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The impact of consumer knowledge on socially responsible spending on products from underdeveloped countries

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ABSTRACT

Today's consumers are increasingly aware of social issues in developing countries. When making purchases, they take into account the production and transportation methods of goods. Particularly, younger individuals actively display their commitment to promoting social values through their purchasing behaviors, a phenomenon termed *meaning-out*. The aim of this study is to explore how knowledge influences such spending patterns. Utilizing recent literature reviews and the theory of planned behavior, statistical analysis was followed by a case study. The results reveal that action-related and effectiveness-based knowledge of social issues boosts sustainable purchasing behaviors. It is imperative to augment knowledge and awareness about the beneficial impacts of such sustainable consumption on developing economies. This study advances the integration of subjective knowledge and objective knowledge components into the theory of planned behavior to elucidate the role of knowledge in fostering socially responsible purchasing. The practical contributions of this research include examining consumers' intentions regarding socially responsible purchases and targeting market segments that prioritize social issues.

Introduction

Increased public awareness of global environmental, social, and governance (ESG) issues, particularly in developing countries and disadvantaged communities, has transformed consumer attitudes towards product selection and overall purchasing intentions. Consumers are increasingly considering the societal impact of their consumption before executing a transaction (Shaw et al., 2006; Baker, 2019; Caimi et al., 2019). This trend exemplifies the process of social value co-generation, where expenditure is regarded as a citizen's vote on its community impact (Hwang et al., 2020). The term *socially responsible consumption* refers to the voluntary purchase of products aimed at addressing significant social issues, including the promotion of human rights, animal advocacy, environmental protection, and other beneficial aspects (Pepper, 2009; Webb et al., 2008). Furthermore, recent studies have explored consumption that supports the Global South and small businesses by purchasing directly from developing countries and local enterprises, while eschewing products from large corporations reliant on cheap labor and exploitative practices such as sweatshops (Barnett, 2010). Consequently, recent consumption patterns primarily mirror the public's autonomy in transactions, governed by individual ethical standards. A survey conducted by BBMG, GlobeScan, and SustainAbility (GlobeScan, 2012), which involved 6224 customers from Brazil, China, India, Germany, the United Kingdom, and the United States, revealed that approximately 70 % of respondents felt obligated to purchase products that are environmentally and socially beneficial. Likewise, contemporary reports on consumption patterns indicate that individuals are increasingly cognizant of the impacts of their shopping choices and expenditures, with this awareness persisting and even intensifying during and post-pandemic (Deloitte, 2023; Severo et al., 2021). Overall, the emphasis on ethical considerations and the adoption of various sustainability initiatives are shaping current consumption trends, although opinions on the drivers of this behavior continue to vary widely.

Sustainable or ethical consumption typically falls into two primary categories: 1) completely eschewing the purchase and consumption of goods and services or practicing voluntary restraint in their use, and 2) modifying the methods of participating in the market, such as opting for purchases that aid local or globally marginalized groups, or selecting products with a comprehensive understanding of their origins and production processes (Pepper, 2009). Ethical consumers often prioritize principles such as equitable labor rights and conditions at the

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geographical and corporate levels of production, compliance with fair trade norms, and companies' voluntary contributions to social welfare (Dickson, 2000). Consequently, socially responsible consumers consider various aspects, including the manufacturing or selling company, the product's geographical origin, the reinvestment or distribution of profits, and the product itself (Crane, 2001; Brinkmann & Peattle, 2008; Ye et al., 2021; Sama et al., 2018). Such consumers purchase domestic products to support local workers and communities, and they buy from developing nations to aid distant communities. They also advocate for economic support of disadvantaged areas or organizations chiefly via buying fair trade products (Sama et al., 2018). Similarly, socially responsible buyers may prefer companies that participate in buy-one-give-one or buy-one-give-money programs, contributing to ethical causes on both local and global scales (Park, 2018).

Expanding on the notion of socially responsible consumption, we introduce the term *expenditure*, emphasizing voluntary spending as a fundamental motivator for an environmentally aware audience dedicated to ending transactions void of sustainable and ethical practices. We identify expressing one's *knowledge* and personal *behavior* toward social causes through dedicated socially responsible *intention* as the primary driver for changing spending habits across specific sectors of goods and services. Consumers are no longer torn between indulgent spending and abstention; instead, they *demand* that companies adopt a socially responsible agenda to secure their patronage (Falcão & Roseira, 2022). We propose that an intricate interplay of both objective knowledge and subjective knowledge regarding social issues, combined with behavioral dynamics, shapes the intention to engage in socially responsible spending as a deliberate, performative action. Consequently, this research aims to explore the rationale for socially responsible spending as an active behavioral mechanism through which individuals assert their knowledge and express their attitudes, norms, and perceived impact on particular social concerns.

Additionally, spending motivations have undergone substantial shifts, accompanied by a significant 30 % increase in sales of products from socially responsible manufacturers since 2018 (Bar Am et al., 2023). Consequently, it is projected that such motivation will persist, with consumers catalyzing corporate changes as they remain focal in transforming business transactions into beneficial social investments (Saul, 2023). Consequently, companies are expected to align their product strengths with these evolving expenditure patterns by adhering to emerging standards that prioritize community contribution and social impact over passive consumption.

