

## Article

# Transcending Linearity in Understanding Green Consumer Behaviour: A Social–Cognitive Framework for Behaviour Changes in an Emerging Economy Context

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**Abstract:** Awareness and understanding of green consumer behaviour (GCB) in emerging economies can increase consumer participation in green initiatives, leading to better product and behavioural choices and protecting scarce resources. Therefore, consumers should actively change their daily habits, lifestyle, and behaviour choices. A transdisciplinary critical realism approach can complement current knowledge on green consumer behaviour theories, which can layer behaviour change as a circular feedback process. Our approach could surpass linearity and rational decision-making—embracing the power of sustainable daily habits. We reviewed green consumer behaviour theories and identified the social cognitive theory (SCT) to support our approach. Hence, we employed an integrative review of applied SCT and green consumer behaviour. Findings suggest GCB as a reciprocal process with behaviour not only the outcome but an integral part of the process, as are personal and external determinants, existing in laminated layers of meaning that transcend the obvious. Finally, we propose a novel adapted framework that considers critical constructs that warrant investigation of an emerging economy context to identify consumers' challenges that impede behavioural change. Recommendations include segmenting consumers through pro-environmental self-identity, consumer personalities, and daily habits, which can help target consumers with appropriate messages and interventions to encourage greener lifestyles.

**Keywords:** critical realism; emerging economies; green consumer behaviour; integrative review; pro-environmental behaviour; social cognitive theory; social cognitive framework; sustainable behaviour; transdisciplinary



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## 1. Introduction

Anthropogenic forces, including individual and collective human activity, contribute to the depletion of natural resources, climate change and global warming, consequently threatening human well-being and ultimate survival [1]. Human activity is thus central to the pursuit of sustainable development [2]. The sustainable development goals (SDGs) set by the United Nations (UN) underscore the balance between managing economic growth and preserving natural resources [3]. The SDGs require decisive action by all countries to drive green economies [4]. Global green economies are measured by the green economy performance of countries using the Global Green Economy Index (GGEI) measures across 18 indicators [5]. These indicators are contained within four dimensions: Climate Change and Social Equity, Sector Decarbonization, Markets and ESG Investment, and Environmental Health [5]. Of the 160 countries measured, the high-ranking green economies are mainly from developed countries (Sweden, Switzerland, Norway). In contrast, emerging economies rank much lower, such as South Africa at 152 and India at 144 [5].

Evidently, emerging economies face unique challenges in achieving the necessary sustainable development [6,7] and a green economy [2,8], and thus necessitate an ongoing dynamic transdisciplinary approach with custom models to understand these unique challenges [7,9,10]. In addition, research on sustainable consumption in emerging economies has been scarce. Consumers in these countries are only starting to embrace and practice sustainable consumption compared to their counterparts in developed countries [11,12]. Thus, generalized approaches and models developed in developed countries might jeopardize the outcome and understanding of such endeavours [9]. Some characteristics of emerging markets and developing economies (EMDEs) include strong per capita income rates and economic growth amidst a strain on depleting resources, population growth, and accessibility by foreign investors. However, they are often vulnerable to climate change and climate variability [13]. In the present turmoil evident in the world, EMDEs have sobering prospects of declining economic growth from 6.3 % in 2021 to 4.6 % in 2022 and 4.4 % in 2023 [14], negatively influencing sustainable development. Furthermore, rapidly growing populations leading to increased urbanization and unemployment levels characterize emerging economies, which also increase the emergence of informal settlements where environmental conservation and sustainable development are seen as luxuries [15,16].

Whether they form part of developed or emerging economies, all humans are responsible for rising overconsumption levels and the subsequent impact of climate change [3]. The effect could be reduced if all consumers adopted pro-environmental habits in their daily behaviour [17–19]. Pro-environmental behaviour relates to consumption that limits environmental harm [20]. It includes behaviours such as re-using, reducing, recycling, saving water, using energy-efficient appliances, composting kitchen waste and buying organic food [21]. Consumers can also embrace a green approach to purchasing behaviour [22].

Additionally, pro-environmental behaviour includes curtailment initiatives, namely habit-forming conduct that reduces the use of resources and energy. Actions such as using public transport or conserving water and energy may cause some discomfort but rarely involve additional costs [23]. Green consumerism and pro-environmental behaviour are often referred to as green consumer behaviour (GCB). The body of research on GCB is vast, and various behavioural models have been developed. While new empirical findings regarding green consumerism and GCB determinants [12,19,24,25] consistently occupy scholarship, it remains imperative to continually evaluate existing insight and re-evaluate gaps in current understandings of GCB. Hence the call for transdisciplinary thinking where there is reverence for the collaborative possibilities amid academic disciplines' ideas and concepts stemming from consumers' real-life experiences [26].

The literature generally categorizes GCB models according to the underlying causes of behavioural change. Mainstream models range from simplistic to complex, focusing on internal or external influencing factors or a combination [27]. An individualistic approach is often emphasized [24]. However, more recent research also mentions changes in social structure [19,28] since individual behaviour change often spills over into socially constructed behaviour change among other community members [29]. Others underline collectivism, social norms and/or government intervention to initiate GCB [25]. Jackson [24] further differentiates between models that focus on routine behaviour/habits and those that endorse rational cognitive processes. The rational decision-making approach or "ABC paradigm" [30] is often criticized for its linear depiction of construct associations and over-reliance on human rationality [31]. Indeed, consumers can sometimes be emotional and live in a complex social world [32]. This requires a broader perspective beyond the linear ABC to delve deeply into the many nuances of green consumerism [33].

Numerous theoretical approaches have focused on linear associations between singular socio-psychological constructs, such as attitudes, values, norms and beliefs. However, few have, to date, ventured into more encompassing psychological antecedents for GCB, such as personality. According to consumer behaviour theory, personality, an internal factor, is also used to psychographically (i.e., through a more robust lens) segment consumer markets based on lifestyles, personalities and social class [34]. Scientific evidence

reveals correlations between personality traits and GCB [35–37], and if studies combine these with environmental and behavioural determinants, researchers might acquire a more holistic perspective of GCB. However, such research remains limited—even more so in emerging economies.

With the above in mind, the overarching aim of this review article was to extend and transcend the current understanding of GCB in an emerging economy. This article joins sustainability discussions from a critical realism philosophy. It builds on the “coffee analogy” [26] to explain the transdisciplinary critical realism approach that challenges the dominant linearity in scholars’ understanding of GCB. For example, simply having a cup of coffee without much reflection constitutes a so-called ‘flat’ reality. However, once an individual transcends this reality, reflecting on the impact of the action, numerous aspects come to mind (e.g., type and preference of coffee, price, brand, packaging, ethical standard, geographical area and the impact of the cultivation on the surroundings, the workers involved). Thus the ‘flat’ reality is layered with multiple dimensions, possibilities and outcomes which enrich understanding. With this analogy in mind, to proceed with a laminated layered approach, the specific objectives of this article were to: (1) conceptualize and propose a holistic GCB model with uniquely specified but under-studied influencing factors for an emerging economy; and (2) refer to this model in applying the assumptions of social cognitive theory (SCT) to the still under-studied context of GCB. Through triadic reciprocal causation, SCT assumes the interaction between personal (cognitive), environmental and behavioural variables [38]. This phenomenon occurs where there is interaction, a give-and-take relationship, between the influencing factors that lead to behaviour (outcome) but where the outcome mutually influences the antecedents [27,32]. The idea of looking at consumer behaviour only as an outcome needs to be abandoned. In reality, consumers tend to integrate their daily habits with everyday lifestyle choices influenced by their perceived self-efficacy, pro-environmental self-identity and personality. Our review and proposed model take the first step towards this approach for emerging economies.

## 2. Theoretical Background

### 2.1. GCB in Emerging Economies

Emerging economies offer unique opportunities and threats in the context of GCB [39]. These economies are steadily gaining prominence in the global economy due to their growth and increased industrialization [40]. Although the World Population Prospects report indicates that the global population has shown the slowest growth rate since 1950, they expect population growth to be concentrated in EMDEs such as sub-Saharan Africa, Latin America, the Caribbean and parts of Asia [41]. Thus, emerging economies show growth in the economy and consumer population, while more advanced economies are on the path of replacement economies [42]. Hence, emerging economies may encounter challenges balancing economic growth and sustainable development [5,41]. Additionally, emerging economies typically have higher income inequality levels and greater poverty, ultimately hampering efforts to achieve a global green economy [2,6].

