urban science

Article

Improving Green Literacy and Environmental Culture Associated with Youth Participation in the Circular Economy: A Case Study of Vietnam

Phuong Mai Tran [1], Thuy Nguyen [1], Huu-Dung Nguyen [2], Nguyen An Thinh [3], Nguyen Duc Lam [4], Nguyen Thi Huyen [3] and Van Quy Khuc [1,3,*]

[1] SCDM Lab, VietKAP, Hanoi 100000, Vietnam; tranphuongmai01vn@gmail.com (P.M.T.); diepnn1519@gmail.com (T.N.)
[2] Faculty of Real Estate and Natural Resource Economics, National Economics University, Hanoi 100000, Vietnam; nguyen.huudung@neu.edu.vn
[3] Faculty of Development Economics, VNU University of Economics and Business, Vietnam National University, Hanoi 100000, Vietnam; anthinhhus@gmail.com (N.A.T.); nthuyen.ueb@vnu.edu.vn (N.T.H.)
[4] Faculty of Political Economy, VNU University of Economics and Business, Vietnam National University, Hanoi 100000, Vietnam; lamnd@vnu.edu.vn
* Correspondence: qvkhuc.4vina@gmail.com

Abstract: The circular economy (CE), a sustainability concept that promotes resource efficiency and waste reduction, has garnered significant popularity in recent years due to its potential to address pressing environmental and economic challenges. This study applies the Bayesian Mindsponge Mindspongeconomics (BMM) framework/analytic method, based on the Bayesian Mindsponge Framework (BMF), to the factors influencing young adults' pro-environmental behavior and their purchases of green products at different price levels. The findings indicate that young adults who are knowledgeable about the CE and who value environmental protection and energy conservation are more likely to engage in waste sorting, while the factors that affect their willingness to pay (WTP) more for green and energy-saving products vary at different price tiers. This study demonstrates that knowledge of the CE, daily waste sorting habits, and environmental concern positively impact young adults' WTP for products that are priced 5%, 10%, and 15% higher, respectively. Furthermore, this study also highlights the potential of educational programs and cultural influences in nurturing a generation that prioritizes environmental value. This research integrates multidisciplinary perspectives and offers practical implications for policymakers, educators, and businesses seeking to promote green literacy and foster an environmental culture among the youth, contributing to the broader goals of green transformation and sustainable development associated with the CE and the green economy, especially in the urban areas of emerging countries and beyond.

Keywords: circular economy; environmental culture; green literacy; sustainable behavior; BMM; Vietnam

Citation: Tran, P.M.; Nguyen, T.; Nguyen, H.-D.; Thinh, N.A.; Lam, N.D.; Huyen, N.T.; Khuc, V.Q. Improving Green Literacy and Environmental Culture Associated with Youth Participation in the Circular Economy: A Case Study of Vietnam. *Urban Sci.* **2024**, *8*, 63. https://doi.org/10.3390/urbansci8020063

Academic Editor: Atiq Zaman

Received: 3 April 2024
Revised: 24 May 2024
Accepted: 27 May 2024
Published: 5 June 2024

1. Introduction

Environmental and ecological challenges have become significant issues of concern worldwide. Despite an increasing awareness among individuals about the impact of resource consumption on the environment, future projections remain dismal. According to the United Nations (2023) [1], by 2050, the level of human resource consumption is projected to reach a point where it would require three Earths to sustain the current population. This overconsumption of resources has far-reaching consequences for the environment, as well as significant economic and social implications, including the exacerbation of socioeconomic disparities and a rise in poverty levels [2,3]. These factors collectively emphasize the urgent necessity for a transition towards environmentally friendly economic growth and sustainable methodologies. Consequently, the notion of a CE has garnered considerable interest in recent times.

Adopting the framework of a CE is a good way to balance economic growth with protecting the environment and making the best use of resources, especially now that resources are limited and people are more worried about the environment [4]. The design of products and systems for durability and multiple lifecycles, the advancement of recycling and reuse, and the minimization of resource wastage and emissions are just a few of the key characteristics that set this CE model apart [5]. It emphasizes the value of materials and resources in a continuous loop, challenging the conventional "take–make–dispose" approach. Its objective is to construct a sustainable and eco-friendly economic system that generates lasting value for both humanity and the planet.

In response to pressing environmental issues, Vietnam is presently undergoing the shift from a linear economy to a CE. This transition involves the adoption of many novel business models that leverage scientific advancements and technological applications [6]. Vietnam has implemented policies that prioritize sustainable economic development, environmental protection, climate change adaptation, and enhanced investment quality and efficiency, as well as other high-quality projects [7]. In 2022, the Deputy Prime Minister of Vietnam signed Decision 687 approving a circular economy development plan in Vietnam, setting specific goals for a reduction in GHG emissions, sustainable production and consumption, improved waste management, and so on [8]. A great number of such circular orientations mainly target cities, leading to various CE initiatives and policies that require urban residents to alter their behavior [9]. In 2020, the Vietnamese government introduced a new environmental law, which comes into effect on 1 January 2022, mandating households to classify their waste [10]. This marks a significant step towards sustainable waste management practices. Under this law, households are now required to segregate their waste into different categories. By encouraging individuals to take responsibility for their waste, the law promotes environmental awareness and encourages the adoption of eco-friendly habits. However, this regulatory effort has received little attention and has met with humble results [11]. By adopting a CE paradigm, Vietnam can hopefully turn this environmental challenge into an opportunity for innovation, economic advancement, and sustainable resource management, similar to the European Union's CE Action Plan [12].

The shift to a CE would be hard to achieve without people's participation, particularly the younger generations who hold a pivotal role in shaping this transition. Through their creative thinking and environmentally conscious actions, young people are leading the charge in accelerating the shift to a CE [13,14]. By the year 2025, it is anticipated that the individuals belonging to the millennial generation will constitute around 75% of the global labor force [15]. Their notable attributes of adaptability and digital literacy make them instrumental in reshaping consumption patterns [16]. This explains why youth leadership is of great importance, and youth-led initiatives and startups are emerging as key players in CE ecosystems [17]. As such, understanding the factors influencing the participation intention of young individuals is essential for harnessing their potential as the drivers of sustainable economic practices. This study aims to address this gap by delving into what drives pro-environmental practice and the willingness to pay (WTP) for green products among the youth through the lens of an environmental culture. These research findings are expected to offer insights into the green literacy and environmental consciousness of young adults in Vietnam in general and in urban settings in particular and to act as a source of reference for policymakers to build a more resilient and eco-conscious society.

The rest of this paper is structured as follows: Sections 2 and 3 provide the literature review and conceptual framework, respectively. Section 4 describes the processes for the data gathering and analysis. Sections 5 and 6 present the findings from the Bayesian estimates and the discussions, respectively. Section 7 includes the conclusions and policy implications.

2. Literature Review and Hypotheses

The notion of the CE has arisen as a viable alternative to the conventional linear economy, characterized by a "take–make–waste" approach [5,18]. Over the past decade,

researchers have conducted various studies to gain insights into the notion of the CE and its value in terms of financial and environmental aspects. Nevertheless, the scientific community has yet to achieve a consensus regarding the terminology associated with the CE [19]. It is widely acknowledged that the notion of the CE is an evolving subject, transitioning from its conceptualization to empirical testing. In fact, it is not a theoretical concept but a practical reality that is being implemented by various actors and sectors around the world. For example, the CE model suggested by the European Parliament [20] covers a series of seven primary stages, beginning with the utilization of raw resources and finishing with waste treatment (see Figure 1). In this model of a CE, the raw materials are produced using a sustainable design, so that the products are more sustainable and environmentally friendly. Afterwards, these products are distributed to and consumed by customers. Presently, the cost of these commodities tends to exceed that of products manufactured using conventional techniques, thereby impeding consumers' purchasing and use intentions. According to Dardanoni and Guerriero (2021), Franzen and Vogl (2013), and Laroche et al. (2001) [21–23], those who are highly concerned about environmental protection have a higher likelihood of purchasing them despite the higher prices. These people can enhance their engagement in the field of a CE by actively participating in the practices of product reuse and repair, thereby prolonging the lifespan of these items. However, there will be times when products become waste and need to be collected. Unlike the traditional linear economy, the collection process in the CE usually involves the process of waste classification and treatment at home, which helps to facilitate waste management with the goal of reducing residual waste to a minimum [24]. Accordingly, it is evident that consumers have a crucial impact in the context of a CE, especially during the consumption and collection stages. This is evident through their inclination to pay a premium for environmentally friendly and energy-efficient products, as well as their engagement in waste segregation practices inside their households.

Figure 1. A model of a circular economy. Source: adapted from [20].

Recognizing the CE as an innovative approach to tackle resource scarcity, increased carbon emissions, and waste generation, many countries have introduced specific laws to support the transition from traditional production methods to a circular model. This transition emphasizes the promotion of material circularity through the principles of reuse and recycling [25,26]. For example, in 2015, the EU gave its consent to a plan of action aimed at implementing the Circular Economy (CE) across its member nations [27], followed by the introduction of a CE monitoring framework [16] and a plastics strategy in 2018 [28]. In Vietnam, the government has demonstrated a commitment to embracing the principles of a CE through a range of initiatives [29,30], such as plastic waste reduction measures,

the establishment of CE hubs, the promotion of sustainable agriculture practices, and the enforcement of regulations for e-waste management [31,32]. Vietnam's commitment to tackling environmental issues, promoting sustainability, and driving economic growth in line with the principles of a CE is evident through its collaborative partnerships with international organizations and its support for environmentally focused enterprises and institutions [33,34]. The adoption of a CE model is deemed as the logical next step towards achieving sustainable development in Vietnam [35,36].

With a view to achieving a circular economy, an environmental culture plays a vital role in that it shapes individuals' attitudes, behaviors, and practices towards resource use, waste management, and sustainable consumption [37,38]. A circular economy requires a shift in both mindset and behavior, which can be fostered through an environmental culture by promoting a deeper understanding of the environmental impacts of linear consumption patterns and the benefits of circular practices and by encouraging individuals to prioritize sustainable consumption and adopt recycling and waste reduction practices [39]. Furthermore, an environmental culture fosters a sense of shared responsibility, encourages collaboration among stakeholders, and promotes the development and adoption of innovative circular solutions, which are critical to the success of achieving a CE [40]. Thus, understanding the components and impact of an environmental culture can inform strategies to foster a culture that supports and accelerates the transition towards a circular economy.

Green literacy, which refers to the knowledge and understanding of environmental issues, sustainable practices, and the impact of human activities on the planet, is a key component of empowering individuals to make informed decisions and to take actions that contribute to an environmental culture and a CE [41,42]. However, another important aspect that requires more attention is the interplay between financial literacy and the carbon footprint [43]. With increased awareness about the environmental impact of individual consumption habits, financially literate individuals will understand the carbon footprint associated with their purchasing decisions, encouraging them to make more sustainable choices and to reduce their overall environmental impact. Financial literacy also empowers individuals to allocate their financial resources effectively, including budgeting for sustainable options that utilize green technology and prioritizing environmentally friendly products and services [43]. Therefore, enhancing both green literacy and financial literacy are critical steps towards creating a more sustainable future, where financial decisions align with environmental goals.

Several studies have attempted to define sustainable consumption behaviors in the context of engagement with the circular economy [44,45]. Some researchers define these behaviors as the deliberate choices made by individuals to reduce their consumption, reuse products, and recycle materials [45]. Others propose frameworks that emphasize the importance of extending product life cycles, sharing resources, and adopting a more conscious and responsible approach to consumption [46]. Understanding the motivations behind sustainable consumption behaviors is essential for promoting and encouraging such behaviors. Studies have identified various motivations, including environmental concern, personal values, social norms, and financial benefits [47,48]. Additionally, the concept of "pro-environmental identity" has emerged as a significant driver of sustainable consumption behaviors [49–53].

Some behavioral models have been proposed and analyzed to better understand the factors that influence individuals' sustainable decisions and behaviors [54,55]. One notable model is the sustainable behavioral model in natural resource management, which combines principles from economics and psychology to examine how people make choices and respond to incentives in the context of environmental conservation [54]. The model starts by examining the decision-making processes of individuals when it comes to environmental conservation. It recognizes that people often make decisions based on a combination of rational and non-rational factors, such as their values, beliefs, and emotions. The model considers both conscious and unconscious decision-making processes. The

pro-environmental behavior model proposed by Kollmuss and Agyeman (2002) suggests that pro-environmental awareness is influenced by knowledge, values, and attitudes, which are deeply rooted in personal values [55]. It has been observed that younger generations are more familiar with the concept of the CE and engage in related behaviors, such as waste separation and the purchase of recycled and remanufactured products [56]. Those with a high environmental consciousness tend to demonstrate a greater propensity for engaging in environmentally friendly actions [57]. Some other studies also show that individuals who are knowledgeable about environmental matters and concern themselves with environmental protection are more likely to opt for green initiatives [58], invest in waste management practices, and demonstrate eco-friendly behavior such as waste classification [59,60]. Additionally, according to the Theory of Planned Behavior (TPB), awareness plays a crucial role in shaping individuals' attitudes, subjective norms, and perceived behavioral control, which in turn influence the individuals' intentions and behaviors [61–63]. To be specific, the increased awareness of environmental protection and the CE often leads to a more positive attitude towards pro-environmental behavior such as waste classification, making individuals more likely to engage in this behavior [63]. For example, if individuals are made aware of the environmental consequences of improper waste disposal and the benefits of recycling and composting, they might develop a more favorable attitude towards waste classification and be more motivated to participate in it.