The research question of this study is how both objective knowledge and subjective knowledge influence a consumer's intention to make socially responsible purchases. The extensive literature review presented below indicates that the majority of research has addressed the concepts of knowledge, behavior, and ethical expenditure in a fragmented manner. Most articles apply the theory of planned behavior (TPB) framework to examine overall sustainable consumption intention, primarily focusing on environmental initiatives rather than social responsibility. Other researchers have explored sustainable consumption through the lens of knowledge and information, discussing how being informed about climate change, environmental risks, and related data can influence consumer behavior. They advocate for more widespread dissemination of information regarding environmental and social issues to enhance sustainability. Both perspectives overlook the connection between knowledge and behavioral factors and fail to recognize individuals as rational beings with unique learning and comprehension methods. This research therefore proposes that knowledge shapes behavioral factors, which in turn encourage ethical expenditure. Thus, the current study aims to bridge the gap in understanding how customers' knowledge affects sustainable consumption behavior and examines the influence of knowledge on promoting socially responsible purchases.

This research employs a mixed-methods approach, utilizing both quantitative and qualitative data in a case study format. The survey data were analyzed using structural equation modeling (SEM) to test the research hypotheses, which are outlined in the subsequent section. The principal findings indicate that action-related knowledge and effectiveness knowledge concerning social issues promote sustainable purchasing behaviors.

This research enhances the theoretical understanding of how knowledge, in conjunction with the TPB, impacts purchase intentions. Specifically, the intrapersonal (cognitive) factor is represented by subjective knowledge, while the interpersonal (surrounding) factor is characterized by the subjective norm. This distinct approach differentiates our model from the traditional TPB, which solely considers the subjective norm.

In the following sections, we review the latest studies to identify a research gap and formulate subsequent hypotheses. The research methodology entails quantitative data analysis followed by a brief case study, with a detailed explanation of the research model. The modeling results are then presented and discussed to draw both theoretical and practical implications, as well as to conclude the research.

Literature review and hypothesis development

The awareness and deep understanding of social responsibility among younger generations influences their spending patterns with regard to consumption (Reichheld et al., 2023). Additionally, numerous studies have shown that different types of knowledge preconditions affect attitudes towards issues, which in turn influence purchasing intentions. This relationship consistently supports theories of socially responsible behavior (Kollmuss & Agyeman, 2002; De Pelsmacker & Janssens, 2007; Marcketti & Shelley, 2009; Kim et al., 2014). However, most research focusing on this specific link tends to discuss knowledge only in terms of awareness or underscore the absence of detailed or foundational understanding.

To date, research on the development of sustainable behaviors has primarily addressed *knowledge* and behavior, as well as intentions towards sustainable actions, under a general behavioral factors framework or in a fragmented manner. This often encompasses constructs such as knowledge, psychosocial factors, and actual practices related to environmental and social issues.

Theory of planned behavior

Regarding behavioral aspects, the predominant framework analyzing consumption patterns is the TPB developed by Ajzen (1985). The theory posits that an individual's intentions dictate their actions, including aspects of consumption and spending. These intentions are influenced by psychosocial factors—attitudes, subjective norms, and perceived behavioral control—all of which significantly impact the development of behavioral performance. For example, Arvola et al. (2008) explored consumers' intentions to purchase organic food by incorporating measures of affective and moral attitudes, while Shaw et al. (2007) showed that adding desire to the model significantly improved explanations of consumers' intentions regarding the avoidance of sweatshop apparel. Thus, the TPB primarily explains sustainable consumption in terms of individual cognitive decision-making and planning, rooted in proactive self-awareness.

Recent studies have actively employed the TPB, incorporating several modifications to the foundational model. For instance, a study examining the intricacies of responsible sustainable consumer behavior utilized the TPB framework to investigate the effects of concern, effectiveness, norms, and moral obligations on consumption patterns (Hosta & Zabkar, 2021). Similarly, Dang et al. (2022) analyzed how three motivational antecedents derived from the TPB influence eco-friendly and ethically sound economic transactions. Meta-analyses of the TPB's application to sustainable purchasing trends have consistently shown that the theory provides a robust foundation for predicting green and socially conscious consumption (Han & Stoel, 2017). Prendegrast &

Tsang (2019) expanded upon this application by designing an experiment to explore how behavioral factors influence various types of socially responsible consumption, although they did not include the original formation of constructs such as intention, attitude, subjective norm, and perceived behavioral control. These studies predominantly focus on the concept of perception, demonstrating how an individual's subjective constructs can influence expenditure patterns without addressing the fundamental origins of these constructs in individuals.

Although studies suggest that access to readily available information on environmental or social issues plays a significant role in an individual's spending and consumption patterns, overall knowledge is not linked directly to the model (Hua & Dong, 2022). Instead, information accessibility provided by corporations through labels and product specifications distinctly influences buying intentions in the final stage of consumer purchasing decisions (Hosta & Zabkar, 2021; Dang et al., 2022). However, other studies have indicated that while knowledge alone may not lead to socially mindful behaviors and consumption, the possession of awareness, factual information, and deep technical knowledge can promote sustainable consumption patterns. This phenomenon occurs only when the knowledge is combined with other psychosocial elements such as attitudes, norms, values, and beliefs (Kollmuss & Agyeman, 2002; De Pelsmacker & Janssens, 2007; Pieniak et al., 2010). Specifically, Kollmuss & Agyeman (2002) discuss how environmental knowledge and awareness collectively foster environmental consciousness and intention. When coupled with individual values and attitudes, this consciousness promotes pro-environmental behaviors. It is thus essential to distinguish between types of knowledge and the role of knowledge in influencing sustainable consumption practices—a behavior in which knowledge works alongside intention-shaping factors.

