



The Impact of Sustainable Packaging in the Food and Beverage Industry on Consumer Purchasing Behaviour - A Study at Siam University

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ABSTRACT

Packaging is an essential part of any product. It does not only fulfil specific functions but also adds value to the overall product for customers. Yet, conventional packaging used by end consumers often yield ecological drawbacks such as CO₂ emissions and water pollution. In this regard, this study aims to explore the impact of sustainable packaging of products in the food and beverage industry on consumer purchasing behaviour. In addition, it investigates whether sustainable packaging adds value to a product and increases the likelihood of a consumer to pay more for it giving the firm a competitive advantage. Here, the research intends to measure consumers' behaviour and their purchasing intention of sustainable packaging as well as their awareness and relationship to environmentally friendly practices regarding consumption of packaging. Furthermore, the research incorporates the Theory of Planned Behaviour by Icek Ajzen to understand how sustainable packaging relates to (1) attitude toward behaviour (2) subjective norm and (3) perceived behavioural control, which affect both behavioural intention and actual behaviour. This work will use a cross-sectional study to research whether consumers show a propensity to buy food and beverages with sustainable packaging. Thus, an online questionnaire and judgmental sampling will be employed targeting undergraduates, graduates and faculty members at Siam University, Bangkok. The questions will be in both English and Thai, whereas for the Thai questionnaire back-to-back-translation will be used. Lastly, the data will be analysed with IBM SPSS Statistics V25 software. The researchers expect to find that sustainable packaging adds to the value proposition of food products and beverages making them more attractive to consumers than products with conventional packaging. However, financial constraints might display one of the main barriers to buying those products. Additionally, respondents might not be very well educated on environmental issues and practices.

Keywords: Sustainable Packaging, Ecological Issues, Theory of Planned Behaviour, Green Purchasing, Green Perceived Value



INTRODUCTION

In today's consumer society, one witnesses not only augmented by also excessive consumption of all kinds of products. These products almost always come with packaging which for instance is needed to protect the product or provide information to the customer yet contributes to the ecological downside of modern consumption. One of the main sources of packaging is the food and beverage industry (Ibrahim et al., 2022). Thus, daily food and beverage consumption leads to a high quantity of waste in form of wrappings, boxes and bags which often end up in landfills or body of waters as pollution. Especially, plastic packaging poses a fundamental threat to the environment. The OECD's first Global Plastics Outlook reports that from the year 2000 to the year 2019 global plastics waste has more than doubled and that 40% of this waste stems from packaging (Plastic Pollution is growing relentlessly as Waste Management and Recycling fall short, says OECD, 2022). More concretely, in 2021 390.7 million metric tons of plastics were produced globally (Statista Research Department, 2023).

To combat environmental issues, governmental institutions and offices worldwide are introducing policies and initiatives to reduce pollution. For instance, in Thailand in 2019 the Thai cabinet approved the "Roadmap on Plastic Waste Management 2018 – 2030" which was proposed by the Pollution Control Department of the Thai Ministry of Natural Resources and Environment. The targets of this roadmap include banning seven types of single-use plastics and recycling 100% of the national plastic waste by 2027. The first goal to ban plastic bottle cap seals, oxo-degradable plastics and plastic microbeads has been successfully achieved by 2019 (Rujivanarom, 2021).

In addition, the economy also addresses the environmental challenges the world faces by providing more and more sustainable packaging solutions to the consumers. Now, the consumers can show different kinds of behaviour in response to the incorporation of sustainable packaging in a product which either helps protect the environment or not. This proposed study wants to further explore the impact that sustainable packaging in the food and beverage industry can have on the purchasing behaviour of consumers. It is crucial to know how environmentally friendly packaging is perceived by the consumer and what effect it has on them. This has significant relevance for the companies that market and implement sustainable packaging as well as society that is ought to support sustainable practices. Right now, there seemingly is a discrepancy between intention and actual behaviour of consumers as on one hand green awareness and trends are propagated through political movements like Fridays for Future or asked for by other environmental advocates in the media, yet on the other hand polluted landfills, endangered ecosystems and water pollution are prevailing. This depicts the starting point of the motivation to conduct the proposed study.

Objectives

This study aims at exploring to identify the following:

- (1) the impact of sustainable packaging on consumer purchasing behaviour,
- (2) consumers' green purchasing intention regarding sustainable packaging,
- (3) the awareness and relationship to sustainable practices regarding consumption of packaging.