The antecedents for GCB differ widely between developed and emerging economies, with potentially infinite levels or “shades” of green consumerism [17,34,43]. Emerging economies are typically described as being at the green awakening stage, with much effort devoted to understanding the antecedents of environmental behaviour in these contexts [10,39,44]. However, rapid industrialization has set the stage for GCB to take second place in global economic development [5]. Nevertheless, countries in North America, Europe, and, recently, China have realized that economic growth is unsustainable without prioritising environmental protection [5]. Emerging economies must follow suit, but efforts to combat natural resource depletion and biodiversity loss are often marred by overconsumption, particularly prevalent among the growing middle-class consumer segments in these markets [9,45]. The concern is also prompted by the lack of consumer knowledge or ignorance of environmental degradation in some emerging economies (i.e., China, Malaysia, India, Pakistan) and the play-off between economic growth and GCB [2,5,17,39]. To date, re-

search published about GCB and influencing factors in emerging economies [22,39,46,47] remains limited compared with the volume of articles on the issue in higher-income markets.

A country such as South Africa is acknowledged as an emerging economy but uniquely ranked as an upper–middle-income country even though it is highly divided, with large segments of the population living in extreme poverty [48]. Nonetheless, this interesting economic classification creates unique circumstances and should thus be explored to offer an understanding of how GCB can be promoted in such contexts [5,39]. Furthermore, emerging economies such as South Africa, Egypt and Pakistan are often classified as environmentally sensitive in balancing climate extremes versus economic growth [11,39,49] or resource-constrained environments. Hence, current research may benefit from expanded insight into GCB in emerging markets and upper–middle-income countries with environmentally sensitive economies.

## 2.2. Models of Behaviour and Theories of Behaviour Change in GCB

Consumer behaviour is mainly associated with actions directly involved in obtaining, consuming and disposing of products and services and includes the decision processes preceding and following these actions [34]. Jackson [24] argues that consumer behaviour's conceptual models should satisfy basic requirements for understanding what motivates consumer behaviour and steer behaviour change successfully. Models should first simplify the heuristics of the social, psychological and contextual antecedents of mainstream GCB to allow for empirical testing. However, models that prove helpful for empirical testing often fail to provide a sufficient understanding of all the influencing factors, relationships and strength of the relationships among factors [24]. On the other hand, the more encompassing models are not always suitable for empirical testing. An adequate conceptual model calls for a balance between explanatory completeness and parsimony or simplicity to facilitate testing [24].

Adding to the above, Darnton [25] distinguishes models of behaviour and theories of change. Models of behaviour aid the understanding of specific behaviours by identifying the underlying factors unique within different contexts and cultures that influence specific individuals [50,51]. Conversely, theories of change indicate how behaviours change over time and how to accomplish behaviour change. Although both approaches have distinct aims, Darnton [25] holds that they are complementary and essential to understanding behaviour and developing effective interventions. Behavioural models are inclined to be linear (depicting relationships between influencing factors as a series of events) [25]. By contrast, models of change tend to be circling and incorporate feedback loops or reciprocal determinism. Essentially, linear relationships and causality first need to be established for influencing factors for interventions to be applied to bring about behaviour change in a holistic circular approach.

Undeniably, applicable models should provide an operational structure as a reference for future research on the topic. Models' schematic structure should clearly define the relevant concepts, including their relationships within the specific theoretical perspectives, and be empirically testable [24]. Furthermore, such frameworks must offer the opportunity and basis to rationally and, with critical realism, integrate literature and findings from other disciplines [10]. This approach will provide a more comprehensive and holistic understanding of the phenomena and construct theory [10,24,26]. Notoriously, models are often context-specific and empirically tested within a specific behavioural setting [25,52], where societal structures alter consumers' values and behaviours [28]. Therefore, models applicable to developed countries may not always be suitable for emerging economies and practices in such communities [10,51].

Nevertheless, we will begin with benchmark categorization [12,24,25,28] of the existing community of practice to understand GCB theory and antecedents for a proposed model that would explain the GCB phenomenon in an upper–middle-income country with an emerging economy. Darnton [25] proposes nine successful principles by researchers such as Sung et al. [50] to develop and test adapted frameworks with circular feedback. Within the

scope of this paper, we partially apply these principles by (1) identifying a behaviour model for exploration, (2) understanding the consumer behaviour associated with the model, (3) refining the behaviour model for operationalization and (4) identifying key drivers, facilitators and barriers. Whereas the following section will identify SCT as an appropriate model for further exploration, the integrated review (reported in Sections 3 and 4) will aid in refining and identifying the key drivers to be incorporated into the model.

### 2.3. The Main Categorization of Green Consumer Behaviour Models

Consumer behaviour as a science is inherently transdisciplinary [26] and focused on highly complex, dynamic, and multi-relational social phenomena [34]. Earlier consumer behaviour research theories grounded in economic theory see consumers as rational individuals who maximize their benefits when purchasing goods and services [53]. Overall, consumer behaviour is complex [19]. It includes a range of cultural, economic and social dynamic processes that iteratively influence consumers, their environment (physical, socio-cultural, reference groups, marketing activities), personal convictions (emotional, affective, cognitive) and behaviours (actions, habits, lifestyles), [27,33,39,54]. These factors create a comprehensive body of thinking and research that reflects consumer behaviour's cognitive and emotional aspects [53]. These internal factors, shaped by external situational factors, culminate in models attempting to integrate the internal and external factors that impact behaviour. This reasoning is on par with Jackson's [19,24,28] and Darnton's [25] perspectives concerning GCB models and classification. A short overview will follow some of the best-known available models in each category, according to Jackson [19,24] and Darnton [25].

Internal (personal) factors of green consumer behaviour models include but are not limited to demographics, motivation, values, personal norms, attitudes, perception, self-identity and features in models such as symbolic interactionism [55,56], self-perception theory [57], norm-activation theory (NAT) [58,59], symbolic self-completion theory [60], self-discrepancy theory [61], and value-belief-norm theory (VBN) [62].

External/environmental (situational) factors include, for example, reference groups, subjective and social norms, ease or do-ability of actions, availability of products or services, effort, monetary value and culture. These factors are included in models such as persuasion theory [63,64], structuration theory [65] and normative conduct theory [66].

Other so-called integrative models combine the interaction between internal and external influencing factors (also termed behavioural determinants) to explain behaviour and behaviour change. Examples of these models include the field theory [67], the theory of interpersonal behaviour (TIB) [68], the attitude-behaviour-context (ABC) theory [59,62,69] and the motivation-ability-opportunity model [70]. An integrative model provides the most comprehensive framework for understanding the complexities of GCB. The underlying assumptions of SCT [27,32,38,64,71] serve as an appropriate basis for developing an integrative model of GCB. However, to date, it has not been extensively applied in this way and in an emerging economy context, hence the gap we identified.

### 2.4. SCT as a Basis for an Integrative Model to Study GCB

SCT shows promising prospects of understanding GCB from a holistic integrative angle, which is crucial in influencing the desired behaviour change outcome. SCT assumptions provide behaviour change opportunities by instilling social and observational learning expectations, self-efficacy, and other reinforcements [38]. Social learning is a product of real-life experiences and observation of others, which continually complement learning through reinforcement [71]. The fundamentals of SCT explain how consumers adjust their behaviour through practices and support to achieve goal-directed behaviour [19,27]. When this goal-directed behaviour is sustainable, it can lead to behavioural change in a social context by acknowledging the different constructs' reciprocal determination and causation [32]. Through its central concept of reciprocal determinism, SCT provides an opportunity to address the lack of non-linear approach research in GCB. SCT emphasizes GCB behaviour

as an outcome but also as a crucial variable to understanding future behaviour change toward green consumerism.

The daunting challenges in emerging countries (i.e., insufficient infrastructure, resource shortages, sociopolitical turmoil, increased inequality) may benefit from GCB research with a thorough theoretical underpinning based on SCT. Transdisciplinarity supported by critical realism can further enable an integrated, multi-dimensional understanding of consumer interactions with society and the environment in a specific context [10]. Unique factors that justify SCT in an emerging economy context require that the context should determine the outcome [72–74]. For example, situational factors, such as access to recycling stations or safe and adequate public transport, differ between developed and emerging economies and may influence aspects such as pro-environmental self-identity. For example, the increased heat in summer in some countries (situational factor) makes air conditioners a necessity even if consumers have a high pro-environmental self-identity [75]. This self-identity is, in turn, formed within a group or situational context that influences perceived self-efficacy behaviour [76,77]. Knowledge and environmental consciousness also influence self-efficacy and, therefore, actions and habits. Consequently, context influences behaviour and behaviour influences context and consumers' reactions to situational accessibility. This example underscores the interaction between personal (cognitive), environmental and behavioural variables as postulated in SCT [38]. However, this classification lacks clarity in the GCB literature, especially in an emerging economy context.