Thus, the following hypotheses are proposed:

H_1: *Caring about energy saving positively affects young adults' waste classification behavior.*

H_2: *Caring about environmental protection positively affects young adults' waste classification behavior.*

H_3: *Awareness of the CE positively affects young adults' waste classification behavior.*

H_4: *Knowledge about the CE positively affects young adults' waste classification behavior.*

Moreover, some studies on consumers' green purchases have confirmed the significant influence of interest in energy saving and environmental protection on individuals' willingness to pay (WTP) for green products despite potential higher prices [64–66]. This type of behavior could also be influenced by people's perceptions and awareness of the CE transition, as they are more familiar with the concept of the CE and circular products [65,67]. Consumers may be willing to pay more for environmentally friendly products due to two value concepts: bequest value and option value [68–72]. Bequest value refers to the value consumers place on preserving the environment for future generations [71,72]. Consumers who prioritize sustainability and environmental conservation may be willing to pay a premium for products that have a reduced impact on the environment. This stems from a desire to ensure that future generations inherit a clean and sustainable planet. Meanwhile, option value refers to the value consumers place on having the choice or option to use environmentally friendly products in the future [69,70]. Consumers recognize that environmental issues are becoming increasingly important, and they may be willing to pay a premium to have access to sustainable options. By purchasing environmentally friendly products now, consumers are securing the option to continue using sustainable alternatives in the future. For example, consumers might choose to buy solar panels for their homes despite a higher initial cost compared to traditional energy sources. By investing in solar panels, they not only reduce their carbon footprint but also gain the option to generate their own renewable energy, potentially saving money on electricity bills in the long run. These two values drive consumer preferences towards products that align with their environmental concerns, even if they come with a higher price tag. Accordingly, this study also proposes the following hypotheses:

H_5: *Caring about energy saving positively affects young adults' WTP more for green and energy-saving products.*

H_6: *Caring about environmental protection positively affects young adults' WTP more for green and energy-saving products.*

H_7: *Awareness of the CE positively affects young adults' WTP more for green and energy-saving products.*

H_8: *Knowledge about the CE positively affects young adults' WTP more for green and energy-saving products.*

It is also noteworthy that eco-friendly behaviors can be manifested in various ways and are likely to interact with and impact one another [48]. In other words, if a person follows a sustainable lifestyle, as reflected by his or her daily practices, that person might also be more willing to purchase green products. Therefore, the following hypothesis is also proposed:

H_9: *Waste classification behavior positively affects young adults' WTP more for green and energy-saving products.*

3. Conceptual Framework and Study Approach

3.1. Conceptual Framework

The conceptual framework was developed and adapted from the Culture Tower [73,74] to further understand people's participation in the CE. It includes three key factors: Knowledge (K), Action (A), and Contribution (C), which represent different levels of engagement in an ascending order (Figure 2).

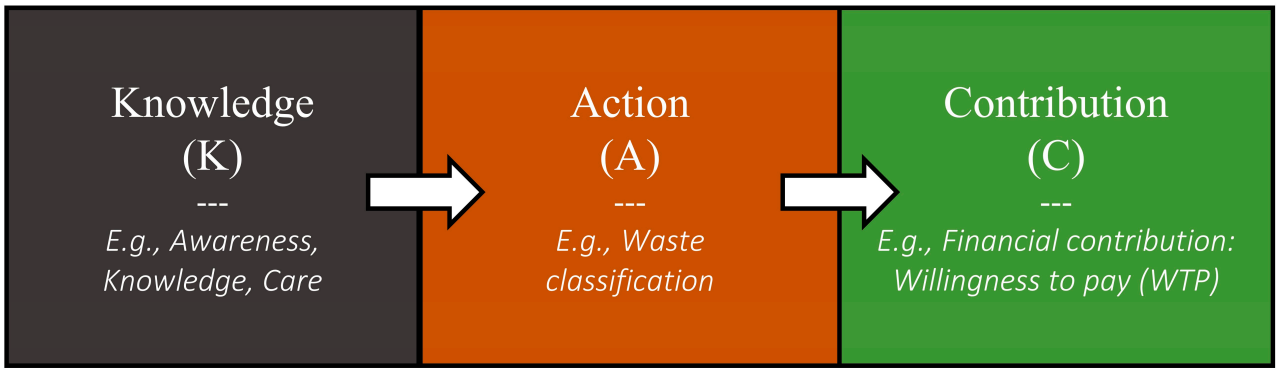

Figure 2. KAC framework of participation in the CE. Adapted from [73,74].

Knowledge (K): Knowledge refers to an individual's awareness, knowledge, and care about the circular economy and environmental protection. It can be further categorized into different levels. For example:

(i) Awareness: basic knowledge about the concept of the circular economy and its benefits.
(ii) Knowledge: either fundamental or in-depth understanding of the principles of the circular economy and sustainable consumption.
(iii) Care: genuine concern for environmental protection.

Actions (A): Actions refer to the tangible behaviors and practices individuals undertake to participate in the circular economy. As waste classification was made mandatory in Vietnam on 1 January 2022 [10], examining waste classification aligns with the current regulatory framework and helps evaluate the compliance and effectiveness of this policy. Hence, choosing this pro-environmental practice is contextually relevant and specific to the target population (i.e., Vietnamese young adults).

Contribution (C): Contribution represents an individual's willingness to contribute to the development of the CE, including paying a higher price for sustainable products or services. This willingness to pay can be categorized into different levels, such as the following examples:

(i) A 5% higher price: individuals are willing to pay a small premium for the products or services that align with circular economy principles.

(ii) A 10% higher price: individuals are willing to pay a moderate premium to support sustainable practices and circular economy initiatives.
(iii) A 15% higher price: individuals are highly committed and willing to pay a significant premium to promote circular economy practices.

This study seeks to examine the price range at which individuals would be willing to switch from traditional products to green products, considering that price is often seen as a barrier to choosing environmentally friendly options. In Vietnam, inflation rates have varied between 2% and 6% from 2016 to 2022 [75], and bank deposit interest rates have ranged from 5% to 10% [76]. Hence, this study selected low thresholds for a price increase, namely 5, 10, and 15%, to test people's reactions to different levels of a price change for products that offer added environmental value.

These factors may be inter-dependent and influence an individual's engagement in the circular economy. This study aims to provide insights into participation in the circular economy among the youth by testing how these factors interact to offer insights that may facilitate the journey to build an eco-surplus economy.

3.2. Study Approach

- Bayesian Mindsponge Framework (BMF)

The Bayesian Mindsponge Framework (BMF) was employed for this study. The BMF is formed by the Bayesian model and the mindsponge theory. The former refers to a statistical model that incorporates Bayesian inference, which is a method of statistical inference based on Bayes' theorem [77–80], while the latter is a novel concept related to information processing in the human mind, suggesting that the way human minds process information is deeply connected to the principles observed in nature [81]. This framework, rooted in the field of social sciences, investigates the mechanisms through which decisions are made by individuals, utilizing a think–absorb–eject mechanism that involves the assimilation of information particles from the surrounding environment [82–86]. The concept of the mindsponge mechanism offers an intriguing perspective on the cognitive processes underlying the formation of pro-environmental intentions. According to this mechanism, individuals possess a mindset comprised of deeply ingrained values and beliefs that shape their value system and influence how they process information within their minds, akin to a multi-filtering process. This mechanism operates continuously, absorbing and filtering information to maximize the perceived benefits and minimize the perceived costs. In this context, the respondents surveyed reflect the outcomes of their prior cognitive processes. Consequently, the justification based on the mindsponge framework seeks to reconstruct the mental processes of the respondents, shedding light on what drives pro-environmental actions [83,85,86].

The Bayesian Mindsponge Framework (BMF) was employed for this study for several reasons. First, this method is better at analyzing small samples of data than frequentist regression [77,87]. The BMF can incorporate prior information from previous studies or expert knowledge into the analysis, while the frequentist approach only uses the data from the current experiment [87]. This means that the BMF can make more efficient use of the available information and produce more accurate and precise estimates of the parameters of interest [77]. The BMF also provides a natural way of expressing uncertainty and variability in the estimates, by using posterior probability distributions and credible intervals, which are more intuitive and informative than the *p*-values and confidence intervals used by the frequentist approach [88]. Second, the BMF helps us to easily handle complex models that involve unobserved variables, non-linear causal relationships, hierarchical structures, and multidimensional outcomes. The BMF can also assist us in dealing with missing data and measurement errors in a principled way, by using appropriate prior distributions and likelihood functions [77,79]. The BMF takes advantage of recent developments in Markov chain Monte Carlo (MCMC) methods, which facilitate the implementation of Bayesian analyses of complex datasets [79]. The third reason is that the BMF helps to avoid some common problems in science, such as "stargazing", p-hacking, and HARKing, which hinder reproducibility and transparency [89,90] It is based on the mindsponge

mechanism, which considers the subjective costs and benefits of different options. This mechanism captures the complexity and dynamics of human thinking, even when dealing with complex information, because it can update continuously, account for non-linear causal relationships, and respond to both internal and external influences [91]. Last but not least, Bayesian inference can help to perform statistical analysis with the BMF, which has some benefits such as subjectivity, flexibility in studying human cognition, suitability for estimating variation across groups, the estimation and visualization of credible intervals, and non-dependence on asymptotic approximation [79].

- Bayesian Mindsponge Mindspongeconomics (BMM) framework

In order to gain a deeper comprehension of the cognitive processes and decision-making strategies employed by young adults in Vietnam within the framework of the CE, this study proposes and/or adopts the BMM framework. The BMM framework is an expansion of the BMF with mindspongeconomics (or BMF plus). Mindspongeconomics extends the mindsponge theory into a new branch of applied economics and aims to address the limitations of traditional economics by optimizing utility through dynamic core values [92]. Thus, the BMM framework combines Bayesian reasoning, the thinking mechanism (mindsponge), and a core values-based, economic decision-making framework (mindspongeconomics). In the context of a CE, BMM can be utilized to promote sustainable practices, efficient resource use, and innovative decision making, because it encourages adaptive, value-driven choices among young consumers who are quicker at adjusting to changes and are highly concerned about the environment [93,94]. On the one hand, Bayesian methods encourage an openness to new information and allow consumers to update beliefs about the CE and its practices based on new evidence, making informed choices in a dynamic environment [95]. On the other hand, young consumers, often passionate about environmental issues, can align their choices with their values and optimize resource allocation using mindspongeconomics [92].

Following are the steps/procedures of performing BMM.

Step 1. Identification of research question(s): Define the research objectives or questions and provide background information to justify their importance. A good research question/objective should lead to valuable scientific outcomes, be feasible and logical, and require minimal resources throughout the scientific investigation process.

Step 2. Formulation of hypothetical models based on the mindsponge mechanism and mindspongeconomics framework: Use the mindsponge mechanism and mindspongeconomics framework to conceptualize and construct hypothetical models to address the research question(s). This step involves understanding the various components and characteristics of the mindsponge mechanism, without being constrained by any predetermined structure or elements.

Step 3. Data design, collection, and processing: Using mindsponge–mindspongeconomics, the dataset should possess three essential elements: rigorous design and collection methods, completeness (with minimal missing data), and diversity of observations to ensure representativeness and avoid selection bias.

Step 4. Bayesian analysis to test the Bayesian model averaging models: This involves five steps: (i) model construction, (ii) model fitting, (iii) model diagnosis, (iv) interpretation of the estimated results, and (v) comparison of the models (optional).

Step 5. Evaluation and presentation of the observed results: Diagnose, interpret, and present the estimated results using appropriate visualizations, following steps 3–5 of the Bayesian analysis. For the Bayesian analysis using Markov chain Monte Carlo (MCMC) techniques, it is important to check the convergence of the Markov chains through the effective sample size (n_eff) and the Gelman shrink value (Rhat), as well as visualizing the plots like the trace plots, Gelman plots, and autocorrelation plots. The Bayesian approach does not rely on *p*-values for the hypothesis assessment; instead, researchers assess the reliability of the hypothesized association between the predictor and outcome variables by examining the parameters' posterior distributions.

Step 6: Discussion about the observed results: Connect and compare the findings using mindsponge–mindspongeconomics to relevant theories and existing studies, discuss the implications, and state the limitations of this study.

4. Materials and Methods

4.1. Bayesian Model

By applying the mindsponge theory coupled with mindspongeconomics, the factors that influence people's core values and preferences, such as misinformation, false beliefs, and cognitive biases [83,92], can be identified. The mindsponge theory and the mindspongeconomics framework help us design better policies and interventions that are tailored to the needs and characteristics of different groups of people [92]. In light of the literature review presented in Section 2, which acknowledges the significance of individuals in the CE, the four subsequent models, which employ eight variables as presented in Table 1, are constructed to comprehend the determinants that impact their actions.

Table 1. Lists of variables used in the models.