Contributions

In this juncture, the research will contribute to academia, management practices and the Sustainable Development Goals of the United Nations. To begin with, to contribute to research in the field of packaging and consumer behaviour the proposed study is ought to identify the factors that influence sustainable purchasing behaviour to help understand the impact and importance of sustainable packaging on consumer purchasing behaviour in particular. In addition, the paper intends to give insight on the value perception of different demographic groups regarding green consumption. Lastly, it will also explore the intention-behaviour gap in sustainable consumption.

Furthermore, with this study companies will gain knowledge on green marketing strategies and consumer behaviour. In the same manner, its results will facilitate the creation and advertisement of green products for companies and organizations as it will help capitalize on green value perception. Moreover, universities and governmental institutions will be able to use the findings to create campaigns which will increase sustainable awareness to promote green consumption practices. In addition, they will also be able to better estimate appropriate investments in education-related sustainability which plays an important role in maximizing sustainable consumption. On top of that, this study will also contribute to community engagement via public lectures, company training courses and local school initiatives by sharing information on environmental issues and raising a sense of social and environmental responsibility.

Finally, this paper will also contribute to the Sustainable Development Goals of the United Nations. Here, particularly two goals are enforced. First, the research adds to Goal 12 which puts an emphasis on guaranteeing sustainable management consumption and production patterns by investigating consumption that seems to harm the environment as well as green awareness and consumer intention on this matter. Similarly, this study promotes Goal 9 which focuses on creating resilient infrastructure and enforcing inclusive and sustainable industrialization as well as innovation (The 17 Goals, n.d).

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Theory of Planned Behavior

To explain and predict behaviour Icek Ajzen presented his Theory of Planned Behaviour in 1991. According to him behaviour is a function of three factors: (1) Attitude toward Behaviour (2) Subjective Norm (3) Perceived Behaviour Control. Firstly, the attitude of an individual toward a certain behaviour relates to as how favourable or unfavourable they evaluate the behaviour. This is influenced by behavioural beliefs which means that any person balances the perceived advantages and disadvantages from a certain action. Additionally, subjective norm touches upon the social pressure someone feels to act a certain way. This entails normative beliefs meaning that often there is a normative referent who will determine an individual's final behaviour. Third, perceived behavioural control relates to how easy or difficult an individual perceives the behaviour to be, and thus includes factors of feasibility. These three factors then lead to intention which indicates how hard someone is willing to try to perform a particular behaviour. According to Ajzen (1991), intention finally leads to behaviour.

Ajzen hypothesizes positive relationships between all variables as one can see in his model which will also be adopted by the authors of the proposed study. The Theory of Planned

Behaviour will be used as the base of this study to develop a conceptual framework. Thus, further concepts are added to this related theory to develop additional hypotheses.

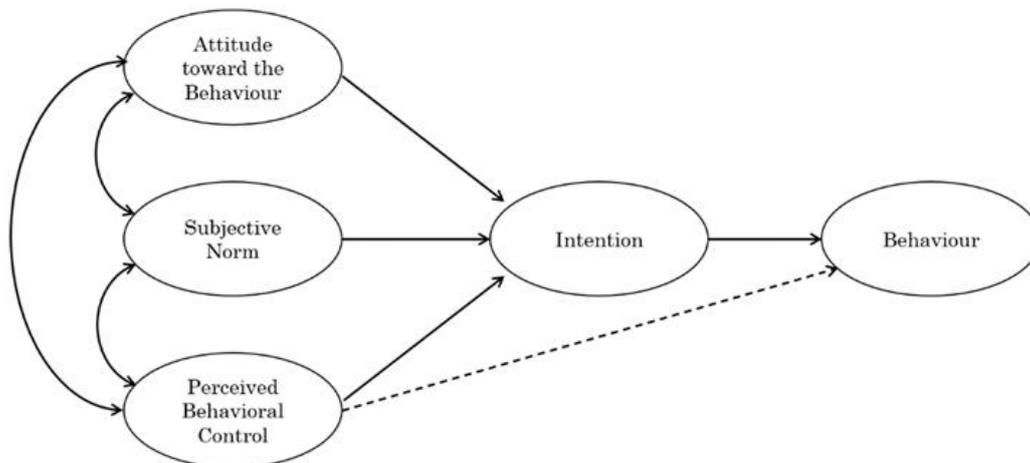


Figure 1: Theory of Planned Behaviour by Ajzen

Sustainable Packaging

Dörnyei et al. (2023) define sustainable food packaging as follows: „Sustainable food packaging is an optimized, measured (quantified) and validated solution, which takes into consideration the balance of social, economic, ecological and safe implementations of the circular value chain, based on the entire history (life cycle) of the food product package unit.” In addition, they state that although there are fine distinguishments, environmentally friendly and green packaging are often used synonymously for sustainable packaging which will also be the case for the proposed study.