Types of knowledge

Based on much of the previous research, knowledge and information dissemination do not refer to the same concept. For instance, studies by Enrich & Irwin (2005), and by Pickett-Baker & Ozaki (2008), have investigated how effective branding strategies, such as product labeling and attribute information, enable consumers to recognize ethical and environmentally friendly products, significantly influencing their purchasing intention. These studies indicate that this trend is particularly apparent among consumers with a pre-existing concern or awareness of such issues, yet they focus exclusively on how companies communicate their production processes and commitment to sustainability practices. This suggests that in these cases, knowledge and awareness transcend mere possession of information on sustainability issues and are also embedded in corporate social responsibility (CSR) and communication strategies. Additionally, other studies suggest that inadequate, incorrect, or misleading product information, commonly found in cases of greenwashing, can dissuade potential purchasers (Carrigan & Attalla, 2001; De Pelsmacker & Janssens, 2007). It is therefore essential to clearly distinguish and explore knowledge not just as pre-existing familiarity with the broader concept of social responsibility but also as a deeper understanding of the subject matter. This type of knowledge can significantly influence the psychosocial formation of subjective norms and attitudes toward the overall issue, beyond the mere knowledge acquired from specific product information immediately prior to purchase.

Frick et al. (2004) delineate various types of environmental knowledge in their study, identifying three primary categories: system knowledge, action-related knowledge, and effectiveness knowledge, each believed to have a significant, albeit distinct, impact on behavioral performance, such as sustainability practices. Specifically, system knowledge pertains to overall awareness of the issue; action-related knowledge concentrates on strategies to address the problem; and effectiveness knowledge evaluates the potential outcomes of these strategies. Consequently, system knowledge indirectly influences behavior, unlike the more direct impacts of action-related knowledge and effectiveness knowledge, which are underpinning overall behavior formation (Frick et al., 2004). For instance, a study using this framework demonstrated that both action-related knowledge and effectiveness knowledge could be improved through experiential learning activities, which may enhance sustainable behaviors if system knowledge serves as a foundational element (Braun & Dierkes, 2017). Furthermore, Pieniak et al. (2010) highlight the importance of subjective knowledge, or individuals' perceived familiarity with the issue. This type of knowledge is crucial for influencing behavioral patterns because a high self-assessment of expertise can lead to more proactive engagement in sustainable actions than merely possessing objective knowledge (Ellen, 1994). Additionally, it is noted that objective knowledge generally serves as the foundation for developing subjective knowledge (Pieniak et al., 2010; Liu et al., 2020).

Hypotheses

This study aims to integrate theories and prior applications with a more detailed analysis of environmental knowledge and the TPB. We aim to construct a comprehensive framework for examining the phenomena of socially responsible consumption and sustainable expenditure. We argue that this approach enables us to portray socially conscious consumers from a proactive angle, where individuals leverage their existing knowledge through purchasing behaviors. We examine how awareness of social issues in underdeveloped countries and marginalized local communities influences consumers' intention to participate in socially responsible expenditure via purpose-driven trade transactions that support ethical causes. This investigation involves verifying hypotheses based on prior research findings. Furthermore, our case study delves into the knowledge-behavior model, arguing that awareness of social responsibilities encourages sustainable spending that benefits community welfare and incentivizes companies to implement ethical practices, moving forward from the traditional emphasis on corporate-driven information-sharing and education.

Drawing on previous research, we develop a series of hypotheses to test our assumptions about the effect of knowledge on purchasing intentions from underdeveloped countries. Consistent with the TPB and prior studies on sustainable purchasing behavior (Qin & Song, 2022; Hosta & Zabkar, 2021; Dang et al., 2022), we hypothesize that psychosocial factors such as attitude, subjective norm, and perceived behavioral control directly enhance one's willingness to purchase goods from underdeveloped countries.

H1. Attitude (a), subjective norm (b), and perceived behavioral control (c) will positively influence the intention to purchase products made in underdeveloped countries.

Contrary to the traditional theory of environmental knowledge proposed by Frick et al. (2004), we argue that no objective knowledge type directly influences behavior. Instead, it shapes behavior indirectly through psychosocial factors in the TPB, specifically attitude and perceived behavioral control. This hypothesis is supported by past studies indicating that individual perceptions, understandings, and other subjective influences significantly affect one's intentions and behaviors (Liu et al., 2018; Pieniak et al., 2010; De Pelsmacker & Janssens, 2007). Therefore, we posit that perceived behavioral control (assumed difficulty of performing an act) and attitude (evaluation of expected outcomes) are influenced by action-related knowledge, effectiveness knowledge, and subjective knowledge as below.

Nautiyal & Lal (2022) addressed the research gap by examining the individual effects of two types of product knowledge—consumers' subjective knowledge and objective knowledge—on their organic purchase intentions, within the framework of the TPB. They found that subjective knowledge had a nonsignificant impact on consumer attitude and intention, while objective knowledge played a major role in strengthening the relationship between attitude and intention. Furthermore, a very weak correlation ($r = 0.11$) found between

subjective knowledge and objective knowledge suggests the presence of confusion and misinformation about organic products among consumers. This finding contrasts sharply with most major studies that examined the role of subjective knowledge and objective knowledge collectively. Therefore, in this study, we separately re-examine how subjective knowledge influences the consumer's intention to purchase products from emerging markets and posit that:

H2. Subjective knowledge about social issues in underdeveloped countries will positively affect attitude (a) and perceived behavioral control (b) toward the consumption of products made in underdeveloped countries.

Frick et al. (2004) discovered that action-related knowledge and effectiveness knowledge directly influence environmental conservation behavior, while system knowledge indirectly influences the behavior through action-related knowledge and effectiveness knowledge. Thus, we have developed the following relevant hypotheses. Neubig et al. (2020) compared the impacts of system information versus action-related information on behavioral intentions regarding food waste. The study examined the impact of information on sustainable consumption and specific actions that can be taken to support it. The results indicate that action-related information significantly enhances respondents' intention to reduce food waste. Thus, we posit that:

H3. Action-related knowledge about social issues in underdeveloped countries will positively affect attitude (a) and perceived behavioral control (b) toward the consumption of products made in underdeveloped countries.