Variables	Meaning	Level	Code
WTP5	Willingness to pay 5% more for green and energy-saving products compared to traditional products	data	1, 0
WTP10	Willingness to pay 10% more for green and energy-saving products compared to traditional products	data	1, 0
WTP15	Willingness to pay 15% more for green and energy-saving products compared to traditional products	data	1, 0
WasteClass_Bi	Daily waste classification status	data	1, 0
Energysave	Care about saving energy	data	1, 2, 3, 4, 5
Enviprotect	Care about protecting the environment	data	1, 2, 3, 4, 5
CEaware_Bi	Awareness of the circular economy	data	1, 0
CEknowledge	Knowledge about the circular economy	data	1, 2, 3, 4, 5

To assess and confirm the model, either the Rhat statistic or the n_eff metric is employed [77,84,85,90,96]. Specifically, the Rhat statistic, also known as the Gelman–Rubin statistic, measures the convergence of multiple Markov chain Monte Carlo (MCMC) chains. It compares the variance between the chains and the variance within each chain, and values close to 1 indicate that the chains have converged and the model is stable. If the Rhat statistic equals 1, it suggests that the model is adequate [77,85]. On the other hand, the n_eff metric, which stands for the effective sample size, measures the efficiency of the MCMC sampling. It estimates the number of independent samples that would provide the same amount of information as the correlated MCMC samples. A higher n_eff value indicates better efficiency and more reliable results [77,85]. In summary, the model is considered satisfactory if Rhat is equal to 1 or if n_eff surpasses a threshold of 1000. Additionally, the MCMC chains can be inspected to evaluate the fit and performance of the Bayesian regression model. This includes examining the density plots of the chains to assess the distribution of the parameter estimates and checking for any anomalies or unexpected patterns. Consistency in the chains, such as smooth transitions between the samples and a lack of abrupt changes, indicates a well-performing model [77,85]. In a Bayesian model, the posterior coefficients and posterior results are used to describe the analysis's outcome, although they focus on different dimensions. The first refers to the updated estimates of the model's parameters after taking into account the data and any prior beliefs that were included, whereas the second is a broader phase that includes everything learned about the model parameters via the posterior distribution. The posterior results comprise not only the posterior coefficients but also the spread (uncertainty) around those estimates, as well as the whole range of possible values for each parameter.

Model 1 examines the determinants of university students' waste sorting at home. In this model, a probability around μ is determined by the form of the normal distribution, whose width is specified by the standard deviation σ. μ_i indicates the young adults' (i's) likelihood of classifying waste; $Energysave_i$ indicates the importance of caring about saving energy to the young adults' (i's) decision to classify waste; $EnviProtect_i$ indicates the importance of caring about protecting the environment to the young adults' (i's) decision to classify waste; $CEaware\_Bi_i$ indicates the importance of awareness of the CE to the young adults' (i's) decision to classify waste; and $CEknowledge_i$ indicates the importance of knowledge about the CE to the young adults' (i's) decision to classify waste. Model 1 has six parameters: the coefficients, $\beta_{Energysave}$, $\beta_{EnviProtect}$, $\beta_{CEaware\_Bi}$, and $\beta_{CEknowledge}$; the intercept, β_0; and the standard deviation of the "noise", σ. The coefficients of the variables $Energysave_i$, $EnviProtect_i$, $CEaware\_Bi_i$, and $CEknowledge_i$ are distributed as a normal distribution around the mean denoted M and with the standard deviation denoted S.

Model 1: Waste classification

$$\text{Wasteclass\_Bi} \sim \text{normal}(\mu,\sigma) \tag{1}$$

$$\mu_i = \beta_0 + \beta_{\text{Energysave}} \times \text{Energysave}_i + \beta_{\text{EnviProtect}} \times \text{EnviProtect}_i + \beta_{\text{CEaware\_Bi}} \times CEaware\_Bi_i + \beta_{\text{Ceknowledge}} \times \text{CEknowledge}_i \tag{2}$$

$$\beta \sim \text{normal}(M,S) \tag{3}$$

Models 2, 3, and 4 investigate young adults' WTP higher for green and energy-saving products at three price tiers. In the willingness-to-pay models, three different levels of prices—5%, 10%, and 15% higher than those of normal products—are examined. By examining these levels, this study aims to more deeply understand the factors driving young adults' purchasing behavior.

Model 2: WTP 5% higher

$$\text{WTP5} \sim \text{normal}(\mu,\sigma) \tag{4}$$

$$\mu_i = \beta_0 + \beta_{\text{Energysave}} \times \text{Energysave}_i + \beta_{\text{EnviProtect}} \times \text{EnviProtect}_i + \beta_{\text{CEaware\_Bi}} \times \text{CEaware\_Bi}_i + \beta_{\text{CEknowledge}} \times \text{CEknowledge}_i + \beta_{\text{Wasteclass\_Bi}} \times \text{Wasteclass\_Bi}_i \tag{5}$$

$$\beta \sim \text{normal}(M,S) \tag{6}$$

Model 3: WTP 10% higher

$$\text{WTP10} \sim \text{normal}(\mu,\sigma) \tag{7}$$

$$\mu_i = \beta_0 + \beta_{\text{Energysave}} \times \text{Energysave}_i + \beta_{\text{EnviProtect}} \times \text{EnviProtect}_i + \beta_{\text{CEaware\_Bi}} \times \text{CEaware\_Bi}_i + \beta_{\text{CEknowledge}} \times \text{CEknowledge}_i + \beta_{\text{Wasteclass\_Bi}} \times \text{Wasteclass\_Bi}_i \tag{8}$$

$$\beta \sim \text{normal}(M,S) \tag{9}$$

Model 4: WTP 15% higher

$$\text{WTP15} \sim \text{normal}(\mu,\sigma) \tag{10}$$

$$\mu_i = \beta_0 + \beta_{\text{Energysave}} \times \text{Energysave}_i + \beta_{\text{EnviProtect}} \times \text{EnviProtect}_i + \beta_{\text{CEaware\_Bi}} \times \text{CEaware\_Bi}_i + \beta_{\text{CEknowledge}} \times \text{CEknowledge}_i + \beta_{\text{Wasteclass\_Bi}} \times \text{Wasteclass\_Bi}_i \tag{11}$$

$$\beta \sim \text{normal}(M,S) \tag{12}$$

4.2. Data

This study utilized primary data obtained using a systematic and sequential methodology [97]. To be specific, the group utilized a Google form to design the questionnaire. This data collection methodology was chosen for two specific rationales. Firstly, the interviewees consist of young adults who possess a high level of familiarity with Google forms, hence

facilitating the survey process. Furthermore, it facilitates time efficiency and enables the surveyor to reach a substantial number of participants across a wide geographical region.

Information about the variables needs to be collected in light of the aforementioned research hypotheses. For the variables of "Daily waste classification status", "WTP 5% more for green and energy-saving products (compared to conventional products)", "WTP 10% more for green and energy-saving products", "WTP 15% more for green and energy-saving products", and "Awareness of the CE", the questions were designed in an open-ended form (yes/no). For the variables of "Care about saving energy", "Care about protecting the environment", and "Knowledge about the circular economy" the questions were designed in the Likert format [98].

A total of 485 surveys were collected throughout the period from September to December 2023. The majority of respondents were students at the VNU University of Economics and Business (47.7%), followed by the National Economic University (16%), the VNU School of Law (11.9%), the Vietnam National University of Forestry (11.6%), and the University of Economics HCM City (8.4%). Furthermore, almost all respondents (93.7%) were between the ages of 18 and 22, and the majority of respondents (73.5%) were from urban areas. Table 2 summarizes the statistical overview of the variables utilized in the models.

Table 2. Summary of variables used in the models.

Variables	N	Mean	SD	Min	Max
WTP5	480	0.867	0.340	0	1
WTP10	480	0.456	0.499	0	1
WTP15	480	0.198	0.399	0	1
WasteClass_Bi	480	0.235	0.425	0	1
Energysave	484	4.002	0.784	1	5
Enviprotect	484	4.324	0.722	1	5
CEaware_Bi	484	0.579	0.494	0	1
CEknowledge	476	2.235	0.994	1	5

5. Results

Table 3 presents a summary of the results obtained from estimating the waste classification model using the R 4.0.3 software. The table illustrates the impact of various factors on the respondents' decisions regarding waste sorting. To be specific, for all the variables, Rhat is 1 and n_eff is over 6000 (much higher than the threshold of 1000, indicating a good model). The trace plots in Figure 3 also demonstrate that the Markov chains exhibit stable and consistent patterns, so the convergence can be confirmed. The simulated results show that, besides knowledge about the CE, interests in both saving energy and environmental protection exert a significantly positive impact on the practice of young adults' classifying waste in households (μEnergysave = 0.45, μEnviprotect = 0.65, and μCEknowledge = 0.37) (Table 3). As can be seen from both the interval and density plot of the probability distributions of the posterior coefficients (Figures 4 and 5), these variables' distributions are entirely on the positive side of the x-axis, signifying a highly reliable positive distribution. However, the impact of awareness of the CE does not yield a statistically significant effect on waste sorting. Interestingly, at a lower confidence level, this variable might negatively influence young adults' waste classification (Figure 3).

Table 3. Estimated posterior results of waste classification.

Parameters	Mean	SD	n_eff	Rhat
a_Wasteclass_Bi	−6.56	1.07	6686	1
b_Energysave_Wasteclass_Bi	0.45	0.21	7665	1
b_Enviprotect_Wasteclass_Bi	0.65	0.25	6301	1
b_CEaware_Bi_Wasteclass_Bi	−0.54	0.33	7347	1
b_CEknowledge_Wasteclass_Bi	0.37	0.16	6992	1

Source: own elaboration.

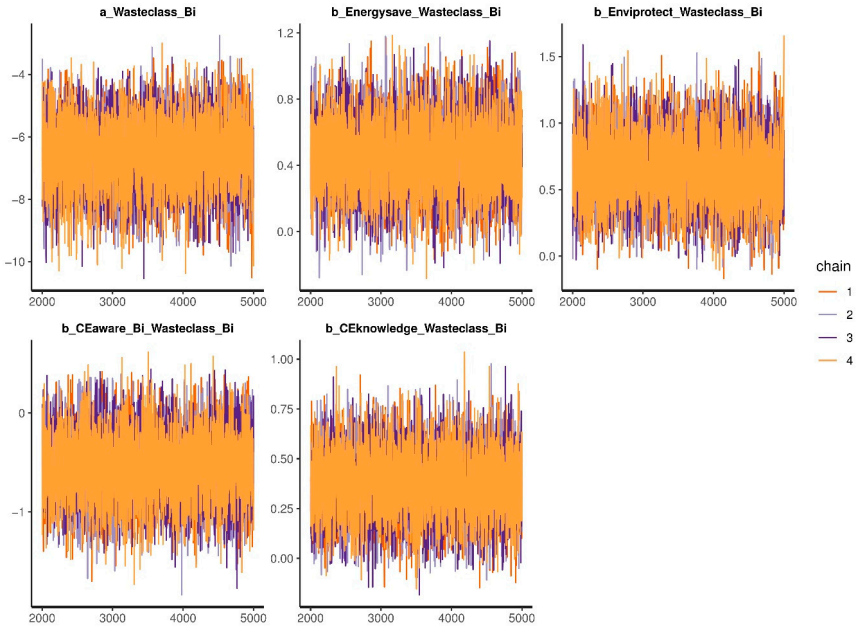

Figure 3. Trace plot for each variable of model 1.

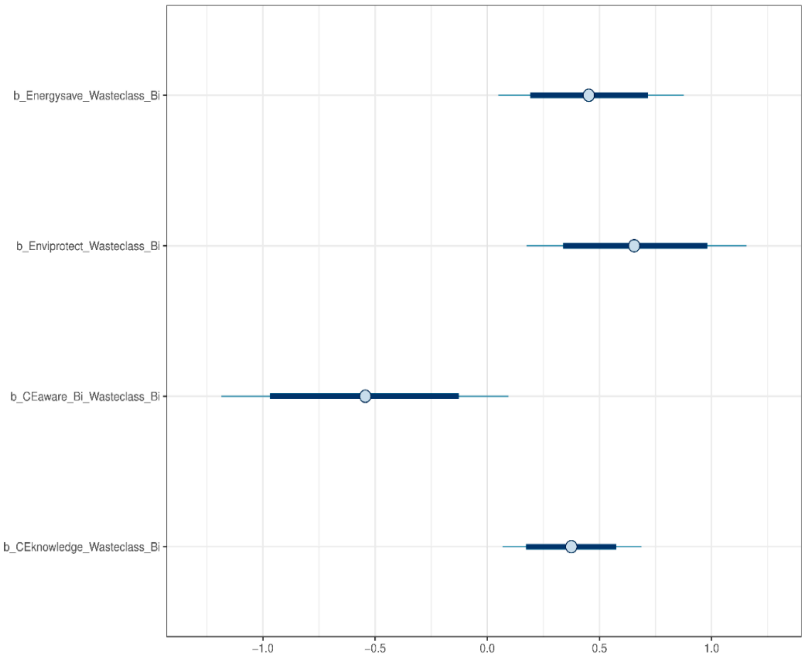

Figure 4. Probability distributions of posterior coefficients (interval plot) of model 1.