Following Ajzen’s (1991) Theory of Planned Behaviour a consumer’s purchasing choice comes from the attitude towards the product which is based on the benefits the consumer thinks the product will yield for them. Generally, packaging can directly and indirectly be beneficial for a consumer. For instance, it can add functions like portability to the overall product or provide benefits through consumer inferences (Steenis et al., 2017) like augmented perceived product quality. The Theory of Planned Behaviour depicts a general attitudinal model that can identify the propensity of consumers to purchase sustainable packaging yet does not specify the effect of a variable, e.g. sustainable packaging, on consumer’s attitude. To take the impact of sustainable packaging into account too, the proposed study suggests that factors of sustainable packaging, ie. features of sustainable packaging like function, material, type and product quality, are positively associated with consumers’ attitude. For example, Steenis et al. (2017) showed that sustainable packaging has salient association and moderate importance for consumer attitude.

Green Perceived Value

This study will consider the Green Perceived Value of Sustainable Packaging which can be described as “the perception of customers regarding the green product characteristics, and its impact on the environment” (Song et al., 2019; Hänninen & Karjaluo, 2017, cited in Ahmed

et al.). It is given to environmentally friendly products by consumers and indicates the benefits they believe to obtain through the purchase of a green product (Chen & Chang, 2012).

Demographic Variables

Chirilli et al. (2022) argue that the characteristics of sustainable packaging alone cannot bring about a positive environmental development as they must be enforced by the consumers' wish and propensity to purchase sustainable packaging. Thus, the consumer becomes determining for the success of sustainable packaging. Subsequently, demographic variables form part of the model of the proposed research as they depict sustainable consumer characteristics that enable researchers to explore the drivers and barriers to sustainable consumption as well as have been identified as key determinants of sustainable consumption by various authors (Nguyen et al., 2019). In the past for instance, socio-demographic characteristics have been hypothesised and proven to significantly influence environmental sustainability awareness, behaviour and consumers' expectations (Chirilli et al., 2022). In the same manner, Shoeran & Kumar (2022) who based their research on sustainable consumption on the Theory of Planned Behaviour as well argued that the demographic variables gender, age, annual income, and education level have a significant moderating effect between attitude and sustainable consumer behaviour intention, between subjective norms and sustainable consumer behaviour and between perceived behavioural control. Likewise, the proposed study includes demographic variables as moderating variables of the research's conceptual framework. The demographic variables that will be used are age, gender, nationality and earning of income.

Proposed Hypotheses and Conceptual Framework

The hypotheses incorporated in this study apart from the hypotheses established in the Theory of Planend Behaviour (H2 – H5) do not only correlate with the objectives of this study but have also been recently formulated by authors like Shoeran & Kumar (2021) and Ahmed et al. (2023). Hence, from the above argument including the Theory of Planned Behaviour by Ajzen, the proposed hypotheses are developed:

- H1: Sustainable packaging is positively associated with attitude toward behaviour.
- H2: Attitude has a significant positive influence on behavioural intention.
- H3: Subjective norms have a significant positive influence on behaviour intention.
- H4: Perceived behavioural control has a significant positive influence on behavioural intention.
- H5: Intention has a positive relationship with behaviour.
- H6: Green perceived value has a mediating effect on behavioural intention and behaviour.
- H7: Demographic variables age, gender, nationality, and earing of income have a moderating effect on the relationship between attitude and behavioural intention.
- H8: Demographic variables age, gender, nationality, and earing of income have a moderating effect on the relationship between subjective norms and behavioural intention.
- H9: Demographic variables age, gender, nationality, and earing of income have a moderating effect on the relationship between perceived behavioural control and behavioural intention.