Consumers seem to display different engagement levels toward green consumerism in developed [77] and emerging economies [43]. Personality traits (as part of SCT's proposed triadic reciprocal causation between personal, environmental and behavioural variables) may significantly explicate the varying levels of GCB, especially in a multi-cultural emerging economy, since the behaviour manifests in consumers' habitual green activities and also in infrequent high-cost decisions requiring reflective and higher-order thinking [37]. However, as part of the consumer's cognition, personality is considered a non-cognitive (habitual) skill/orientation that determines behaviour and remains stable over time [78]. It is further defined as a psychological characteristic that distinguishes and reflects how individuals respond to their environment and are often equated to stable ways of thinking, feeling and behaving [79]. Learned through life, personal experiences and shared social connotations [80], personalities reflect similarities and highlight differences between consumers [34].

In reviewing the core assumptions of SCT, it becomes apparent that much benefit can be derived from using it as a theoretical basis for studying GCB in emerging economies. However, this would also necessitate a search and systematic review process of studies that might have already applied SCT to identify the layered dimensions and explain the behaviour in question. The approach used to achieve this outcome is described in the following section.

### 3. Methods

Various scholars pointed out that an extensive collection of models with specified determinants that attempt to explain GCB has already been established [12,19,24,25]. Therefore, the purpose of this study was not to review all articles published on the topic of GCB but instead to focus more narrowly on those that applied SCT to elucidate the complex facets of GCB. Consequently, an integrative review approach was chosen as the methodology for this study since an integrative review combines elements of a narrative and systematic review [81]. Additionally, it allowed us to follow a rigorous systematic process for the inclusion of articles based on inclusion criteria. This approach guides an integrative synthesis of research in this field and potentially provides a resilient foundation for advancing knowledge and combining perspectives [82,83].

However, we build on the above approaches through transdisciplinary applied critical realism content analysis as the data analysis method. Thus, we agree with Cockburn [10] and McGregor [26] and argue that a transdisciplinary approach transcends the obvious

by blurring the boundaries between science and society. Also, applied critical realism enables knowledge integration across disciplinary and science–society boundaries, which layer (laminates) the different planes (concepts) to understand sustainability, specifically GCB. This approach can result in understanding reality (i.e., GCB in an emerging economy context) that exists on different levels. It could also transcend understanding the ontological and epistemological composition beyond mere disciplines [10]. For more insight into this method, see Cockburn [10]. The envisaged outcome of this review process was to conceptualize a heuristic model that includes factors that have not been extensively covered in the current literature. Finally, the proposed model can recommend novel and essential topics for future research on GCB, specifically in emerging market contexts.

Review articles in general [84] and specifically integrative reviews [83] can stimulate essential future research on a topic. The integrative review process was beneficial for this study owing to its suitability for addressing both mature and emerging topics [83]. However, given the ever-changing nature of GCB and the vast number of publications based on different factors, the integrative approach allowed us to consider a greater variety of publications than a strict systematic review, while allowing for a rigorous systematic selection process of the final articles.

Although predefined selection criteria were applied to eliminate data collection subjectivity, the literature discussion and background setting included additional support literature that may contribute valuable information and context to the identified issues. Furthermore, we referred to textbooks and seminal background material, such as the reviews by Darnton [25] and Jackson [24], that necessitated the inclusion of older literature. We also considered the recent review of sustainable consumption by Quoquab and Mohammad [12]. After that, we employed criteria in line with the recommendations of Paul et al. [85] to find specific articles surrounding the application of SCT in explaining green consumer behaviour. The final decision of an integrative review was further confirmed and supported when the search terms that delineated the scope of this article strictly limited the number of articles suitable for data analysis and discussion. In addition, we conducted the review process in five steps [83]: (1) planning and building the review and establishing keywords and search terms research to set boundaries for the literature that will be reviewed; (2) data collection; (3) data coding and analysis; (4) reporting the results, and (5) providing a proposed model of the derived evidence.

### *3.1. Planning the Review and Establishing Keywords and Search Terms to Delineate the Study*

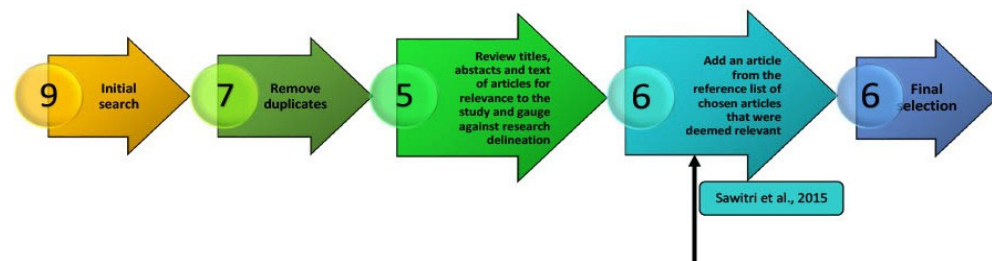
After scrutinising the literature, based on the research objectives and inclusion criteria, potential keywords that capture the essence of the review were identified. The inclusion criteria for our review were: (1) articles about sustainability or green consumer behaviour from different disciplines, (2) articles from both emerging and developed economies, (3) peer-reviewed articles from the last ten years, (4) articles having at least one citation, and (5) research articles including quantitative, qualitative and review articles. Since research on green consumer behaviour in emerging economies is sparse, we deemed it essential not to exclude research from developed contexts. Furthermore, developed economies tend to be more advanced toward green consumer behaviour; thus, we extrapolated elements emerging from these articles to the emerging context based on available supportive literature regarding emerging economies. Finally, we excluded articles based on the following criteria: (1) articles not considering consumer behaviour and (2) articles not published in English. Our keywords also delineated the review and provided boundaries for the literature search.

Based on the applied methodology of Xia and Watson [86], authors can decide whether to base their search on titles, abstracts or full text. Therefore, we decided to base our search on the title of the articles [86]. After a trial-and-error process, two main search categories were selected with chosen search terms: Social cognitive theory (social cognitive theory; social cognitive framework; social cognitive perspective; social cognitive theory perspective; social cognitive model) and Sustainability (sustainability; sustainable; eco-friendly; pro-

environment; green; pro-environmental behaviour/behaviour; sustainable consumption; pro-environmental behaviour/behavior).

### 3.2. Data Collection

The initial search was performed on 1 August 2021 and repeated on 29 June 2022. English, peer-reviewed academic journals (2012–2022) were searched for the databases of EBSCOhost, Emerald Insight Journals, Google Scholar, Sabinet Online, ScienceDirect and Web of Science. The search terms were strictly applied with Boolean phrases “social cognitive theory” OR “social cognitive framework” OR “social cognitive perspective” OR “social cognitive theory perspective” OR “social cognitive model” AND “sustainability” OR “sustainable” OR “eco-friendly” OR “pro-environment” OR “green” OR “pro-environmental behaviour/behavior” OR “sustainable consumption” OR “pro-environmental behaviour/behavior”. Figure 1 explains the data collection and selection process, with the number of articles yielded in each phase encircled.



**Figure 1.** The data collection review process to select the appropriate articles for the integrative review (compiled by the authors).

Our search yielded articles all relevant to our inclusion criteria, and none had to be excluded. Although we only obtained six articles, there are no minimum requirements for a systematic review. Instead, the number of articles largely depends on the research topic and the supportive evidence available [82]. Due to our substantial body of corroborating evidence available based on our search of seminal works, literature reviews and supportive literature, the six articles yielded a sufficient basis for the data analysis process. In the literature, the integrative review of Hughes et al. [87] in 2019 was based on only four sources. Evans et al. [88] published a state-of-the-science integrative review in 2022 with only 16 articles. Oerman and Knafl [89] argue that the quality of the articles is much more important than the quantity. Hence, we firmly focussed on the rigour of our methodology, carrying out a critical appraisal for every article included.

The data appraisal of the articles was conducted using the critical appraisal skills tool (McMaster critical review), and these appraisals for each article are attached as appendices [90]. However, due to the specificity of our keywords and inclusion criteria, all articles yielded a good data appraisal score and could be included in the data analysis.

### 3.3. Data Analysis

This final selection yielded six articles (Table 1), henceforth referred to as the six primary studies. These articles explored how SCT had previously been studied in relation to GCB. We reached a point of saturation pointing all to the same factors of importance fitting the SCT assumptions and application for green consumer behaviour, which is an essential benchmark for the quality and number of articles to include [91]. Supportive literature was used to support the discussion and provide context.