Table 4 presents a summary of the results obtained from estimating model 2 using the R 4.0.3 software. The diagnostic statistics indicate a good convergence of the model's Markov chains, evidenced by the effective sample sizes (n_eff) that are larger than 1000, and the Gelman shrink factor (Rhat) statistics that equal 1 (Table 4). The trace plots also confirm the good convergence of the model (Figure 6). To be specific, the table illustrates the impact of various factors on the respondents' decisions regarding their willingness to pay (a WTP of 5% higher). Model 2 (Figures 7 and 8) demonstrates the determinants of young adults' WTP higher for green and energy-saving products. It is interesting to note that when the cost of these products is higher at different levels, the WTP is affected by different factors. At 5% higher, only the awareness of the CE is shown to be statistically significant. To be specific, there is a strong positive association between the respondents' awareness of the CE and a WTP that was 5%

higher (mean = 0.85). On the other hand, this factor shows no influence on their WTP when the prices of the products are approximately 10% higher.

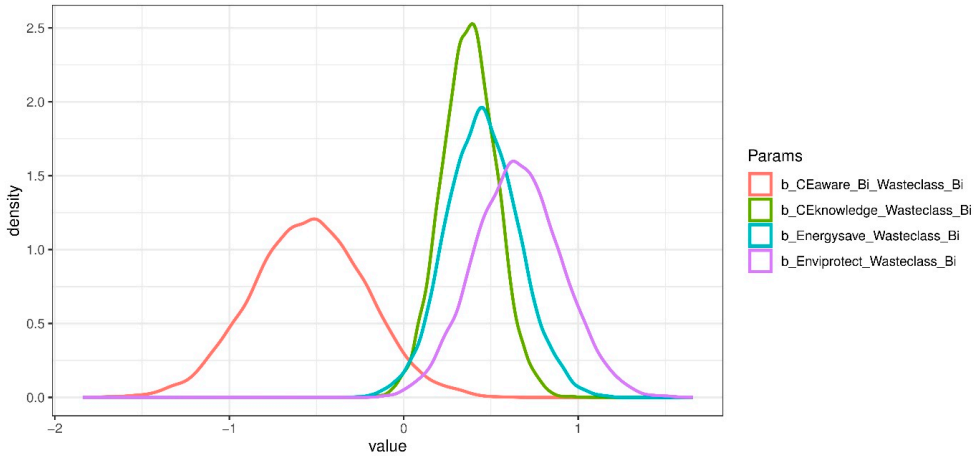

Figure 5. Plotting the coefficients' posterior distribution of model 1.

Table 4. Estimated results of model 2 (a WTP of 5% higher).

Parameters	Mean	SD	n_eff	Rhat
a_WTP5	0.06	0.97	7329	1
b_Energysave_WTP5	0.25	0.24	7400	1
b_Enviprotect_WTP5	0.19	0.25	6653	1
b_CEaware_Bi_WTP5	0.85	0.41	7233	1
b_CEknowledge_WTP5	−0.18	0.21	7216	1
b_Wasteclass_Bi_WTP5	0.62	0.46	9110	1

Source: own elaboration.

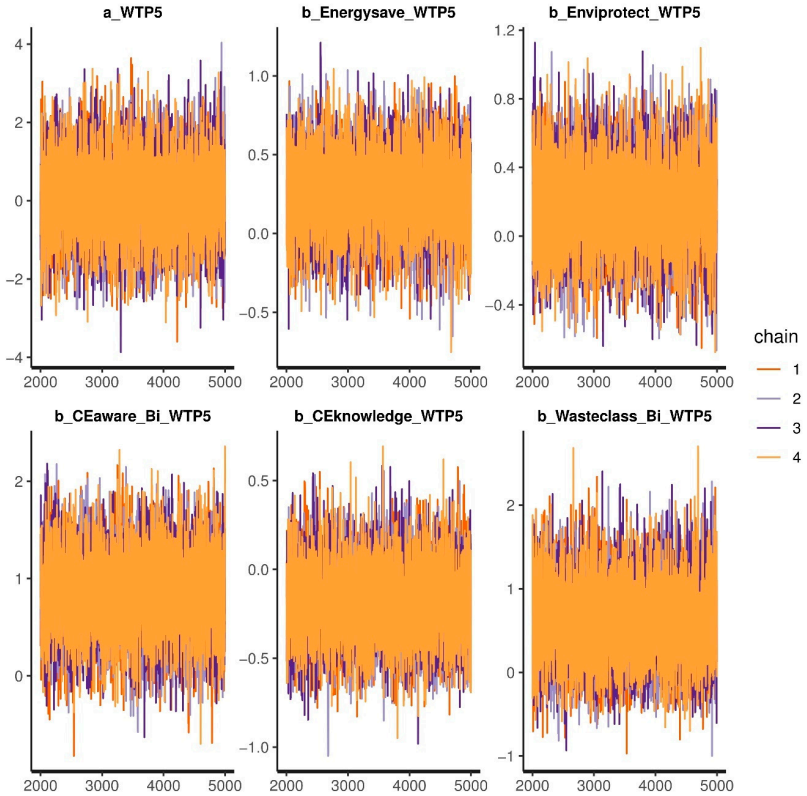

Figure 6. Trace plot for each variable of model 2.

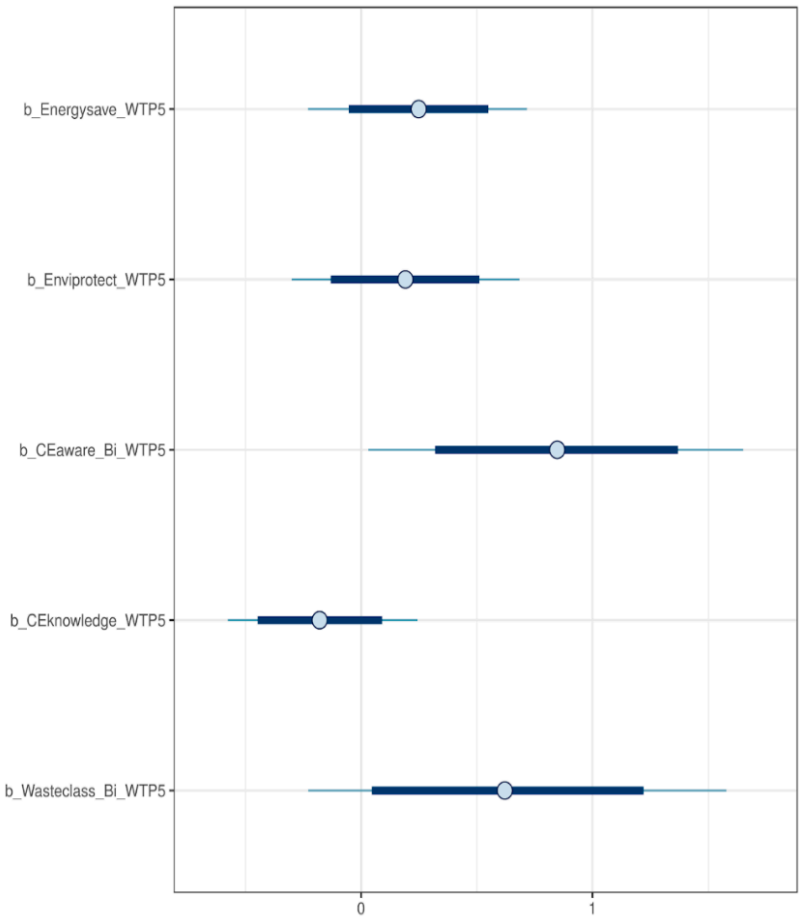

Figure 7. Probability distributions of posterior coefficients (interval plot) of model 2.

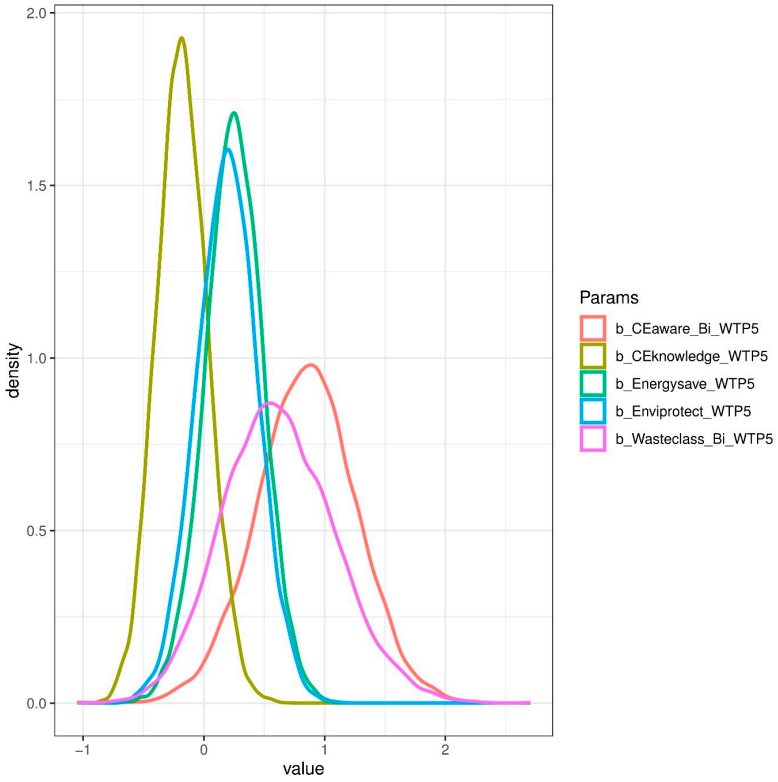

Figure 8. Plotting the coefficients' posterior distribution of model 2.

Model 3′s statistical results are well validated. All n_eff values are greater than 1000, and the Rhat values are equal to 1 (Table 5). The convergence of model 3′s Markov chains is again confirmed through visual diagnostic methods, namely the trace plots (Figure 9). To be specific, the table illustrates the impact of various factors on the respondents' decisions regarding their willingness to pay (a WTP 10% higher). From model 3 (Figures 10 and 11), a strong positive correlation between the waste classification and a WTP 10% higher is found ($\mu = 0.72$). Although awareness of the CE, care about saving energy, and care about protecting the environment are reported to induce respondents to pay (mean = 0.22, mean = 0.22, and mean = 0.12, respectively), Figure 9 suggests that these three factors were not statistically significant.

Table 5. Estimated results of model 3 (a WTP of 10% higher).

Parameters	Mean	SD	n_eff	Rhat
a_WTP10	−1.83	0.72	7637	1
b_Energysave_WTP10	0.22	0.17	8533	1
b_Enviprotect_WTP10	0.12	0.18	7062	1
b_CEaware_Bi_WTP10	0.22	0.28	7902	1
b_CEknowledge_WTP10	−0.01	0.14	7796	1
b_Wasteclass_Bi_WTP10	0.72	0.25	8618	1

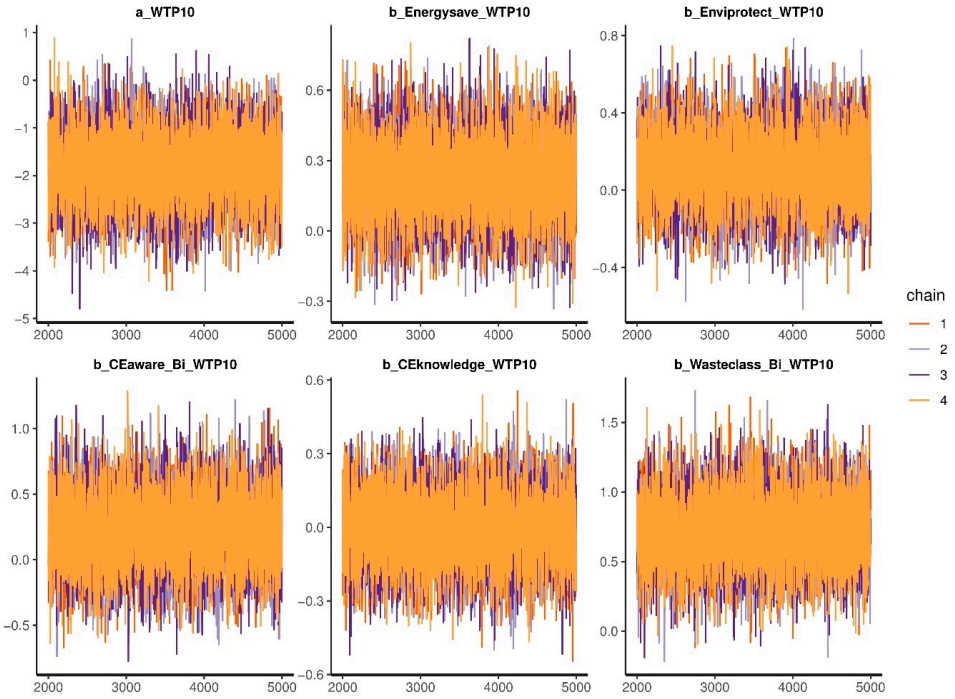

Figure 9. Trace plot for each variable of model 3.

