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Elucidating the factors influencing the acceptance of green products: An extension of theory of planned behavior



Shih-Chih Chen *, Chung-Wen Hung

Department of Accounting Information, Southern Taiwan University of Science and Technology, No. 1, Nan-Tai Street, Yungkang Dist., Tainan City 710, Taiwan

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ABSTRACT

Recent environmental disasters worldwide have made people consider the need for environmental protection. Therefore, the invisible pressure from these people made a paradigm shift on the economic structure as well as the business strategies. Even if these pressures from the environmental-friendly people are not forceful, it is nevertheless inevitable to put more strategic importance on the environment. The aim of this study was to identify determinants of acceptance of green products, including attitude, subjective norm and perceived behavioral control of theory of planned behavior with social impression, environmental consciousness, and environmental ethics and beliefs to understand and predict the adoption of consumer intentions. An online survey with 406 responses has been analyzed by partial least square (PLS). This study found that the attitude, perceived behavioral control, environmental consciousness of consumers and the environmental ethics and beliefs of consumers have a significant positive association with their intention to use green products, while the subjective norms consumers and the social impression consumers are positively but not significantly correlated to their intentions towards using green products. Based on these results, several strategic suggestions for participators and academics as well as policy implications to promote the green production were offered.

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1. Introduction

Rapid economic development has resulted in overconsumption of natural resources and disruption in the balance of the ecological environment. Global warming, ozone depletion, water and air pollution, and species extinction have become key environmental issues [1]. The borderless competition under the WTO system has resulted in prosperous global economic development. Unfortunately, this ever increasing demand for the economic development brought the unbearable side effect of climatic anomalies, as can be seen by the endless stream of natural disasters, including mudslides, hurricanes, floods, and droughts, around the world in recent years and the loss and damage these climate changes bring. Kates [2] pointed out that overpopulation and excessive consumption are the main causes of today's ecological and environmental crises. These problems are especially severe in Northeast Asian countries such as China, Korea, and Taiwan due to their high population densities. The dense population living in each developed and developing countries has put a lot of pressure on the environment, with the density of sources of pollution continuing to increase and environmental burdens becoming increasingly heavy. These environmental pressures have forced to reconsider and reflect upon the relationship between human beings and nature because the extraction of natural resources is a disposable factor in the development of human civilization [3,4]. Thus, the idea of environmental protection has begun to gradually emerge in people's minds.

Green consumption is one way to increase environmental sustainability. When green consumers are aware of the deteriorating environment and develop a more responsible attitude toward environmental protection, their consideration will include in their purchase decisions. leading them to buy products which have minimal impact on the environment [5]. Green products are defined as products produced using techniques and chemicals used for various environmental services such as sewage treatment, solid-waste management, air-pollution control and other service which are all aimed for environmental protection [6]. According to Nimse et al. [7], green products can be defined as products that are composed of recyclable materials and are manufactured using water- and energy-saving methods to reduce waste, package and times of toxic materials disposal. Seyfang [6] also indicated products produced and service offered by green products and service industries can be used to measure, prevent, limit, reduce or repair environmental damages to water, air and soil and deal with problems regarding waste, noise and ecosystem which includes technology, products and service in connection with zero-discharge to reduce environmental risk and pollution and to see a decline in the use of resources.

Problems of mass-production, mass-consumption, and massdisposal resulting from rapid economic growth have raised various

^{*} Corresponding author.

E-mail addresses: scchendr@stust.edu.tw (S.-C. Chen), cwhung@stust.edu.tw (C.-W. Hung).

ethical issues. Although most people purchase products every day, few people consider the ethical problems of consumption. The literature indicated that the percentage of environmentally friendly products in the aggregate demand is low [8]. A study by Lai [9] indicated that, if people can think globally and act locally to affect the environment and launch environmental campaigns, the outcomes of such environmental campaigns would be remarkable. The question is how consumers can reduce local environmental burdens. The most direct and efficient way to reduce overconsumption of resources is by changing consumption patterns. Studies such as Málovics et al. [10] also pointed out that reducing consumption levels is beneficial in decreasing global overconsumption of natural resources.

Consumers play a fundamental role in the green revolution because green consumption not only has positive effects on the environment, the economy, and society, but is also essential for sustainable development [1,11]. After comprehensive and profound thinking and reflection regarding the relationship between humans and the environment, the concept of environmental consciousness was introduced in the 1960s. The environmental consciousness development process was formed to meet the urgent demands of human social practices and consists of a multi-layered, comprehensive system with regard to the relationship between humans and the environment [12,13]. Vlek & Steg [14] pointed out that environmental consciousness is the investigation of the decisions people make on the environment with the compromise or contradiction between sustainable environmental quality and immediate economic growth. Growing environmental consciousness profoundly affects consumer demands and behaviors, and consumers are increasingly willing to use green products and contribute more to them [15]. Bansal [16] indicated that people with strong environmental consciousness are more likely to engage in environmentally-friendly activities. Therefore, this study used environmental consciousness as a way to predict consumer behavior.