**Table 1.** Summary of the six studies' main findings and the emerged factors.

Studies	Main Findings	Emerged Factors
Study 1 Phipps et al. [27] Context: New Zealand and Australia Citations: 456	This study addressed two critical feedback paths within the social cognitive theory (SCT) framework, which confirms reciprocal determinism between sustainable consumption's personal, environmental and behavioural factors. Past behaviour influences future behaviour and behaviour, which affects personal and environmental determinants.	Reciprocal determinism Personal determinants Environmental determinants Behavioural outcomes
Study 2 Lin & Hsu [92] Context: Taiwan Citations: 142	Personal factors such as self-monitoring, self-esteem and self-preference (which culminate in self-efficacy) more significantly influence green consumer behaviour (GCB) than environmental awareness, the belief that climate change is real, mass media interventions or green consumption outcome expectations.	Environmental influences Personal self-concepts Perceived self-efficacy Personal green behavioural outcome expectations Reciprocal determinism
Study 3 Sawitri et al. [93] Context: Review article—not context-specific Citations: 199	The study concludes that SCT explains the dynamic complexities of GCB with an integrative perspective based on reciprocal determinism. Therefore, behaviour is not just an outcome but also a variable that determines future behaviour. Additionally, personal agency is central to SCT when applied to explaining pro-environmental behaviour.	Self-efficacy through learning experiences Outcome expectations Goal-directed behaviour (intentions to actions and habits) Contextual factors Intra-personal factors (attitudes, norms and habits)
Study 4 Font et al. [76] Context: Latin American (emerging economy) Citations: 144	Reciprocal determinism is evident where individuals' drivers for GCB lead to communal benefits for a society that, in turn, influences social norms. Four clusters were identified: the costs cluster, the legitimization cluster, the biospheric cluster and the lifestyle cluster.	Culture (who influences the behaviour and with what group do they identify): collectivism vs. individualism Beneficiary (who motivates the behaviour and whom the person wants to help): self vs. other
Study 5 Preko [72] Context: Ghana (emerging economy) Citations: 63	Consumers responded to eco-information, but situational factors (e.g., poor sanitation and lack of recycling bins) impeded GCB. Environmental consciousness, knowledge and attitude are therefore crucial for GCB.	Reciprocal determinism Personal factors (demographics) Behaviour (self-efficacy, outcome expectation, self-control, reinforcement)
Study 6 Rakib et al. [94] Context: not specified Citations: 2	Different message-framing types were found to influence consumers' emotions significantly. For example, positive emotions (joy) influence motivation; however, negative feelings (guilt) can also affect motivation. Moreover, conscious decision-making and automated buying behaviour are driven by past behaviour and impact future choices.	Person (self) vs. People (others) Message framing (positive or negative) Emotion and sustainability motivation Wishful identification (self-identity) Automatic behaviour vs. deliberate action (lifestyle)

The six selected articles (across various disciplines) [27,72,76,92–94] were studied and coded in AtlasTi, a qualitative data analysis software program, using transdisciplinary applied critical realism content analysis. The articles were scanned, and single codes were identified based on their recurrence throughout the articles. The corresponding text was then assigned to the code structure. Next, categories (code groups) were created based on the interaction of the codes that categorized a code group. The corresponding researcher performed the coding, but all authors deliberated and agreed upon the interpretation and selection of categories. We used a framework synthesis [86,95] approach, since the study is grounded on SCT with an a priori conceptual model of SCT and consumer decision-making. SCT's primary constructs are personal, external, and behavioural determinants. We built on these determinants and the main assumptions of SCT as they emerged from the studies reviewed, such as reciprocal determinism and the outcome of the iterative process.

The following seven categories (after coding) emerged in the six articles: (1) SCT framework; (2) pro-environmental self-identity (self-concept and lifestyle); (3) goals (needs and wants); (4) external determinants (situational factors, culture, do-ability); (5) personal determinants (environmental consciousness, consumer personalities, self-efficacy); (6) behavioural determinants (actions, habits, practice) and (7) outcome. They will be discussed below.

## 4. Results and Discussion

### 4.1. Social Cognitive Theory Framework

Behaviour is central to SCT as an outcome and a crucial variable fundamentally embedded in the description of triadic reciprocal causation or determinism [27,32]. We begin by alluding to reciprocal determinism as evidenced in the six studies and the centrality of the self-concept.

#### 4.1.1. Reciprocal Determinism

The six main studies [27,72,76,92–94] identified from the integrative literature search emphasized that GCB is not a static one-way, one-dimensional phenomenon. Instead, it is a complex iterative dynamic process between consumers, their environment (physical, socio-cultural), personal convictions (emotional, affective, cognitive) and their behaviour (actions, habits, lifestyles). Preko [72], in particular, highlights the importance of understanding this interrelationship within the context of emerging economies since the contextual setting and situational factors influence the outcome and should be understood as such. His study revealed that consumers in Ghana are aware of and respond to eco-information and eco-friendly products. In this example, they even read the product labels on water sachets. However, due to situational factors, such as poor sanitation, filth and a lack of refuse bins on the beach (which may have served as contextual cues), these consumers perpetuated the existing littering by leaving the remains of the sachets on the beach after drinking the water.

As a critical assumption of SCT, reciprocal determinism enables us to move beyond a linear approach to one which sees behaviour as an outcome and provides feedback to other influencing factors, namely internal or environmental factors. Environmental knowledge and consciousness can lead to an appreciation of the environment, thus using garbage cans for waste, producing a cleaner environment and nudging other consumers to follow suit. Rakib et al. [94] add that framing eco-information messages (external stimuli) can stimulate consumers' internal motivations to engage in personal interaction and sustainable behaviour. The point is that there may be several factors at play. Therefore, SCT explains the dynamic complexities of GCB with an integrative perspective based on reciprocal determinism, whereby behaviour is not just an outcome but also a variable that determines future behaviour [27]. Additionally, reciprocal determinism rotates around the central knowledge of consumer identity within a specific context called self-concept [19].

Self-concept cannot exist without social reality or the interaction between the environment and behaviour [18,19]. Owing to critical realism, Cockburn [10] explains that

the self is four-dimensional (i.e., 'self-self', 'self-nature', 'self-others', 'self-society'), which empowers the scrutiny of the self as a relational multi-faceted process. Hence, self-concept results from reciprocal determinism and a consumer's self-concept is necessary for all other determinants to interact, interdependent and relational [10,19,32,92]. Thus, self-concept should be central in a model for GCB, as proposed by Hawkins and Mothersbaugh, [95] and not as part of personal determinants, as some literature may suggest [53]. In study four of our integrative review, Font et al. [76] debate that individuals who form their identity based on an appreciation for society and the environment are crucial in paving the way for sustainable practices. This viewpoint amplifies Cockburn's [10] four-dimensional social person that empowers the scrutiny of the self as a relational multi-faceted process.

#### 4.1.2. The Interrelationship between Self-Concept, Lifestyle, Needs, Wants and Goals

Of the six studies included in the integrative review, Phipps et al. [27], Font et al. [76], Preko [72] and Rakib et al. [94] identified self-concept as a significant influencer for GCB, mainly if the individual displays a strong locus of control and belief in their self-concept [27,92]. Thus, as supportive literature shows, self-concept is essential in determining consumers' GCB because it is a significant predictor of consumption choice-making [19,96,97]. Likewise, consumers attempt to live in a particular way within the limits of their resources, allowing for a specific lifestyle [19,98]. Their self-concept, combined with their lifestyle, raises awareness of specific needs and wants or desires that require consumption decisions [19,97]. Consequently, individual consumption behaviour is associated strongly with consumers' chosen lifestyle, as pointed out in study two [92] in our integrative review. In making a decision, or deciding to abstain from consuming a product or service, consumers acquire experiences that iteratively influence their self-concept and lifestyle [19,27].

Supporting Information points out that consumers' beliefs about their self-concept or identity also dictate their views on the environment and the need to preserve natural resources [97,99]. According to study four [76], these beliefs translate into a particular lifestyle and then transform into habits. For example, Font et al. [76] hold that society's needs and the individual's sense of responsibility to act for society's collective benefit may often influence lifestyle choices. Adopting such a selfless lifestyle implies that certain social norms have been converted into personal norms [76]. However, supportive studies show that a selfless lifestyle may also be challenged by barriers, such as unsustainable daily habits, redundant wants and needs, and identities tied to consumption [100], especially in emerging markets [101,102]. These consumers still identify themselves (self-identities) with their consumption practices due to the increased availability of products fuelled by rapid economic growth in these economies [103]. These self-identities do not support GCB and should change to pro-environmental self-identities (PESI), whereby individuals possess a sense of self that promotes pro-environmental actions [104].