Table 6 presents a summary of the results obtained from estimating model 4, which illustrates the impact of various factors on the respondents' decisions regarding their willingness to pay (a WTP 15% higher). All the variables have a Rhat value of 1, and the effective sample sizes (n_eff) exceed 7000, which is well above the desired threshold of 1000 for an accurate estimation. Figures 12–14 present probability distributions of posterior coefficients, the coefficients' posterior distribution, and trace plot for each variable of model 4, respectively. To be specific, the convergence of the model is confirmed by the dense plots of variance in Figure 14. The application of the Markov chain Monte Carlo (MCMC) method to large hierarchical models in Bayesian statistics yields consistent results across all chains, indicating the presence of autocorrelation. The distribution of coefficients from the Bayesian regression model (BRM) can be observed in Figures 13 and 14. From model 4, the reported result in Figure 12 reveals that most of the distribution of Enviprotect lies on the

positive side of the axis, indicating a highly reliable positive association between interest in protecting the environment and a WTP 15% higher (mean = 0.48). It is also noteworthy that, despite positively influencing a WTP 5% higher, awareness of the CE is found to exert a negative effect on a WTP 15% higher. However, a certain part of being CE-aware still lies on the positive side of the x-axis, implying that it is not statistically reliable in the 15% case.

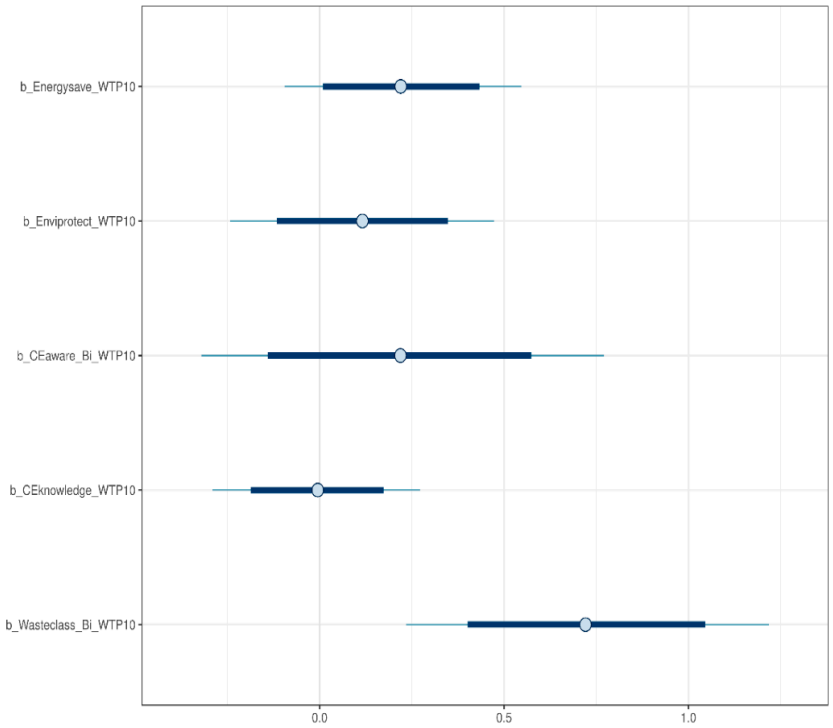

Figure 10. Probability distributions of posterior coefficients (interval plot) of model 3.

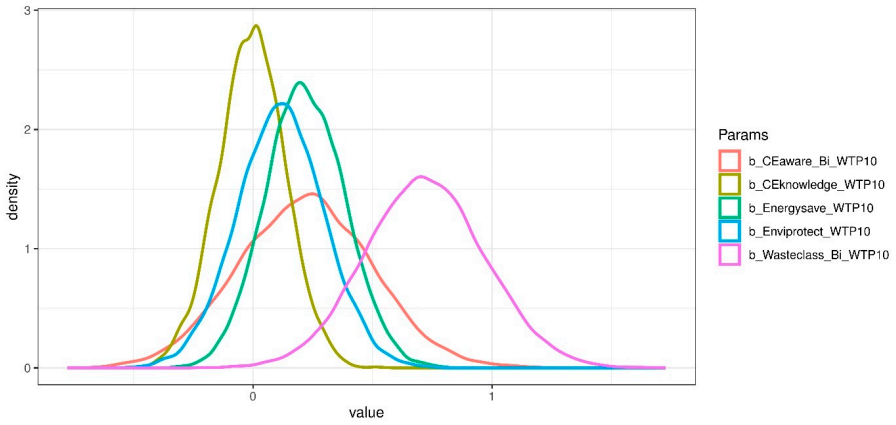

Figure 11. Plotting the coefficients' posterior distribution of model 3.

Table 6. Estimated results of model 4 (a WTP of 15% higher).

Parameters	Mean	SD	n_eff	Rhat
a_WTP15	−4.46	1.02	8104	1
b_Energysave_WTP15	0.20	0.21	9466	1
b_Enviprotect_WTP15	0.48	0.25	7391	1
b_CEaware_Bi_WTP15	0.40	0.33	7936	1
b_CEknowledge_WTP15	0.10	0.16	7724	1
b_Wasteclass_Bi_WTP15	0.22	0.29	8929	1

Source: own elaboration.

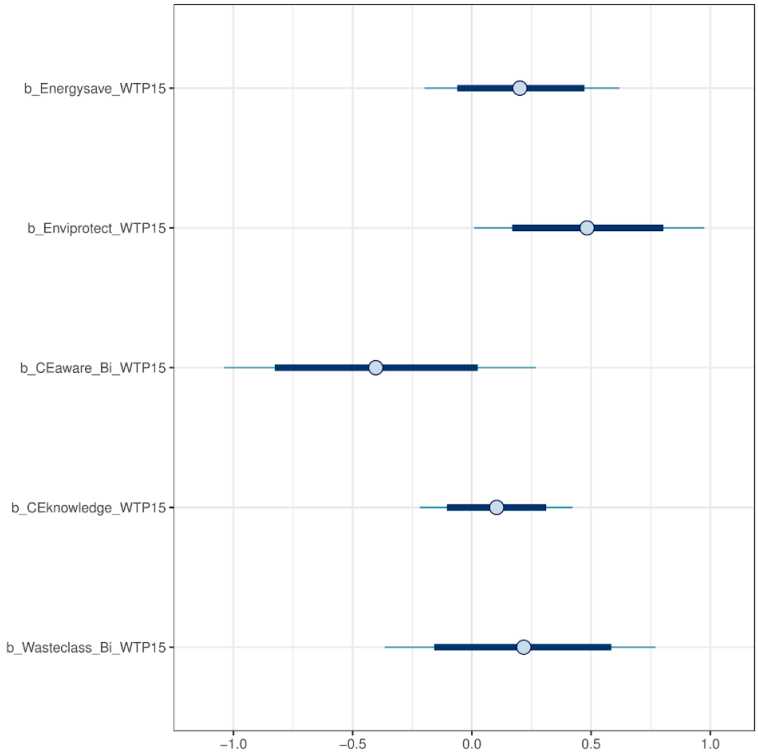

Figure 12. Probability distributions of posterior coefficients (interval plot) of model 4.

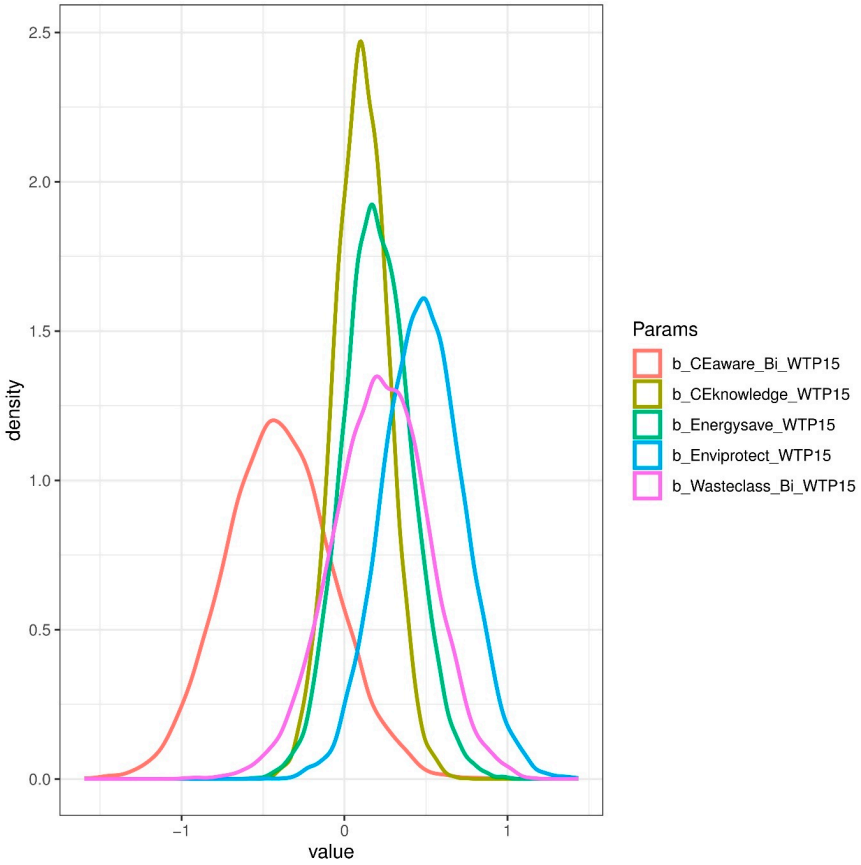

Figure 13. Plotting the coefficients' posterior distribution of model 4.

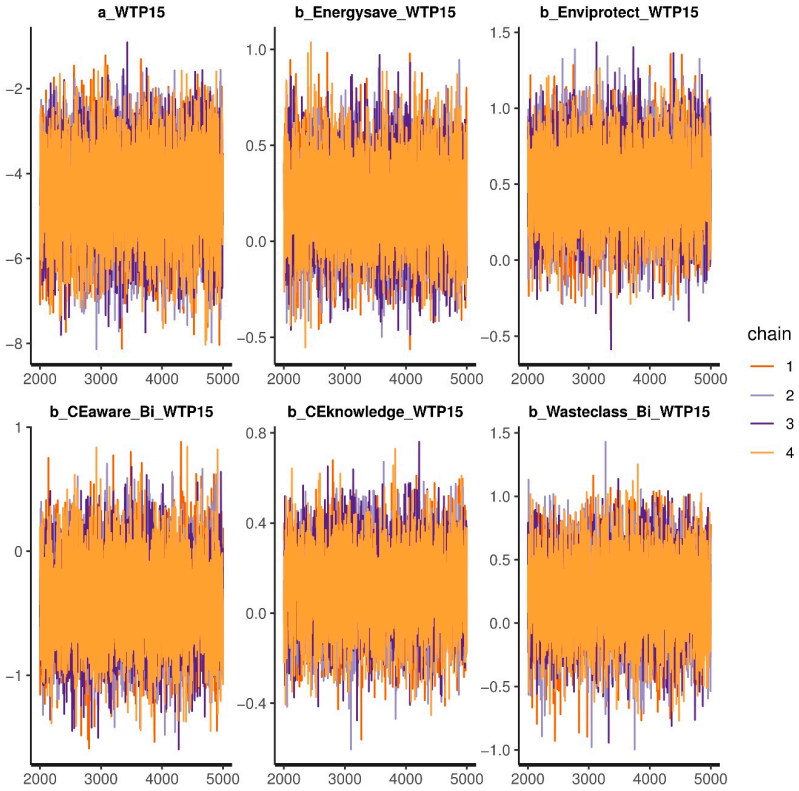

Figure 14. Trace plot for each variable of model 4.

6. Discussion

6.1. Key Findings

This current study employs the Bayesian Mindsponge Mindspongeconomics (BMM) framework to gain a deeper understanding of the participation in the CE of Vietnamese young adults. The models are built on the information processing mechanism, and the estimation is carried out through Bayesian inference. The research results show that pro-environmental attitudes play a crucial role in stimulating pro-environmental practices, specifically waste classification. However, the factors that drive financial contributions to development of a CE appear to be more complex and yield valuable insights at different levels. However, when it comes to the financial contribution to developing a CE, the driving factors seem to be more complex and provide valuable insights at different levels.

As evidenced in the preceding section, a significant association was observed between the engagement of young individuals in waste sorting practices and their knowledge of the CE and care about saving energy, as well as protecting the environment. In Vietnam, the concept of the CE and its various applications has gained nationwide attention, particularly following the issuance of Decision 687 on the development of a CE [99], as well as related practices such as waste management, energy saving, and green shopping, which are promoted both at universities and in communities, helping to enhance youths' knowledge of the CE. These efforts have familiarized Vietnamese young people, especially university students, with knowledge of the CE, which not only provides them with the necessary knowledge and skills to perform green practices such as waste sorting but also motivates them to actually adopt such behaviors [100]. However, in Vietnam, the adoption of the CE concept is presently constrained, which suggests a potential gap in the widespread dissemination and reception of environmental values. Vietnam is currently undergoing a dynamic phase of transformation [29], making effective resource management crucial to the further thriving of Vietnam on its progressive trajectory. To this end, the CE should be prioritized to reach holistic sustainability goals [101], and there is a fundamental requirement to effectively communicate and instill environmental value within society to propel

the national economy towards a CE. Moreover, being aware of and exposed to the dire consequences of global warming, Vietnamese young adults increasingly express a greater level of care about protecting the planet [102]. Care is also found to exert a significant impact on promoting pro-environmental behaviors in many studies [61–63,103]. On the other hand, awareness of the CE did not have a significant impact in this study. This is in line with Linda and Bhishna's findings [104] that awareness alone may have little impact on changing behaviors, which could be explained by the environmental attitude–behavior gap, which refers to the failure of behavioral intentions to reflect actual pro-environmental behavior [51–53].

