

Consumer behavior in sustainable fashion: a systematic literature review and future research agenda

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Abstract

During the last decade, sustainable fashion has attracted increasing attention from policymakers, firms, and consumers. This interest is also reflected in consumer behavior research in this area. Notwithstanding this, there are few systematic literature reviews from a consumer behavior perspective. The purpose of this paper is to systematically review and critically assess the studies on consumer behavior in sustainable fashion to identify the research gap in this context and inform a future research agenda. A total of 167 journal articles were identified, and a final sample of 88 articles synthesized. A descriptive analysis was performed to examine the research methods, research trends, and theoretical underpinnings. Separately, a synthetic analysis was performed using the Stimulus-Organism-Response (S-O-R) framework. Findings reveal a significant increase in the volume of publications since 2009. Qualitative, experimental, cross-cultural, and longitudinal studies are significantly less represented in the literature. No evidence of research using big data techniques were identified. Much of the research published is not adequately grounded in theory. The findings also suggest that the consumer attitude-behavior gap requires further exploration. This review fills a need to summarize the current state of consumer behavior in sustainable fashion literature and provides valuable insights into the existing marketing corpus on the topic. Moreover, the review identifies a number of outstanding research gaps that can inform future research.

Keywords - Sustainable fashion, Consumer behavior, Systematic literature review, Fast fashion, Slow fashion, Stimulus-organism-response framework

1. Introduction

The fashion industry has an adverse impact on the environment and society across all stages of the product life cycle (Hill & Lee, 2012; McNeill & Venter, 2019). For example, clothing represents over 60% of total textile use and generates over 57 million tons of waste per annum (European Commission, 2019). In response to criticism surrounding the fashion industry, the concept of sustainability has begun to attract the attention of consumers, policymakers, and retailers in the fashion industry (McNeill & Venter, 2019). Sustainable fashion can be defined as “clothing which incorporates one or more aspects of social and environmental sustainability” (Su, Watchravesringkan, Zhou, & Gil, 2019, p. 1141). These aspects include fair trading principles, sweatshop-free principles, and using materials that bring no harm to the environment (Chang & Watchravesringkan, 2018; Goworek, Fisher, Cooper, Woodward, & Hiller, 2012).

From the consumer perspective, in response to perceived clothing over-consumption, sustainable fashion has been positioned as a solution to emerging socio-environmental issues, such as pollution, energy conservation, fair trade principles, and sweatshop-free labor (Diddi, Yan, Bloodhart, Bajtelsmit, & McShane, 2019; McNeill & Venter, 2019; Su et al., 2019). Both scholarly and grey literature point to a shift towards values-led consumerism, away from possessions towards experiences, and towards sharing, rather than owning fashion items (de Klerk, Kearns, & Redwood, 2019; European Commission, 2019). Indeed, in many European Union (EU) countries, there has been a positive shift in consumers’ awareness of climate change and environmental issues (Centre for Sustainable Fashion, 2019). This paradigm shift has encouraged EU policymakers to consider sustainable fashion as an opportunity to develop new sustainable business models for the fashion industry, especially among SMEs. In addition

to the continued emergence of sustainable or ethical fashion startups, established fashion brands, including Nike, Timberland, and Levi's, have begun to incorporate sustainable development principles into their business models and produce eco-friendly products, while retailers such as M&S and H&M have incentivized consumer recycling initiatives (de Klerk et al., 2019; Ritch, 2015; Lee, 2011).

To harness the power of sustainable fashion, it is crucial to understand consumer attitudes and behaviors. Research has begun to explore the potential of interventions from retailers and activists to influence consumer behavior. Although there have been an increasing number of empirical studies in the literature examining consumer attitudes and behavior in the context of sustainable fashion (e.g., Jacobs, Petersen, Hörisch, & Battenfeld, 2018; Koszewska, 2016), these studies are fragmented with little evidence of conclusive insights and implications. In particular, these studies present mixed results with regard to the gap between consumers' attitudes and their consumption behavior. Moreover, existing literature reviews published on sustainable fashion are typically not from a consumer behavior perspective but rather focus on understanding trends within sustainable fashion research (Yang, Song & Tong, 2017), implications on the supply chain (de Medeiros, Ribeiro, & Cortimiglia, 2014), and sustainable business models (Todeschini, Cortimiglia, Callegaro-de-Menezes & Ghezzi, 2017).

To this end, we contend that it is both timely and important to review the existing knowledge on sustainable fashion and consumer behavior so that unexplored gaps are identified to advance a future research agenda. We have, therefore, carried out a systematic literature review of relevant journal articles published from 2009 to 2019 sourced from five online academic databases to inform the following research questions (RQs):

1. What research methodologies and methods are used in consumer behavior research on sustainable fashion?
2. What theoretical lenses are used in consumer behavior research on sustainable fashion?

3. What factors did extant research explore to understand consumer behavior?
4. How has empirical consumer behavior research on sustainable fashion evolved over time?

To answer these questions, we conduct a content analysis by theory and methodology to identify key scholarly trends, identify gaps in the literature, and how the research in this area has evolved in the last decade, and provide an agenda for future research. Furthermore, and in contrast to other reviews, we categorize the factors that affect consumer behavior using the Stimulus-Organism-Response (S-O-R) framework thus enabling a methodical synthetic analysis of existing knowledge.

The remainder of the paper is organized as follows. In the next section, we introduce sustainable fashion by contrasting fast fashion with the (re)emergence of slow fashion through the lens of consumer behavior. We then discuss the research methodology employed to identify existing research. Following a presentation of descriptive statistics and analysis, we perform a synthetic analysis using the S-O-R Framework. We conclude with a discussion of the main findings including key trends and gaps in the literature to inform a future research agenda.

2. Background

Since the turn of the century, fast fashion has revolutionized the fashion industry (McNeill & Moore, 2015) as fashion retailers sought to respond to changing fashion trends and consumer demand increasingly faster (Zarley Watson & Yan, 2013). Fast fashion retailers are some of the largest retail clothing brands worldwide and include H&M, Zara, and Forever 21 (Jung & Jin, 2016). The main characteristics of fast fashion products are low price, frequent deliveries, and minimal markdowns with a short life of items in stores because newer items are frequently replace them (Mcneill & Moore, 2015; Zarley Watson & Yan, 2013). The huge demand for fast fashion items has resulted in multiple fashion seasons instead of the traditional two seasons (Vehmas, Raudaskoski, Heikkilä, Harlin, & Mensonen, 2018). With fast fashion encouraging

over-consumption and disposability (Park, Lee, & Koo, 2017), this has led to serious social and environmental problems such as shortage of natural resources, high energy consumption due to more fashion cycles during any given period and pollution (Moon, Lai, Lam, & Chang, 2015).k

In contrast, sustainable fashion, also known as ‘slow fashion’, has emerged, or in reality re-emerged, as a potential alternative to fast fashion (Henninger, Alevizou, & Oates, 2016; Sung & Woo, 2019). Notwithstanding its prevalence in the media and indeed the literature, what is exactly meant by sustainable or slow fashion remains elusive. It is not the antithesis to fast fashion, but rather a different approach where “designers, buyers, retailers, and consumers are more aware of the impacts of products on workers, communities, and ecosystems” (Fletcher, 2007, p.2). Slow fashion is similar to the concept of ‘slow food’ but is oriented towards quality rather than time i.e., extending the life of clothing through quality (Fletcher, 2007). This broad perspective on what sustainable fashion encompasses is reflected in the wide range of terms and definitions that feature in the literature (see Table 1), and are often used interchangeably and for different purposes (Lundblad & Davies, 2015). However, from a review of these definitions it is clear that sustainable fashion not only focuses on *what* is consumed but *how* fashion products are consumed.

Table 1 Definitions of sustainable fashion

Author	Term	Definition	Sustainability aspect
Reimers <i>et al.</i> , 2016	Ethical clothing	Clothing that seeks to minimise its negative impact on the environment, employees and animals via processes that include, but are not limited to, slow fashion.	Environmental
Sung & Woo, 2019	Slow fashion	Apparel that is made through environmentally, socially, and ethically responsible practices.	Social and environmental
Niinimäki, 2010	Eco-fashion	Clothing that is designed for long lifetime use; it is produced in an ethical production system, perhaps even locally; it causes little or no environmental impact and it makes use of eco-labelled or recycled materials.	Social and environmental
Fu & Kim, 2019	Eco-fashion	Fashion clothing made in an eco-friendly way using biodegradable or recycled materials such as corn fiber, and eco-fabrics that are made with eco-technologies such as natural dyes and socially responsible processes such as fair-trade sourcing.	Social and environmental
Carey & Cervellon, 2014	Ethical clothing	Clothing that takes into consideration the impact of production and trade on the environment and on the people behind the clothes we wear.	Social and environmental
Carey & Cervellon, 2014)	Eco clothing	All clothing that has been manufactured using environmentally friendly processes.	Environmental
Connell, 2011	Environmentally preferable fiber	Any fibers that the participants believed as more environmentally sustainable compared to conventional fiber.	Environmental
Jung & Jin, 2016	Slow fashion	An alternative to socially and environmentally unsustainable practices resulting from the expedited fashion cycle in the fast fashion system.	Environmental
Goworek <i>et al.</i> , 201)	Sustainable clothing	Clothing that incorporates one or more aspects of social and environmental sustainability, such as Fair Trade manufacturing or fabric containing organically-grown raw material.	Social and environmental
Kim & Jin, 2019	Environmentally sustainable apparel	Clothing that includes organic fabric, eco-friendly apparel, recycling, second-hand clothing.	environmental
(Kang <i>et al.</i> , 2013	Environmentally sustainable textiles and apparel	Apparel that is produced and consumed through processes in which resources are not depleted or permanently damaged.	Environmental
Chan & Wong, 2012	Eco-fashion	The type of clothing that is designed and manufactured to maximize benefits to people and society while minimizing adverse environmental impacts.	Social and environmental
Iran & Schrader, 2017	Eco-Fashion	Garments which are designed and produced to increase benefits for people and society while decreasing a garment's negative environmental effects (eco-friendly).	Social and environmental

Studies identify a wide range of sustainable fashion practices. For instance, upcycling is a commonly-cited sustainable fashion practice that refers to the process where textiles from waste clothing are redesigned and reproduced into new environment-friendly products (Cassidy & Han, 2017). Reflecting the changing consumer attitudes discussed earlier, other forms of sustainable fashion practices have emerged including clothing renting, swapping, and buying second-hand clothes (Armstrong, Niinimäki, Kujala, Karell, & Lang, 2015; Lang & Armstrong, 2018; McNeill & Venter, 2019). The key characteristic of sustainable fashion is providing a balanced approach to both fashion consumption and production. Studies have highlighted that sustainable fashion production also improves the quality of life of fashion workers by reducing time pressure in the production process (Jung & Jin, 2016).