Consumers' values, attitudes and beliefs regarding environmental issues, environmental concerns and identity statements about the self-concept comprise the term PESI [105]. Thus, PESI calls for action upon "the self" through behaviour, such as recycling, because one identifies themselves as a recycler. Study six [94] mentions the term "wishful identification" to refer to consumers who identify with product brands and imitate the actions or beliefs of other green consumers and brand ambassadors if that is aligned with their own desired self-identification. Mere motivation towards sustainability will not necessarily impact actions and lifestyle. However, once it is focused on creating an ideal self-concept to satisfy the four-dimensional self [10], the potential for GCB is significantly increased. In this regard, consumers' PESI is reportedly the strongest predictor of their GCB [106] and is, therefore, crucial in understanding why consumers behave (un)sustainably [20]. PESI also regulates the reliability between the values, attitudes and behaviours which lead to the stability of GCB [104] and are employed in studies that apply the SCT [27,73].

Goal-setting and goal-directed behaviour towards behavioural change in a social context are inherent in SCT [32]. Individuals set goals (motivated behaviour) based on their self-concept and associated values [19,34], further underscored by emotions [94]. When

individuals value the environment, they will be motivated to set goals and subsequently engage in behaviour that does not impair the environment [97]. Nevertheless, both studies three and six caution that a goal that does not become an action remains a behavioural intention [93,94]. Thus, tangible everyday actions are still the proper measure for GCB influenced by personal, external and behavioural determinants as postulated in SCT.

#### 4.1.3. Personal Determinants

Apart from self-concept, lifestyles, needs, wants, and goals that are central to decision-making, according to consumer behaviour scholars such as Hawkins and Mothersbaugh [95] and SCT principles [27,107], other internal factors influence decision-making. While the classification of determinants may differ somewhat between sources, in our review, personal determinants represent internal factors in consumer decision-making [53]. Of the six primary studies included in our integrative review, Lin and Hsu [92] and Preko [72] found that personal factors had the most significant influence on GCB. However, many personal determinants in Preko's [72] study relate to demographics such as age, gender, income and education. Contrary to Preko's [72] study, prior empirical research has reported several inconsistencies in specifying demographic variables associated with pro-environmental action [108–110]. Thus, we omit demographics as a personal determinant from our review, although we do not discount the role that demographic factors may fulfil in certain types of GCB.

Income may be of particular interest in emerging economies, such as South Africa, characterised by high-income inequality levels [48]. While a growing segment of middle to higher-income consumers exhibit overconsumption tendencies similar to more developed contexts [45,111], a large segment of lower-income consumers remains challenged by the affordability of greener alternatives. Nevertheless, actions such as using public transport or conserving water and energy rarely involve additional costs [23] and are, therefore, less dependent on a consumer's income level. In the reporting of empirical research, it is a given that samples must always be specified and justified in terms of demographic variables (including income) to deduce potential impact. However, in the studies we reviewed, the personal determinants which proved to exert the most significant and consistent influence on GCB include the following:

##### Belief in Climate Change and Environmental Consciousness (EC)

The six primary studies in our review conclude that consumers should acknowledge climate change as a threat and have at least general knowledge or consciousness that the environment is in danger due to overconsumption. Lin and Hsu [92] and Preko [72] deemed EC, environmental knowledge and environmental attitude crucial for GCB. In particular, study two [92] paired EC with mass media communication and classified it as an external environmental construct. Study four [76] focused primarily on translating EC into actions and the occasional interchange between self-serving and other-serving benefits derived from these actions.

Consciousness also acknowledged as basic knowledge forms part of personal (cognitive) determinants and is a pre-condition for behaviour change [38,107,112,113]. The cognitive dimension includes the individual's level of information and knowledge about environmental problems [113,114]. Consequently, EC is necessary to change behaviour to more sustainable practices because it allegedly activates personal norms, guiding behaviour that reflects pro-environmental values and beliefs [113,115]. In the context of this review, we define consciousness as an environmental concern and frame EC as a multi-dimensional, behaviour-oriented concept [115], equivalent to the mental and emotional dimension of GCB. EC has been shown to influence sustainable consumption [114] positively. However, it is less understood in diverse socio-cultural environments such as those found in emerging economies [20,94] and warrants investigation. Moreover, the mere availability of information and awareness about the realm of environmental issues may not necessarily guarantee personal motivation and goal-setting to engage in GCBs, as has

transpired in study six [94,116]. Thus, scrutinizing other unique personal determinants, such as personality and self-efficacy, is essential [113].

### Personality

Although the six primary studies included in the integrative review repeatedly mention personalities, with study six [94] classifying emotions as part of personalities, none directly measure the concept as an indicator of GCB within the SCT framework. Consumer personalities are consumers' unique personal sets of mental programmes, which they share with no other human being, despite possible similarities between specific individuals [53]. As a psychological characteristic, personality determines and reflects how people respond to their environment and refer to relative 'enduring styles of thinking, feeling and acting' [79]. Although this personal determinant is grounded upon inherited characteristics (i.e., individuals' unique set of genes), it can be acquired through life, personal experiences and shared social means such as culture [80]. Also, positive and negative message framing has been proven to influence consumers' emotions (as part of their personalities) toward sustainability [94].

The different personality dimensions of the trait theory might predict consumers' likelihood of participating in GCB. These dimensions include neuroticism, conscientiousness, agreeableness, honesty–humility, extraversion and openness to experience. Dimensions that are most strongly associated with, for example, environmental concern are openness and agreeableness [117,118]. Likewise, agreeableness, conscientiousness and openness to new experiences were positively related to environmental engagement [119]. Furthermore, distinct personality trait patterns perceive recycling differently, as indicated by the significant dissimilarities in consumers' attitudes, personal norms and perceived behavioural control. These differences influence their beliefs about recycling differently [120]. To our knowledge, only a few studies link personality types to consumers' approach to GCB [35–37,120,121]. Moreover, since personalities reflect consumer similarities and differences [34], it might be a valuable measure to establish consumers' potential associations with GCB, especially in multicultural landscapes such as those found in emerging economies. Moreover, personality traits are significant for environmental engagement since it manifests in habitual green activities and infrequent high-cost decisions motivated by reflective thinking [37].

### Self-Efficacy

As an aspect of SCT, self-efficacy implies one's personal perceived judgement or self-belief of one's ability and probability of successfully practising or controlling a particular behaviour [71,122]. Therefore, self-efficacy indicates the degree to which individuals believe they can initiate motivation, thought, and action to perform specific actions [107] effectively and is thus seen as a predictor for GCB [21,113]. All six main studies included in the integrative review placed a weighted value on self-efficacy. Study two [92] concludes that personal factors such as self-monitoring, self-esteem and self-preference (which all culminate in self-efficacy) have a more significant influence on GCB than environmental awareness, the belief that climate change is a reality, mass media interventions or green consumption outcome expectations.

Self-efficacy is cognitive and state-oriented rather than affective and trait-oriented [92]. Bandura [107,112] further explains that self-efficacy can change as circumstances and activities change—hence reciprocal determinism applies. He emphasized that it centres on an individual's degree of conviction to complete a task using specific skills. Individuals are prone to practice their preferred behaviour if they perceive they have the required skills and capacity to do so and believe their behaviour can change the outcome. [123,124]. There is an interaction between having skills, the ease of a task's do-ability and the belief in performing a specific action [92]. Therefore, consumers will more likely engage in GCB when they believe in their capacity to mitigate the adverse effects of climate change [125,126] and the perceived ease of performing such actions [127]. As illustrated in the water sachet example

in the emerging economy context of Ghana, situational factors caused consumers to doubt their self-efficacy affecting the intended outcome with recyclable water sachets [72].

It is imperative to note that perceived self-efficacy is associated with both individualistic value systems (i.e., lifestyle, identity or morality) and collective systems [76,113]. When put into social purposes, the perceived self-efficacy can nurture communal life and collective behaviour change [38,76,123,125], evidenced in the South American emerging economy context where communal green values improve an individual's self-efficacy toward green consumer behaviour [76]. The consequent behaviour change alters society and the social-cultural environment, which links to external determinants.

#### 4.1.4. External Determinants

External determinants generally include culture, family, reference groups, communication strategies, marketing and other business efforts, and social status [53]. According to the six primary studies in our review, environmental change, government policies, social pressure, circumstances or situational factors, availability of sustainable product alternatives, price or do-ability of actions and message framing can all be added to either promote or impede GCB. Following careful deliberation, we used the following umbrella terms to label determinants within the external realm: (a) situational factors, including contextual influences such as the status of a country (i.e., emerging economy) and environmental change or impact; (b) do-ability of GCB; and (c) socio-cultural settings including cultural focus and social norms.

