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Why Do Consumers Switch to Biodegradable Plastic Consumption? The Effect of Push, Pull and Mooring on the Plastic Consumption Intention of Young Consumers

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Abstract: Recent economic growth has increased human concern for the environment, especially in developing countries. Because of this paradigm shift, the Chinese population in particular has become more aware of problems with plastic pollution. To reduce the usage of single-use plastics in the nation, this study intended to ascertain the switching intention of Chinese young consumers towards the use of biodegradable plastics. Drawing upon the push–pull–mooring model and institutional theory, this study investigates the push factors, including environmental threats, knowledge, and the strict regulative environment; pull factors, including alternative attractiveness and normative environment; and mooring factors, such as cost switching and self-efficacy. The important findings of this study indicated that all PPM factors except environmental knowledge have an impact on the intention of switching to biodegradable plastics. It was also found that mooring factors significantly moderate switching. We offer important theoretical and practical implications for policymakers and businesses.

Keywords: green behavior; biodegradable plastics; switching intention; PPM; institutional theory

Citation: Gao, S.; Shao, B. Why Do Consumers Switch to Biodegradable Plastic Consumption? The Effect of Push, Pull and Mooring on the Plastic Consumption Intention of Young Consumers. *Sustainability* **2022**, *14*, 15819. https://doi.org/10.3390/su142315819

Academic Editors: Diego Monferrer, José Luis Vázquez-Burguete and Ana Lanero Carrizo

Received: 13 October 2022
Accepted: 23 November 2022
Published: 28 November 2022

1. Introduction

Plastic is a common pollutant all over the world, whose persistence in the ecosystem and potential harm to the environment and living things as a whole are the most disturbing aspects of an urbanized existence [1–3]. Plastics are relied upon by modern culture because of their low cost, design adaptability, strength, lightweight, formability, etc. [4,5]. Plastic bottles and bags, food packaging, and other single-use items play an important role in peoples' lives [6]. Additionally, the outbreak of COVID-19 has highlighted the importance of plastic consumption in daily life [4,7]. Even though plastic was perceived as "scientific wonder" because it has made convenience substantially easier for a long time, its toxic chemical composition and negative environmental repercussions cannot be ignored [8,9].

The low environmental awareness of people is one of the main causes of plastic pollution. This is because the majority of customers suffer from an addiction to single-use plastics despite the fact that half of all manufactured plastics are designed to be used just once before being disposed of [10]. This behavior will accumulate disposable plastics, especially when the recovery and recycling process is inadequate, leading to plastics ending up in oceans and landfills [11]. The government has promoted the use of biodegradable plastic bags that are used by fewer individuals than anticipated, which is directly attributed to low demand and excessive cost [12]. Furthermore, this behavior is also affected by a lack of environmental knowledge. A survey by Ahmad et al. [13] showed that a great mass of customers lacked knowledge of environmental terminology and concepts regardless of their level of education. In addition, Dyehouse et al. [14] pointed out that a number of people only have a general environmental awareness and are lacking in the comprehension of more complex environmental issues and ideas.

With its enormous population, China is one of the top nations in the world in terms of plastic usage [2]. Because of the severity of plastic pollution, the government of China has

implemented numerous rules and policies to limit the use of single-use plastics, especially in the catering industry, and raise public awareness on the hazards of single-use plastics. For instance, some types of plastic bags were outlawed back in 2008 [15]. The new and stringent regulations of China for the manufacture, sale, and usage of plastic products went into effect in 2021. It is challenging to depend only on government actions to change how society views the environment. This fact allows for the use of biodegradable plastics to replace single-use ones, with an aim to address the problems of plastic waste pollution while ensuring the sustainability of the environment. Irrespective of age, the government or residents, and consumers or manufacturers, this obligation is assumed by all parties with the aim of preserving the environment. The ecosystem needs to be cared for and protected by everyone.

Therefore, through integrating the push–pull–mooring (PPM) model [16] and institutional theory [17], this study first attempts to discuss Chinese consumers switching intention from single-use plastics to biodegradable plastics. The PPM model laid the groundwork for encompassing socioeconomic and environmental factors that may have an influence on the switching intention of an individual, and institutional theory aided in illuminating the role of social and regulatory aspects. This study investigated (i) the relationship between consumers' perception and acknowledgement of the environment and switching intention; (ii) how formal and informal institutions influence the behavioral intention of consumers; (iii) the role of biodegradable plastics in the switching intention of consumers when they are used as an alternative to single-use plastics; and (iv) the direct effect of mooring factors as a single construct on the switching intention of consumers, and its effect on the switching intention of consumers when it interacts with push and pull factors. To explore the changeover to biodegradable plastics and green behavior, this study is helpful for different stakeholders such as researchers, policymakers, and practitioners to understand the specific practical details of environmental issues: specifically, the critical role of consumers and the essential restriction policies for reducing plastic pollution.

First, the literature is analyzed to create a model containing push, pull, and anchoring components before data collection through a primary survey. After collection, data are discussed with some implications for the future.

2. Literature Review

2.1. Biodegradable Plastic

People prefer green, less polluting, and more safety products when they face growing plastic pollution [18]. An instance of a green product is biodegradable plastic. These biodegradable polymers are probably obliterated by sunlight and bacteria [19]. Depending on the quality of plastic, its biodegradation occurs under a range of soil conditions. Microorganisms react differently to degradation processes, each of which has a specific set of soil conditions preferred for growth [20]. The breakdown of a few biodegradable polymers only takes place in industrial waste treatment systems when they are exposed to ultraviolet (UV) radiation or temperatures exceeding 50 °C for a sustained length of time [21]. Samir et al. [22] claimed that biodegradable polymers can break down under both aerobic and anaerobic conditions.

An experiment conducted by Orenia et al. [23] showed that biodegradable polymers with the right proportion of starch are able to be decomposed and produce high tensile strength. Additionally, agricultural waste-derived cellulose acetate (CA) may be capable of replacing and/or reducing the usage of petroleum-based and non-biodegradable materials in packaging, fiber, salt containers, and plastic components [24]. Another illustrative example is represented by microbial poly-hydroxyalkanoates (PHAs) which have been utilized for many years to create biodegradable plastics [25,26]. Davis and Song [27] stated that increasing the usage of biodegradable plastics and packaging aims to replace petroleum with recyclable and more sustainable resources and support the adoption of a holistic approach to waste management by minimizing the usage of landfills [21,28].

2.2. Related Theory and Hypothesis Developments

The increasing focus on environmental and social issues in the public agenda provides an opportunity to integrate them into sustainable commodity supply chain management [29]. Boons and Lüdke-Freund [30] emphasized the critical role of typical normative requirements for sustainable innovative business models in supporting technical services [31–33]. Plastic pollution and growing environmental concerns are driving industry to develop sustainable and cleaner products [34]. This requires knowledge from suppliers and consumers, a certain mindset, and an intention to switch to green products [35]. This study combines the PPM model with institutional theory to analyze the green-switching behavior of consumers when faced with environmental problems such as plastic pollution. This paper will explain these frameworks and provide insights from the previously published literature related to the use of the PPM model and assumptions.

The PPM model includes three significant migration elements: push, pull, and mooring. Specifically, push denotes factors that repel people and serve as sources of improvement for the sociopsychological security of migrants at either their present residence or destination, while pull refers to enticing qualities. Along with push and pull factors, several anchoring elements point to important personal and social aspects and aid in the decision to migrate [16]. PPM is a comprehensive model that may be used to understand the switching intention of consumers towards a variety of products and services, including elements repelling (pushing), attracting (pulling), and limiting or enabling switching (mooring), just as the antecedents of migration [36]. Thanks to its ability to classify quantifiable factors into effect categories within the theoretical framework, PPM was identified by Bansal et al. [37] as an important model for explaining the switching behavior of customers. The PPM model fails to advocate any set variables for push, pull, and anchoring compared with other frameworks, such as the theories of reasoned action and planned behavior, norm action and technology acceptance models. Cheng [38] asserted that the pull or push weight of a variable depends solely on how important it is to solve a problem. Despite having focused on integrating environmental concerns, knowledge and efficacy into the conventional theories of reasoned action and planned conduct as well as norm value belief, researchers have been unable to fully account for the green behavior and attitude of consumers [39–41]. Institutional theory aids in explaining institutional and social effects, whereas the PPM model is able to capture the complex behavior of humans towards sustainability by integrating individual, group and governmental effects to understand the behavior of consumers [42]. This study understands the effect of regulative and normative environment from the perspective of institutional theory. An institution is a formal set of rules and regulations that affect an individual's decision-making process [17] and green switching behavior. The regulative environment indicates the encourage/intervening effect of rules and regulations on individual behavior, whereas the normative environment refers to the effect of informal environments on shaping individuals' behavior. The following section highlights the significant constructs of this study's theoretical model, which integrates factors from the PPM model and institutional theory.