This study shows that awareness of the CE and care about environmental protection are positively associated with a willingness to pay (WTP). However, unlike some other studies [105–107], this study investigates the relationship between the willingness to pay (WTP) and environmental engagement levels, categorized into three pricing tiers. At a 5% higher price level, the willingness to pay is significantly positively associated with awareness of the CE, which underscores the power of information in driving sustainable behaviors. This implies that even individuals with only a brief exposure to information about the CE are motivated to contribute, primarily through information dissemination. In other words, education and awareness campaigns may allow for the wider adoption of eco-friendly practices. This study also finds that individuals who classify waste daily are more likely to pay 10% more for green products, whereas interest in environmental protection is the driving force behind purchases of products with 15% higher prices. This indicates that CE-aware individuals only adopt pro-environmental practices as part of their routine, often without conscious environmental consideration. Meanwhile, genuine environmental concern plays a crucial role in their willingness to pay. In this case, a high level of contribution depends on a deep commitment rooted in mindset, core values, and intrinsic beliefs, reflecting a culture of care for the environment, and this care extends beyond personal habits into responsible choices of consumption, such as investments in green and energy-saving products. Individuals at this level are prepared to actively promote an environmental culture where environmental preservation is the core value. The difference in people's responses at different levels is also consistent with the Culture Tower, in which each block represents the factors that correspond with the degree of participation. The levels of 5%, 10%, and 15% correspond with the Culture Tower's levels—Knowledge/Perception, Action/Practice, and Contribution/Core Value [73]. Therefore, understanding and fostering this link is pivotal for promoting sustainable practices at the individual level. These different engagement levels can be explained through two theories of the mind: serendipity [108] and the mindsponge mechanism [82]. To be specific, by accident, individuals are briefly exposed to CE-related information, after which the filtering mechanism kicks in and these pieces of information undergo internal processing within one's mind. According to the mindsponge theory, the process involves the acceptance or rejection of values to alter perceptions based on their compatibility with the intrinsic values embedded in one's information processing mechanism [82]. This typically emphasizes the role of information dissemination and culture in shaping and transforming one's perceptions and/or behavior. As seen in Japan, South Korea, and Singapore, it takes many years to instill this environmental value in different segments of the population or future generations through communication, education, and policies, which suggests that Vietnam, a nation that boasts about its cultural resources, should quickly take action towards a CE and sustainability.

The CE is a global trend that has been successfully implemented in numerous nations due to its potential to achieve both economic and environmental sustainability goals [109]. The CE Action Agenda identifies five opportunities associated with a CE: making better use of finite resources, creating new value from waste, creating jobs and economic growth, improving human health, and protecting biodiversity [110]. In addition, a CE can help developing countries solve the dilemma between economic growth and environmental pollution as presented in the Environmental Kuznets Curve (EKC), because it reduces the amount of waste produced by the economy and promotes the reuse of resources [111]. As the youth are the future of the nation, it is imperative that Vietnam enhances young

adults' participation in the CE. By taking both initial steps, such as waste classification, and further steps, Vietnamese people, especially the youth, are expected to maintain their enthusiasm and spread their eco-friendly lifestyles, ideas, and initiatives, creating a strong environmental culture within the next generation. To this end, a comprehensive strategy, including communication, education and training, and capacity building, is required.

6.2. Contributions

Upon analyzing the results, this work has made numerous significant contributions. Theoretically, this study has enriched the existing literature review on an environmental culture by using different theories to explain the mechanism from awareness to intention/behavior, namely, the Theory of Planned Behavior [61–63], the Culture Tower [73], the sustainable behavioral model in natural resource management [54], and the semiconducting principle of monetary and environmental values exchange [112]. With regards to the willingness to pay, the results of three levels—5%, 10%, and 15%—are consistent with the levels of the Culture Tower—Knowledge/Awareness, Action/Practice, and Contributions. In addition, this research paper methodologically contributes to the existing literature by applying the Bayesian Mindsponge Mindspongeconomics (BMM) framework to understand the consumer decision-making process. From a practical viewpoint, firstly, it assesses the potential of developing a CE with a solution to address the economic–environmental–development trade-off in a developing country like Vietnam. In addition, as the majority of the respondents live in urban areas, this study can be utilized to promote CE practices in cities, contributing to environmental sustainability. By studying the role of young people, it also proposes an approach to foster this process: promoting green literacy and building an environmental culture among the youth. Secondly, the results reveal the driving factors for youth engagement in the CE by building a research model from an environmental perspective with variables concerning awareness, knowledge, practice, and contribution [73]. These findings emphasize the importance of improving environmental education and fostering positive environmental attitudes among the younger generation. Although governing bodies have made waste classification obligatory for households, evidenced by the introduction of the Environmental Law 2020 [10], there should be greater efforts in communication or the introduction of higher penalties for non-compliance to raise public awareness of the law in general and the responsibility for environmental protection in particular. Furthermore, education also plays a key role in fostering a mindset transformation towards environmental issues. Educational programs should (i) be incorporated into the school curriculum to instill environmental values in children from an early age; and (ii) be better aligned with the needs of young people and start with small to big actions, turning required pro-environmental activities assigned during university courses into daily practices. As future change agents, young individuals—future company owners and policymakers—who add environmental value to their set of values may be inclined to carefully take account of environmental consequences in their decision making. The results not only indicate factors leading to Vietnamese young adults classifying waste and paying more for green and energy-saving products but also imply practical policies to engage them. The results claim that this cultural approach would be highly promising for further understanding the drivers of behavior.

6.3. Limitations and Potential Follow-Up Research

Nevertheless, this study has certain limitations. Firstly, the sample size is relatively limited, which may introduce a certain degree of bias. Future studies can try the frequentist approach with a larger sample size to compare with this study's findings. Furthermore, while the concept of the CE encompasses a broad spectrum of subjects, this particular study narrows its scope to solely examine the waste classification practices of students in urban areas and their WTP for greener and more sustainable products, following the new environmental law in 2020 with specific provisions on waste classification practices in Vietnam. Therefore, future studies should consider exploring broader and/or country-

specific subjects, such as recycling and energy-conserving actions, and be conducted in different areas of Vietnam or other countries.

7. Conclusions

Vietnam has steered its efforts towards the green transformation and sustainable development associated with the CE and the green economy; hence, understanding youth participation in CE practices plays a pivotal role in enhancing green literacy and an environmental culture nationwide. This study is one of the first attempts to employ the Bayesian Mindsponge Mindspongeconomics (BMM) framework and approaches the issue through the lens of an environmental culture with a primary focus on culture-related factors, seeking to comprehend youth participation in pro-environmental behaviors and their willingness to pay. This study finds that young adults who have knowledge of the CE and who concern themselves with energy saving and with environmental protection are more likely to perform pro-environmental practices such as waste sorting. As regards their willingness to pay, the results reveal the positive impact of interest in saving energy and in environmental protection on waste classification in households and suggests that CE-aware and environmentally conscious individuals have a higher level of willingness to pay. This research unravels the layers of individual contributions to the CE, showcasing diverse engagement levels. For those understanding the CE on a superficial level, mere exposure information is enough to motivate their participation, which highlights the importance of raising awareness and disseminating the relevant knowledge. At a deeper level of engagement, individuals may engage unconsciously, and pro-environmental actions are performed as a part of their daily routine without explicit environmental advocacy or conscious commitment. For those who are willing to pay 15% more for products, a substantial commitment emerges, rooted in genuine environmental concern that extends beyond mere daily habits. As the future of a nation and potential changemakers, young adults are expected to be environmentally conscious in both their personal and professional lives. Youth engagement can foster a culture of environmental consciousness and responsibility, inspiring broader societal shifts towards greener lifestyles and consumption patterns. These findings contribute valuable insights to the ongoing endeavors aimed at cultivating green literacy and environmental consciousness among the youth in Vietnam, particularly in urban settings, and serve as a foundation for developing strategies that foster sustainable practices and enhance environmental consciousness, contributing to a more resilient and eco-conscious society.

Author Contributions: Conceptualization, V.Q.K.; methodology, P.M.T. and V.Q.K.; software, P.M.T. and V.Q.K.; validation, H.-D.N., N.A.T., N.D.L. and V.Q.K.; formal analysis, P.M.T., T.N., H.-D.N. and V.Q.K.; resources, V.Q.K.; data curation, H.-D.N. and V.Q.K.; writing—original draft preparation, P.M.T., T.N., H.-D.N. and V.Q.K.; and writing—review and editing, P.M.T., T.N., H.-D.N., N.A.T., N.D.L., N.T.H. and V.Q.K. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Data Availability Statement: The datasets utilized in the present investigation can be obtained from the corresponding author upon reasonable request.

Acknowledgments: We would like to thank all participants who assisted us with the data collecting for this study. We would also like to thank three reviewers for their valuable recommendations that helped improve the quality of our paper.

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

References

1. United Nations. *The Sustainable Development Goals 2023 Report*; United Nations: New York, NY, USA, 2023; Available online: https://unstats.un.org/sdgs/report/2023/The-Sustainable-Development-Goals-Report-2023.pdf (accessed on 3 October 2023).
2. Hallegatte, S.; Fay, M.; Barbier, E.B. Poverty and climate change: Introduction. *Environ. Dev. Econ.* **2018**, *23*, 217–233. [CrossRef]
3. Hallegatte, S.; Rozenberg, J. Climate change through a poverty lens. *Nat. Clim. Change* **2017**, *7*, 250–256. [CrossRef]

4. Geissdoerfer, M.; Savaget, P.; Bocken, N.M.P.; Hultink, E.J. The Circular Economy—A new sustainability paradigm? *J. Clean. Prod.* **2017**, *143*, 757–768. [CrossRef]
5. Bocken, N.M.P.; de Pauw, I.; Bakker, C.; van der Grinten, B. Product design and business model strategies for a circular economy. *J. Ind. Prod. Eng.* **2016**, *33*, 308–320. [CrossRef]
6. Manh, N. ề Circular economy towards environmental protection and sustainability in Vietnam (Phát triển kinh tế tuần hoàn hướng tới bảo vệ môi trường, phát triển bền vững ở Việt Nam). *Communist Rev.* **2022**, *35*, 381–386. Available online: https://www.tapchicongsan.org.vn/web/guest/bao-ve-moi-truong/-/2018/825771/phat-trien-kinh-te-tuan-hoan-huong-toi-bao-ve-moi-truong,-phat-trien-ben-vung-o-viet-nam.aspx (accessed on 3 October 2023).
7. Duong, T. Government and Business Community Join Hands to Promote Green Growth. *Government News*. 20 March 2023, pp. 22–24. Available online: https://en.baochinhphu.vn/government-and-business-community-join-hands-to-promote-green-growth-111230320162702567.htm (accessed on 22 October 2023).
8. The Vietnam Prime Minister. Decision 687/QD-TTg: Approving the Project of developing Circular Economy in Viet Nam. 2022. Available online: https://thuvienphapluat.vn/van-ban/EN/Thuong-mai/Decision-687-QD-TTg-2022-the-scheme-for-circular-economy-development-in-Vietnam/516871/tieng-anh.aspx (accessed on 3 September 2023).
9. Herrador, M.; Dat, T.T.; Truong, D.D.; Hoa, L.T.; Łobacz, K. The Unique Case Study of Circular Economy in Vietnam Remarking Recycling Craft Villages. *SAGE Open* **2023**, *13*, 1–17. [CrossRef]
10. The National Assembly. Law 72/2020/QH14 on Environmental Protection in Vietnam. 2020. Available online: https://thuvienphapluat.vn/van-ban/EN/Tai-nguyen-Moi-truong/Law-72-2020-QH14-on-Environmental-Protection/463512/tieng-anh.aspx (accessed on 13 October 2023).
11. Do, T. Sorting Waste at Source: Difficult but Necessary (Phân loại rác tại nguồn: Khó nhưng cần thực hiện). 2023. Available online: https://baophapluat.vn/phan-loai-rac-tai-nguon-kho-nhung-can-thuc-hien-post491768.html (accessed on 10 May 2023).
12. European Commission. *A New Circular Economy Action Plan for a Cleaner and More Competitive Europe*; European Commission: Brussels, Belgium, 2020; Available online: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN (accessed on 13 October 2023).
13. Hickman, C.; Marks, E.; Pihkala, P.; Clayton, S.; Lewandowski, R.E.; Mayall, E.E.; Wray, B.; Mellor, C.; van Susteren, L. Climate anxiety in children and young people and their beliefs about government responses to climate change: A global survey. *Lancet Planet. Health* **2021**, *5*, e863–e873. [CrossRef] [PubMed]
14. Krajnc, D.; Kovačič, D.; Žunec, E.; Brglez, K.; Kovačič Lukman, R. Youth Awareness and Attitudes towards a Circular Economy to Achieve the Green Deal Goals. *Sustainability* **2022**, *14*, 12050. [CrossRef]
15. World Bank. *The Circular Economy: Could It Provide Opportunities for Greener and Better Jobs?* World Bank: Washington, DC, USA, 2021; pp. 1–43. Available online: http://documents.worldbank.org/curated/en/099707203152315359/IDU0e4d857ef0761b048d00af3b03ad74920e264 (accessed on 13 October 2023).
16. Nguyen, T.X.H.; Tran, T.-B.-N.; Dao, T.-B.; Barysheva, G.; Nguyen, C.-T.; Nguyen, A.-H.; Lam, T.-S. Elderly People's Adaptation to the Evolving Digital Society: A Case Study in Vietnam. *Soc. Sci.* **2022**, *11*, 324. [CrossRef]
17. Arslan, S.; Panitsara, N.; Lerwen, L. Youth Leadership in a Circular Economy: Education Enabled by STEAM Platform. In *An Introduction to Circular Economy*; Springer: Singapore, 2020; pp. 597–622. [CrossRef]
18. Kirchherr, J.; Yang, N.H.N.; Schulze-Spüntrup, F.; Heerink, M.J.; Hartley, K. Conceptualizing the Circular Economy (Revisited): An Analysis of 221 Definitions. *Resour. Conserv. Recycl.* **2023**, *194*, 107001. [CrossRef]
19. Homrich, A.S.; Galvão, G.; Abadia, L.G.; Carvalho, M.M. The circular economy umbrella: Trends and gaps on integrating pathways. *J. Clean. Prod.* **2018**, *175*, 525–543. [CrossRef]
20. European Parliament. *Circular Economy: Definition, Importance and Benefits*; European Parliament: Strasbourg, France, 2023; pp. 23–26. Available online: https://www.europarl.europa.eu/news/en/headlines/economy/20151201STO05603/circular-economy-definition-importance-and-benefits (accessed on 3 October 2023).
21. Dardanoni, V.; Guerriero, C. Young people's willingness to pay for environmental protection. *Ecol. Econ.* **2021**, *179*, 106853. [CrossRef]
22. Franzen, A.; Vogl, D. Acquiescence and the Willingness to Pay for Environmental Protection: A Comparison of the ISSP, WVS, and EVS*. *Soc. Sci. Q.* **2013**, *94*, 637–659. [CrossRef]
23. Laroche, M.; Bergeron, J.; Barbaro-Forleo, G. Targeting consumers who are willing to pay more for environmentally friendly products. *J. Consum. Mark.* **2001**, *18*, 503–520. [CrossRef]
24. Demirbas, A. Waste management, waste resource facilities and waste conversion processes. *Energy Convers. Manag.* **2011**, *52*, 1280–1287. [CrossRef]
25. Ghisellini, P.; Cialani, C.; Ulgiati, S. A review on circular economy: The expected transition to a balanced interplay of environmental and economic systems. *J. Clean. Prod.* **2016**, *114*, 11–32. [CrossRef]
26. Mazur-Wierzbicka, E. Circular economy: Advancement of European Union countries. *Environ. Sci. Eur.* **2021**, *33*, 111. [CrossRef]
27. European Commission. *Amending Directive 2008/98/EC on Waste*; COM/2015/0595 Final; European Commission: Brussels, Belgium, 2015; pp. 1–5.
28. Mayer, A.; Haas, W.; Wiedenhofer, D.; Krausmann, F.; Nuss, P.; Blengini, G.A. Measuring progress towards a Circular Economy—A monitoring framework for economy-wide material loop closing in the EU28. *J. Ind. Ecol.* **2019**, *23*, 62–76. [CrossRef] [PubMed]