##### Situational Factors and Do-Ability

Studies three [93], five [72], six [94], and to a lesser extent, studies one [27] and two [92] confirmed that situational factors could either impede or promote GCB, even if an individual has robust perceived efficacy or even self-concept. It is argued that individuals with facilitating contextual conditions (along with sufficient self-efficacy) are likely to set more challenging goals and demonstrate a greater willingness to engage in GCB. Unfortunately, affordability may be problematic for some individuals. For example, installing rainwater tanks to conserve water is expensive. GCB is thus subject to the ease and do-ability of action within a given environment and the constraints of available resources. Consumers will indicate, for example, that it is easier to switch off lights to save energy than to recycle because of the lack of recycling offset points [127–129].

Furthermore, emerging economies are a significant situational factor in the contextual setting of GCB. They often lack structural resources to promote sustainability and GCB because economic growth is their chief aim, thereby contradicting sustainable development [2]. Such countries also tend to be populated by mainly low to middle-income groups who cannot finance GCB initiatives themselves [130]. Moreover, even though some consumers want to live more sustainably, they may lack the financial means to choose between options. For these reasons, many believe governments and other stakeholders should facilitate conditions and provide financing, where needed, to engage in GCB, especially because poverty-stricken emerging economy countries are usually the hardest hit by environmental disasters due to climate change [131].

##### Social Norms and the Socio-Cultural Environment

Studies two [92], four [76] and six [94] addressed external determinants concerning social norms and the socio-cultural environment. Lin and Hsu [92] included public media influences and social sanctions as external/environmental constructs in their study. At the same time, Rakib et al. [94] focused on positive and negative message framing directed toward consumers regarding the sustainability of products, brands and companies. Social norms are significant influencing factors because individuals with a stronger sense of social and moral responsibility will have greater motivation and, therefore, willingness to practice GCB [92,94,132]. This social norm pressure chimes with Font et al.'s [76] findings in an

emerging economy that individuals' drivers for GCB lead to communal benefits for a society that, in turn, influences social norms.

Socio-cultural influences are another significant external influence, especially in emerging economies. Bandura [107,123] included culture as an environmental construct in SCT. Study four [76] applied the cultural approach to sustainability empathy in the South American context. They [76] explained sustainability empathy as the extent to which individuals feel detached or attached to a particular set of culturally bound social norms. Moreover, individualism versus collectivism describes how or why some individuals associate more closely than others with their society and environment [76], as supported by African emerging economies [133]. Generally, individualism promotes the self, thus hinges on materialism and contradicts GCB or pro-social behaviour [134]. On the other hand, collectivism considers the group's interest in the debate between a culture of consumption versus conservation [135]. All human activity is rooted in, shaped, and constrained by cultural structures, and people mainly act within a cultural reality [136], which is crucial in determining consumer behaviour [34].

Different ethnicities do not necessarily dictate a specific civilization's culture. Instead, members' learned and shared values, beliefs, and customs subsequently direct their behaviour [136]. Customs are culturally acceptable traditions of behaving in everyday routine [53] and can relate to habitual behaviour and practices that influence GCB. How consumers are driven to satisfy needs is structured through culture [137] and, ultimately, translates into behaviour, either as a habitual automated process or deliberate cognitive action [19,94].

#### 4.1.5. Behavioural Determinants

SCT supports the significance of conscious decision-making and automaticity in decision-making and behaviour [71,76,92,94,107,138]. Three of the main studies in our review [76,92,94] agree that, due to the harmful impact of human lifestyles on the environment, the focus of applied environmental psychology should be expanded to include behaviour change favouring the environment. Thus, actions, habits and practices need to change, as Jackson [19,24,28] and Kurz et al. [139] confirm. However, material possessions and consumption activities are deeply embedded in the cultural fabric of consumer lives [19,24,139]. Moreover, they are complex in emerging economies owing to the play-off between GCB and economic growth [11,39,49].

Consumers can use cognitive, emotional and non-conscious approaches to make decisions that lead to behaviour [94,140,141]. The cognitive approach is an active, deliberated approach with effortful planning and intellectual activity to reach goal-directed behaviour, as pointed out by study six [94]. The more abstract emotional approach involves the use of heuristics which include environmental influences, social norms, and cultural surroundings and as pointed out, all these are unique in emerging economies. Consumers unconsciously retrieve information about previous experiences and evaluations to make rapid decisions rather than thoroughly weighing all positive and negative options [142]. The concept of automaticity acknowledges that consumers unconsciously decide or use a combination of conscious and unconscious processing, actively interacting with the ultimate goal of automating behaviour [94,143]. This automated behaviour leads to habits that start as actions and are repeated over time [27,94,144].

Consumers' actions are the actual behaviour to satisfy their needs through goal-directed behaviour, resulting in habits and following practices [19,145,146]. Cognitive efficiency finally occurs as behaviours are repeated in stable contexts and become habits [143,144]. According to SCT [138] and three of the studies included in the integrative review [76,92,94], behaviour change assumes actions are taken to behave according to individuals' belief systems, cultural, contextual and social influences, self-concept and perceived self-efficacy. These behaviours occur through internalized choices as daily habits. For example, Rakib et al. [94] recognized positive message framing as more effective in driving consumers towards sustainability than negative message framing (i.e., the positive effect on

the environment that sustainable habits will accomplish versus the negative consequence that will occur when consumers do not live sustainably). Thus, actions can also refer to avoidance or curbed behaviour to avoid non-sustainable behaviour. Individuals often commit to a particular lifestyle when actions become habits, enhancing perceived self-efficacy and outcome expectations.

Many everyday sustainable behaviours require repeated actions, resulting in habit formation and automatic (unconscious) behaviour prompted by regularly encountered contextual cues [139]. In addition, many daily habits have sustainability implications (e.g., energy and resource utilization, transportation, shopping, use and disposal of products). Thus, habit change is a critical component of GCB [27,94,144,147]. We argue that emerging countries should focus on easy-to-perform daily habits that contribute to sustainability.

Environmental cues can activate habitual behaviour as a type of unconscious (spontaneous) behaviour or routine [148]. Frequent repetitions of a specific behaviour fashion the learned behaviour (e.g., choosing reusable bags rather than plastic bags), which is led by internal (e.g., commitment to preventing plastic pollution) or external cues (e.g., other people use reusable bags as opposed to plastic) [149]. Environmental behaviour necessitates repetition to reach the required behavioural change over time [144]. The degree of automaticity of a specific behaviour in stable conditions determines the strength of a habit. Habits functionally achieve goal-directed behaviour by repeating the same behaviour purposefully and being rewarded for it by an expected outcome, which accords habits with a degree of intentionality [144,145]. It is better to determine habits as a form of actual behaviour (actions) than intention-to-behave because habits are followed in a stable context [145,148].

In addition to actions, habits and practices constitute past behaviour that guides future behaviour, reinforcing the concept and success of reciprocal determinism [94]. Practices imply the actual application or use of an idea, belief or method (see water-saving examples from Australia in Phipps et al. [27] for that practice to become the norm). Phipps et al. [27] emphasize that past behaviour (e.g., actions, habits and practices and learning from socio-cultural settings) strengthen self-concept and perceived self-efficacy, thus influencing future behavioural outcomes. Behaviour can also influence personal factors, such as a sense of self-efficacy, influencing behaviour and the environment [27,71,76,92]. Nevertheless, Rakib et al. [94] found that sustainable information and motivation did not significantly affect consumers' actions or intentions. They did not engage in more deliberate cognitive actions. Rather previous already established automated actions prevailed [94]. Thus, we can deduce that behaviour manifests as an outcome and provides feedback to all behaviour precursors because of social learning in cultural environments [27].

#### 4.1.6. Outcome Expectations

Outcome expectations or the beliefs individuals have about the consequences of their changed behavioural strategy [107] are a function of personal agency, which develops into habits and lifestyles [27,76,92–94]. Given the identified challenges with perceived self-efficacy in emerging economies, the foreseen outcome habits and lifestyles may differ from developed countries. Therefore, based on SCT principles, the outcome construct can be rendered as individuals' convictions about their pro-environmental behaviours' possible positive or negative consequences.