Few stores fully encompass the ideals of slow fashion, but there have been some attempts from fast fashion retailers to adopt selected slow fashion strategies and environmentally friendly clothing products (Chang & Jai, 2015; Hill & Lee, 2015). For instance, Chang and Jai, (2015) examined the effect of fast fashion retailer strategies to position sustainability. The study found that perceived Corporate Social Responsibility (CSR) effort, price, and brand equity had a significant effect on consumer's sustainability purchase intention. McNeill and Venter (2019) explored the attitudes of heavy purchasers of fast fashion towards four alternative sustainable collaborative fashion forms (i.e., buying second hand, renting, sharing, and clothing swaps). The study's findings highlighted that there are four key aspects with respect to constructing a sustainable fashion identity - emotions, pleasure, and hedonism; conformance to social norms; expressing individuality and standing out; and the social implications of sustainable behavior. Each aspect was found to encourage different forms of sustainable collaborative fashion. Although more retailers (e.g., Patagonia) have attempted to promote sustainability in various

ways such as the use of organic materials and socially responsible sourcing, fast fashion is still the accepted social norm, especially among young consumers (Diddi et al., 2019).

While there is evidence of genuine attempts by the fashion industry to embrace sustainable fashion, there is also evidence of greenwashing in the industry, a combination of two simultaneous behaviors retaining the disclosure of negative information related to a firm's environmental performance while disclosing positive information regarding its environmental performance (de Freitas Netto, Sobral, Ribeiro, & da Luz Soares, 2020). Such selective disclosures can result in adverse effects on consumer confidence in environmentally friendly or “green” products (Delmas & Burbano, 2011).

3. Methodology

Using a systematic review offers a state-of the-art understanding of research topics (Paul & Criado, 2020). Systematic reviews can be conducted in several forms, namely: structured reviews (Paul & Feliciano-Cestero, 2021; Paul & Singh, 2017; Rosado-Serrano, Paul, & Dikova, 2018), framework-based reviews (Paul & Benito, 2018), hybrid-narrative reviews with a future research agenda framework (Paul, Parthasarathy, & Gupta, 2017; Paul & Singh, 2017), theory-based reviews (Paul, 2020), bibliometric reviews (Randhawa, Wilden, & Hohberger, 2016), meta-analysis reviews (Tamilmani, Rana, Prakasam, & Dwivedi, 2019), and theory development reviews (Paul, 2020; Paul & Mas, 2020).

In this review, we adopt a framework-based review approach to examine the previous literature related to consumer behavior in sustainable fashion. According to Paul & Criado, (2020), using a framework-based review allows researchers to used frameworks such as Antecedents, Decisions and Outcome (ADO) (Paul & Benito, 2018) and Theory, Construct, Characteristics and methodology (TCCM) (Paul & Rosado-Serrano, 2019), or they can develop their own

frameworks and use them. Thus, we adopted the S-O-R Framework to categorise the antecedents and consequences of consumer behavior in sustainable fashion.

The S-O-R Framework is an extension by Mehrabian & Russell (1974) of stimulus-response (SR) theory (Woodworth, 1929). The SR theory was an attempt to understand individuals' behaviors in response to external stimuli. It was critiqued for oversimplifying the causes of behaviors and neglecting the mental state of a focal individual (Zhang & Benyoucef, 2016). While classical SR theory treated human beings as passive, nearly machine-like, Mehrabian & Russell (1974) viewed human responses as organismic in nature thus introducing the organism concept situated between the stimulus and response. According to Mehrabian & Russell (1974), environmental cues act as a stimulus that can affect individuals' internal cognitive and affective states, which subsequently influence their behavioral responses. The S-O-R Framework represents a flexible lens to understand consumer behavior (Chan, Cheung, & Lee, 2017). As shown in Figure 1, there are three major elements represented in the S-O-R Framework: (1) *Stimulus* refers to factors which impact individuals' internal state and arouses consumer interest; (2) *Organism* refers to the consumer's evaluation; and (3) *Response* represents the outcome of the consumer's reaction. The organism can be a form of affective or cognitive state or process and it mediates the relationship between stimulus and consumer responses.

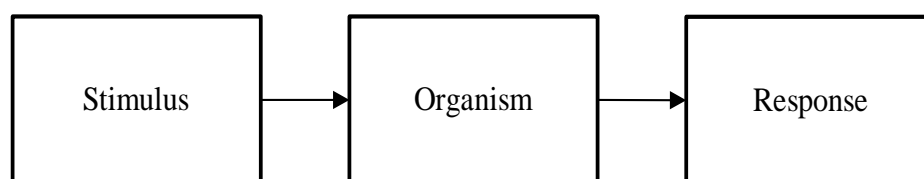


Figure 1. Stimulus-Organism-Response Framework

There are two reasons for applying S-O-R in this review. First, the S-O-R framework complements the descriptive analysis and offers a crucial theoretical lens to understand individual behavior. It has been widely used in consumer behavior research (Arora et al. 2020; Zhu et al. 2019; Chan et al., 2017; Zhang & Benyoucef, 2016). In particular, it has been used

to explore both hedonic and utilitarian aspects of consumer behavior (Zhu et al. 2019; Peng & Kim, 2014), both of which have been identified as influential in shaping consumer evaluation of sustainable fashion (Park & Lin, 2018; Chi, 2015; McNeill & Moore, 2015). Second, the S-O-R framework provides a structured manner to understand the effect of technological and environmental features as stimuli on consumer behavior (Chan et al., 2017). We posit that the S-O-R Framework can help researchers with sensemaking and understand the important stimulus and organism factors that drive consumer response in sustainable fashion context, and identify gaps in the literature.

3.1 Inclusion and Exclusion Criteria

The main purpose of developing inclusion and exclusion criteria is to ensure that we only select the studies that are relevant to our review. As this review focuses on consumer behavior in sustainable fashion, we only included empirical studies that examine consumer behavior; thus, studies that tackle firm, organization, or stakeholder perspectives were excluded. Moreover, we considered only the journal articles that were included in the above-mentioned databases. Conference papers and books were excluded. We limited our search to studies published to a ten-year period between 2009 and 2019. Furthermore, we only considered studies published in English (see Table 2).

Table 2 Inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
Empirical Paper	Conceptual, white papers, conference papers, books and book chapters
Examines consumer behavior in the context of sustainable fashion	Studies that examine firm/organization behavior
Published from 1 January 2009 to 31 December 2019	Papers published outside the selected period of time
Available in ScienceDirect, Emerald, Springer, Wiley Online Library, or Taylor & Francis	Papers published outside the selected databases
Focus on sustainable fashion products	Business models, strategy, supply chain papers
Written in the English language	Non-English language papers.

3.2 Study Selection Process

To perform the search process in an effective way, we used the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol (Moher, Liberati, Tetzlaff, & Altman, 2009). The PRISMA protocol involves four phases: identification, screening, eligibility, and inclusion. Figure 2 below depicts the detail for each phase.