Singh and Rosengren [43] investigated the switching intentions between two online retailers, and indicate that push factors (e.g., low consumer service, product delivered issues, high price perception, and technical issues), pull factors (e.g., alternative attractiveness and word of mouth), and mooring factors (e.g., switching costs and prior switching behavior) have important effects on switching intentions. Ghufran et al. [44] explored Chinese consumers' switching intentions from conventional food to organic food, especially during the COVID-19 pandemic. The results revealed push factors (i.e., neophilia, food safety, and nostalgia) positively associated with switching intentions. In addition, pull factors (i.e., organic attraction) as a moderator pushes the consumers switch sense. Moreover, the mooring factor (i.e., switching cost) negatively affects the consumer switch intentions. Peng et al. [45] investigated the role of networks, deprivation, and transfer trust on mobile instant massaging users' switching behavior. This behavior is similar to physical migration, especially when switching occurs as a result of using a product or service for a specific time period. The findings of Wu et al. [46] revealed that push factors (risk), pull factors (trust

and critical mass), and mooring factors (switching cost and social norms) have a positive influence on consumers switching intention to a cloud storage service. Lee [47] employed the PPM model to study consumers' switching intention between mobile and offline stores and noted that push and pull factors had a positive impact, while mooring factors had a moderating effect.

According to Bansal et al. [37], the PPM model combines a collection of predictor variables into a theory-outlined effects category. The PPM model does not explicitly state the push-, pull-, and mooring-related variables. Li [48] emphasized that push and pull impacts are in an equilibrium and the assignment of an element as a pull or push effect is set by its correlation with the origin. There is a fantastic agreement among researchers that switching cannot be attributed to one cause; however, it may be declared from an associated idealistic perspective. The assignment of weights to environmental factors as push, pull, or intervening factors depends entirely on the prevailing circumstances [49]. The theory of reasoned behavior (TRA) and the theory of planned behavior (TPB) remain relevant in capturing inexperienced buying behavior; however, they fail to elucidate the connection between inexperienced attitudes and actual inexperienced purchases through antecedents such as attitudes, norms, and perceived activity management [41,50,51]. This limitation has sparked a dialogue on the validity of those activity measures for quantifying the gap between attitudes and ecological behaviors and inexperienced buying. Classical models such as TRA and TPB and customized frameworks in specific cultural or native contexts, emphasize the combination of psychological feature factors such as environmental issues, environmental information, and self-efficacy. Frameworks that emphasize self-interest have chosen TPB, whereas different frameworks with pro-social motivation integrate normative activation models or normative theories' valuable beliefs [52]. Paul et al. [41] indicated that the extended TPB has higher utility than TPB and TRA in predicting inexperienced purchasing. The divergent consensus on the application of these frameworks forces us to integrate the theoretical framework of switching to analyze complex human behavior in sustainability. Assessing the interactions between people, firms, and governments, considering each micro- and macro-level factor, is critical to determine "what influences shopper intentions and also the ensuing behaviors" [42].

In addition, as the younger generation becomes the future workforce, they have become a significant consumer group in the future, which means their behaviors in relation to green products are important to ensure the environmental sustainability [6]. Furthermore, Prakash and Pathak [50] explained that it is crucial to consider the attitude of young consumers towards green consumption in order to increase their willingness to purchase eco-friendly products. It is also the responsibility of the industry to develop and change consumers' behavioral intentions regarding biodegradable plastics, for example, by using social marketing campaigns [15]. The control of intentions is determined by specific behaviors. This study combines institutional theory with the PPM model to propose a framework to parse the green behavior of young people consuming single-use plastics to biodegradable plastics.

2.3. Switch of Intention to Biodegradable Plastics

Known as intention, a state of mind directs and organizes behavior [23], which is essentially a readiness to act in a certain way to bring about a certain situation. Despite being still an intention, it will not occur [53]. As asserted by Ajzen [54], it is assumed that intention obtains persuading elements influencing behavior and action, and is the blatant indication of a person's willingness to make effort and the extent to which he prepares for expressing and engaging in behavior [55]. In general, a stronger desire to engage in action should lead to a more likely performance [15]. Here, consumers switching intention from single-use plastics to biodegradable plastics can be seen both globally and especially in China.

Today, the world is witnessing a growing yearning for green products. In this context, academics express deep concern for public welfare and are striving to find solutions to

environmental problems [56]. Environmental consumerism and the usage of products friendly to the ecosystem are two key behaviors of environmental consciousness [3]. Some instances of these products include low-energy and recycled or recyclable home items, perfumes free of chemicals, post-consumer plastics or paper, energy-saving light bulbs, goods made of biodegradable materials, etc. [57]. On top of this, a lot of discussions have been held on biodegradable plastics during the past few years. Despite vehement advocacy by one side, the proposal was scorned by the other as unrealistically executable. Nevertheless, Orenia et al. [23] asserted that biodegradable plastic, also called bioplastic, is developed to settle environmental problems caused by single-use plastics, demonstrating how consumer behavior is shifting away from single-use plastics step by step and towards biodegradable plastics [58]. In the past years, sustainable natural resources (such as plants) were used for cultivation, especially in European nations [30].

With the largest population in the world, China has been actively tackling the challenge of plastic pollution. The study by Kang et al. [1] showed that Chinese consumers are supportive of the prohibition on plastics and choose to purchase biodegradable plastics, and emphasized that it is irresistible to promote biodegradable plastic bags. The Global Change Information System [59] showed that the sudden ban on non-biodegradable single-use plastics has sparked a boom in the production of alternative products. It is expected that China will produce seven million tons of biodegradable plastics by 2025 [60]. The Chinese government has demonstrated a strong commitment to sustainable consumption and development in addition to the plastic ban. In Jilin Province, China, for example, the government is encouraging the use of aged corn for biodegradable plastics [59], which not only resolves the problem of the demand for raw materials but also helps local governments to promote policies that are consistent with the environmental policies of the central government. This is a win–win situation for the government and market as well as individuals. As green products can be used for pollution reduction, the plan for tackling plastic pollution (2021–2025) also directs government departments to explore ways to further reduce the use of plastics and identifies e-commerce packaging and government procurement as two major areas to target for reduction in single-use plastic consumption in the near term [60]. This fact proves that the Chinese people, including the government, manufacturers and consumers, are heading quickly towards the use of biodegradable plastics.

3. Research Hypothesis

3.1. Push Factors (Environmental Threat, Environmental Knowledge, and Regulative Environment) and Switching Intentions

Push factors can be defined as factors "that motivate people to leave an origin" [61] (p. 196). In this study, environmental threat, knowledge, and the regulative environment were integrated into push factors.

Environmental threat refers to the degree to which a person experiences negative repercussions from challenges related to the environment [62]. Based on the protection motivation theory, individuals conduct specific protective behaviors following the evaluation of a particular threat associated with a particular issue [63]. In this work, switching intention was prompted by individuals' perception of environmental threats. People show a higher willingness to engage in eco-friendly movements when having negative emotions in consideration of environmental issues [64]. They will have the desire to protect the environment when aware of potential threats [65]. Ahamd and Thyagaraj [66] indicated that the perception of environmental change and environmental concern positively influence consumers' attitudes and behaviors towards green products. It is known that the severity of plastic pollution raises concerns about the environment and people's health, and its level is gradually decreasing with the introduction of the "plastic restriction policy" [1]. All these aspects lift the awareness of plastic pollution. Predictably, current environmental issues have increased individual awareness of environmental hazards. Therefore, people are assumed to be more willing to switch from single-use plastics to biodegradable plastics

when faced with a threat to the environment and their health. Based on this discussion, we hypothesize that:

H1a. *Environmental threat significantly affects switching intention.*

Generated with the actual world through the sensory input of people, knowledge is ultimately analyzed by the subconscious [67]. MacInnis et al. [68] mentioned that knowledge has an important role as an antecedent to the receivers' capacity to process the information. Kumar et al. [69] suggested that knowledge impacts the attention to and helps in the processing of a message about a product (biodegradable plastics in this case). The evidence showed that the intentions of consumers toward green items may be influenced by their level of understanding [69], which is ascribed to the fact that knowledge is crucial when people make decisions about their lives, particularly when it comes to purchasing.