The learning experience may influence outcome expectations. The vast differences in emerging economies' social environments might influence the learning experience regarding green daily habits. The outcome expectations can adopt various forms of behaviour, including social effects such as recognition and acknowledgement from others, namely reference groups and social norms, physical effects such as financial benefit, and self-evaluation gradually shaped through individuals' learning experiences [32]. Moreover, existing literature argues that consumers with more favourable contextual factors and better perceived environmental self-efficacy judgement will have higher outcome expectations, leading to more challenging goals and GCB [27,76,92–94]. However, research has shown

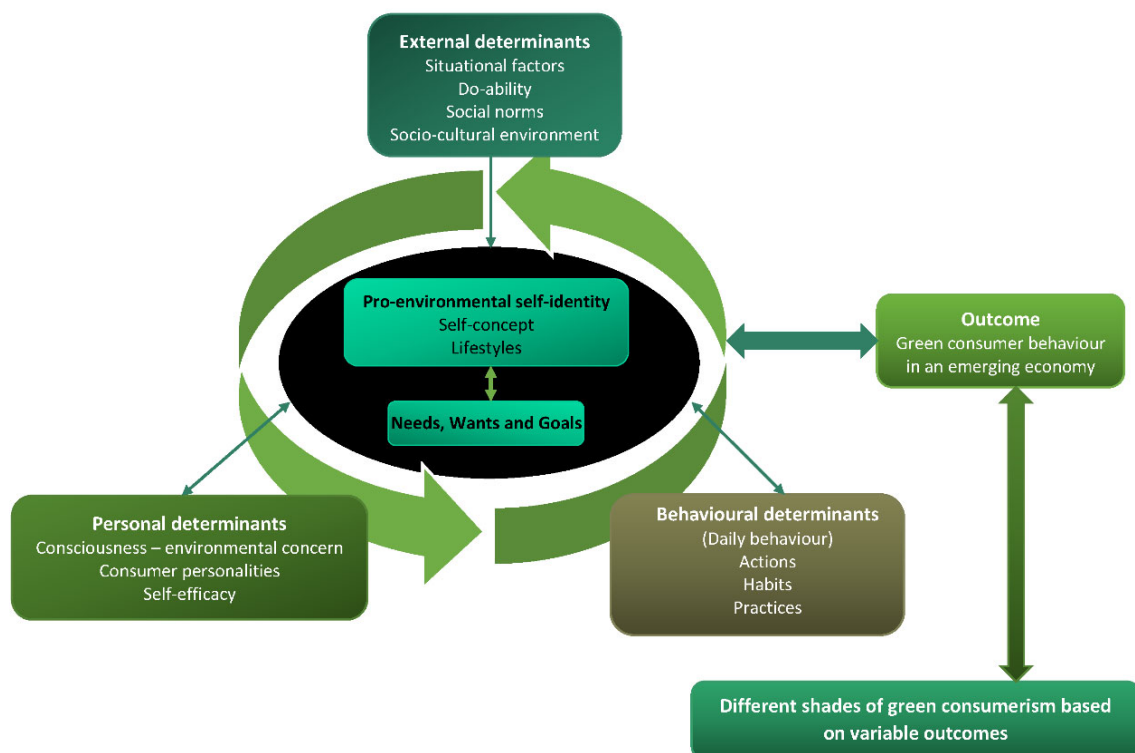


that emerging economy contexts are less favourable for GCB [150,151]. Hence, there will be variations in the degree of GCB, suggesting different shades of green consumerism in emerging economies than in developed countries. As explicated in the following sections, the proposed shades or green consumerism levels are essential to consider and clarify.

#### 4.1.7. A Proposed Conceptual Model

##### Applying the Theoretical Assumptions of SCT and Research Propositions

The six significant studies reviewed indicate a positive interaction between personal, external and behavioural determinants that reciprocally influence one another in a dynamic relationship and lead to an outcome that either supports or counteracts GCB. Phipps et al. [27] and Rakib et al. [94] caution that reciprocal determinism does not necessarily imply a positive outcome but only postulates a relationship between these determinants. Figure 2 depicts an adapted model initially proposed by Phipps et al. [27]. We propose this adapted model as a theoretical framework for understanding general consumer behaviour based on SCT principles and applying it to sustainable behaviour in an emerging economy context. This model draws on the SCT assumption that context determines behavioural outcome [72–74]; thus, the unique challenges and situational factors in emerging economies regarding GCB are considered. Our discussion of the proposed model will include the factors we deemed most relevant in an emerging economy context (including pro-environmental self-identity, personal-, external- and behavioural determinants) and list research propositions (P1–P5) that may guide future research.



**Figure 2.** A proposed theoretical framework for understanding green consumerism in an emerging economy context, adapted from Phipps et al. [27].

Quoquab and Mohammad [12] identified the gap in sustainable consumption models of the scarcity of including mediating (showing relationships) variables, which support the understanding of when and why the relationship between two or more variables depends on a third variable, as well as moderating variables (affects the strength and direction of the relationship). Thus, in line with their recommendations, our behavioural process is mediated by self-concept and lifestyles resulting from consumers' needs, wants and goals [95].

For the proposed model, we use the umbrella term PESI and propose that PESI act as a mediator in this model, a relationship yet to be investigated but which may help explain GCB when applied and tested in an emerging economy context. Van der Werff et al. [104] evidenced the mediating role of environmental self-identity in increasing the preference for GCB. PESI, as a mediated moderator, can be reinforced by behavioural determinants as consumers actively choose green habits [18]. Hence, the following propositions:

**P<sup>1</sup>** If consumers have a positive PESI, it may mediate and reinforce their personal determinants to support active GCB.

**P<sup>2</sup>** If consumers' behavioural determinants are focused on GCB, it is feasible to say that these actions reinforce PESI.

We included three personal determinants, namely EC, consumer personalities and perceived self-efficacy, in the proposed model, which can each be dealt with as a separate research proposition. We include EC as a personal determinant in the proposed model since awareness of the effects of climate change, which is often low in emerging countries [2,5,17,39], influences how consumers live. Furthermore, EC positively influences sustainable consumption [114]. However, the impact of EC is less understood in emerging economies because of the complexity of their situational factors [20].

Our framework proposes that consumer personalities, under-researched in GCB contexts, will add a unique reflection on GCB and may aid in better understanding GCB in emerging economies. Basic-Sontic et al. [37], for example, reported that personality dimensions, directly and indirectly, influenced the pro-environmental behaviour of respondents in their study through the channel of EC.

Self-efficacy results from EC, personality traits, having the skills to perform a do-able action, the ease of the do-ability of that action in a specific context and the belief to perform a specific action that could potentially lessen the adverse effects of climate change. We propose that higher perceived self-efficacy will result in more GCB. Thus, considering this, the following proposition may be presented:

**P<sup>3</sup>** Personal determinants (including EC, consumer personalities, and perceived self-efficacy) influence GCB by encouraging behavioural determinants (daily action, habits and practices).

Some actions will be perceived as easier to execute for different consumers based on their situational factors, which constitute an external determinant. Emerging countries may lack the infrastructure to support GCB. They often find it challenging to balance development and industrialization on the one hand and sustainability goals on the other. Furthermore, the do-ability of GCB is influenced by, for example, infrastructure and available services such as recycling stations and rainwater tanks. Finally, socio-cultural settings, including cultural focus and social norms, influence the acceptance and practice of GCB. When consumers share the same values and beliefs, it evolves into a cultural orientation to perform sustainable practices. This cultural orientation is an example of individual consumer behaviour influencing the group and social norms. Therefore, we propose that:

**P<sup>4</sup>** External determinants can influence personal determinants, impacting consumers' GCB.

**P<sup>5</sup>** Determinants within the external realm, comprising situational factors and contextual influences such as the country's status (emerging economy) and environmental change or impact, can also influence behavioural determinants (daily actions, habits and practices), which encourage GCB.

However, for emerging economies, we propose that the easy-to-do, daily actions of GCB, not necessarily involving additional costs or expert knowledge to perform, can become healthy and sustainable habits that can support behaviour change over time. Furthermore, consumers' behavioural determinants (including actions, habits and practices) can be adopted as heuristics to simplify decision-making. In other words, they are adopting simple choice rules to simplify complex decisions [145] about GCB. However, in such a case, the goal should first be to change bad habits and induce better ones [94,152]. Thus, actual daily habits regarding easy-to-do actions can provide a glimpse of the health of consumers' sustainable practices and offer insight into habits that need to change.

Once GCB and accompanying actions, habits and practices have been formed, they can, for example, enhance self-efficacy and do-ability, which, when successful, compel the individual to engage in further GCB [87] and the desired outcomes. Such a dynamic, ongoing process supports the underlying SCT assumption of reciprocal relationships, as illustrated in the proposed theoretical model (Figure 2), which hinges on behavioural change as an ongoing circular process. This theoretical model's outcome refers to detected GCB or non-GCB influenced by the triadic reciprocal determinism of personal determinants, the external environment and behaviours. Decision-making can be both conscious and automated, and SCT supports the significance of both [94].