Wang & Hazen (2016) examined how knowledge and perceptions of remanufactured products in terms of cost, quality, and green attributes influence consumers' purchase intentions. They found that purchase intention is positively influenced by perceived value, which is most influenced by quality knowledge, followed by cost knowledge and green knowledge. Quality, cost, and green performance are elements of effectiveness; therefore, we posit that:

H4. Effectiveness knowledge about social issues in underdeveloped countries will positively affect attitude (a) and perceived behavioral control (b) toward the consumption of products made in underdeveloped countries.

Additionally, we posit that system knowledge primarily informs one's behavioral act of purchasing from these nations, influencing the cognitive decision-making process that leads to socially ethical consumption. This assertion is grounded on prior discussions indicating that possessing accurate information about prevalent issues establishes the foundation for developing more behavior-proximal types of knowledge, such as action-related knowledge and effectiveness knowledge (Frick et al., 2004).

H5. System knowledge concerning social issues in underdeveloped countries will positively influence action-related knowledge (a) and effectiveness knowledge (b).

Moreover, we posit that enhancing all three forms of objective knowledge—system, action-related, and effectiveness—subsequently increases one's subjective knowledge for self-assessment. In this context, system knowledge indirectly influences performative behavior through subjective knowledge, according to the general findings of Pieniak et al. (2010) and the differentiation among the three types of objective knowledge.

H6. System knowledge (a), action-related knowledge (b), and effectiveness knowledge (c) will positively influence subjective knowledge.

The proposed model, as outlined in Fig. 1, hypothesizes a direct relationship between the theoretical factual knowledge of general scarcity in underdeveloped nations and the shaping of action-related knowledge and effectiveness knowledge. Additionally, it suggests that a subjective understanding of the issue shapes attitudes and behavioral control. Thus, the pre-existing notion of a subjective norm, coupled with the individual's unique perception of the social problem at hand, influences consumption. In this model, both subjective knowledge and subjective norm are the primary drivers for forming intentions. Hence, the intrapersonal factor is subjective knowledge, and the interpersonal factor is subjective norm—distinguishing our model from TPB studies that only consider subjective norm. Social learning (or social cognitive) theory, proposed by Bandura (1977), underscores the significance of behavior observing, modeling, and imitating, attitudes, and emotional reactions of others. This theory examines how both surrounding (subjective norm) and cognitive (subjective knowledge) factors interact to influence human learning and behavior.

Research methodology

A case study was constructed using both quantitative and qualitative data collected in November 2023. Initially, an online survey was conducted targeting the South Korean public aged 19 to 34 to assess their awareness of social issues in developing countries because this age group

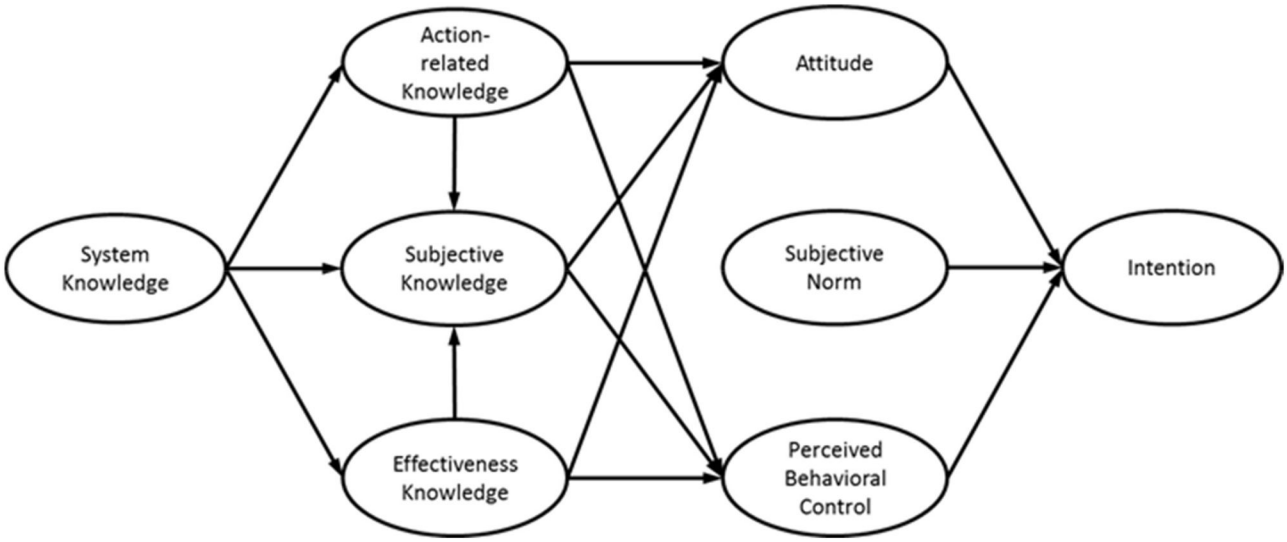

Fig. 1. Proposed research model for socially responsible purchasing behavior.

constitutes a significant portion of the global working population (OECD, 2023). The survey data were analyzed using a structural equation model to investigate relationships among latent variables (Lee, 2015; Deng et al., 2018). Additionally, a qualitative analysis was conducted at the South Korean branch of Simmons Bedding to explore customers' willingness to engage in transactions with the company, influenced by their awareness of societal issues and the company's CSR activities. This mixed-methods approach, which integrates both numeric and qualitative data, was selected not only to assess the predispositions regarding expenditure characteristics and spending intentions but also to evaluate how firms might react to shifts in these socially responsible spending trends.