According to Rajendran and Wahab [70], the use of knowledge happens in the product assessment phase of a consumer's journey, where their evaluation of goods resulting in positive results is an instance of knowledge and an important tool for helping consumers to assess or evaluate their purchase behaviors. In addition, consumer perception is a prime tool for supporting consumers in examining or evaluating their purchase decisions, which is an example of knowledge. Consumer perception is also an illustration of knowledge and plays a critical role in helping consumers evaluate their purchase decisions. Further, the more consumers learn about the information of green products, the more they have the perception and desire for such products [57]. Therefore, knowledge has a significant effect on altering individuals' attitudes and intentions toward green products.

Additionally, users' comprehension degree of environmental concerns influencing the behavior of a person in response to environmental issues can be used to determine their level of knowledge and education regarding the relevance of employing environmental knowledge [6]. The better they understand environmental issues, the more likely they are to switch to buying the green products. Based on this discussion, we hypothesize that:

H1b. *Environmental knowledge has an impact on switching intention.*

Effective rules and regulations are necessary for the improvement of environmental quality, especially the promotion of clean and biodegradable plastics. According to Sajjad et al. [49], institutional performance may diminish the negative association between income inequity, low environmental quality, and public health. The government is of importance in the process of consumers' buying goods, which can promote industry development by issuing relevant policies. Consumers tend to buy environmentally friendly products because they trust the government. In other words, the behavior of the government will positively change the attitude of consumers towards green consumption [71]. Apart from exerting an impact on consumer attitude, government actions also significantly influence the direct consumption of citizens. Agovino et al. [72] and Zhang et al. [73] emphasized that government actions will boost the green consumption of consumers. Facts also have proven that policies of plastic restriction and prohibition controlling plastic pollution can effectively generate sustainable consumer behavior [74]. Tougher measures taken in 2021 had a positive impact, with a significant decrease of 46% in the use of toll transport belts and a significant increase of 117% and 36% in the use of old and degradable plastic bags, respectively [75]. The plastic bag pricing policy lowered the use of single-use plastic bags by 44% [2]. The promotion of biodegradable plastics can help reduce plastic pollution, while strict policies will prompt consumers to switch to reusable plastics [76]. Based on this discussion, we hypothesize that:

H1c. *The strict regulative environment has an impact on switching intention.*

3.2. Pull Factors (Alternative Attractiveness and Normative Environment) and Switching Intentions

Pull factors can be defined as factors that "draw perspective migrants to the destination" [18]. In the present study, alternative attractiveness and the normative environment were included in the category of pull factors.

Owing to environmental concerns (plastic pollution), degradable plastics are becoming an appealing alternative to single-use ones [77]. Consumers showing sensitivity to environmental problems are more pleased to purchase green products [78]. The goals of low carbon, plastic reduction, and sustainability can only be achieved through changes in the social behavior of green consumption [6]. Moshood et al. Ref. [75] maintained that biodegradable plastics are a practical alternative to single-use plastics and a necessary alternative for sustainable development. Given the possible health problems caused by plastic pollution, consumers prefer clean and green products [6] (e.g., biodegradable plastics). Based on this discussion, we hypothesize that:

H2a. *Alternative attractiveness has an impact on switching intention.*

People evaluate the environmental impact of their purchases on the basis of their normative environments, exerting a social influence on how they make purchases [79]. Consumers' buying habits reflect their social tendencies [3]. Changes in attitudes and motivations that promote green behavior can be evoked by social influence [80]. The green buying behavior of customers reflects the important and guiding role of social values without discernible influence from functional, emotional, or conditional values [81]. As Jugert et al. [82] emphasized, collective efficacy manipulations play a critical role in increasing individual pro-environmental behavior. Moreover, social value positively influences the change of behavioral intention [83]. For example, a normative environment may prompt consumers to switch from single-use plastics to biodegradable plastics. Based on this discussion, we hypothesize that:

H2b. *The supportive normative environment has an impact on switching intention.*

3.3. Mooring Factors (Self-Efficacy and Switching Cost) and Switching Intentions

Affecting switching decisions directly or indirectly, mooring factors expedite or restrain the switching process through intervention. In this study, self-efficacy and switching cost were incorporated into mooring factors. Switching cost indicates the additional cost that consumers are required to pay for biodegradable plastics.

Self-efficacy refers to a crucial psychological resource for motivating people and helping explain why people engage in behavior supporting environmental protection [84], whose higher level increases green consumption behavior [85]. Being responsible contributes to green behavior, and those who hold a positive attitude towards the environment are more inclined to do that [86]. On the other hand, activist conduct can only be interpreted by efficacy, and perceived consumer efficacy is positively correlated with environmental concerns. Value orientation affects conduct in the presence of efficacy and concerns. Environmental concerns are positively influenced by altruistic value orientation [87]. The perception of consumer effectiveness, environmental awareness and attitude towards green products all have a substantial and direct impact on the decision of an individual to make a green purchase [39].

However, the desire of consumers to switch a product or service decreases with the increase in switching cost, which reflects the time and effort spent, the money invested, and the mental effort expended [88–90]. A large price difference exists between biodegradable and disposable plastic bags, which is due to the higher production cost of biodegradable bags. Consumers participate in this price comparison. High switching cost increases the likelihood that consumers will continue to consume single-use plastics despite being aware of their environmental hazards. Based on this discussion, we hypothesize that:

H3a. *High self-efficacy will increase the switching intention of consumers.*

H3b. *Low switching cost will increase the switching intention of consumers.*

3.4. Moderation Effect of Mooring Factors (Self-Efficacy and Switching Cost)

Despite showing the direct effect, the mooring factors (i.e., high self-efficacy and low switching cost) also moderate the relationship between push, pull, and dependent variables. Facing the severity of plastic pollution, consumers with higher environmental concerns and higher ecological literacy may retain positive green attitudes, especially under the influence of restrictive policy promotion and social influence, high-efficacy consumers will actively participate in green consumption [6]. However, the higher price of biodegradable plastics may make the benefits perceived by consumers to be less than single-use plastics [91], and they will keep their current choice. According to Singh and Rosengren [43] and Ghasrodashti [89], consumers have a higher possibility of sticking with their existing choices (e.g., existing service providers or products) when mooring factors (e.g., low self-efficacy and high switching cost) outweigh push and pull variables. We assume a similar moderating effect will be present in the context of consumers' switch to biodegradable plastics. Based on this discussion, we hypothesize that:

H4a. *Mooring factors (collectively) moderate pull factors while addressing switching intention.*

H4b. *Mooring factors (collectively) moderate push factors while addressing switching intention.*

Drawing upon the PPM model and institutional theory, this study includes one dependent variable: switching intention, and seven independent variables including push factors (i.e., environmental threat, environmental knowledge, and regulative environment), pull factors (i.e., alternative attractiveness and normative environment), and mooring factors (i.e., self-efficacy and switching cost). Furthermore, mooring factors are included as a moderating variable. Figure 1 shows the conceptual framework for this study.

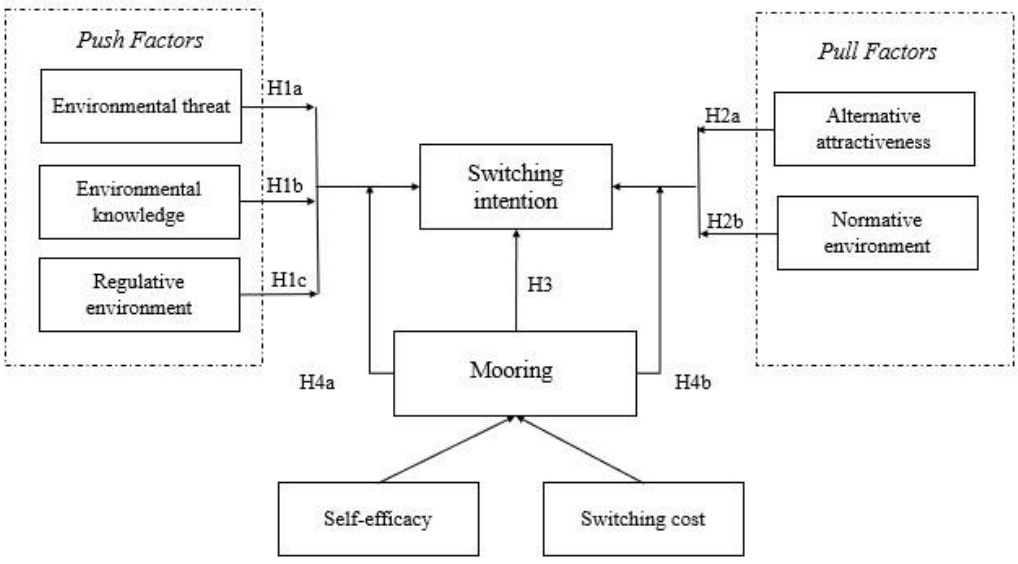

Figure 1. Conceptual framework.