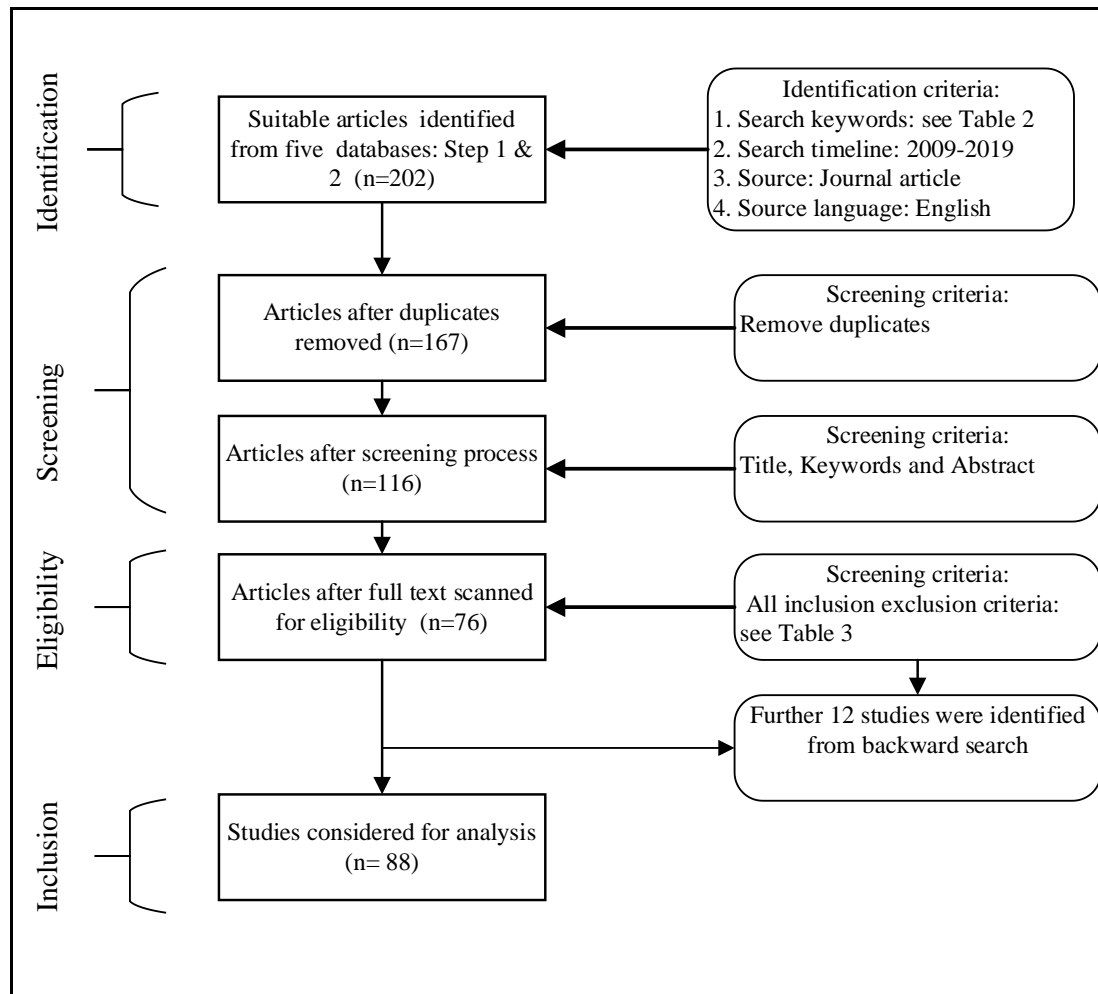


Figure 2. PRISMA Protocol

In the identification phase, we searched five online databases; ScienceDirect, Emerald, Springer, Wiley Online Library, and Taylor & Francis. Each online database was searched using specific keywords such as sustainable fashion, slow fashion, fashion sustainability, sustainable fashion products. We refined our search by combining keywords using Boolean operators (AND, OR, NOT etc.) and designed search strings such as (“sustainable fashion”

AND “consumer behavior” OR “consumer purchasing intention”). This step was necessary to ensure that all relevant studies were included. The keyword search was performed in the title, abstract and keyword sections of the articles. The list of keywords used in this phase is presented in Table 3. In each search attempt (i.e., Steps 1 and 2). The search results were screened and related studies identified based on the inclusion criteria (see Figure 2). A total of 202 hits were identified in the identification phase.

Table 3 Search Keywords

Search Phase	Keywords and Search Strings
Step One – Keyword Search	Sustainable fashion, Slow fashion, Consumer behavior, Fashion sustainability, Consumer purchasing behavior, Sustainable fashion products, Collaborative fashion consumption, Eco fashion, Organic fashion
Step Two – Search String	Sustainable fashion AND Consumer behavior OR, Consumer purchasing intention, Consumer behavior AND Fashion sustainability Sustainable fashion products AND Consumer, Consumer behavior AND Corporate social responsibility OR CSR, Eco Fashion AND Consumer behavior, Organic clothing AND consumer behavior

Using Mendeley, we were able to list all the studies in “author, title, year” format and run the check for duplicates function to remove any duplication in the initial dataset. 35 studies were found to be duplicates and thus removed. The remaining studies (n=167) were scanned by reading the title, keywords, and abstracts. A further 51 studies were excluded during this phase. The remaining 116 studies were carefully reviewed for the following eligibility criteria: the article (a) must be an empirical study, (b) examine consumer behavior in the context of sustainable fashion, and (c) focus on sustainable fashion products. A further 40 studies were removed after this review resulting in 76 studies (see Table 4).

Table 4 Summary of Academic Database Search Results

Academic Database	Results after title screening	Results after applying inclusion/exclusion criteria
ScienceDirect	66	16
Emerald	82	34
Springer	24	7
Wiley Online Library	11	9
Taylor & Francis	19	10
Total	202	76

To ensure that all relevant studies related to this review were included in the final sample, we applied a backward search as recommended by Kitchenham (2004). Backward search is an appropriate and easy-to-implement strategy to find relevant articles for a specific topic (Jalali & Wohlin, 2012; Xiao & Watson, 2017). We scanned the reference list of each study included in the final review and identified any additional studies that might be suitable for the review. An additional twelve studies were identified; a full text screening for eligibility criteria was applied. Following this process, all twelve studies were included resulting in a final sample of 88 research articles for the final review. Table 5 below shows the journal list where these 88 articles were published.

Table 5 Final Selected Articles

No	Journal	Category	Sub-Discipline	Authors	No. of studies
1	Journal of Fashion Marketing and Management	Business	Management, Marketing	Carey & Cervellon (2014; Chan & Wong (2012); De Lenne & Vandenbosch (2017); Evans & Peirson-Smith (2018); Henninger et al. (2016); Hill & Lee (2012, 2015); Hustvedt & Dickson (2009); Jin Gam (2011); Khare & Varshneya (2017); Kim & Jin (2019); Manchiraju & Sadachar (2014); Phau, Teah, & Chuah (2015); Shen, Wang, Lo, & Shum (2012); Vehmas, Raudaskoski, Heikkilä, Harlin, & Mensonen (2018); Yu, Cao, & Tan (2019); Zarley Watson & Yan (2013); Lang & Armstrong (2018); Lang, Seo, & Liu (2019) Perry & Chung (2016) (Reimers, Magnuson, & Chao, 2016) (Ellis, McCracken, & Skuza, 2012)	22
2	International Journal of Consumer Studies	Business	Consumer Research	Gam, Cao, Farr, & Kang (2010); Harris, Roby, & Dibb (2016); Jung & Jin (2016); Kang, Liu, & Kim (2013); McNeill & Moore (2015); McNeill & Venter (2019); Bly, Gwozdz, & Reisch, 2015; Connell (2010); D'Souza, Gilmore, Hartmann, Apaolaza Ibáñez, & Sullivan-Mort, (2015); Khare & Sadachar (2017); Oh & Abraham (2016); Matthews & Rothenberg (2017); Koszewska (2013); Lin (2010)	14
3	Journal of Cleaner Production	Environmental science	Green and Sustainable Science	Chekima, Syed Khalid Wafa, Igau, Chekima, & Sondoh (2016); Garcia, Cordeiro, Nääs, & Costa Neto (2019; Grappi, Romani, & Barbarossa (2017); Jacobs et al. (2018); Paço, Shiel, & Alves (2019); Iran, Geiger, & Schrader (2019); Becker-Leifhold (2018)	7
4	International Journal of Retail & Distribution Management	Business	Management	Chang & Watchravesringkan (2018); Ritch (2015); Rothenberg & Matthews (2017); Su et al. (2019) De Klerk et al. (2019)	5
5	Journal of Global Fashion Marketing	Business	Marketing	Kong, Ko, Chae, & Mattila (2016); Lee (2011); Min Kong & Ko (2017); Park, Lee,	5

				& Koo (2017); Maloney, Lee, Jackson, & Miller-Spillman (2014)	
6	Journal of Retailing and Consumer Services	Business	Marketing, Consumer Research	Park & Kim (2016; Pookulangara & Shephard (2013); Sung & Woo (2019); Park & Joyner Armstrong, (2019); Wagner et al. (2019)	5
7	Social Responsibility Journal	Business	Sustainability, governance	Chang & Jai (2015); Rolling & Sadachar (2018); Connell (2011)	3
8	Journal of Business Research	Business		Achabou & Dekhili (2013); Han, Seo, & Ko (2017); Park & Lin (2018)	3
9	Fashion and Textiles	Material science	Textile	Hong & Kang (2019); Lang et al. (2016)	2
10	Sustainable Development	Environmental science	Green and Sustainable Science	Armstrong, Niinimäki, Lang, & Kujala, (2016); Niinimäki, (2010)	2
11	Sustainable Production and Consumption	Environmental science	Green and Sustainable Science	Diddi et al. (2019); Lang & Joyner Armstrong (2018)	2
12	Journal of the Textile Institute	Material science	Textile	Chi (2015); Moon, Lai, Lam, & Chang (2015)	2
13	Journal of Consumer Behaviour	Business	Consumer Research	Lundblad & Davies (2016); McKeown & Shearer (2019)	2
14	Journal of Consumer Marketing	Business	Consumer Behavior	Ha-Brookshire & Norum (2011); Tong & Su (2018)	2
15	Journal of Consumer Policy	Business	Marketing, Consumer Behavior	Joyner Armstrong, Connell, Lang, Ruppert-Stroescu, & LeHew (2016)	1
16	Journal of Product and Brand Management	Business	Marketing	Childs, Woo, & Kim (2019)	1
17	Marketing Letters	Business	Marketing	Russell & Russell (2010)	1
18	Review of Managerial Science	Management	Business Administration	Buerke, Straatmann, Lin-Hi, & Müller (2017)	1
19	Fashion Practice	Material science	Visual Arts and Performing Arts	Janigo & Wu (2015)	1
20	International Journal of Fashion Design, Technology and Education	Engineering/ social science	Industrial and Manufacturing Engineering and Education	Niinimäki & Armstrong (2013)	1
21	Asia Pacific Journal of Marketing and Logistics	Business	Marketing	Zhao, Lee, & Copeland (2019)	1
22	Research Journal of Textile and Apparel	Business/ Management, Engineering	Management of Technology and innovation, Industrial Manufacturing Engineering	Eifler & Diekamp (2013)	1
23	Family and Consumer Sciences Research Journal	Social Sciences	Cultural Studies and Sociology and Political Science	Fu & Kim (2019)	1
24	Journal of Business Ethics	Business/ Management	Business and International Management	Jung, Kim, & Oh (2016)	1
25	Young Consumers	Social Sciences	Life Span and Life-course Studies	Nguyen, Nguyen, & Nguyen (2019)	1
26	Journal of Marketing Communications	Business/ Management	Business and International	Yan, Hyllegard, & Blaesi (2012)	1

