate level (mean = 3.46, SD = 0.59) because the mean score is in the moderate range (2.51–3.50) from the 5-point scale. This finding suggests that Thailand should promote Environmentally Sustainable Consumption Behavior (ESCB) to young consumers more increasingly. Especially, when sub-behaviors were considered, it found that the item of environmentally-friendly goods (or services) consumption among youth was still in the moderate level (mean = 3.03, SD = 0.83) and had the lowest score compared to all sub-behaviors of ESCB. Therefore, this behavior should be more promoted in Thai youth. Besides, other sub-behaviors including air-conditioner usage with environmental awareness (mean = 3.40, SD = 0.94), bicycle use (mean = 3.23, SD = 1.21), walking instead of using elevator (mean = 3.35, SD



= 0.95), waste sorting (mean = 3.37, SD = 0.94), and plastic bag avoidance (mean = 3.41, SD = 1.02) can be also taken to promote to Thai youth because the mean score is still in the moderate range (2.51–3.50) from the 5-point scale. From these results, there were only two sub-behaviors that were shown in the high level. These were electric saving (mean = 4.07, SD = 0.91) and water-saving (mean = 3.81, SD = 0.91) because their scores were in the high range (3.51– 4.50) from the 5-point scale. This was a good situation for Thailand after electric saving and water saving had continuously been promoted to Thai young consumers for a long time.

#### 4.3 Factors affecting Environmentally Sustainable Consumption Behavior (ESCB) among Thai youth

Multiple regression analysis (MRA) was performed to examine what factors affected by ESCB. The standardized regression coefficients ( $\beta$ ),  $t$ -statistic, and the overall  $R^2$  for this analysis indicated that all three independent variables affected ESCB significantly as shown in Table 3. From Table 3, attitude toward the behavior ( $\beta = .292$ ), subjective norm ( $\beta = .159$ ), and perceived behavioral control ( $\beta = .203$ ) can significantly co-predict ESCB at 24.8 percent (Adjusted  $R^2 = 0.248$ ).

**Table 3** Multiple regression analysis of ESCB among Thai youth

Independent Variable	(n = 1,000)	
	$\beta$	$t$
1. Attitude toward the behavior	.292	9.664**
2. Subjective norm (friend)	.159	5.262**
3. Perceived behavioral control	.203	6.470**
Adjusted $R^2 = 0.248$ , $F = 110.707$ , $p < .01$		

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

From the findings in this part, they 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) (Ajzen, 1988). These results were also consistent with the previous studies applying the theory of planned behavior (TPB) a research framework (Luchs & Mooradian, 2012; McCabe, Corona, & Weaver, 2013; Scholl, Rubik, Kalimo, Biedenkopf, & Soebach, 2010; Staniskis, Arbaciauskas, & Varzinskas, 2012; Thøgersen & Schrader, 2012; Vantamay, 2017, 2018, 2019). One approach based on this research is designing plans to adjust three independent variables: attitude toward the behavior, subjective norm, and perceived behavioral control. If these predictive variables were changed, they will eventually affect ESCB because these three independent variables can determine ESCB significantly.

When beta ( $\beta$ ) scores were ordinally considered, it found that the attitude towards the behavior had the highest positive impact on ESCB ( $\beta = .292$ ). Attitude toward the behavior was defined as an individual's positive or negative evaluation of self-performance of environmentally sustainable consumption behavior. That is, if Thai youths have a more positive feeling on environmentally sustainable consumption behavior, they will be likely to have more ESCB. Especially, personal sources can increase positive feeling effectively (Vantamay, 2018). Therefore, parents, teachers, and even celebrities should play an important role to promote ESCB among Thai youths. Besides, the communication campaign can be effectively used for promoting sustainable behaviors by presenting messages about negative outcomes of environmentally unsustainable consumption. Likewise, presenting messages about positive outcomes of performing ESCB should be emphasized in communication campaign continuously (McCabe, Corona, & Weaver, 2013; Scholl, Rubik, Kalimo, Biedenkopf, & Soebach, 2010). When the attitude towards the behavior (ATT) was adjusted or changed, it affected actual behavior significantly.