This research utilizes the embedded case study design in order to examine how knowledge affects the market by influencing customer preferences and their overall propensity to engage in sustainable spending. Its aim is to deepen our understanding of how the awareness of social underdevelopment impacts public spending intentions, magnitude, and nature. Further analysis provides the private sector with evidence on how companies can benefit from adapting to these evolving consumption patterns, where the anticipated financial returns serve as a reward for the costs associated with adopting CSR practices (Kuri, 2021). Highlighting the companies that align with current ethical consumer behavior trends emphasizes the practical relevance of this study and the importance of recognizing these shifting spending patterns in corporate management.

Lee (2015) designed a survey to ascertain the impact of knowledge on socially responsible spending behaviors. Although most research on socially responsible spending is conducted in the West, awareness of underdevelopment in other countries is notably increasing in South Korea, a nation that has witnessed rapid economic growth after significant wartime devastation (Stangarone, 2015). Surveying South Korean consumers may thus provide fresh perspectives on research into socially responsible spending.

Data collection and questionnaire

The questionnaire aimed to understand consumer expenditure patterns for low-tech versus high-tech products, with a particular focus on agricultural commodities from underdeveloped nations. Specifically, respondents were instructed to reflect on instances when they chose products manufactured in these countries. The responses were measured on a seven-point Likert scale evaluating attitude, subjective norm, perceived behavioral control, purchasing intention, and subjective knowledge. Attributes such as attitude, subjective norm, perceived behavioral control, and purchasing intention were assessed using items derived from the frameworks of Ajzen (2006), George (2004), Shaw et al. (2000), Bansal & Taylor (2002), Kim et al. (2014), and Casalo et al. (2010). Subjective knowledge regarding social issues in underdeveloped countries was measured through items validated by Pieniak et al. (2010), Dodd et al. (2005), and Flynn & Goldsmith (1999). A comprehensive description of all measurement instruments is provided in Table 1.

System knowledge, action-related knowledge, and effectiveness knowledge regarding social issues in underdeveloped countries were assessed using official data from international organizations such as the United Nations Development Program and the World Bank (World Bank, 2023; United Nations, 2023; UN Capital Development Fund, 2023; International Labour Organization, 2023; UNICEF, 2023; Transparency International, 2023; Wydick, 2012). The study employed specific articles addressing critical issues like poverty, global warming, and organic certification criteria, among others. To objectively assess knowledge, 29 items were developed. For the assessment, 14 items evaluated system knowledge, 11 items measured action-related knowledge, and 4 items gauged effectiveness knowledge. Presented in multiple-choice and true/false formats (16 and 13 items, respectively), these items were meticulously selected and vetted by experts in international development to measure objective knowledge. The scores for objective knowledge were determined based on the total number of correct answers, with possible scores for system knowledge ranging from 0 to 14, for action-related knowledge from 0 to 11, and for effectiveness knowledge from 0 to 4. In the multiple-choice questions, the 'do not know' option was counted as incorrect. The survey included 259 respondents: male (73.0 %), mostly with a college or lower level of education (70.7 %), single (82.6 %), and largely under 40 years of age (90 %). Data analysis employed SEM using SPSS 20 and AMOS 20 to evaluate the research model.

Table 1
Questionnaire instruments.

Construct	*Items*	*Decoding*
Attitude	Purchasing products made in underdeveloped countries is a good idea.	ATT1
	Purchasing products made in underdeveloped countries is a wise decision.	ATT2
	For me, purchasing products made in underdeveloped countries is valuable.	ATT3
	For me, purchasing products made in underdeveloped countries is pleasant.	ATT4
	Generally, my attitude toward purchasing fair-trade products is positive.	ATT5
Subjective norm	The majority of significant individuals in my life believe I should purchase products manufactured in underdeveloped countries.	SN1
	The individuals who influence my decisions think that I should purchase products made in underdeveloped countries.	SN2
	Those important to me would approve of my purchasing products manufactured in underdeveloped countries.	SN3
	Influential people in my life approve of my decision to buy products made in underdeveloped countries.	SN4
	It is expected of me to buy products manufactured in underdeveloped countries.	SN5
Perceived behavioral control	I have the ability to purchase products made in underdeveloped countries.	PBC1
	I find it easy to buy products from underdeveloped countries.	PBC2
	I could feasibly purchase products from underdeveloped countries in the coming month.	PBC3
	I have full control over purchasing products from underdeveloped countries.	PBC4
Intention to purchase	I plan to buy products from underdeveloped countries in the coming month.	INT1
	I intend to purchase products from underdeveloped countries in the coming month.	INT2
	I am committed to purchasing products from underdeveloped countries in the coming month.	INT3
	I have the intention to buy products from underdeveloped countries in the coming month.	INT4
	I will attempt to buy products from underdeveloped countries in the coming month.	INT5
Subjective knowledge	I am quite knowledgeable about social issues in underdeveloped countries.	SK1
	I feel I have limited knowledge about social issues in underdeveloped countries. (reverse scored)	SK2
	Among my circle of friends, I am regarded as an expert on social issues in underdeveloped countries.	SK3
	Compared to most people, I possess less knowledge about social issues in underdeveloped countries. (reverse scored)	SK4
	Individuals familiar with my expertise recognize my proficiency in addressing social issues in underdeveloped regions.	SK5

Confirmatory factor analysis

To address potential bias and confounding factors, confirmatory factor analysis was used to evaluate the convergent validity,

discriminant validity, and reliability according to the procedure recommended by Hair et al. (2010). Four items were eliminated owing to low factor loadings (< 0.7). The criteria for reliability (composite reliability > 0.7), convergent validity (average variance extracted (AVE) > 0.5), and discriminant validity (maximum shared variance ⟨ AVE, average shared variance < AVE, square root of AVE ⟩ inter-construct correlations) were satisfied. Harman's single-factor test was conducted to assess common method bias, revealing that a single factor explained 36.4 % of the variance. Thus, common method bias was not considered a significant issue in this study. Model fit was evaluated using $\chi 2/df$, root mean square error of approximation (RMSEA), goodness of fit index (GFI), and comparative fit index (CFI). $\chi 2/df$ was 1.539 ($\chi 2 = 329.369$, $df = 214$), RMSEA was 0.046, GFI was 0.901, and CFI was 0.974. These indices met the general criteria ($\chi 2/df$ ⟨ 3, RMSEA < 0.08, GFI 0.9, CFI > 0.9), confirming that the measurement model was adequately fit.