			Management, Marketing		
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3.3 Data Coding

After finalizing the final dataset, we read the full text of each article, and extracted and organized the information relevant to our review (Danese, Manfè, & Romano, 2018; Vrontis, Makrides, Christofi, & Thrassou, 2021). For this purpose, we developed a data extraction form to help record and summarize all the important information needed to address the review research questions (Kitchenham & Charters, 2007), reduce human error (Vrontis et al., 2021), and provide a transparent procedure (Okoli, 2015). The data extraction form is presented in Table 6. The process of data coding involved two steps. First, the form was piloted on a sample of the final articles. Two co-authors extracted the information from the sample articles for cross-checking to avoid any technical issues such as completeness and usability of the form (Kitchenham & Charters, 2007). In the second step, each article was assigned a unique number and one co-author carefully read the full text of that article and coded the data according to article title, year of publication, the theory used, independent variables, external variables, research approach, research method, sample, geographic market, and research theme. The second co-author double-checked the extraction form and selected a random sample for cross-checking. Any differences were discussed and resolved.

Table 6. Data extraction form

Extracted data	Description	Data used for
Study ID	Each study assigned a unique number	Documentation process
Article title	The full name of the article that appear in the search stage	Documentation process
Year	The publication year of the article (2009-2019)	Used to highlight the publication timeline and output (section 4.1.1) and sustainability themes (section 4.1.4)
Theory	The theory adopted to achieve the article's objectives	Used to summarize and categorize the theories used in reviewed studies (section 4.1.5)
Independent Variables	Factors that studied in the article to investigate a specific outcome	Used to summarize the antecedents to help categorize them using the S-O-R framework (section 4.2)

Dependent Variables	Target outcome/phenomenon the article aims to study e.g., consumer loyalty	Used to summarize the consequences/outcome variables to help categorize them using the S-O-R framework (section 4.2)
Research approach	Quantitative, qualitative or mixed approach	Used to summarize the research approach used in the reviewed studies (section 4.1.3)
Research method	Survey, interviews, focus group, experimental design etc.	Used to summarize the research methods used in the reviewed studies (section 4.1.3)
Sample	The representatives of population the study aimed to study e.g., students, female consumers, male consumers etc.	Used to understand the nature/types of consumers in the reviewed studies (section 4.1.3)
Geographic market	The context of the study e.g., America, Europe etc.	Used to understand and summarize the context where each study was conducted (section 4.1.2)
Remarks	Notes relating to the article's findings, gaps and other additional information.	Used to summarize the gaps and limitations of the reviewed studied and guide the future research agenda (section 5.4)
Research theme	The main topic that the article discusses from the perspective of a given sustainability pillar/perspective	Used to understand the topic/theme discussed in each study and its relationship to the sustainability pillars (section 4.1.4)

4. Results

In this section, we provide two sets of analysis – a descriptive analysis and a synthetic analysis using the S-O-R Framework. We believe that these analyses complement each other and provide an insight into the trajectory of the research field on consumer behavior in sustainable fashion along with potential areas requiring further exploration.

4.1 Descriptive Analysis

We offer a descriptive analysis of literature on sustainable fashion consumer behavior between 2009 and 2019 from five perspectives: publication outlets, geographic region, research approaches and methods, sustainability themes, and theoretical underpinnings.

4.1.1 Publication Outlets

The number of empirical studies examining consumer behavior in the sustainable fashion context has increased each year since 2009. As shown in Figure 3, after a period of small but steady growth, publications dropped in 2014 to three studies before gradually increasing to 19

published studies in 2019. More than two-thirds of the studies ($n=62$) were published between 2015 and 2019. This suggests that more studies are likely to appear in the coming years. Furthermore, the dataset reflects a broad range of publication outlets in the focal period. As per Table 5, studies on consumer behavior in sustainable fashion were published in 26 journals in four main categories including business, material science, environmental science, and management. Unsurprisingly, compared to other disciplines, the marketing discipline plays a more active role in understanding consumer behavior pertaining to sustainable fashion. This can be seen in Table 5 where articles mainly appear in journals such as the *Journal of Fashion Marketing and Management* ($n=22$). In total, 26 articles were published in consumer research journals including the *International Journal of Consumer Studies*, the *Journal of Consumer Behavior*, and the *Journal of Retailing and Consumer Services*. In the sustainable science research field, 14 articles were published in journals such as the *Journal of Cleaner Production* and *Social Responsibility Journal*. Few empirical studies were published in the broader management science and policy fields.

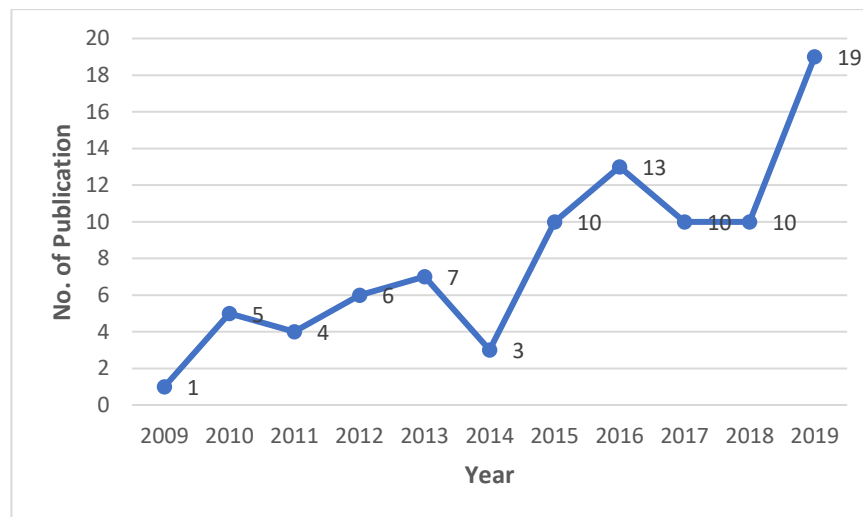


Figure 3 Timeline of publications in the dataset

The top ten most cited articles among the reviewed studies were identified. As shown in Table 7, these mainly focus on two main areas (1) consumer identity, perceptions, and attitudes

towards sustainable fashion, and (2) variables affecting consumer purchase decision making for sustainable products such as organic cotton and eco-friendly products. Most of these articles focus on environmental and economic aspects rather than social aspects. For example, Jin Gam (2011) examined the effect of fashion and shopping orientation, environmental concerns, and consumer eco-friendly behavior on purchasing environmentally friendly products. Kang et al., (2013) examined young consumers' behavior and perceptions of environmentally sustainable textiles in three different countries - the US, South Korea, and China. Regarding research methods, six of the most cited articles employed survey methods, while two used interviews with consumers and students, and two used experimental designs. Unsurprisingly, those articles with high citation counts are typically older papers. Notwithstanding this, articles that are more recent attracted significant citations suggesting increased interest in the field and potentially a limited pool of high-quality articles from which to draw.

Table 7. List of the most cited articles in the dataset as at 11/10/2021

Title	Journal title	Authors	Year	No. of citations
Eco-Clothing, Consumer Identity and Ideology	Sustainable Development	Niinimäki	2010	526
Sustainable fashion consumption and the fast fashion conundrum: Fashionable consumers and attitudes to sustainability in clothing choice	International Journal of Consumer Studies	Mcneill & Moore	2015	384
Internal and external barriers to eco-conscious apparel acquisition	International Journal of Consumer Studies	Kim Y. Hiller Connell	2010	370
Slow fashion movement: Understanding consumer perceptions—An exploratory study	Journal of Retailing and Consumer Services	Pookulangara & Shephard	2013	369
Environmentally sustainable textile and apparel consumption: the role of consumer knowledge, perceived consumer effectiveness and perceived personal relevance	International Journal of Consumer Studies	Kang et al.	2013	336
Luxury and sustainable development: Is there a match?	Journal of Business Research	Achabou & Dekhili	2013	313
Consumer likelihood of purchasing organic cotton apparel	Journal of Fashion Marketing and Management	Hustvedt & Dickson	2009	298
Are fashion-conscious consumers more likely to adopt eco-friendly clothing?	Journal of Fashion Marketing and Management	Jin Gam	2011	290
The impact of ethical fashion on consumer purchase behavior	Journal of Fashion Marketing and Management	Shen et al.	2012	280
Young generation Y consumers' perceptions of sustainability in the apparel industry	Journal of Fashion Marketing and Management	Hill & Lee	2012	215

4.1.2 Geographic contexts

Figure 4 suggests that most of the studies were conducted in North America (49%), followed by Asia (17%) and Europe (13%). The rest of the studies were conducted in Australasia (11%), cross-culture context (9%), and Africa (1%). The USA is the most researched geographic context with 43 studies. The UK ($n=6$) is the main focus of European studies followed by Germany ($n=3$), Finland ($n=2$), Italy ($n=1$), and the Netherlands ($n=1$). Most Asian studies focused on China ($n=4$), Hong Kong ($n=3$), South Korea ($n=5$), and India ($n=1$). The results show that the majority of the published studies ($n=80$) were based on a single country with only eight conducted in multiple countries. This indicates a substantial research gap in exploring cross-cultural factors.