29. Nguyen, T.P.L. Circular economy towards sustainability in Vietnam (Kinh tế tuần hoàn hướng tới phát triển bền vững ở Việt Nam). *Communist Rev.* **2022**. Available online: https://tapchicongsan.org.vn/web/guest/kinh-te/-/2018/825071/kinh-te-tuan-hoan-huong-toi-phat-trien-ben-vung-o-viet-nam.aspx (accessed on 22 October 2023).
30. Pham, T.H. Circular economy has gradually replaced linear economy (Kinh tế tuần hoàn từng bước thay thế kinh tế tuyến tính). *Vietnam Econ. J.* **2023**, *31*, 16–17. Available online: https://vneconomy.vn/kinh-te-tuan-hoan-tung-buoc-thay-the-kinh-te-tuyen-tinh.htm (accessed on 30 April 2024).
31. Bui, Q.-T.; Pham, H.-N. Some solutions to promote the development of a circular economy in Vietnam (Một số giải pháp thúc đẩy phát triển nền kinh tế tuần hoàn tại Việt Nam). *Financ. J.* **2020**, *3*, 1–9. Available online: https://iced.org.vn/mot-so-giai-phap-thuc-day-phat-trien-nen-kinh-te-tuan-hoan-tai-viet-nam/ (accessed on 22 October 2023).
32. UNDP. *Promoting Effective Solutions to Address the Problem of Plastic Pollution in the Agricultural Sector in a Systematic and Comprehensive Way*; UNDP: New York, NY, USA, 2023; pp. 1–8. Available online: https://www.undp.org/vi/vietnam/press-releases/thuc-day-cac-giai-phap-hieu-qua-giai-quyet-van-de-o-nhiem-nhua-nganh-nong-nghiep-mot-cach-he-thong-va-toan-dien (accessed on 22 October 2023).
33. UNDP. *Experience Sharing from Pilot Projects Implemented with Female Informal Workers in Vietnam*; UNDP: New York, NY, USA, 2022; pp. 1–9. Available online: https://www.undp.org/vi/vietnam/press-releases/chia-s%E1%BA%BB-kinh-nghi%E1%BB%87m-t%E1%BB%AB-c%C3%A1c-d%E1%BB%B1-%C3%A1n-th%C3%AD-%C4%91i%E1%BB%83m-tri%E1%BB%83n-khai-c%C3%B9ng-v%E1%BB%9Bi-c%C3%A1c-n%E1%BB%AF-lao-%C4%91%E1%BB%99ng-phi-ch%C3%ADnh-th%E1%BB%A9c-t%E1%BA%A1i-vi%E1%BB%87t-nam (accessed on 22 October 2023).
34. Nam, H. *Promoting Circular Economy: Developing a National Action Plan (Thúc đẩy kinh tế tuần hoàn: Xây dựng kế hoạch hành động quốc gia)*; National Institue for Finance: Hanoi, Vietnam, 2022; pp. 22–24. Available online: https://mof.gov.vn/webcenter/portal/vclvcstc/pages_r/l/chi-tiet-tin?dDocName=MOFUCM237965 (accessed on 12 March 2024).
35. Linh, K. Proposal of a sandbox for developing circular economy (Đề xuất Cơ chế thử nghiệm phát triển kinh tế tuần hoàn). *Government News*. 8 September 2023, pp. 11–14. Available online: https://baochinhphu.vn/de-xuat-co-che-thu-nghiem-phat-trien-kinh-te-tuan-hoan-102230908164020756.htm (accessed on 22 October 2023).
36. The National Assembly. *Laws on Environmental Protection*; The National Assembly: Paris, France, 2020; pp. 1–56. Available online: https://thuvienphapluat.vn/van-ban/Tai-nguyen-Moi-truong/Luat-so-72-2020-QH14-Bao-ve-moi-truong-2020-431147.aspx (accessed on 22 October 2023).
37. Opoku, A. The Role of Culture in a Sustainable Built Environment. In *Sustainable Operations Management: Advances in Strategy and Methodology*; Chiarini, A., Ed.; Springer International Publishing: Cham, Switzerland, 2015; pp. 37–52. ISBN 978-3-319-14002-5. [CrossRef]
38. Suhartanto, D.; Dean, D.; Amalia, F.A.; Triyuni, N.N. Attitude formation towards green products evidence in Indonesia: Integrating environment, culture, and religion. *Asia Pac. Bus. Rev.* **2024**, *30*, 94–114. [CrossRef]
39. Macklin, J.; Kaufman, S. How Do We Change What We Cannot Describe? A Comprehensive Framework of User Behaviours in a Materials' Circular Economy. *Circ. Econ. Sustain.* **2024**, *4*, 387–412. [CrossRef]
40. Ejibe, I.; Nwankwo, T.C.; Nwankwo, E.E.; Okoye, C.C.; Scholastica, U.C. Advancing environmental sustainability in the creative sectors: A strategic HR framework based on data analytics and eco-innovation. *World J. Adv. Res. Rev.* **2024**, *21*, 050–060. [CrossRef]
41. Liu, L.; Tobias, G.R. The impact of environmental literacy on residents' green consumption: Experimental evidence from China. *Clean. Responsible Consum.* **2024**, *12*, 100165. [CrossRef]
42. Law, J.W.; Lye, C.T.; Ng, T.H. Can environmental literacy and integrated behavioral factors encourage green practices at home? Evidence from Malaysia. *Clean. Responsible Consum.* **2023**, *10*, 100134. [CrossRef]
43. Beny, B.; Wendy, W.; Saleh, M.; Giriati, G. The effect of financial literacy and green innovation technology on green economic sustainability in emerging countries. *Int. J. Data Netw. Sci.* **2023**, *7*, 1829–1838. [CrossRef]
44. De Guimarães, J.C.F.; Severo, E.A.; Klein, L.L.; Dorion, E.C.H.; Lazzari, F. Antecedents of sustainable consumption of remanufactured products: A circular economy experiment in the Brazilian context. *J. Clean. Prod.* **2023**, *385*, 135571. [CrossRef]
45. Shevchenko, T.; Saidani, M.; Ranjbari, M.; Kronenberg, J.; Danko, Y.; Laitala, K. Consumer behavior in the circular economy: Developing a product-centric framework. *J. Clean. Prod.* **2023**, *384*, 135568. [CrossRef]
46. Sun, S.; Wu, Q.; Tian, X. How does sharing economy advance cleaner production? Evidence from the product life cycle design perspective. *Environ. Impact Assess. Rev.* **2023**, *99*, 107016. [CrossRef]
47. Durrani, S.; Sohail, M.; Rana, M.W. The Influence of Shopping Motivation on Sustainable Consumption: A Study Related to Eco-Friendly Apparel. *J. Soc. Sci. Rev.* **2023**, *3*, 248–268. [CrossRef]
48. Ur Rahman, S.; Chwialkowska, A.; Hussain, N.; Bhatti, W.A.; Luomala, H. Cross-cultural perspective on sustainable consumption: Implications for consumer motivations and promotion. *Environ. Dev. Sustain.* **2023**, *25*, 997–1016. [CrossRef]
49. Mayer, A.; Carter, E. Social norms, pro-environmental identity, and finances: What motivates households to participate in energy efficiency programs? *Energy Effic.* **2024**, *17*, 30. [CrossRef]
50. Sierra-Barón, W.; Olivos-Jara, P.; Gómez-Acosta, A.; Navarro, O. Environmental Identity, Connectedness with Nature, and Well-Being as Predictors of Pro-Environmental Behavior, and Their Comparison between Inhabitants of Rural and Urban Areas. *Sustainability* **2023**, *15*, 4525. [CrossRef]