Results

According to the survey results in Table 2, the respondents exhibited a moderate level of objective knowledge, averaging 13.73, with the highest scores in action-related knowledge questions. System knowledge was the lowest, less than half the maximum possible score. This suggests that although many individuals lack detailed awareness of international social issues, they are somewhat familiar with innovative measures to address these challenges (Lee, 2015).

In Table 3, the average percentage of correct answers is just below 50 %, indicating that awareness of common socio-economic-environmental issues in developing nations is still emerging. The sample primarily showed medium-level understanding in areas such as poverty, labor, infrastructure, and fair trade, while knowledge of international development and business themes was markedly lower, underscoring the importance of enhanced dissemination of information on international development. In contrast, the environment section had a high correct response rate, averaging 77.3 %, suggesting individuals in developed areas are more conscious of the environmental challenges and sustainability efforts in developing regions and among marginalized populations.

The SEM results presented in Fig. 2 show significant direct effects of attitude ($\beta = 0.331$, $t = 4.292$, $p < 0.001$), subjective norm ($\beta = 0.166$, $t = 2.400$, $p < 0.05$), and perceived behavioral control ($\beta = 0.217$, $t = 3.237$, $p < 0.01$) on purchasing intention, strongly supporting the first hypothesis (H1). Additionally, action-related knowledge significantly influenced both attitude ($\beta = 0.159$, $t = 2.632$, $p < 0.01$) and perceived behavioral control ($\beta = 0.161$, $t = 2.373$, $p < 0.05$), confirming the third hypothesis (H3). Conversely, while the influence of effectiveness knowledge on attitude ($\beta = 0.119$, $t = 2.059$, $p < 0.05$) was significant, its impact on perceived behavioral control ($\beta = -0.053$, $t = -0.820$, $p > 0.05$) was not, endorsing H4a but challenging H4b. System knowledge significantly influenced both action-related knowledge ($\beta = 0.453$, $t = 8.089$, $p < 0.001$) and effectiveness knowledge ($\beta = 0.234$, $t = 3.824$, $p < 0.001$), in line with H5. Finally, system knowledge ($\beta = 0.468$, $t = 7.200$, $p < 0.001$), action-related knowledge ($\beta = 0.139$, $t = 2.308$, $p < 0.05$), and effectiveness knowledge ($\beta = 0.146$, $t = 2.643$, $p < 0.01$) significantly influenced subjective knowledge as hypothesized in H6. In summary, objective knowledge based on verifiable data demonstrably shapes purchasing intentions among socially responsible economic actors, as Lee (2015) also supports.

Table 2
Descriptive statistics for each objective knowledge type.

	System knowledge	Action-oriented knowledge	Efficiency knowledge	Factual knowledge
Mean	5.60	6.78	1.35	13.73
Standard deviation	2.33	1.79	0.95	0.95

Table 3
Percentage of correct answers for each section in objective knowledge.

Issue sectors	Total questions	Percentage of correct responses
Poverty	6	43.1 %
Labor	5	41.0 %
Infrastructure	5	48.6 %
Fair Trade	4	45.8 %
Environment	3	77.3 %
Donation	3	43.8 %
Politics	1	64.5 %
International Development	1	25.5 %
Business	1	27.0 %
Total	**29**	**47.2 %**

We conclude that knowledge affects the intention to purchase, consistent with prior research; however, the influence of each type of knowledge varies. System knowledge, action-related knowledge, and effectiveness knowledge all positively impact subjective knowledge. Moreover, system knowledge boosts both action-related knowledge and effectiveness knowledge. Nevertheless, subjective knowledge alone does not significantly influence either attitude or perceived behavioral control, nor does it determine expenditure intentions. Rather, providing accessible, precise, and factual information about societal issues significantly encourages sustainable spending, especially when combined with prevailing subjective norms. This contrasts with the view that knowledge from personal experience, or subjective knowledge, primarily affects consumption patterns.

Discussion with a case example

This study extends the TPB and enhances the model's utility by proposing and testing the inclusion of knowledge components. Several studies have demonstrated the TPB to be ineffective, attributing the reason to the exclusion of unconscious influences on behavior (Sheeran et al., 2013) and the role of emotions beyond anticipated affective outcomes (Conner et al., 2013). Specifically, the static explanatory nature of the TPB fails to adequately explain the observed effects of behavior on cognitions and intentions (McEachan et al., 2011).

These reviews have clearly shown that the majority of variability in observed behavior is not accounted for by measures of the TPB. Hence, researchers and practitioners now utilize extended forms of the TPB in order to explain human behavior better (Sniehotta et al., 2014). In this context, the present study contributes to theoretical and practical advances in understanding how knowledge influences purchase intention towards global sustainability.

The findings of this study contradict those of some previous research, such as Nautiyal & Lal (2022), who found that subjective knowledge had a negligible impact on consumer attitude and intention. Conversely, this research illustrates how subjective knowledge shapes consumers' intention to purchase products from emerging markets. This is concurrent with Frick et al. (2004) who found that action-related knowledge and effectiveness knowledge positively influence sustainable consumption directly. Moreover, this paper identifies both subjective knowledge and subjective norm as primary factors in forming intentions. Previous studies (Neubig et al., 2020) have applied an adapted model of the TPB to assess how both subjective knowledge and objective knowledge are mediated by consumers' attitudes, norms, and perceived behavioral control. However, this research examines the direct effects of knowledge on sustainable consumption, distinctively positioning our model.