As sustainable fashion is a global phenomenon, it is important to consider how cultural differences and background can play an active role in understanding consumer behavior. Cultural issues may vary from one country to another and consequently affect consumer's environmental concerns (Min Kong & Ko, 2017). This, in turn, may influence their decision to purchase sustainable fashion. For instance, Carey & Cervellon (2014) conducted an exploratory study to compare the attitude of young consumers towards ethical fashion in France, Canada, and the UK. The results highlighted notable differences in consumer perceptions of ethical fashion. Canadian participants perceived ethical fashion as both positive and fashionable whereas French participants had concerns relating to lack of appeal and "dullness" clothing. Similarly, while both UK and French participants expect to pay more for ethical fashion, they perceived the reasons for this increased price differently. For UK participants, the higher prices reflected higher quality and cost of materials whereas French participants perceived it as reflecting a form of compensation for other unethical practices. In Asia, Min Kong & Ko (2017) found significant differences between consumers in China, South Korea, and Japan in relation to perceived environmental concern, benefits and risks, and sustainable product knowledge.

Therefore, these results show a need for more cross-country studies on sustainable fashion to understand how cultural differences among consumers impact their values, beliefs, and attitudes to sustainable fashion (Su et al., 2019).

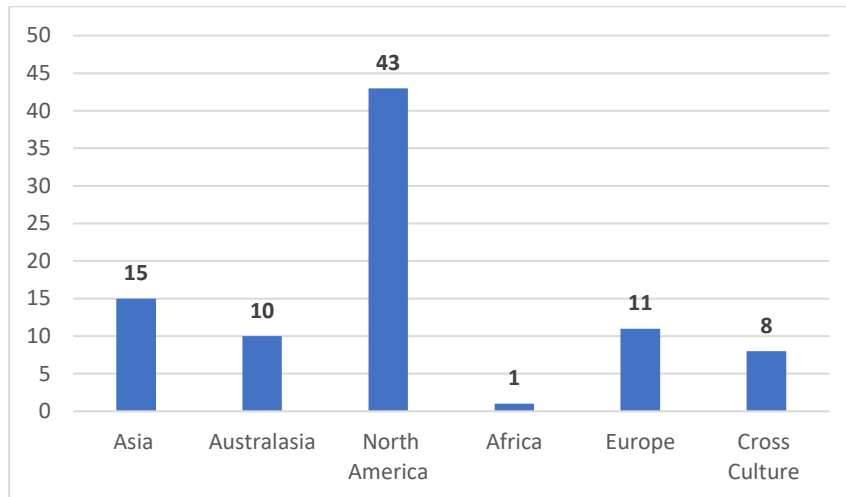


Figure 4. Number of studies by region in the dataset

4.1.3 Research approaches and methods

Across the three broad research methodologies, studies within the review predominately pursued a quantitative research approach (71%), followed by qualitative approaches (19%) and a small number of mixed-method studies (10%). In terms of research methods employed, over 70% ($n=54$) of the studies applied a survey method. In contrast, few studies ($n=7$) use experimental design. For instance, Rolling & Sadachar (2018) use a between-subjects experimental design to assign two random groups to an online experiment related to products that contain luxury-only or sustainable-luxury brand descriptions. Similarly, Chang and Jai (2015) used the same method to examine the effect of corporate CSR efforts, price value, and brand equity on consumer sustainable purchases. On the other hand, several studies adopted qualitative methods such as interviews ($n=19$) or focus groups ($n=8$) to understand consumer behavior of the sustainable fashion phenomenon. For example, Lundblad and Davies (2016) used semi-structured interviews to understand the values and motivations underpinning

consumers' actual sustainable fashion consumption. By using a means-end theory approach, they were able to link the purchased products to purchasing criteria and the personal values of consumers. Carey and Cervellon (2014) used both interviews and focus groups to explore the differences between young fashion consumers' attitudes in Canada, France, and UK. The findings from the study indicated notable differences in consumers' perception of ethical fashion between the three countries in terms of representation and appeal of this fashion segment, as well as the perceived availability. Lastly, four studies were identified using mixed-methods (e.g., Evans & Peirson-Smith, 2018; Joyner Armstrong et al., 2016; Moon et al., 2015).

The distribution of the research methods used in the reviewed studies is presented in Figure 5. In addition, for the research sample used, more than half of the studies ($n=46$) explicitly stated that consumer sample was used irrespective of participants' gender. In contrast, 16 studies studied female consumers only while only one studied male consumers only. As students are both significant consumers of both fast fashion and online purchases and are more accessible to researchers, it is unsurprising that 19 studies use students as their subject sample.

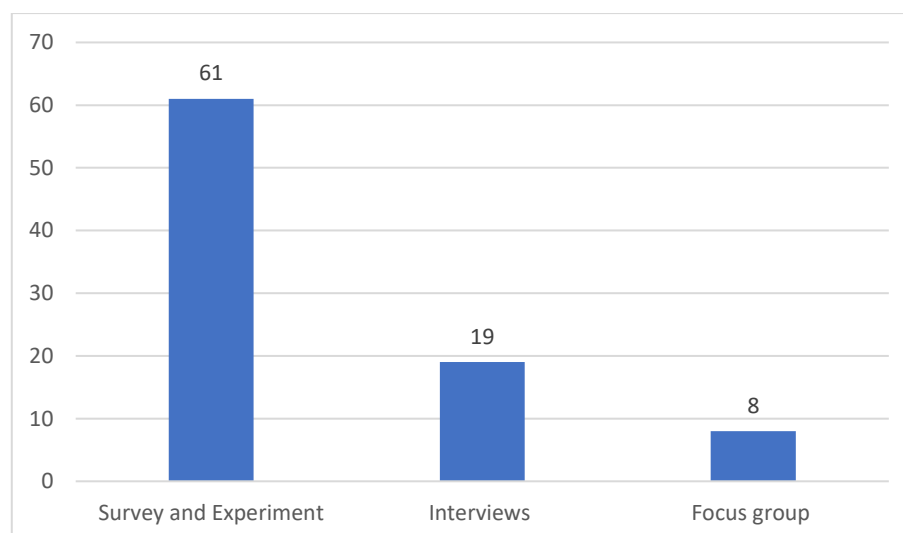


Figure 5. Research methods featured in the dataset

4.1.4 Sustainability Themes

Based on our analysis, we identified the topics discussed chronologically across the period studied and classified the articles published in each period of time based on three sustainability pillars - economic, social, environment (Hansmann, Mieg, & Frischknecht, 2012). The environmental pillar includes topics such as climate protection, protection of resources, and bio-diversity (Buerke et al., 2017). The social pillar combines the creation of a feasible and better livable space including better education and training, equal opportunities for men and women, fair trade, and labor practices (Clune & Zehnder, 2018; Shen et al., 2012). We noticed that most of the reviewed studies fall under either environment or economic sustainable pillars.

The period from 2009 to 2011 focused on the environmental pillar with studies investigating the growth in consumer awareness of environmental concerns and increasing interest in green products (Gam et al., 2010; Lee, 2011). In this period, most of the studies focused on defining the concept of eco-friendliness and the willingness of consumers to buy environmentally friendly products; the organic cotton market and its influence on sustainable fashion was a particular focus of this time (see, for example, Gam et al., 2010; Ha-Brookshire & Norum, 2011; Hustvedt & Dickson, 2009; Connell, 2010; Lin, 2010). The factors explored included related sub-themes such as consumer's environmental concerns (Gam et al., 2010; Jin Gam, 2011; Lee, 2011), environmental attitudes (Ha-Brookshire & Norum, 2011; Hustvedt & Dickson, 2009), environmental consciousness (Russell & Russell, 2010; Connell, 2010), and environmental impact (Niinimäki, 2010).

Sixteen studies were published from 2012 to 2014. These largely continued in the vein of the first phase with six studies focusing on environmental aspects. During this phase, a number of studies (n=6) on social pillar sub-themes emerged such as ethical fashion consumption (Carey & Cervellon, 2014; Manchiraju & Sadachar, 2014; Shen et al., 2012; Ellis, McCracken, & Skuza, 2012) and luxury products and responsible behavior (Achabou & Dekhili, 2013). At

this time, there is also an emergent emphasis on explaining the characteristics of slow fashion and its consumers and exploring the differences between fast fashion and slow fashion (Pookulangara & Shephard, 2013; Zarley, Watson & Yan, 2013; Koszewska, 2013; Wang, 2014). For example, Zarley, Watson & Yan (2013) conducted a qualitative study on the main differences between slow fashion and fast fashion consumers in three decision process stages purchasing/consumption, post-consumption evaluation, and divestment.