Consumer acceptance of innovative products is widely studied in the field of information management [17]. Since the 1980s, many studies have combined information management, sociology, and psychology to develop theories for explaining or predicting user acceptance of technology products [18]. The theory of planned behavior has been often used to study the relationship between people's beliefs, attitudes, and behavioral intentions, including green consumption behavior [19], ecological behavior [20], readiness for environmental protection [21], marketing of environmentally friendly products [22] and choice of green hotels [23,24]. However, although previous studies have used the theory of planned behavior to explain behavioral intentions, few studies have examined environmental cognitions of individuals. Therefore, this study used an extended theory of planned behavior model to analyze empirical data and learn about behavioral intentions relating to green consumption. The implications of this study can be considered when introducing environmental policies, developing corporate environmental consciousness, and promoting green consumption in the hopes of increasing social environmental consciousness and achieving environmental sustainability.

The remainder of this study is organized as follows. In Section 2, we reviewed relevant literature pertaining to the related factors and developed the research hypotheses. Afterwards, we presented the research methodology in Section 3, and demonstrated the analysis results in Section 4. Finally, Section 5 presents our findings, theoretical and practical implications, and limitations of this research.

2. Literature review

2.1. Theory of planned behavior

The theory of planned behavior is an extension of the Theory of Reasoned Action (TRA) and the multi-attribute attitude model [25,26]. One of the earliest and widely applied models, TRA was introduced by Fishbein and Ajzen and assumes that individual behavior can be controlled at will. However, TRA cannot fully explain human behavior since, in reality, different factors may affect behavioral intentions. As such, Ajzen [25] extended TRA and proposed theory of planned behavior as a model which can more accurately predict and explain human behavior.

The core argument of theory of planned behavior is that human behavior results from rational choices rather than from willful action and is influenced by attitude, subjective norm, and perceived behavioral control through their effect on behavioral intentions. Restated, human behavior is governed by behavioral intentions, which are in turn influenced by attitude (evaluation of the target behavior), subjective norms (judgment about others' potential attitude toward the target behavior), and perceived behavioral control (perceived ability of performing the target behavior).

Many studies agreed that theory of planned behavior accurately predicted many different behaviors. Hagger et al. [27] maintained that the three aforementioned factors can be used to predict behavioral intentions and behavior; however, many other studies suggested that more predictors should be added to theory of planned behavior in order to increase its explanatory ability. Thus, this study integrated additional factors of social impression, environmental consciousness, and environmental ethics in the proposed model used to examine consumer acceptance of green products.

2.2. Social impression

Social impression refers to the thoughts and expectations of society regarding personal behaviors, and the degree to which the extrinsic influence of social impression can affect the confidence and sense of achievement of an individual can be seen as a reflection of position, achievement, respect, and approval, as well as other factors. Long & Shiffman [28] believed that consumer use or selection of products can reveal either a desire to belong to a particular group or, conversely, an unwillingness to be a part of it. Thus, consumers may give positive feedback regarding certain brands due to social impression. One example is how owning a certain product can gain the consumer a good reputation within a group or groups that he or she desires to join.

According to the Maslow hierarchy of needs [29], all human behavior arises from needs, and all individuals, regardless of their cultural backgrounds, have five basic needs. These needs can be divided into 5 levels according to their degree of priority. Starting from the bottom level, the need of each level must be satisfied before the individual moves to the next level and attempts to satisfy the corresponding need. The highest level needs, in other words, follow the most fundamental needs (the most primary ones) in terms of priority. From the lowest, most fundamental level to the highest, the needs are physiological needs, safety needs, love and belonging needs, esteem needs and self-actualization needs. Among these, esteem needs refer to the need for self-esteem and the need to be valued by others. Esteem refers to feelings of achievement and feelings of being valued by others based on personal achievements, position and appearance. In other words, individuals usually desire to be esteemed and valued by others. Consequently, human behavior involves the pursuit of self-actualization, socio-economic position, a sense of honor and a sense of achievement.

2.3. Environmental ethics and beliefs

Attfield [30] pointed out that traditional ethics emphasizes interpersonal ethics while environmental ethics emphasizes the obligations and duties people have to the environment. Another study by Ferkany & Whyte [31] pointed out that, in the context of a community, we should meet moral obligations and advocate the cultivation of environmental ethics education, which includes knowing the role environmental ethics has played in environmental policy and the responsibilities we bear in terms of problem solving. Additionally, Swanton [32] mentioned that we must understand that environmental ethics is appropriate to the Download English Version:

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