It is possible to assert that in domains such as environmental justice, communities have already garnered substantial objective knowledge, highlighting the diminished need for educational motives in corporate endeavors. Instead, producers need to embrace the changing purchase behaviors of socially responsible consumers. These consumers serve as advocates, actively seeking opportunities to support producers whose

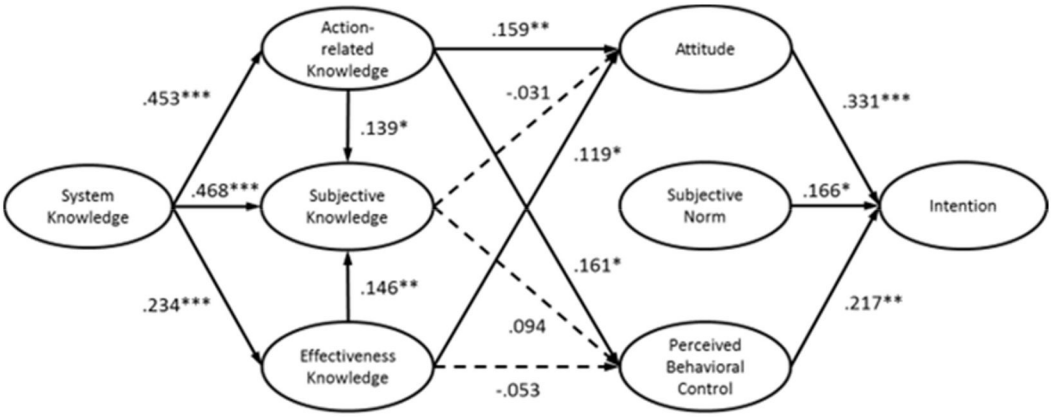

Fig. 2. Summary of model results. Solid (dotted) lines represent being significant (nonsignificant).
* p value < 0.05, ** p value < 0.01, *** p value < 0.001.

practices resonate with their implicit consumption objectives. Rather than perceiving purchases as mere transactions of goods and services for money, these committed buyers aim directly to channel their knowledge and insights on societal issues through the economy with their participation in the market. Thus, consuming or investing in a product, service, or corporation becomes a means to demonstrate knowledge-driven socially ethical intentions that promote broader community welfare. This shift transforms the notion of expenditure from a mere market transaction to an individual socioeconomic voluntary action, where even boycotting is considered a form of expenditure (Papaoikonomou et al., 2011). Therefore, this shift in consumer behavior induces producers to incorporate the growing demand for socially responsible production and corporate management. The emphasis on consumers' socially responsible values now plays a significant role in the management strategies of leading corporations, integrating societal considerations with product innovations (Zsóka et al., 2013). Notably, the social dimensions have recently received more attention compared to environmental aspects, as corporate initiatives increasingly prioritize addressing the needs of disadvantaged social strata. This viewpoint is consistent with established research on the increased recognition of social challenges and economic disparities in underdeveloped societies, both globally and locally.

A short case on socially responsible consumption

Simmons Bedding of South Korea is actively targeting the socially responsible consumer segment. It is one of the country's three major mattress manufacturers (Kim, 2023). Despite its dominant market position, the company experienced a noTable 6.4 % sales drop in 2022, primarily attributed to the pandemic. As the economy began its recovery, manufacturing costs escalated, and demand for bedding products stagnated due to ongoing economic restrictions, such as the shift of students from campus residences to online classes. This stagnation in demand is a significant factor for the regional bedding industry, which depends largely on the sales of premium mattresses at the beginning of a new semester, when purchases typically surge. This pattern aligns with the 'eight pocket' spending trend, observed when multiple relatives financially support newly admitted students in acquiring high-quality items, including bedding, for the start of the academic year (Yeon, 2023). Hindered by reduced mobility among the younger generation and a broader economic downturn that saw household savings dwindle and priority shift from luxury purchases to essential needs, the company's financial health suffered, underscoring the urgent necessity for inventive strategies to revive the declining demand.

Socially responsible production and marketing, aimed at addressing post-pandemic challenges encountered by underprivileged communities, have emerged as the solution to the company's declining revenues. Consumption preferences that favor sustainable production and endorse companies committed to ethical practices are increasingly apparent among younger Millennials and Generation Z (Lee, 2020). Subsequently, Simmons Bedding broadened its scope from producing environmentally sustainable products to encompassing social causes by introducing the new Beauty Rest 1925 model. This adjustment capitalizes on the growing *meaning-out* trend, where socially conscious consumers exhibit their personal beliefs and values via consumption choices (Shin & Bae, 2023). The mattress manufacturer has enhanced its CSR by committing to donate a portion of each product's revenue to renovate the Children's and Adolescent Center at Samsung Seoul Hospital and to assist patients in need. This strategic initiative to allocate profits towards community programs during an economic crisis exemplifies its commitment to fostering mutual growth between business and society.

Young consumers responded steadily and decisively to Simmons Bedding's genuine marketing, as evidenced by the significant sales rise in the Beauty Rest products. The new bed was enthusiastically received in the market, generating over 300 million won in proceeds donated to the hospital and accounting for >1700 units sold. This led to over 6 billion won in revenue within the first 5 months of market launch in 2023. This socially conscious transformation in the business model allowed the company to maintain the original prices for its bedding products, unlike the major regional competitors Coway and Ace Bedding, who saw a decrease in operational profits in 2022 (Kim, 2023). Consequently, this socially oriented promotion and corporate governance approach positively influenced overall sales, as demonstrated by a 20 % increase in Beauty Rest bedding in the first half of 2023 (Yeon, 2023). In sum, the Simmons company's environmentally and socially responsible governance, aligned with the like-mindedness of its core consumers, can enhance financial performance while increasing social welfare. The pursuit of sustainability causes for long-term social benefits is a progressive step for CSR and a fundamental shift toward business prosperity in the new economic paradigm (Skare et al., 2024; Mohr et al., 2001).