In the period from 2015 to 2017, concerns about the adverse impact of fast fashion emerge as a theme resulting in a re-concentration of studies under the environmental pillar ($n=24$), while only one study in the dataset was classified under the social pillar. Significant sub-themes related to whether fast fashion is sustainable (H. Chang & Jai, 2015; Henninger et al., 2016; H. Park & Kim, 2016), and the potential of fast fashion retailers to offer sustainable products (Chekima et al., 2016; Hill & Lee, 2015; Mcneill & Moore, 2015; Rothenberg & Matthews, 2017). Studies also highlighted the main challenges and barriers facing slow fashion as a growing fashion concept (Harris et al., 2016; Moon et al., 2015; H. Park et al., 2017), and examine the consumption behavior of a specific consumers segment (Bly, Gwozdz, & Reisch, 2015; D'Souza, Gilmore, Hartmann, Apaolaza Ibáñez, & Sullivan-Mort, 2015; Khare & Sadachar, 2017)

The increased interest in sustainable fashion continued in the last period of our review, 2018 to 2019, with 29 published studies. Again, the majority of these studies can be categorized under the environmental pillar with only five studies related to the social pillar. While those papers addressing the environmental pillar themes addressed similar topics to previous phases, a major focus of those studies categorized under the social pillar focus on the gap between consumers' attitudes towards sustainable fashion and their actual buying behavior (Diddi et al., 2019; Jacobs et al., 2018; Park & Lin, 2018). The reviewed studies suggest that although consumers are aware of the slow fashion concept and the importance of sustainable clothing,

they do not translate this awareness into actual purchase behavior (Park & Lin, 2018). Our analysis suggests that the reviewed studies applied theories related to beliefs, values, and knowledge to explore the existence of a consumer attitude-behavior gap (Diddi et al., 2019; Jacobs et al., 2018). However, it also suggests that value- and attitude-based frameworks do not fully explain what makes consumers hesitate in transforming their pro-sustainability attitudes towards sustainable fashion products into actual purchase behavior (Joyner Armstrong, Connell, Lang, Ruppert-Stroescu, & LeHew, 2016; Park & Lin, 2018). For example, Han et al. (2017) found that consumers' staged experiences are an important factor in bridging the gap between consumer's attitude and their actual purchasing behavior. The study findings suggested that staged experiences enable consumers to gain practical knowledge about sustainable fashion and thus they become more open to buying such products. Moreover, Niinimäki (2010) highlighted that consumers' purchasing decisions are somewhat irrational and not always connected to their values.

Consumer knowledge plays a significant role in explaining the gap between consumer attitudes and intentions, and their actual purchasing behavior (Chang & Watchravesringkan, 2018). Studies suggest that consumer understanding of sustainable fashion is often limited both in terms of (i) available sustainable fashion products, and (ii) the impact of sustainable fashion on the environment and society. For example, they may believe that sustainable fashion products are made from expensive and organic fibers (Chang & Watchravesringkan, 2018). Thus, as consumers' knowledge about sustainable fashion increases, this may bridge the gap between their attitude, intentions, and actual behavior when it comes to purchasing. Figure 6 summarizes how the topic of sustainable fashion has evolved throughout the timeline of the review.

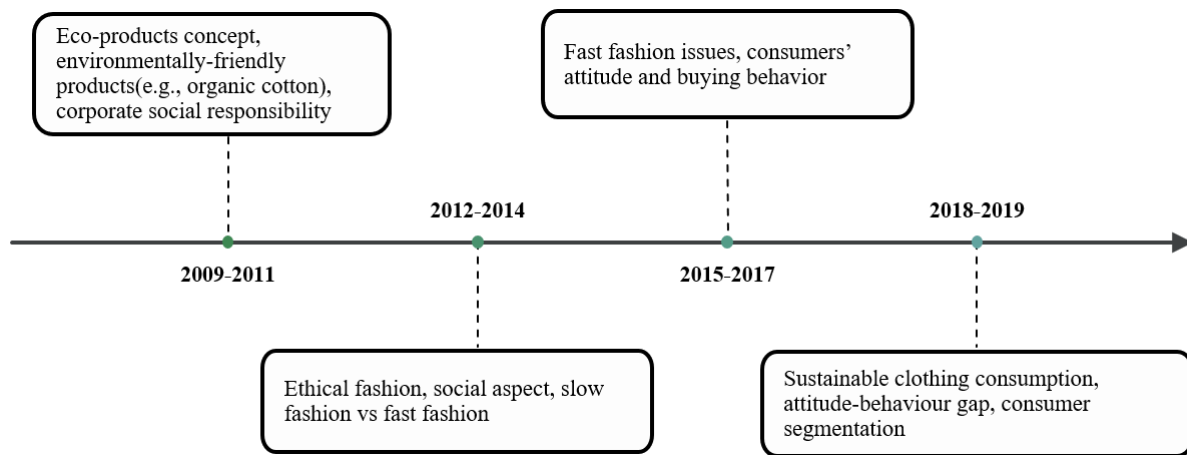


Figure 6. The evolution of sustainable fashion consumer behavior research from 2009 to 2019 based on the dataset

4.1.5 Theoretical Underpinnings

Extant empirical studies on consumer behavior in sustainable fashion adopt a number of theoretical lenses ($n=27$), however, it should be noted that a significant number do not explicitly underpin their research with theory ($n=61$). Of those studies that do, the Theory of Planned Behavior (TPB) is the most adopted theory ($n=12$). Of those studies that do use explicit theories, three categories can be identified – (i) behavioral and attitude theories, (ii) value and perception focused theories, and (iii) development and psychological theories.

Behavioral and attitude theories: Fifteen studies apply behavioral and attitude theories to understand the determinants of consumer behavior in sustainable fashion. Theories such as TPB, Theory of Reasoned Action (TRA), behavioral reasoning theory, and fashion adoption theory feature in the studies. For example, McNeill & Venter (2019) applied TPB and used in-depth interviews to examine consumer behavioral norms and to understand how consumers construct a fashion identity in four alternatives forms of fashion consumption - borrowing, renting, swapping, and buying second hand. De Lenne & Vandebosch (2017) found that using TPB constructs such as attitude and subjective norms along with other factors, e.g., descriptive norms and self-efficacy, can help understand the relationship between different types of media

and consumer's intention to buy sustainable fashion products. In addition, Zhao et al. (2019) used TRA and the prototype willingness model to investigate how consumers in China were taught their environmentally sustainable apparel consumption behavior through social media and also how peer influence affected their purchase intentions. Furthermore, Diddi et al. (2019), using behavioral reasoning theory highlighted that perceived value, commitment for sustainability, uniqueness, and lifestyle changes are among the reasons driving young consumers to engage in sustainable clothing consumption behavior, whereas lack of variety, budget constraints, and lack of knowledge hindered their engagement. As sustainable fashion is considered a new trend compared to fast fashion, Gam (2011) applied fashion adoption theory to determine whether fashion and shopping orientation influence consumers' purchasing behavior of environmentally friendly clothing.

Value-based theories: Four studies investigated consumers' values and perceptions towards sustainable fashion leveraging theories such as the Fritzsche model, impression formation theory, and attribution theory. The Fritzsche model (Fritzsche & Oz, 2007) posits that personal values are a major predictor of a consumer's personal traits relating to the ethical aspect of their decision-making. Manchiraju & Sadachar (2014) employed the Fritzsche model to explore how consumer personal values can predict their intention to engage in ethical fashion consumption. Impression formation theory describes how individuals' characteristics can emerge and create a unified perception and postulates that this perception happens during the summation of various parts (Asch, 1946). Rolling & Sadachar (2018) used impression formation theory to examine the influence of luxury brand descriptions on millennials' impressions of sustainability. In this case, they posited that if a luxury brand did not describe itself as having sustainability characteristics, then the overall impression should be that of a luxury-only brand. In contrast, if a luxury brand describes itself as having both sustainability and luxury characteristics, then the overall impression of the brand should be the sum of these two parts

i.e., a sustainable-luxury brand. Notably, Rolling & Sadachar (2018) find that the impression of luxury is not adversely impacted by being combined with sustainability. Concerning consumer perceptions, Childs et al. (2019) employed attribution theory to investigate the effect of CSR campaigns on consumers' perceptions of brand authenticity and consumer attitudes towards the brand. In the same manner, Chang & Jai (2015) applied the S-O-R model to examine the strategies used by fast fashion retailers to position sustainability and how such strategies influenced perceived CSR effort, price value, and brand equity.

Development and psychological theories: Four studies attempt to examine how consumer psychological state and developmental stage can influence their attitude and behavior towards sustainable fashion. For example, Han et al. (2017) employed Heider's balance theory to understand how a state of psychological imbalance can lead to an attitude-behavior gap in consumers' sustainable fashion consumption. According to Heider's (1982) balance theory, individuals seek to maintain internal harmony among their values, behaviors, and attitudes. Therefore, when these elements are imbalanced, consumers are more likely to change their attitude and behavior to restore this balance. In the context of sustainable fashion, Han et al. (2017) suggested that staged sustainable fashion experiences might help consumers overcome their psychological imbalance. McNeill & Moore (2015) used developmental theory to study the attitude of consumers towards sustainable fashion products. The results of the study showed that fashion consumers can be categorized into three groups – (a) self-consumers concerned about the hedonic needs, (b) social-consumers concerned about their social image, and (c) sacrifice-consumers who are trying to reduce their impact on the world. In the same manner, Kim & Jin (2019) use socio-emotional selectivity theory, a lifespan development theory, applied to older female consumers to understand the importance of the time perspective on their consumption of environmentally sustainable clothing. Table 8 summarize the theories used in the reviewed studies by category.