4. Methods

The current study adopted a quantitative method, which discusses whether there is any correlation between the variables. This study focused on the hypothesis testing of a research framework covering the correlation existing among push, pull, and mooring factors and switching intentions. Structural equation modeling (SEM) was used for the analysis, and Smart PLS 3 software was used to determine the study model [92,93].

In addition, the structural model identified the relationships between structures. Quantitative methods are applicable in this case because scholars usually utilize them to predict how variables are related [6,75]. Another reason for using the quantitative research

design, with reference to other researchers [6], is that quantitative research methods focus on collecting and analyzing numerical data from a set of quantitative studies, which allows researchers to approach a large number of respondents in a short period of time and is more effective than qualitative studies with the same sample sizes.

In this research, the unit of analysis is a person, as the responses are derived from the individual response. Allwood et al. [94] defined the target population as the specifically designated large group from which the researchers draw the sample and from which the results are generalized. Referring to Hu et al. [95], the age range of young people in China is classified as 18–40 years old, which is also the target population of this study. Simple random sampling is utilized in this study. Simple random sampling belongs to probability samplings, which indicates that the chance of the sample being included is equal to every case of the overall population [96]. The benefits of this method are easy to understand and prevent bias because the results are projectable [96]. G-Power software analysis was used to determine the number of sample sizes. This study contained a minimum of 138 samples. The sample size was calculated based on the sample size obtained from the G-Power function, where: (1) test family = F-test, (2) effect size $f^2 = 0.15$, (3) α error problem = 0.05, (4) power (1-β error problem) = 0.95, and the number of predictors was 5.

This study collected data through survey research. Survey research uses questionnaires with formal interviews to collect data on a number of people's backgrounds, behaviors, beliefs, or attitudes [97]. A typical survey asks questions to between 100 to 5000 people in a short period of time [97]. In this research, the available technology (i.e., WeChat) was chosen as the medium to gather the needed information. Initially, 407 questionnaires were given at random to young people aged 18 to 40 in China. Each participant received two Chinese Yuan in cash as payment for participation. After data cleaning, a total of 387 replies were received. The demographic characteristics of the sample collected were further revealed by the introduction of an adjusted instrument, the design of a survey and a collecting procedure in the next subsections.

4.1. Measurement Scales

The survey construction questionnaire is composed of three conceptual sections. The header of the primary survey includes a simple explanation of research objectives and a guarantee that the data submitted by each respondent will be kept private. Demographic questions, including those about gender, age, educational attainment, and monthly income, were contained in the subchapter that came after. Each of the proposed constructs was represented by items in the final subsection, including environmental threat and knowledge, normative and tight regulatory environments, the attractiveness of alternatives, self-efficacy, switching cost, and intention. These constructs were modified from the body of existing literature to maintain the plausibility of materials. In particular, the three-item measures developed by Wang et al. [78] were amended to assess environmental threat. The five-item measures developed by Moshood et al. [6] were revised to assess environmental knowledge. The four- and two-item scales developed by Urban and Kujinga [98] were altered to measure normative and regulatory environments, respectively. With two- and three-item scales, respectively, switching intent and cost were examined in the work of Jung et al. [99]. Additionally, the three-item questionnaire of Tarkang and Zotor [100] used to gauge a person's level of self-efficacy was modified. Furthermore, the elements used to bolster the research contribution of Rezvani et al. [101] were modified to explain how consumers perceived alternative attractiveness. Likert scales ranging from 1 to 5 for strongly disagreeing to strongly agreeing were used to rate each item.

4.2. Sampling and Data Collection

A total of 387 respondents were in this study. The demographics of the respondents are shown in Table 1. It can be seen that 50.39% of the sample consists of female consumers, and the respondents were Chinese young people. In addition, most of the responders were either employed or students.

Table 1. Respondent demographics from the questionnaire.

Demographic	Number of Respondents	Percentage
Age		
18–20	68	17.57
21–25	110	28.42
26–30	87	22.48
31–35	80	20.67
36–40	42	10.85
Gender		
Male	192	49.61
Female	195	50.39
Profession		
University student	93	24.03
Administrative staff	83	21.45
Technician	28	7.23
Professional staff	94	24.29
Others	89	23.0
Income (Monthly)		
Less than 3000	16	4.13
3000–5000	53	13.70
5000–7000	92	23.77
7000–9000	161	41.60
More than 9000	65	16.80
Grand Total	387	100

4.3. Common Method Bias

In order to avoid the issue of common method bias, the current study was put to the test by implementing the suggestions made by Kock and Lynn [102] and Kock [103], suggesting examining the entire collinearity. In this approach, every variable was regressed against a common one, and single-source data were not skewed if the variance inflation factor (VIF) was lower than 3.3. Single-source bias is not a major issue for the data of this study because their VIF is less than 3.3. The whole collinearity testing is displayed in Table 2.

Table 2. Full collinearity testing.

Environmental Threat	Environmental Knowledge	Strict Regulative Environment	Alternative Attractiveness	Normative Environment	Mooring
1.076	1.102	1.046	1.059	1.068	1.130

5. Data Analysis

Partial least squares (PLS) modeling with SmartPLS 3.2.8 [104] was utilized as the statistical method to analyze the measurement and structural model because it requires no normality assumption and survey analysis typically fails to follow a normal distribution [105].

5.1. Assessment of the Measurement Model: Construct Validity

PLS-structural equation model (SEM) and statistical program SmartPLS 3 are two methods adopted to estimate the proposed model [104], the former of which is a multivariate and non-parametric technique used for calculating possible variable path models [106]. The PLS (partial least squares) approach was chosen because it allows us to evaluate both the measurement model and the structural model. Another reason for adopting PLS-SEM is the complexity of the model. PLS-SEM requires a smaller sample size than the covariance-based structural equation model (SEM) [107]. In addition, PLS-SEM does not impose constraints on the distribution of variables [107]. PLS-SEM is also advised for moderation models on account of its ability to handle complicated research models [92].

The measurement model was tested by assessing outer loadings, composite reliability, Cronbach's alpha (α), discriminant validity, and average variance extracted (AVE) for convergent validity. Construct validity is defined as the degree to which the desired variable is accurately tested by a measure [108]. Refusal to assess construct validity is likely to jeopardize research findings [108]. Two types of indicators must be used for assessing the validity of the measurement model: discriminant and convergent validity.

Outer loadings, AVE, Cronbach's α, and composite reliability are crucial measurements in convergent validity that need to be taken into account. The variance of the measurement model for each construct was evaluated using AVE, and the dependability of indicators was gauged using outer loadings [106]. Cronbach's α and composite reliability were used to assess the internal consistency reliability and correlation of each construct. The outcome of each assessment tool for convergent validity is presented in Table 3.

Table 3. Measurement items.