This research adopted a hybrid approach to bolster the empirical results with an actual business case to demonstrate how consumers' knowledge acts as an antecedent to purchase intention. Although previous studies have included knowledge components, the roles of subjective knowledge and objective knowledge have not been clearly understood. While they stated that subjective knowledge might be more influential, this study demonstrates that sustainable consumption intentions are more strongly affected by objective knowledge. The case study cited above exemplifies this finding well; the manufacturer did not rely on customers' sentiments or subjective appeals, but rather on objective knowledge about the social issue and the tangible impact of product purchases in providing medical treatment to vulnerable patient groups. Consumers have reacted to these social causes by consistently

purchasing from the manufacturer's product line, which donates a portion of the sales to a community hospital.

Conclusions

This research demonstrated how awareness of social issues shapes intentions for socially responsible purchases by examining the impact of such knowledge on attitudes, perceived behavioral control and purchasing intentions. That is, system knowledge, action-related knowledge, and effectiveness knowledge about social issues based on factual and unbiased information fosters sustainable consumption intentions. Understanding consumers' expenditure patterns for social causes can yield long-term benefits for companies in the socially conscious consumption market segment.

This study enhances understanding of how subjective knowledge and objective knowledge impact a consumer's intention to purchase products from underdeveloped countries. Former TPB studies only assessed how knowledge effects were mediated through consumers' attitudes, norms, and perceived behavioral control, but this research integrates subjective knowledge and objective knowledge to demonstrate knowledge's role in promoting socially responsible purchases.

Theoretical implications

This research enhances the studies of consumption behaviors through a hybrid research model that combines the TPB with knowledge components as in social learning theory. It advances our understanding of sustainable expenditure, illustrating that individual awareness and knowledge prompt actions toward socially responsible purchasing. The research model incorporates subjective knowledge and objective knowledge attributes into the TPB to explore how knowledge influences socially responsible purchasing behaviors. The term *expenditure* underscores the notion of an informed act because the relatively young participants in this study make mindful, self-aware decisions to allocate their financial resources, thereby demonstrating their knowledge and commitment to making a difference. Therefore, it is not the responsibility of companies to persuade people to consume sustainably; instead, they should monitor and leverage existing demand within such demographic groups (Schlaile et al., 2018).

Practical implications for shaping socially responsible expenditure

The practical contributions of this research lie in developing strategies to foster socially responsible consumption. Typical advertising messages employ emotional appeals, urging customers to purchase products that contribute to saving the earth or assisting the underprivileged. However, the findings of this study suggest that providing objective knowledge, particularly to younger generations, is crucial for increasing their awareness and inclination towards sustainability-oriented purchases.

Consumers' objective knowledge and understanding of current social issues, coupled with actionable solutions, supports vulnerable segments of society. De Pelsmacker & Janssens (2007) note that low-quality information can make consumers skeptical about social issues, reducing their motivation to spend actively on socially responsible products and services. As this research demonstrates, objective knowledge significantly influences socially responsible consumption, and knowledge based on factual information can encourage such expenditure. We contend that providing clear, unbiased system knowledge is more effective than focusing solely on action-related knowledge and effectiveness knowledge because the former inherently informs and shapes the latter two. Notably, many advocates of sustainable consumption have traditionally relied on emotional appeals to foster a subjective perspective among customers on social issues, leveraging emotions such as anger, pride, and particularly guilt (Hibbert et al., 2007; Wang & Wu, 2016). In contrast, contemporary consumers prefer objective, sentiment-free information grounded in proven phenomena and empirical evidence to facilitate purchase decisions that align with their patterns of socially responsible expenditure.

Understanding regional issues and necessary actions that help underdeveloped countries can influence decisions to partake in economic activities to support the welfare and prosperity of emerging markets. Socially responsible spending greatly promotes sustainability efforts, including environmental conservation, and stimulates purchases and investments by socially aware economic actors (Oehmke & Opp, 2023). And objective, unbiased information about major social challenges in developing countries can enhance expenditures on products and services sourced from these regions, thereby aiding community development. The sharp rise in public interest and the robust growth in socially responsible funds, together with impact investments such as ESG corporate stocks, indicate that financial returns and positive social impacts are closely linked. Credible information about social issues not only broadens system knowledge but also boosts knowledge related to actions and effectiveness, owing to improved transparency in the effects of ESG-related investments by companies (Bryant, 2021; Peterson, 2022). This finding also suggests that sustainability marketing should prioritize providing more objective, sentiment-free information to customers to grow sales from underdeveloped regions.

Limitations and future research

This study primarily concentrated on one region; therefore, extending investigations to other emerging and developed markets can show the socially responsible spending patterns more clearly. Sample diversity with respect to age is the limitation of this study. While this research focused on a young generation in a particular country, future studies could benefit from intergenerational and intercultural comparisons. Moreover, the complexity of the proposed model complicates its application to other data types; therefore, a future task will be to identify key parameters of knowledge and planned behavior to develop a more simplified model. By narrowing the research scope and incorporating relevant control variables, further impacts such as differences among various age groups may be identified.

CRediT authorship contribution statement

Joosung Lee: Writing – original draft, Validation, Investigation, Formal analysis, Conceptualization. **Loun Lee:** Visualization, Data curation.

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