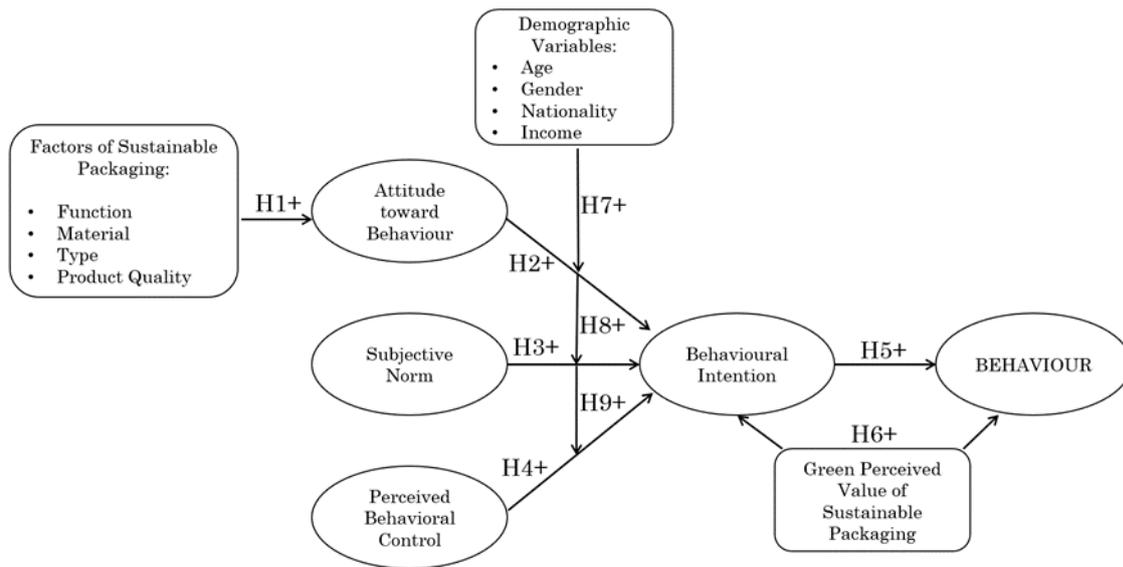


Figure 2: conceptual framework developed for proposed study

RESEARCH METHODOLOGY

For this study quantitative and explanatory research will be employed. The independent variables are Sustainable Packaging, Attitude toward Behaviour, Subjective Norm, Perceived Behavioural Control and Intention while the dependant variable is Behaviour. Besides, there are also the Demographic Variables as moderating variables. The data will be collected through online questionnaires via Google Forms. They will be both in English and Thai (back-to-back-translation) and consist of two parts. The first part identifies the demographic characteristics of the respondents and the second includes items that focus on the variables of the conceptual framework. First, a pilot study will be conducted. The sampling method that will be used is judgmental sampling. Here, the research will be designed to explore consumer purchasing behaviour of Thai and International undergraduates, graduates and faculty members selected by the authors at Siam University, Thailand. The participants will be those who purchase sustainable packaging. As for data analysis IBM SPSS V25 will be used, and the measurement scales are all adopted from prior literature.

PLAN

The research planning started in week 36 of 2023. Both the planning and the literature search took extensive time – up to two months. Furthermore, developing the questionnaire, which will be both in English and Thai, will be finished by the end of week 45. Then, the pilot study will be carried out in week 46. The real data collection is planned to start within the same week, after potential adaptations of the questionnaire. Lastly, the report will be written and presented by week 48.

Year	2023												
Research (Activities)	wk 36	wk 37	wk 38	wk 39	wk 40	wk 41	wk 42	wk 43	wk 44	wk 45	wk 46	wk 47	wk 48
1.Planning	of												



research													
2.Literature Search													
3. Development of questionnaire													
4.Pilot study													
5.Data collection													
6.Data entry and analysis													
7. Report writing and presentation													

Table 1: Gantt Chart

EXPECTED OUTCOME

This study’s goal is to explore green purchasing intention and awareness as well as actual consumer behaviour of respondents at Siam University in Thailand. Hence, a questionnaire will be employed to investigate the relationship between the different variables of the authors’ conceptual model which is based on the Theory of Planned Behaviour. The authors expect to find a direct positive relationship between all variables as well as that sustainable packaging, including product quality, function, material and type, has a positive and significant impact on consumers’ purchasing behaviour. Furthermore, the study hypothesizes that demographic variables have a moderating effect on the relationship between attitude toward behaviour and behavioural intention, between subjective norm and behavioural intention and between perceived behavioural control and behavioural intention (Shoeran & Kumar, 2021). Prior research using the Theory of planned Behaviour have found that the three factors attitude toward behaviour, subjective norm and perceived behavioral control have a positive and/or significant relationship with intention (Prakash & Pathak, 2017; Shoeran & Kumar, 2021; Ahmed et al., 2023).

In sum, the research aims at shedding light on consumer purchasing behaviour of packaging in the food and beverage industry and the influences on it as well as depicting whether consumers show a propensity to buy sustainable products the way recent trends suggests or whether one can rather detect an intention-behaviour gap.

LIMITATION OF THE STUDY

This cross-sectional study will be limited both to the food and beverage industry as well as to the participants at Siam University which means that the research does not allow any generalization of the findings. On top of that it will not address the polemic of greenwashing that can be seen in relation to the implementation and selling of allegedly sustainable products.

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