The second effective variable is perceived behavioral control (PBC) ( $\beta = .203$ ). It was defined as the perceived ease to perform environmentally sustainable consumption behavior. From the result, it showed that PBC has positively affected ESCB. That is, if Thai youths have more PBC on environmentally sustainable consumption behavior, they will be likely to have more ESCB. Ajzen (1988) 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 environmentally sustainable consumption behavior. Using extra activities, courses, curriculum, and even manuals to diffuse the knowledge of sustainable consumption to Thai youths can increase their self-efficacy in sustainable consumption behavior (Ajzen, 1988; Zhao & Schroeder, 2010; Murr, 2008; Vantamay, 2017, 2018, 2019; Staniskis, Arbaciauskas, & Varzinskas, 2012). Besides, using social marketing campaign (Kotler & Lee, 2008) or community-based social marketing campaign (CBSM) to promote ESCB by any relevant organizations in Thailand should be implemented to Thai youth because of their effectiveness to increase knowledge and self-efficacy in sustainable behaviors significantly (McKenzie-Mohr, 1996, 1999; Kennedy, 2010; Emery, 2012; Heiskanen & Pantzar, 1997)

Another variable which had the significantly lowest impact ( $\beta = .159$ ) on ESCB, compared to all independent variables, is the subjective norm from friends. Ajzen (1988) 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 norms were 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 behaviors in every aspect among youths more than any other groups (Luchs & Mooradian, 2012). 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 ESCB among youth (Scholl, Rubik, Kalimo, Biedenkopf, & Soebach, 2010), using student leaders or senior students as a role model (Vantamay, 2018; Hoque, 2014), student dormitories' regulations to promote ESCB (Jones, Hillier, & Comfort, 2011; Kanayo, Nancy, & Jumare, 2012), and building cooperation networks in ESCB among students from several academic institutions (Pape, Rau, Fahy, & Davies, 2011; Murr, 2008; Vantamay, 2019). These approaches will help make a stronger ESCB norm among youth group.

The author believes that if Thailand continuously promotes ESCB among youth through the approaches of changing or adjusting these three independent variables as mentioned above, consumption patterns toward environmental sustainability among Thai youths 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 (Thailand Environment Institute Foundation, 2016).

## 5. Conclusion

This study aims to investigate environmentally sustainable consumption behavior (ESCB) among Thai youth and to examine factors affecting ESCB by using the theory of planned behavior (TPB) as a research framework. The samples were 1,000 youths (18-24 years old) by using a multistage sampling technique from 5 regions in Thailand. A self-administered questionnaire was employed in data collection. Multiple regression analysis (MRA) was used for examining factors affecting ESCB at the .05 statistically significant level. The findings showed that ESCB among Thai youths was in the moderate level (Mean = 3.46, SD. = 0.59) from 5-point rating scale measurement. After MRA analysis, it showed that attitude toward the behavior ( $\beta = .292$ ), subjective norm ( $\beta = .159$ ), and perceived behavioral control ( $\beta = .203$ ) can explain ESCB at 24.8 percent. The author suggested that these factors should be taken into planning for promoting ESCB among Thai youths. Plans to adjust or change three independent variables (attitude toward the behavior, subjective norm, and perceived behavioral control) were recommended by the author. Attitude toward the behavior may be adjusted by 1) parents should play as a role model in promoting ESCB in family, 2) teachers should teach about ESCB both formal and informal classroom, 3) academic institutions should promote pro-environmental activities in their sites, 4) using celebrities in various media as a reference group to endorse ESCB to youth is needed, and 5) negative outcomes of environmentally unsustainable consumption and positive outcomes of performing ESCB should be presented to youth in communication campaign continuously. Additionally, subjective norm from a friend may be adjusted by 1) national regulations to promote ESCB should be implemented to change social norms about ESCB among



youth, 2) Student leaders should be encouraged to serve as role models, 3) student dormitories should have regulations to promote ESCB, 4) Senior students should be trained in ESCB courses, and 5) building cooperation networks in ESCB among students from several institutions will help make a stronger ESCB norm in youth group. Lastly, perceived behavioral control may be adjusted by 1) activities to promote self-efficacy in ESCB among youth should be implemented, 2) disseminating knowledge of ESCB to youth is needed to boost up self-confidence, 3) A social marketing campaign by any relevant organizations in every level to promote ESCB should be implemented to Thai youth, 4) courses or curriculum to increase ESCB skills among youth should be developed, and 5) a manual or a handbook to guide how to perform ESCB appropriately for students should be provided. The author believes that if these predictive variables were changed or adjusted, they will eventually affect ESCB. For the direction in the next research about this issue, the author suggests that interventions to promote ESCB among Thai youth in academic institutions should be developed, tried out, and evaluated in scientific validation. It will help expand more knowledge in promoting sustainable consumption in Thailand effectively.

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