Table 8. Summary of theories that feature in the dataset

Group	Theory	Studies	No. of studies
Behavioral and attitude theories			
	Theory of Planned Behavior	Chang & Watchravesringkan (2018); De Lenne & Vandenbosch (2017); Chekima et al. (2016); McNeill & Venter (2019); Kang et al. (2013); Phau et al. (2015); Kong et al. (2016)	12
	Theory of reasoned action	Zhao et al. (2019); Sung & Woo, (2019)	2
	Fishbein's attitude theory	Su et al. (2019)	1
	Behavioral Reasoning Theory	Diddi et al. (2019)	1
	Fashion adoption theory	Jin Gam (2011)	1
Value and perception theories	Impression formation theory	Rolling & Sadachar (2018)	1
	Fritzsche model	Manchiraju & Sadachar (2014)	1
	Attribution theory	Childs et al. (2019)	1
	Stimulus-organism-response model	Chang & Jai, (2015)	1
	Conventional economic theory	Chan & Wong (2012)	1
	Brand-extension theory	Hill & Lee, (2015)	1
Development and psychological theories	Heider's balance theory	Han et al. (2017)	1
	Developmental theory	McNeill & Moore (2015)	1
	Socioemotional selectivity theory	Kim & Jin (2019)	1
	cognitive-experiential self-theory	Fu & Kim (2019)	1

4.2 Synthetic Analysis Using the S-O-R Framework

Through the review, we also explored the factors employed in the reviewed studies. We use the Stimulus–Organism–Response (S-O-R) Framework to categorize these factors to aid sense-making and provide a comprehensive picture of the antecedents and consequences of consumer behavior in sustainable fashion as per Figure 7. S-O-R also allows the incorporation of different theories that broadly align with the three categories of stimulus-organism-response.

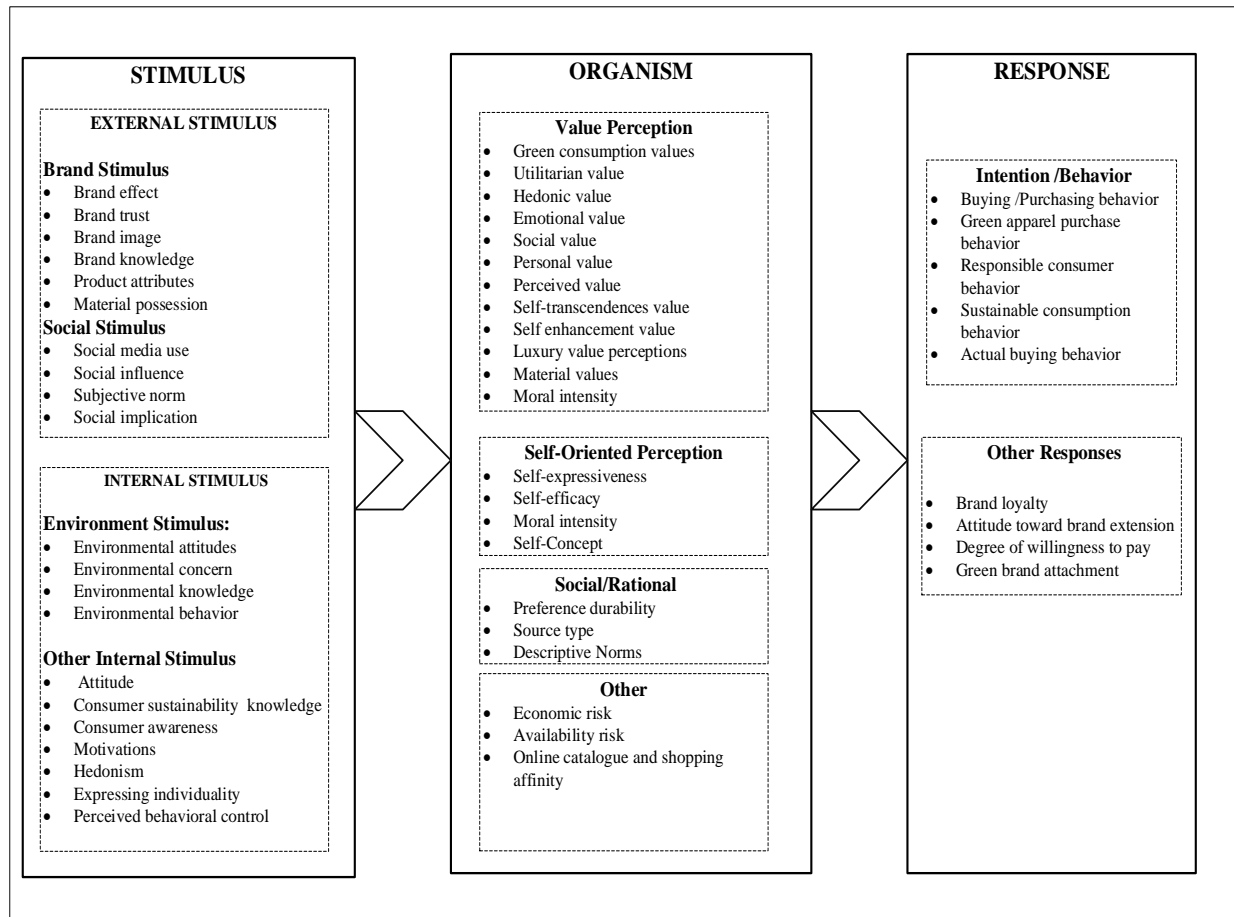


Figure 7. The Stimulus-Organism-Response Framework

4.2.1 Sustainable Fashion Stimulus

In the S-O-R Framework, stimulus refers to the triggers that encourage or prompt consumers. We identified two types of stimuli: external and internal. In this review, the external stimuli were brand stimulus, social stimulus, and environmental stimulus. Brand stimuli are cues related to the brand characteristics. As shown in Figure 7, we identify four factors related to brand stimuli in the reviewed studies - brand effect, brand trust, brand image, and product attributes, brand knowledge and material possession. For example, Hill & Lee (2015) examined consumer perceptions of sustainable line extension initiatives introduced by the fast fashion retailer, H&M. The results suggest that brand effect positively influenced consumer brand-cause fit and brand extension i.e., new products that are not currently served by the brand (Keller & Aaker, 1992). Park & Kim (2016) highlighted that brand effect is an important

predictor of sustainable fashion brand loyalty. The study found a significant positive impact of both brand effect and brand trust on brand loyalty. Further, brand image influences consumers, and consequently may foster more favorable perceptions of sustainable fashion products. Childs et al. (2019) measure consumer perceptions of brand image for H&M and Patagonia and classify both companies as disposable or sustainable. The results showed that when consumers are exposed to CSR campaign messages, they have a more favorable perception of brand attitude and authenticity for sustainable brands than they do for disposable ones. Amongst the stimulus factors, research has shown that product attributes are important factors affecting consumers' behavior e.g., product price, production, quality (Rothenberg & Matthews, 2017).

The second external stimulus is the social stimulus. We identify four social stimulus factors in the reviewed studies including social media use, social influence or subjective norms, and social implication. Among these factors, we found that subjective norms were widely examined (e.g., Chang & Watchravesringkan, 2018; Jain, Rakesh, Kamalun Nabi, & Chaturvedi, 2018; Kang, Liu, & Kim, 2013; Sung & Woo, 2019). For example, two studies examined the effect of social influence such as peer influence on consumer intentions and on purchasing behavior of sustainable fashion products (Khare & Varshneya, 2017; Zhao et al., 2019).

Environmental stimuli are the cues related to consumer concerns about the effect of sustainable fashion on the environment. Previous studies reported that certain environmental factors are greater predictors of consumer's behavior such as consumers' environmental attitudes (Chang & Watchravesringkan, 2018; Hustvedt & Dickson, 2009) and their environmental concern (Lee, 2011; Park & Lin, 2018).

Furthermore, we identify other internal stimuli related to consumer gratification including hedonism (McNeill & Venter, 2019) and motivation (Carey & Cervellon, 2014). We also found that consumer attitudes were widely examined in the studies. Research has found that a positive

attitude towards sustainable fashion is a good starting point for stimulating sustainable consumption (Park & Lin, 2018). Consumers with a positive attitude are more likely to translate this attitude into purchasing behavior (Hustvedt & Dickson, 2009), and are more willing to learn about the environment (Zhao et al., 2019). Among these stimuli, we also identified three studies that examined perceived behavior control. Phau et al. (2015) examined the effect of perceived behavior control, in this case, self-efficacy, on consumer intention not to buy luxury branded clothing. Other studies examined the influence of perceived behavior control on consumer intention to purchase environmentally friendly apparel (Chang & Watchravesringkan, 2018; Kang et al., 2013).

4.2.2 Sustainable Fashion Organism

Under the S-O-R Framework, organism refers to the consumer's internal evaluation of a certain stimuli. There are four types of organisms studied among the literature in the dataset - value perception, self-orientated, social/rational, and other organism factors. Values have received attention in a number of studies. For instance, utilitarian value, emotional values, and social values are likely to shape consumer's evaluation of sustainable fashion (Chi, 2015; Park & Lin, 2018). Studies have also found that consumers' personal values such as self-enhancement and self-transcendence positively affect consumer attitudes (Jacobs et al., 2018; Su et al., 2019), and consumer behavioral intention (Manchiraju & Sadachar, 2014). Perceived value refers to "the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given" (Zeithaml, 1988, p.14). In the context of sustainable fashion, perceived value was found to be an important predictor that influences consumer satisfaction (Min Kong & Ko, 2017), consumer attitude towards slow fashion (Sung & Woo, 2019), and both purchase intention and purchase experience (Park & Lin, 2018). This suggests that consumers tend to make positive evaluations if they can recognize the value of sustainable fashion.

Self-oriented perception factors such as self-expressiveness, self-efficacy, and moral intensity have been found to play a significant role in consumers' evaluation of taking further actions including intention to purchase sustainable fashion products. For instance, De Lenne & Vandenbosch (2017) found that fashion magazines positively predicted consumers' self-efficacy beliefs, which directly affected their sustainable apparel buying behavior. Moral intensity was also found to be an important factor that positively affected Korean female consumers' purchase of sustainable products (Hong & Kang, 2019). Furthermore, self-expressiveness played an important role in explaining consumers' intention to buy upcycled products (Park & Lin, 2018). Among the organism factors, previous studies have examined other perceptions like descriptive norms, economic and availability risk, and online catalogue and shopping affinity (De Lenne & Vandenbosch, 2017; Jacobs et al., 2018; Park & Lin, 2018).