51. Colombo, S.L.; Chiarella, S.G.; Raffone, A.; Simione, L. Understanding the Environmental Attitude-Behaviour Gap: The Moderating Role of Dispositional Mindfulness. *Sustainability* **2023**, *15*, 7285. [CrossRef]
52. Gifford, R.D.; Chen, A.K.S. Why aren't we taking action? Psychological barriers to climate-positive food choices. *Clim. Change* **2017**, *140*, 165–178. [CrossRef]
53. Wyss, A.M.; Knoch, D.; Berger, S. When and how pro-environmental attitudes turn into behavior: The role of costs, benefits, and self-control. *J. Environ. Psychol.* **2022**, *79*, 101748. [CrossRef]
54. Koval, V.; Havrychenko, D.; Filipishyna, L.; Udovychenko, I.; Prystupa, L.; Mikhno, I. Behavioral Economic Model of Environmental Conservation in Human Resource Management. *Intellect. Econ.* **2023**, *17*, 435–456. [CrossRef]
55. Kollmus, A.; Agyeman, J. Mind the Gap: Why Do People Act Environmentally and What Are the Barriers to Pro-Environmental Behavior? *Environ. Educ. Res.* **2002**, *8*, 239–260. [CrossRef]
56. Smol, M.; Avdiushchenko, A.; Kulczycka, J.; Nowaczek, A. Public awareness of circular economy in southern Poland: Case of the Malopolska region. *J. Clean. Prod.* **2018**, *197*, 1035–1045. [CrossRef]
57. Kousar, S.; Afzal, M.; Ahmed, F.; Bojnec, Š. Environmental Awareness and Air Quality: The Mediating Role of Environmental Protective Behaviors. *Sustainability* **2022**, *14*, 3138. [CrossRef]
58. Li, F.; Zhang, K.; Yang, P.; Jiao, J.; Yin, Y.; Zhang, Y.; Yin, C. Information exposure incentivizes consumers to pay a premium for emerging pro-environmental food: Evidence from China. *J. Clean. Prod.* **2022**, *363*, 132412. [CrossRef]
59. Han, Z.; Zeng, D.; Li, Q.; Cheng, C.; Shi, G.; Mou, Z. Public willingness to pay and participate in domestic waste management in rural areas of China. *Resour. Conserv. Recycl.* **2019**, *140*, 166–174. [CrossRef]
60. Mukherji, S.B.; Sekiyama, M.; Mino, T.; Chaturvedi, B. Resident knowledge and willingness to engage in waste management in Delhi, India. *Sustainability* **2016**, *8*, 1065. [CrossRef]
61. Savari, M.; Damaneh, H.E.; Damaneh, H.E.; Cotton, M. Integrating the norm activation model and theory of planned behaviour to investigate farmer pro-environmental behavioural intention. *Sci. Rep.* **2023**, *13*, 5584. [CrossRef] [PubMed]
62. Khan, Y.; Hameed, I.; Akram, U. What drives attitude, purchase intention and consumer buying behavior toward organic food? A self-determination theory and theory of planned behavior perspective. *Br. Food J.* **2023**, *125*, 2572–2587. [CrossRef]
63. Arkorful, V.E.; Shuliang, Z.; Lugu, B.K. Investigating household waste separation behavior: The salience of an integrated norm activation model and the theory of planned behavior. *J. Environ. Plan. Manag.* **2023**, *66*, 2195–2221. [CrossRef]
64. Kowalska-Pyzalska, A. Do consumers want to pay for green electricity? A case study from Poland. *Sustainability* **2019**, *11*, 1310. [CrossRef]
65. Wang, X.; Li, W.; Song, J.; Duan, H.; Fang, K.; Diao, W. Urban consumers' willingness to pay for higher-level energy-saving appliances: Focusing on a less developed region. *Resour. Conserv. Recycl.* **2020**, *157*, 104760. [CrossRef]
66. Zhang, Y.; Xiao, C.; Zhou, G. Willingness to pay a price premium for energy-saving appliances: Role of perceived value and energy efficiency labeling. *J. Clean. Prod.* **2020**, *242*, 118555. [CrossRef]
67. Almulhim, A.I.; Abubakar, I.R. Understanding public environmental awareness and attitudes toward circular economy transition in saudi arabia. *Sustainability* **2021**, *13*, 10157. [CrossRef]
68. Pascual, U.; Muradian, R.; Brander, L.; Gómez-Baggethun, E.; Martín-López, B.; Verma, M.; Armsworth, P.; Christie, M.; Cornelissen, H.; Eppink, F.; et al. The economics of valuing ecosystem services and biodiversity. In *The Economics of Ecosystems and Biodiversity: The Ecological and Economic Foundations*; Routledge: London, UK, 2012; pp. 183–256. [CrossRef]
69. Schaub, S.; Ghazoul, J.; Huber, R.; Zhang, W.; Sander, A.; Rees, C.; Banerjee, S.; Finger, R. The role of behavioural factors and opportunity costs in farmers' participation in voluntary agri-environmental schemes: A systematic review. *J. Agric. Econ.* **2023**, *74*, 617–660. [CrossRef]
70. Dold, M.; Lewis, P. A neglected topos in behavioural normative economics: The opportunity and process aspect of freedom. *Behav. Public Policy* **2023**, *7*, 943–953. [CrossRef]
71. Wan Ab Rashid, W.N.A.; Mohamad, J.; Kesumo Wardhani, N. Government Valuers' Perception on the Current Practice of Ecosystem Service Valuation in Malaysia. *Environ. Proc. J.* **2024**, *9*, 59–66. [CrossRef]
72. Martino, S.; Kenter, J.O. Economic valuation of wildlife conservation. *Eur. J. Wildl. Res.* **2023**, *69*, 32. [CrossRef] [PubMed]
73. Khuc, V.Q. Culture Tower. *SSRN* **2023**. VIETKAP-SCDM WPS No. 2023/6. Available online: https://doi.org/10.2139/ssrn.4559667 (accessed on 13 May 2024).
74. Khuc, Q.V.; Pham, L.; Tran, M.; Nguyen, T.; Tran, B.; Hoang, T.; Ngo, T.; Tran, T.-D. Understanding of Vietnam farmers' perception toward forest importance and perceived willingness-to-participate in REDD + program: A case study in Nghe An province. *Forests* **2021**, *12*, 521. [CrossRef]
75. Tuyet, A. Experts Forecast That Vietnam's Inflation Rate in 2023 Will Revolve around 3.5% (Chuyên gia dự báo lạm phát Việt Nam năm 2023 xoay quanh 3,5%). VnEconomy. 2023. Available online: https://vneconomy.vn/chuyen-gia-du-bao-lam-phat-viet-nam-nam-2023-xoay-quanh-3-5.htm (accessed on 13 May 2024).
76. Thanh, P. How Has Vietnam's Inflation Rate Changed over the Years? (Tỷ lệ lạm phát của Việt nam qua các năm đã thay đổi ra sao?). DNSE. 2024. Available online: https://www.dnse.com.vn/hoc/ty-le-lam-phat-cua-viet-nam-qua-cac-nam (accessed on 13 May 2024).
77. Nguyen, M.H.; La, V.P.; Le, T.T.; Vuong, Q.H. Introduction to Bayesian Mindsponge Framework analytics: An innovative method for social and psychological research. *MethodsX* **2022**, *9*, 101808. [CrossRef]

78. Müller, N.F.; Stolz, U.; Dudas, G.; Stadler, T.; Vaughan, T.G. Bayesian inference of reassortment networks reveals fitness benefits of reassortment in human influenza viruses. *Proc. Natl. Acad. Sci. USA* **2020**, *117*, 17104–17111. [CrossRef] [PubMed]
79. Vuong, Q.H.; La, V.P.; Nguyen, M.H.; Ho, M.T.; Tran, T.; Ho, M.T. Bayesian analysis for social data: A step-by-step protocol and interpretation. *MethodsX* **2020**, *7*, 100924. [CrossRef] [PubMed]
80. Vuong, Q.; La, V.; Nguyen, M.; Ho, M. Improving Bayesian statistics understanding in the age of Big Data with the bayesvl R package. *Softw. Impacts* **2020**, *4*, 100016. [CrossRef]
81. Vuong, Q.-H. *Mindsponge Theory*; Sciendo: Warsaw, Poland, 2023; ISBN 978-83-67405-15-7.
82. Nguyen, M.H.; Vuong, Q.H.; Ho, M.T.; Le, T.T. Mindsponge mechanism. *SSRN Electron. J.* **2021**. [CrossRef]
83. Khuc, Q.; Tran, M.; Nguyen, T.; Thinh, N.A.; Dang, T.; Tuyen, D.T.; Pham, P.; Dat, L.Q. Improving Energy Literacy to Facilitate Energy Transition and Nurture Environmental Culture in Vietnam. *Urban Sci.* **2023**, *7*, 13. [CrossRef]
84. Khuc, V.-Q.; Nguyen, M.; Le, T.-T.; Nguyen, T.-L.; Nguyen, T.; Hoang, K.-L.; Quan-Hoang, V. Brain Drain out of the Blue: Pollution-Induced Migration in Vietnam. *Int. J. Environ. Res. Public Health* **2022**, *19*, 3645. [CrossRef] [PubMed]
85. Nguyen, M.H. Multifaceted interactions between urban humans and biodiversity-related concepts: A developing-country data set. *Data Intell.* **2021**, *3*, 578–605. [CrossRef]
86. Rognli, E.W.; Zahl-Olsen, R.; Rekdal, S.S.; Hoffart, A.; Bertelsen, T.B. Editorial perspective: Bayesian statistical methods are useful for researchers in child and adolescent mental health. *J. Child Psychol. Psychiatry Allied Discip.* **2022**, *64*, 339–342. [CrossRef] [PubMed]
87. Piironen, J.; Vehtari, A. Comparison of Bayesian predictive methods for model selection. *Stat. Comput.* **2017**, *27*, 711–735. [CrossRef]
88. Dunson, D.B. Commentary: Practical advantages of Bayesian analysis of epidemiologic data. *Am. J. Epidemiol.* **2001**, *153*, 1222–1226. [CrossRef] [PubMed]
89. McElreath, R. *Statistical Rethinking: A Bayesian Course with Examples in R and Stan*, 2nd ed.; CRC Press: Boca Raton, FL, USA, 2020. [CrossRef]
90. Vuong, Q.H.; Nguyen, M.H.; Ho, M.T. Bayesvl: An R package for user-friendly Bayesian regression modelling. *VMOST J. Soc. Sci. Humanit.* **2022**, *64*, 85–96. [CrossRef]
91. Vuong, Q.H.; La, V.P.; Vuong, T.T.; Nguyen, H.K.T.; Ho, M.T.; Ho, M.T. What have Vietnamese scholars learned from researching entrepreneurship? A Systematic review. *Heliyon* **2020**, *6*, e03808. [CrossRef] [PubMed]
92. Khuc, V.Q. Mindspongeconomics. *SSRN Electron. J.* **2022**, 1–11. [CrossRef]
93. Poortinga, W.; Demski, C.; Steentjes, K. Generational differences in climate-related beliefs, risk perceptions and emotions in the UK. *Commun. Earth Environ.* **2023**, *4*, 229. [CrossRef]
94. Concordia University. Youth Adapt Faster than Seniors to Unexpected Events, Study Finds. *ScienceDaily*. 18 January 2011. Available online: www.sciencedaily.com/releases/2011/01/110118113453.htm (accessed on 12 March 2024).
95. Shairp, R.; Veríssimo, D.; Fraser, I.; Challender, D.; Macmillan, D. Understanding urban demand for wild meat in Vietnam: Implications for conservation actions. *PLoS ONE* **2016**, *11*, e0134787. [CrossRef] [PubMed]
96. Nguyen, M.H.; Le, T.T.; Nguyen, H.K.T.; Ho, M.T.; Thanh Nguyen, H.T.; Vuong, Q.H. Alice in suicideland: Exploring the suicidal ideation mechanism through the sense of connectedness and help-seeking behaviors. *Int. J. Environ. Res. Public Health* **2021**, *18*, 3681. [CrossRef] [PubMed]
97. Khuc, V.Q. Primary data survey: A step-by-step procedure for researchers in social sciences and humanities. *OSF Prepr.* **2021**, 1–51. [CrossRef]
98. Joshi, A.; Kale, S.; Chandel, S.; Pa, D.K. Likert Scale: Explored and Explained. *Br. J. Appl. Sci. Technol.* **2015**, *7*, 396–403. [CrossRef]
99. Prime Minister. Decision 687/QD-TTg 2022 the Scheme for Circular Economy Development in Vietnam. 2022. Available online: https://english.luatvietnam.vn/decision-no-687-qd-ttg-dated-june-07-2022-of-the-prime-minister-approving-the-scheme-on-development-of-circular-economy-in-vietnam-222265-doc1.html (accessed on 5 February 2024).
100. Vietnamnews. Green Skills Education for Youth Key to Green Transition in Vietnam. *Vietnamnews*. 12 August 2023, pp. 1–6. Available online: https://vietnamnews.vn/society/1582347/green-skills-education-for-youth-key-to-green-transition-in-vietnam.html (accessed on 2 February 2024).
101. Phan, T.-A.; Tran, N.-H.-D. Circular Economy in Vietnam. *Rev. Financ. (Tap Chi Tai Chinh)* **2023**, 8–9. Available online: https://tapchitaichinh.vn/van-de-phat-trien-kinh-te-tuan-hoan-tai-viet-nam.html (accessed on 19 November 2023).
102. VNA. Vietnamese Youth Take Climate Action Towards a 'Green' Future. *VietnamPlus*. 2 November 2022, pp. 2–5. Available online: https://en.vietnamplus.vn/vietnamese-youth-take-climate-action-towards-a-green-future/244299.vnp (accessed on 9 February 2024).
103. Cogut, G.; Webster, N.J.; Marans, R.W.; Callewaert, J. Links between sustainability-related awareness and behavior: The moderating role of engagement. *Int. J. Sustain. High. Educ.* **2019**, *20*, 1240–1257. [CrossRef]
104. Linda, T.; Bhishna, B. Sustainable campus: Engaging the community in sustainability. *Int. J. Sustain. High. Educ.* **2014**, *15*, 390–403. [CrossRef]
105. Zaidi, N.; Dixit, S.; Maurya, M.; Dharwal, M. Willingness to pay for green products and factors affecting Buyer's Behaviour: An empirical study. *Mater. Today Proc.* **2020**, *49*, 3595–3599. [CrossRef]
106. Nguyen, T.C.; Nguyen, H.D.; Le, H.T.; Kaneko, S. Residents' preferred measures and willingness-to-pay for improving urban air quality: A case study of Hanoi city, Vietnam. *J. Econ. Dev.* **2022**, *24*, 262–275. [CrossRef]

107. Gomes, S.; Lopes, J.M.; Nogueira, S. Willingness to pay more for green products: A critical challenge for Gen Z. *J. Clean. Prod.* **2023**, *390*, 136092. [CrossRef]
108. Vuong, Q.H. *A New Theory of Serendipity: Nature, Emergence and Mechanism*; Sciendo Migration: Warsaw, Poland, 2022. [CrossRef]
109. McGinty, D. 5 Reasons to Shift from a 'Throw-It-Away' Consumption Model to a 'Circular Economy'. World Economic Forum. 2021. Available online: https://www.weforum.org/agenda/2021/02/change-five-key-areas-circular-economy-sustainability/ (accessed on 17 November 2023).
110. Dwortzan, M. Global Net-Zero Emissions Goals: Challenges and Opportunities. MIT Climate Portal. 2022. Available online: https://climate.mit.edu/posts/global-net-zero-emissions-goals-challenges-and-opportunities (accessed on 17 November 2023).
111. Kasioumi, M.; Stengos, T. A Circular Model of Economic Growth and Waste Recycling. *Circ. Econ. Sustain.* **2023**, *3*, 321–346. [CrossRef]
112. Vuong, Q.H. The semiconducting principle of monetary and environmental values exchange. *Econ. Bus. Lett.* **2021**, *10*, 284–290. [CrossRef]