Despite the limited application of SCT to explain GCB to date, our literature review shows its suitability for studying the complexity of GCB in high-income and emergent economy countries. We thus draw on many scholars [27,72,76,92–94,111] and propose that SCT be applied to GCB through a critical realism transdisciplinary approach that will provide value in understanding the higher-order thinking underlying complex decision-making in an emerging economy. Consequently, the proposed model may have particular merit in exploring behaviour, especially in emerging economies, as it provides a more holistic approach and includes contextual influences, integrating knowledge and transcending understanding.

#### Shades of Green Consumerism

Previous strategies have divided consumers into smaller homogeneous segments based on specific traits (e.g., environmental attitudes), characteristics and reactions to influencing factors of green behaviour [153]. Studies also distinguish between different types of green consumers based on, for example, the intensity of their concern for the environment [154,155] because individual environmental consciousness is known to influence behaviour [156]. Psychographics is another of several methods used for consumer segmentation. This method includes other consumer personalities and lifestyles (i.e., activities, interests and opinions) and tends to reflect consumers' attitudes to specific issues [53]. As a more complex segmentation strategy, psychographics differentiates consumers from one another in more depth and insightful levels to explain why some consumers engage in GCB, regardless of their demographic profile [114]. For example, when consumers pursue selfless lifestyles, they believe that climate change is a reality and that their actions impact the environment [157]. However, the degree and intensity of their adherence may vary, resulting in different segments of green consumers [158].

Within emerging economy contexts, previous studies have used lifestyle statements to categorize South African consumers into five green values segments, namely "Engaged Greens", "Green Supporters", "Neutral Greens" (40%), "Green Cynics" (20%) and "Green Rejecters" (10%) [159]. A more recent example from an emerging economy (Latin America) identified four clusters of consumers governed by similarities and differences in their cultural focuses (collectivism vs. individualism) and beneficiaries (whom they want to help). These clusters influence their reasons for being green consumers and the degree to which they act in an environmentally friendly manner [76]. Finally, in an Indian context, consumer groups were identified and clustered as "keen green", "moderate greens", and "reluctant greens" based on several cognitive variables (i.e., environmental concern, perceived environmental knowledge and green purchasing behaviour) to study those participants [43].

We propose that certain groups of people approach GCB and sustainable lifestyles in similar fashions because of shared beliefs and practices within their social environments. The same might apply to people who do not value sustainable lifestyles. Therefore, different consumer segments can be detected with various personal determinants, demographics, values, cultures, contextual factors, self-identity and perceived efficacy. Nevertheless, sections of the population remain without the means to allow choices for GCB or make choices against it. Consequently, they cannot easily change unsustainable practices [111]. The pro-

posed model identifies different levels or “shades” of engagement in green consumerism that may manifest in the measured outcomes.

The scope of our study’s proposed model focuses only on consumers able to choose to scrutinize their actions when they have the autonomy to direct their behaviour. Hence, the proposed model reflects consumers’ everyday actions and habits that most people can exercise. These actions include (a) curtailment behaviour (e.g., frequent habit-forming actions that rarely involve additional costs but often result in energy and/or water conservation) [23,160]; (b) buying behaviour (e.g., selecting products with less packaging); (c) usage behaviour (e.g., opting for reusable water bottles and shopping bags); and (d) social/education consumer behaviour (e.g., educating oneself about environmental issues). These different domains of behaviour can and do overlap. In addition, the proposed model aims to provide a framework to guide research that might segment consumers according to their PESI (which includes lifestyles), EC, consumer personalities and perceived self-efficacy against the background of cultural diversity in an emerging economy context.

To profile consumers (clusters) according to these constructs, their daily green consumer actions should be matched with the constructs, which will help segment them into groups based on their engagement levels in green consumerism and the accompanying GCB. We also propose using psychographics (personality, lifestyle, interest), levelling out demographics as a single predictor of segments to explain why some consumers engage in GCB [95]. These shades of green consumerism acknowledge that consumers in emerging economies are diverse, with different personal, behavioural and external factors influencing their daily behavioural outcomes. Accordingly, it is essential to note that the “different shades of green consumerism” could, at one end of the continuum, also include non-green consumers [43,77]. This outcome will be valuable in providing insight into why the behaviour of some segments is not green. The proposed model can thus help identify core aspects in emerging societies that need attention to enable change to the cultural orientation of consumerism in favour of more sustainable behavioural practices.

#### 4.1.8. Limitations

Surprisingly, the integrative review deemed only six articles relevant to the specifications of the search words, underscoring the scarcity of SCT application to GCB. Although these articles allowed us to deduce many assumptions about SCT based on their evidence, we had to include much Supporting Information to provide the missing pieces of the puzzle. However, the proposed model might not be all-encompassing due to the vast array of relevant constructs that could influence GCB. In balancing parsimony and explanatory completeness [24], this model identified constructs the researchers deemed essential in an emerging economy context to allow for empirical testing.

#### 4.1.9. Recommendations for Future Research

Qualitative research is always valuable for more in-depth insight into a phenomenon. However, quantitative research provides a bigger picture of who, what, and how many. Thus, it quantifies possible problems and their magnitude. Since emerging economies are mostly still in a ‘green awakening’ phase, it will be sensible first to quantify the parameters to discover the level of engagement in GCB. Thus, we propose quantifying (through determining and describing) consumers’ PESI, EC, consumer personalities, perceived self-efficacy and daily habits against the backdrop of their situational and contextual settings. Our research propositions offer valuable guidance in undertaking such research. In addition, we propose that PESI be a mediating moderator, considering the scarcity of mediating factors in GCB models. This quantifiable data can detect relationships between constructs and cluster the population according to their characteristics.

The practical implication of the SCT provides a theory of change as a circular process incorporating feedback. Thus, we can confirm that behavioural models and theories of change are complementary. It boils down to whether one empirically tests a model or applies a theory to actual real-life events. Conclusively, influencing factors first need to

establish linear relationships and causality, empirically determined as proposed. However, when tested empirically, we are optimistic that the constructs in our proposed model will provide an additional tool for gaining insight into CGB and play an essential part in cultivating a green culture one consumer at a time, one habit at a time. Then, interventions can be applied to cause behaviour change by changing behaviour to form a holistic circular approach. Only then will it be sensible to start with qualitative research to find the answers to why some clusters of consumers behave in a certain way.

## 5. Conclusions

Of the six articles yielded by the literature search within the search parameters that applied the SCT to explain GCB, only studies four and five focused on emerging economies. Thus, there is scope to apply the SCT in an emerging economy setting with a unique perspective on the determinants of GCB. With our review, we highlighted situational and contextual settings in the environment to position the relevance to an emerging economy.

Following the critical determinants unearthed through critical realism in the integrative review, we proposed a theoretical model based on the assumptions of SCT. The proposed model aims to provide a framework to guide research that might segment consumers according to their personal determinants (EC, consumer personalities perceived self-efficacy), daily GCB (i.e., behavioural determinants), PESI and lifestyle (as mediating factors) against the background of cultural diversity in an emerging country. This model can usefully serve as a framework for future research since it incorporates a more holistic layered understanding of the underlying determinants of GCB.

When investigating GCB, it is essential to acknowledge that this is one of the many divisions of consumer behaviour fields where inequalities are a vital consideration. A recurring theme in GCB is that behaving in a more environmentally friendly way might impose extra monetary costs or resources—which some/most citizens in emerging economies cannot afford. However, approaching GCB more simplistically might include more consumers equally when scrutinising their everyday habitual behaviour. This approach can provide insight into GCB in emerging economies, the do-able, practical application in everyday behaviour, and the obstacles consumers face.

Accordingly, our proposed model could be used as a basis for guiding a ‘green awakening’ in emerging economies and may ultimately benefit consumers, the industry and the government as multiple stakeholders. However, the proposed model requires empirical testing in an emerging economy setting, especially due to the limited number of available articles from an emerging economy available for inclusion. Such research could potentially identify additional factors with the evolving application of SCT on green consumer behaviour in emerging economies. When empirically tested, the results can likewise be applied to profile consumers into different clusters or groups that exhibit various “shades of green consumerism”. Thus, this proposed model can help identify core aspects within emerging societies that need attention to change the cultural orientation of consumerism and thus change consumer behaviour in favour of more sustainable practices. Finally, empirically applying this model might help explain the different shades of green consumerism in an emerging economy context, which can help cultivate a green consumer through an advanced understanding of consumer behaviour in emerging, culturally diverse countries. This will also make a valuable theoretical contribution to applying the SCT in an emerging economy context.

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