Construct	Item Code	Measurement Items	Outer Loading	Cronbach's Alpha	CR	AVE
Environmental threat	ET1	Human beings create carbon emission, plastic pollution, and environmental issues	0.815	0.803	0.884	0.717
	ET2	Human beings rise the problem of plastic pollution	0.859			
	ET3	Excessive use of synthetic plastics pollutes soil and water	0.866			
Environmental knowledge	EK1	I know more about biodegradable plastic	0868	0.921	0.940	0.758
	EK2	I understand the environment phrases and symbols on product packages	0.877			
	EK3	I am knowledgeable about environmental issues	0.868			
	EK4	I have never heard of biodegradable plastics	0.889			
	EK5	I understand the benefits of using biodegradable plastics	0.852			
Regulative environment	RE1	I am satisfied with government regulation to improve environment	0.848	0.872	0.912	0.722
	RE2	I support the 'the banned' policy of restricting the use of synthetic plastics	0.857			
	RE3	The government is taking measurable to reduce plastic pollution	0.853			
	RE4	I believe the government has implemented various policies for prompting biodegradable plastics	0.841			
Normative environment	NE1	My friends/family think it is right to use biodegradable plastics	0.859	0.849	0.912	0.768
	NE2	My friends/family consider it necessary to switch to biodegradable plastics	0.875			
	NE3	My friends/family use biodegradable plastics in daily life	0.895			
Alternative attractiveness	AA1	Alternates to biodegradable plastics are innovative and take my attention	0.838	0.826	0.896	0.742
	AA2	Biodegradable plastics are cleaner and more environmentally friendly	0.877			
	AA3	I prefer to use biodegradable plastics frequently	0.868			
Self-efficacy	SE1	I can try to change myself to biodegradable plastics without the help of others	0.919	0.811	0.914	0.841
	SE2	I am able to change to biodegradable plastics reasonably well on my own	0.915			
Switching cost	SC1	I would be willing to pay much higher fees in order to protect the environment	0.844	0.806	0.885	0.720
	SC2	I would be willing to accept cuts in my standard of living to protect the environment	0.865			
	SC3	I would be willing to pay much higher prices in order to protect the environment	0.836			
Switching intention	SI1	I will buy biodegradable plastics in the near future	0.853	0.799	0.881	0.712
	SI2	I plan to buy biodegradable plastics on a regular basis	0.853			
	SI3	I intend to buy biodegradable plastics because they are more environmentally friendly	0.826			

5.2. Discriminant Validity

Discriminant validity is used to verify that measurement variables have little or no relationship with one another [96]. In this study, heterotrait–monotrait (HTMT) ratio statistics analysis was used as a discriminant measuring technique. HTMT was derived from a multitrait-multimethod (MTMM) matrix [109]. The study by Henseler-Unger and Ziele [109] suggested that the value should not be greater than 0.9 to have high discriminant validity, but a value greater than 0.9 is seen as a lack of discriminant validity. As illustrated in Table 4, no values passed the HTMT 0.85 and 0.90 tests, confirming discriminant validity.

As shown in Table 4, all HTMT values are less than 0.9, where the highest and lowest values are 0.432 and 0.061, respectively, thereby reflecting satisfactory discriminant validity.

Table 4. Discriminant validity: heterotrait–monotrait ratio statistics.

Items	ET	EK	RE	AA	NE	SE	SC	SI
Environmental threat	-							
Environmental knowledge	0.232	-						
Regulative environment	0.061	0.094	-					
Alternative attractiveness	0.147	0.130	0.126	-				
Normative environment	0.067	0.189	0.092	0.147	-			
Self-efficacy	0.079	0.178	0.199	0.141	0.109	-		
Switching cost	0.230	0.184	0.110	0.181	0.219	0.128	-	
Switching intention	0.432	0.255	0.343	0.359	0.403	0.329	0.309	-

5.3. Structural Model Assessment

The model explained 44.5% (R^2 = 0.445) consumers switching intention. Moreover, predictive relevance (Q^2 = 0.293) was greater than zero, demonstrating that the model has sufficient predictive correlation. In addition, structural paths obtained low (0.2), medium (0.15), and high (0.35) effect size [110].

5.4. Assessment of the Structural Model: Hypothesis Testing

Hypothesis testing in the structural model was identified by performing bootstrapping in SmartPLS after the measurement model was evaluated and values met all requirements. The researcher must perform bootstrapping with a bootstrap sample size of 5000 and a significant α of 0.05 [111]. Sarstedt and Mooi [112] suggested that the researcher should additionally look at the standard coefficient beta (standard beta) for the purpose of determining how a significant variable affects another variable. However, it cannot be simply declared that factors are significantly related despite their favorable association [113]. As a result, it is necessary to evaluate interaction effects (t-value) to corroborate the hypothesis [111]. According to the research of Hair et al. [94], the t-value should be above 1.645 (t-value > 1.645) for the acceptance of the hypothesis when $\alpha \leq 0.05$ and the one-tailed test was performed. Results of the hypothesis testing required from bootstrapping are exhibited in Figure 2 and Table 5.

t-values and each path coefficient were verified with the aim of verifying the statistical significance of bootstrapping approaches and SmartPLS 3 included in the present study (Table 5). As suggested by Hair et al. [106], the confidence interval should be examined to obtain more knowledge of how much the population parameter decreased at a particular degree of confidence. Not every confidence interval includes 0, as illustrated in Table 5.

Table 5. Summary of hypotheses testing.

Hypotheses	Path	Std. Beta	Std. Error	T-Value	Bias	Confidence Interval		
						5%	95%	Decision
H1a	ET→SI	0.254	0.039	6.479	0.002	0.187	0.315	Supported
H1b	EK→SI	0.023	0.042	0.545	0.001	−0.044	0.094	Not Supported
H1c	RE→SI	0.220	0.039	5.609	0.001	0.155	0.285	Supported
H2a	AA→SI	0.178	0.040	4.462	0.002	0.111	0.242	Supported
H2b	NE→SI	0.236	0.039	6.001	0.000	0.171	0.299	Supported
H3	Mooring→SI	0.178	0.045	3.905	0.003	0.094	0.247	Supported
H4a	ET × Mooring→SI	−0.197	0.043	4.641	0.006	−0.267	−0.131	Supported
	EK × Mooring→SI	−0.029	0.047	0.608	−0.002	−0.110	0.046	Not Supported
	RE × Mooring→SI	0.143	0.038	3.736	−0.001	0.079	0.205	Supported
H4b	AA × Mooring→SI	0.062	0.041	1.496	0.002	−0.007	0.127	Not Supported
	NE × Mooring→SI	0.163	0.043	3.784	−0.005	0.098	0.238	Supported

Note: $p \leq 0.05$ (1-tailed test); ET, environmental threat; EK, environmental knowledge; RE, regulative environment; AA, alternative attractiveness; NE, normative environment; SI, switching intention.

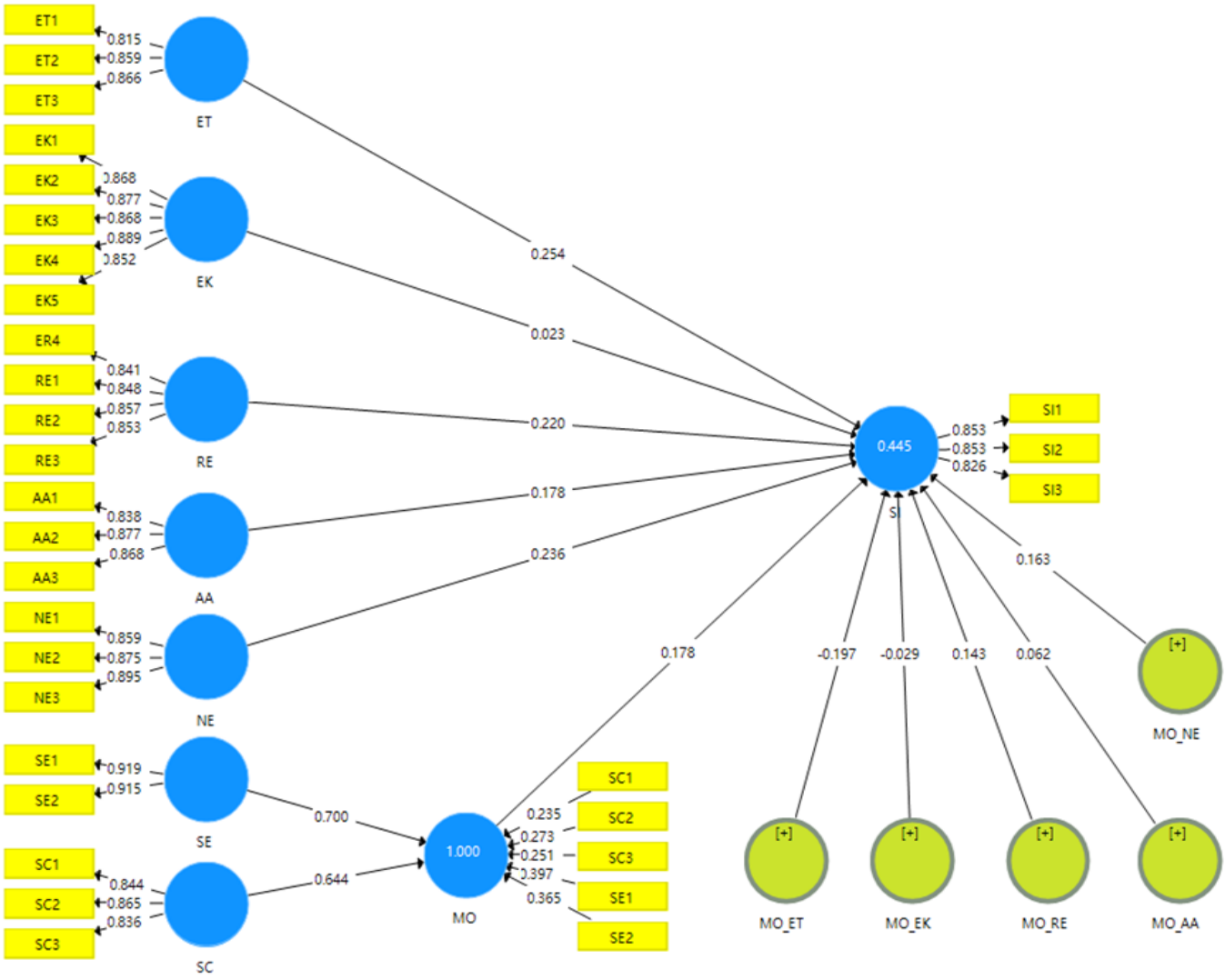

Figure 2. Evaluation of structural model through PLS bootstrapping.

Results showed that (H1a) environmental threat and switching intention among young people in China had a positive relationship (β = 0.254, t = 6.479), while (H1b) switching intention and environmental knowledge had an inverse relationship (β = 0.023, t = 0.545). The results are in line with Moshood et al. [6] and Sajjad et al. [49], who emphasized the role of intervening factors to translate the environmental knowledge into green consumption behavior and environmental threat increases consumers' intention to switch to biodegradable plastics. Furthermore, the regulative environment had a positive association with the intention of Chinese consumers to switch from single-use to biodegradable plastics (H1c, β = 0.220, t = 5.609). The results of this study highlight that tougher ban policies are helpful for increasing biodegradable plastic consumption, as Makarchev et al. [74] and Horng et al. [65] pointed out. Each of the pull factors were proven to have a positive effect on switching intentions (H2a, β = 0.178, t = 4.462; H2b, β = 0.235, t = 6.001), as recorded by Khan et al. [83]. Biodegradable plastics provide flexible product choices for consumers, and consumers are more probable to switch to biodegradable plastics especially under the effect of subjective norms. The current study, which looked at how mooring influenced switching intention, found a positive correlation between mooring overall and the willingness of Chinese consumers to move from single-use plastics to biodegradable plastics (H3, β = 0.178, t = 3.905), which indicated the influence of financial resources and

self-efficacy on green consumption intentions as observed by Landry et al. [114]. A detailed discussion on the findings along with implications is presented in Section 6.

Additionally, a two-stage strategy was taken to examine the moderating factor while addressing each of the constructs for push and pull forces. Except for environmental knowledge and alternative attractiveness ($\beta = -0.029$, $t = 0.608$; $\beta = 0.062$, $t = 1.496$) (refer to the interaction graphs in Figures 3 and 4), mooring as a construct was not taken into consideration in terms of effect when defining switching intent. Figure 5 shows that the negative impact of environmental threat on switching intention was specifically perceived to be significantly mitigated by anchoring ($\beta = -0.197$, $t = 4.641$). In addition, it was discovered that mooring variables operated as a catalyst, supporting the development of a positive correlation between switching intent and the regulative environment ($\beta = 0.143$, $t = 3.736$), as shown in Figure 6. Furthermore, it was found that mooring as a construct has a potent moderating effect, helping to reinforce the beneficial relationship between the normative environment and switching intention ($\beta = 0.163$, $t = 3.784$), as shown in Figure 7. People who trust the government and know the severity of plastic pollution are more likely to switch to biodegradable plastics, if the product did not cost too much money.

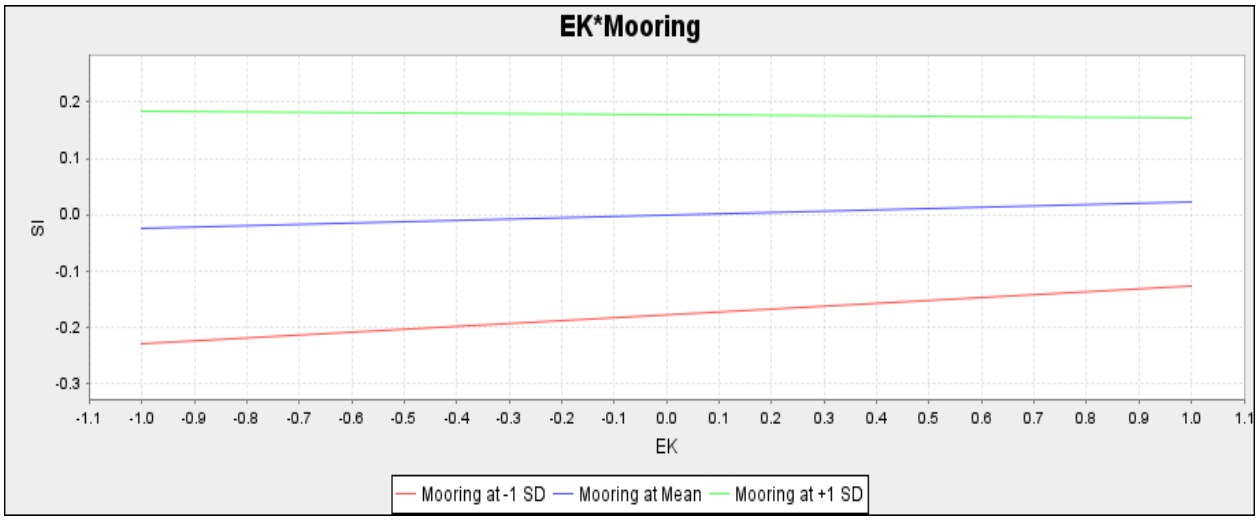

Figure 3. Interaction graph of EK and mooring on SI.

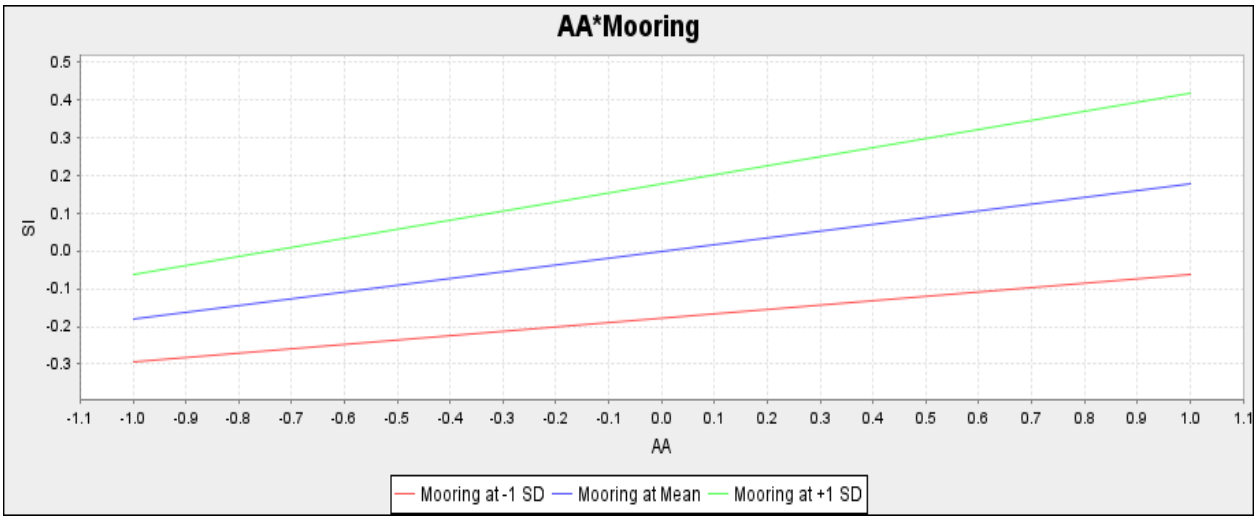

Figure 4. Interaction graph of AA and mooring on SI.

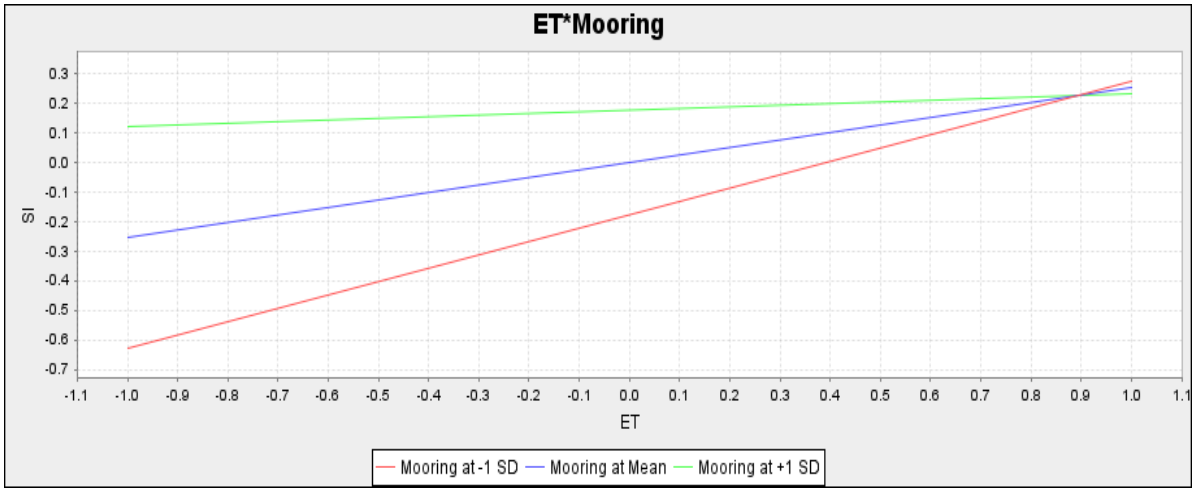

Figure 5. Interaction graph of ET and mooring on SI.

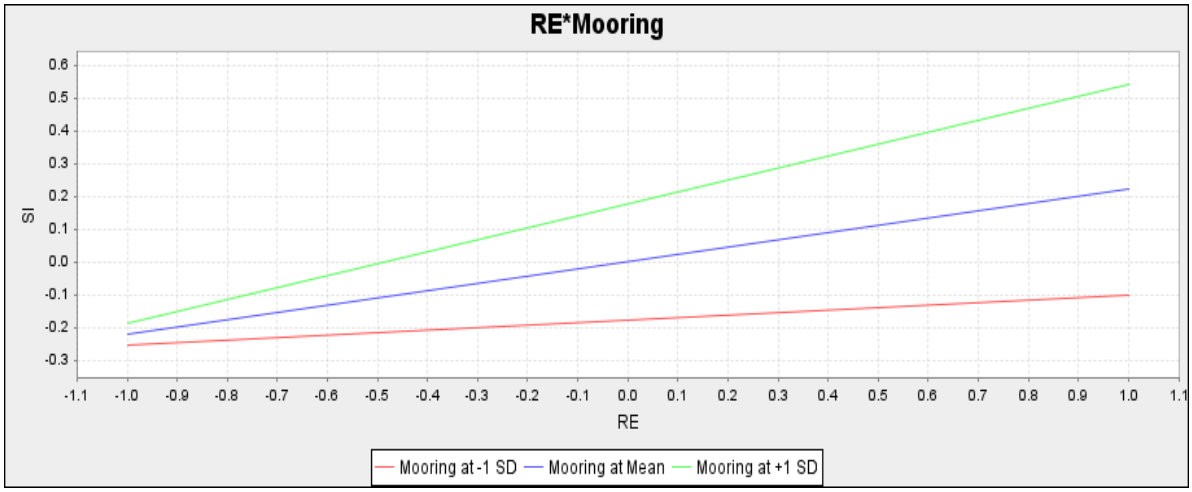

Figure 6. Interaction graph of RE and mooring on SI.

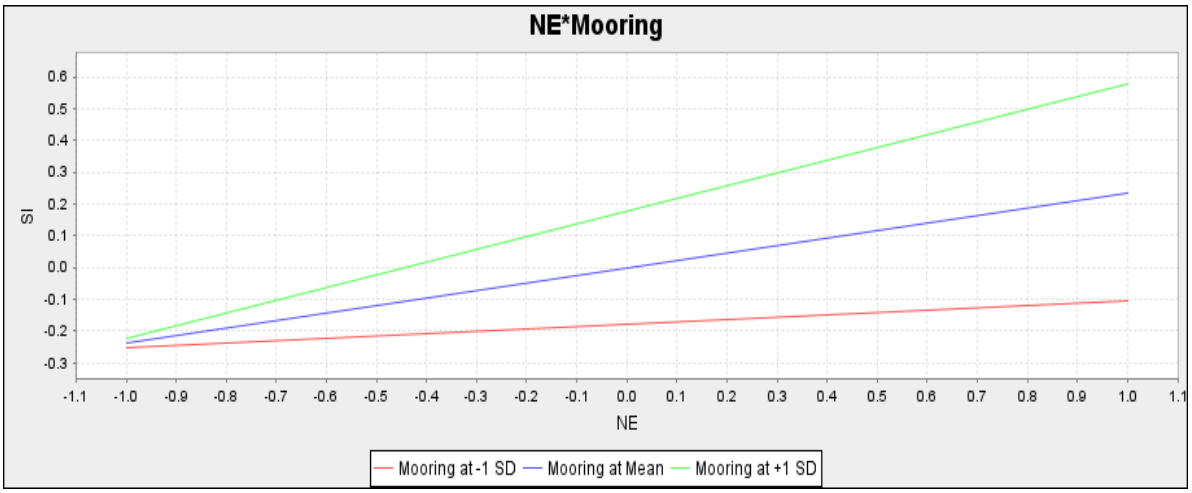

Figure 7. Interaction graph of NE and mooring on SI.

6. Discussion

In this study, the PPM model and institutional theory were integrated to analyze the intention of customers to switch from single-use to biodegradable plastics. Environmental threat and knowledge, strict regulative and supportive normative environments, alternative attractiveness, self-efficacy, and switching cost were incorporated into a framework to highlight significant implications for the switching intention of consumers towards biodegradable plastics. To analyze cognitive, socioeconomic, and institutional consequences at micro, meso, and macro level, the framework integrated the PPM model with institutional theory. This paradigm was used to examine the intention of Chinese consumers to convert from single-use to biodegradable plastics.

The PPM model, institution theory, and seven independent variables were used to determine the switching intention of Chinese consumers towards biodegradable plastics: push (environmental threat and knowledge as well as the regulative environment), pull (alternative attractiveness and the normative environment), and mooring factors (self-efficacy and switching cost). The moderating effects of mooring factors on the relationships of push and pull with switching intention were also covered. According to a study by Ahmad and Thyagaraj [66] and Moshood et al. [6], three direct hypotheses (H1, H2, and H3) were developed to assess the associations of push (environmental threat and knowledge and the regulative environment), pull (alternative attractiveness and the normative environment), and mooring factors (self-efficacy and switching cost) with switching intention. Based on the findings, hypothesis 1b (H1b) has a negative link with switching intention, while five factors (H1a, H1c, H2a, H2b, and H3) have a positive relationship. Switching intention is favorably influenced by environmental threat, regulative and normative environments, alternative attractiveness, self-efficacy, and switching cost. According to these findings, Chinese consumers are willing to change their behavior, especially the consumption of biodegradable plastics, if they recognize the severity of plastic pollution and take into account product characteristics (biodegradability and alternative attractiveness) that cause less environmental harm, which are in addition to explicit prohibition and social influence.

Both the positive associations of environmental threat and the regulative environment with switching intention are consistent with earlier research by Makarchev et al. [74] and Horng et al. [65]. In line with the study of Moshood et al. [6], environmental knowledge is negatively related to switching intention, illustrating that Chinese customers would not alter their behavior towards eco-friendly products despite their understanding of the environment. That is, the environmental knowledge of customers generally has minimal bearing on their choice to switch. Their decision to consume biodegradable plastics will not change. To be specific, the effect of the regulative environment on the switching intention of Chinese consumers showed significance, indicating that effective policies and regulations are necessary to trigger sustainable consumer behavior.

The result of the analysis showed the statistical significance of pull factors including alternative attractiveness and the supportive normative environment on the switching intention of consumers towards biodegradable plastics. Pull has an effect equally strong to that of push when it comes to driving switch. The normative environment has a significant positive influence on the switching intention of Chinese consumers from single-use to biodegradable plastics, which is in congruence with the research finding of Khan et al. [83] examining the influence of subjective norms on the intention to purchase bioplastic products. Notably, alternative attractiveness is significantly and positively correlated with switching intention. This finding implies that biodegradable plastics as a solution to alleviate environmental issues have attracted great attention and Chinese consumers actually practice green consumption, which will prompt a circular economy.

According to the results in Table 5, this research might determine that mooring factors including self-efficacy and switching cost act as moderators between push, pull, and switching intention. As mooring became the moderating variable, hypotheses (H3 and H4) were modified from prior research. H3 was verified, as presented in Table 5, positively affecting switching intention. In comparison with previous research [114], the present

findings demonstrated that self-efficacy and switching cost were positively associated with switching intention. Thus, a conclusion can be drawn that the cognition of Chinese consumers has an impact on their willingness to consume biodegradable plastics. The acceptance of H4 would increase the credibility of these assertions, evidencing that mooring acts as a moderating variable through regulative and normative environments. It can be seen that collective efficacy manipulations play an important role in increasing pro-environmental behavior, and enhancing collective and individual perceived efficacy [82]. Furthermore, the interactions of switching cost with normative and regulative environments indicated that a higher cost of conversion can be a deterrent to the willingness of consumers to reduce plastic pollution and observe government environmental policies even when they have high efficacy and a conductive regulative environment. Increased effectiveness and low switching cost will lessen the negative effects of the regulatory environment, which will further stimulate the conversion of degradable plastics.

The PPM model and institutional theory were applied in this study to provide empirical evidence of the switching intention of consumers under the background of plastic consumption. The results of SEM revealed that PPM factors significantly and directly affect switching intention, whereas the push factor environmental knowledge has no statistically significant effect on it. It was noticed in the results that factors resulting in the perception of environmental threat and the strict regulative environment can push consumers away from the consumption of single-use plastics or can increase the switching intention of consumers. In addition, the existence of alternatives (alternative attractiveness) and a supportive normative environment can pull consumers toward biodegradable consumption. It is worth noting that self-efficacy and low switching cost have an intervening effect on the relationships of push and pull with switching intention.

6.1. Theoretical Implications

The findings of this study expand on earlier studies in the expanding field of sustainable consumption and production mandates among sustainable development goals (SDGs) identified by the United States and the United Nations as a key research priority area for the improvement of nature well-being [115]. Previous studies have not taken into account macro- and meso-level influence and instead examined the switching intention or behavior of customers from the standpoint of individual motivations. This study broadens the use of the PPM model in the realm of plastic and sustainable consumption, where switching intention is affected by environmental hazards, a stringent regulatory environment, individual and societal norms, perceived self-efficacy, and switching cost.

Additionally, this research contributes to the body of knowledge by providing empirical data on variables affecting consumers to switch from single-use plastics to biodegradable ones. Future studies by academics, the government and the related industries may benefit from the research conclusions. This research is crucial for subsequent academics to have a better understanding of Chinese customers' intent toward biodegradable plastics.

Self-efficacy and switching costs play critical roles in consumers' green consumption behavior [87,116]. This study advances the comprehension of the sustainable consumption of biodegradable plastics by Chinese consumers, which was accomplished by modeling the associations between PPM elements (self-efficacy and switching cost) that affect switching intention towards biodegradable plastics. Additionally, by examining the interactions between PPM factors, this study may propel the knowledge of people and hypotheses about how switching attention is influenced by environmental threats and a strict regulatory environment, pull (alternative attractiveness and social norms), and mooring factors (self-efficacy and switching cost). Therefore, it is essential to discuss environmental, economic, social, and political factors affecting the desire of Chinese consumers to switch to biodegradable plastics. That is, this study contributes to a better understanding of how certain factors (constructs) may encourage/discourage Chinese consumers from consuming biodegradable plastics.

Particularly, the current study bridges the gap that prevents the critical role of collective culture and governance from being examined in the context of plastic consumption. Wang and Li [2] emphasized that pricing policy (i.e., charging for plastic carrier bags) has a positive effect on decreasing plastic bag usage, and this study confirmed a strict environmental policy and collective culture prompted people to switch to biodegradable plastics. The result of this research can be applied to the government for consideration of the impact of people's attitudes towards biodegradable plastics and their willingness to purchase through appropriate subsidies to ensure the success of policy execution and improve the breadth and depth of policies. Furthermore, environmental collective effectiveness and collectivism provide a favorable explanation for consumers' perception of green consumption [117]. Hence, programs promoting biodegradable plastics can be created by policymakers and subsequently distributed to the general public, adding to the literature on plastic consumption from the standpoint of policy research.

Moreover, the benefits of this study include improving the awareness of information in the case of encouraging activities related to sustainability. Potential consumers contribute significantly to the demand for disposable plastics, thus making it crucial to convey more informative messages about the risks associated with plastic pollution [118]. These messages should help potential consumers understand that increased spending on the risks related to plastic pollution can only be beneficial when the spending is intended to reduce risks.

6.2. Policy and Business Implications

With regard to the environment of the planet, plastic pollution has brought about major problems. The ability of the world to process throwaway plastic garbage cannot keep up with the rate of product production. Only about 9% of the 300 million tons of plastic garbage produced every year worldwide can be recycled [119]. In growing Asian nations, plastic pollution is rapidly becoming one of the most severe environmental problems. Because China has the largest economy in Asia, it is essential for policymakers to comprehend how Chinese consumers look at plastic usage and how their behavior is changing.

The findings of this study offer proof of the environmental threat and the regulatory framework needed to forecast intention to convert from single-use plastics to biodegradable plastics. Policymakers could launch pro-environmental initiatives and make use of different media outlets to highlight the danger posed by plastic pollution to raise public awareness of environmental protection. Meanwhile, government organizations should develop and put into effect stricter and more reasonable policies, laws, and regulations regarding the production, distribution, and use of plastics. The insufficient knowledge of pertinent laws and rules will give rise to behavioral lag.

Governments and organizations should also put greater emphasis on developing green technologies and changing procedures to make them more environmentally friendly. Beyond that, businesses should give equal consideration to the needs of consumers when determining how to successfully sell market items made of bioplastic. It is significant that the pull variable, specifically group norms, shows favorable effects on switching intention. Programs and initiatives in favor of biodegradable plastics should be integrated into the process of policy development, thereby enabling society as a whole to spread awareness among individuals. It also illustrates how peers influence the use of biodegradable plastics. The usage of biodegradable plastics should be promoted with success by regulatory authorities combining social stakeholders into a platform, which will endow biodegradable plastics with social symbolic value and enhance switching.

The results of this study also show that mooring variables (self-efficacy and switching cost) can spur people to move from single-use plastics to biodegradable plastics. Policymakers should focus their efforts on fostering the confidence of people in their talents to affect behavior noticeably. Increasing people's knowledge of their own self-worth, self-efficacy, and self-effectiveness all help people act in a pro-environmental way. In the meantime, regulations are supposed to place a strong emphasis on motivating and training those

with more in-depth local expertise to adopt sustainable behaviors. During educational campaigns and policy implementation to prevent plastic pollution, the government and legislators should concentrate on environmental concerns, the attitude of people towards technology and environmental advantages on a collective level.

6.3. Limitations and Recommendations for Future Research

Several limitations found during the research procedure were included in this study. These limitations should be taken into consideration in the future for a more thorough analysis. In order to deter Chinese customers from buying single-use plastics, the initial focus of this study was exclusively on how they intended to use biodegradable plastics. However, the use of single-use plastics can be avoided in a number of ways, including recycling; paper, biological, and cardboard bags; and using stainless steel objects (such as straws or mugs). Then, a researcher may consider measuring using new objects and looking at a different culture. Secondly, a survey questionnaire was utilized to gather the data for this investigation. The questionnaire of this survey is a bit problematic for the reason of the possibly misleading responses of the respondents. Future research may collect data through in-person or phone interviews, and different data-gathering methods and other strategies (e.g., snowball sampling or probability sampling method). Thirdly, the authors collected data through a cross-sectional method that can only capture data timely at a single point, leading to the impossibility of identifying dynamic shifts in consumer environmental concerns, environmental knowledge, perceived self-efficacy, switching cost, or green benefits. In addition, this study was only ongoing for a brief period. The researcher consequently suggested employing longitudinal research for further studies on the same parameters over another period. Additionally, the perceived uncertainty of economic policies may have an impact on consumers choice behavior [120]. In a future study, we may consider the uncertainty as an important theoretical construct to enhance the explanatory power of the current model.

Author Contributions: S.G. developed the research idea, conceptualization, and methodology, processed and curated data, formal analysis, and wrote the manuscript; B.S. conceptualization, processed and curated data, formal analysis, and performed the review and editing. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The datasets generated during the current study are available from the corresponding author on reasonable request.

Conflicts of Interest: The authors declare no conflict of interest.

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