4.2.3 Sustainable Fashion Responses

In the S-O-R Framework, a response is a consumer's reaction to a sustainable fashion product stimulus and organism. Consumer intention to purchase was the most studied response in the dataset ($n=23$), followed by purchasing behavior ($n=9$). Other research examined the degree of willingness of consumers to pay higher prices for sustainable fashion products based on their environmental consciousness (Lee, 2011), attitudes (Jung et al., 2016; Lee, 2011), and knowledge and beliefs (Shen et al., 2012; Ellis et al., 2012). In addition, studies have also examined other consumer responses such as brand loyalty (Park & Kim, 2016), attitude toward brand extension (Hill & Lee, 2015), and responsible consumer behavior (Buerke et al., 2017).

5. Discussion and Contribution

5.1 Methodological Perspectives

Our first research question focused on understanding the trends in terms of the methodological perspectives leveraged within the existing literature. The review revealed evidence of the three

broad research methodologies but a heavy focus on quantitative methodologies, with a large majority of studies conducting surveys. While this may be reflective of traditions within the broader consumer behavior literature, we call for greater variety in the research methodologies and research designs applied. Surprisingly, experiments have been used sparingly in this domain ($n=4$) and the large majority of quantitative studies were survey-based in nature. This represents two important gaps in the extant literature. Experimental research designs offer many opportunities in this context to test the efficacy of different organization communication strategies on consumer attitudes and behavioral interventions (Rahman & Gong, 2016; Wagner et al., 2019). This can help examining the influence of educational interventions on consumer understanding of sustainable fashion. These communication strategies include content on organizations' websites, mainstream media advertisements, and social media messaging. In addition, it would be interesting to conduct field experiments to determine the role of other factors within physical and online fashion retail environments including approaches to sustainable labelling on products, websites, and even the organisation of stores, online and physical, to highlight sustainable products.

Lastly, as sustainable fashion is attracting growing attention in the media and large-scale retailers like H&M continue to launch advertisement campaigns highlighting their sustainable practices and promises, it is likely that consumer attitudes and awareness will also change over time. Thus, longitudinal studies offer ripe research opportunities to explore consumer attitude and behavioral patterns over time in response to such stimuli.

5.2 Theoretical Perspectives

Our second research question focused on understanding the theoretical underpinnings of studies within this context. Our analysis revealed two important insights regarding the theoretical trends within this domain - (1) considerable number of studies in our review do not explicitly leverage theory, and (2) theories can be categorized into attitude and behavior

theories, value-based theories, and psychological theories. While each category and individual theory represent useful lenses in this context, the lack of consistency in which theories are applied and the application of these theories has led to a fragmented theoretical base within this domain. We urge researchers to both underpin their research in theory and provide clearer justification for their choice of underlying theory, and a more uniform and comprehensive approach to the adaptation of these theories. For example, the tendency within the literature to focus on attitudes and behavioral intentions leads to overlooking actual behavior, an important empirical consideration, and component of prominent theories including TPB and TRA. For instance, TPB posits that attitude towards a behavior will influence intentions to perform the behavior, and actual behavior is influenced by intentions (Fishbein and Azjen, 1975). Without an examination of this intention-behavior link, we cannot determine the applicability of theories such as TPB to the sustainable fashion context. It is also important to note the flexibility of many behavioral theories such as TPB that can be combined with other theories to provide a more comprehensive understanding.

There are also many other theoretical bases researchers engaged in research on sustainable fashion consumer behavior can draw upon. Looking at the theories within the three categories above and the broader consumer research domain, a number of theories represent interesting avenues for future research. For example, information processing theories such as the elaboration likelihood model (ELM) or the multiple-motive heuristic-systematic model (HSM) from the social psychology literature have been leveraged in other disciplines such as information systems, advertising, and consumer behavior. ELM was applied in over 125 marketing and advertising studies from 1981 to 2012 to understand the role of persuasion in various consumer contexts (Kitchen, Kerr, Schultz, McColl, & Pals, 2014). ELM focuses on persuasion and the role of variables related to a message source, content, the recipient, and the context on individuals' processing of persuasive messages via two routes - the central or

peripheral route (Petty & Cacioppo, 1986). Multiple-motive HSM notes the role of factors such as information sufficiency, ability to gather information, and individuals' motivation in determining whether they heuristically (superficially) process or systematically process information prior to engaging in a behavior (Trumbo, 1999, 2002). Both theories represent a useful lens from which to examine how individuals process information regarding sustainable fashion and the influence of different factors in driving systematic/central effortful processing represents an important area of enquiry.

The attitude-behavior gap has been highlighted and explored by numerous studies within this context (e.g., Han et al., 2017). In addition to a more comprehensive application of theories such as TRA or TPB, there are additional theories that may help understand this gap. One such theory is Protection Motivation theory (PMT). PMT was originally developed to understand how threat and coping appraisals influence individuals' health-based behaviors (Rogers, 1975). Threat appraisals focus on individuals' perceptions of the breadth and severity of the pertinent threats and the likelihood these threats will materialize, whereas coping appraisal focuses on individuals' perceptions of their ability to engage in behaviors, which minimize the threat (Rogers, 1975). In this context, PMT may provide a useful lens for understanding how individuals' appraisals of the threats generated by fast fashion practices on the environment, and their ability to source and purchase sustainable alternatives, impact their consumption of sustainable fashion products.

Many of these theories focus on efforts to persuade consumers using messaging or leveraging the views of referent others. However, negative trends and practices and their impacts on consumers cannot be ignored. As demonstrated by the recent Boohoo.com scandal, growing awareness of the environmental and human rights issues associated with fast fashion brands and practices may influence consumer perceptions and practices (The Sunday Times, 2020). As large retailers including those previously viewed as fast fashion leaders, e.g., H&M, seek

to create positive perceptions of their brand and highlight sustainable practices, it is likely we will see further scandals around negative and misleading practices as well as greenwashing. Research investigating consumer responses to negative practices by organizations that they are familiar with represents an important area of inquiry. We propose psychological contract violation as one potential theoretical lens in this area. Psychological contracts focus on beliefs regarding the obligations between two parties such as a customer and organization (Morrison & Robinson, 1997). A perceived violation of this contract generates negative emotions and feelings of betrayal and anger (Denise, 1989). It would be interesting to examine the outcome of perceived violations of a psychological contract between consumers and retailers with regard to sustainable practices on consumer brand perception and behaviors.

5.3 Examining the Factors in Extant Literature: S-O-R Framework

The third research question focused on determining the variables leveraged in the extant literature and categorizing these variables using the S-O-R Framework.

5.3.1 Examining the Stimulus Factors

In our review, external stimuli included brand and social stimuli, and internal stimuli focused on factors related to knowledge and concerns. The role of referent others in influencing individuals' perceptions and attitudes was captured in many studies including social influence and subjective norm variables ($n=10$). For example, two studies examined the effect of social influence such as peer influence on consumer's intention and purchasing behavior of sustainable fashion products (Khare & Varshneya, 2017; Zhao et al., 2019). These studies provide evidence on the importance of the views of others in shaping individuals' perceptions with regards to sustainable fashion. Further research could investigate this influence further to determine potential negative and positive influences. For example, if consumers' peers do not engage in sustainable fashion buying behaviors or dismiss the importance of sustainable

fashion, does this impact the attitudes and behaviors of the individual? Also, how do individuals evaluate the credibility of the source and their views? The focus on stimuli related to individuals' attitudes, knowledge and concerns is unsurprising and is likely to continue in future research. Again, these variables could be developed further using some of the theories discussed above to examine how internal stimulus factors may be influenced by organizations' communications and how individuals with differing levels of concern or knowledge process sustainable fashion marketing messages and content. There are numerous other variables that may represent additional stimuli that researchers could incorporate in their research. We recommend leveraging the theories discussed earlier in Section 5.2 as an initial starting point to identify further stimulus variables. In addition, the mechanisms of stimuli could be examined further to determine how different communication approaches such as audio, video, and social media advertisements, or news coverage drive individuals' attitudes and brand perceptions.

5.3.2 Examining the Organism Factors

Organism factors focus on consumers' evaluation of the stimulus. Organism factors within our review focused on value perceptions, followed by self-orientated perceptions. Several studies focused on consumers' value perceptions ($n=10$). There is no uniform approach to the values studied with the exception of perceived value, which was studied in five studies; studies often included more than one value. The link between stimuli and value perceptions represents an important avenue for continued inquiry to determine how different stimuli shape and alter value perceptions, and to determine which value perceptions are important drivers of behavior. Other organism factors related to self-perceptions, for example self-concept and self-efficacy, and others such as availability risk, have been studied to a limited degree to date. Thus, the role of such factors can neither be confirmed nor dismissed. Future research should focus on studying a broader set of organisms across the various sustainable fashion contexts and among different demographic groups to determine their relevance. In addition, theories related to information

processing as discussed earlier in Section 5.2 represent a potentially fruitful means to understand how consumers process and respond to different stimuli.

5.3.3 Examining the Response Factors

Response factors encompass consumers' reactions to sustainable fashion product stimuli and organisms. Our review revealed an unsurprisingly emphasis on purchase intentions ($n=23$) and self-reported purchasing behaviors ($n=9$). While it is important to examine the influence of various stimuli and organism factors on intentions and self-reported behaviors, the manifestation of actual purchasing behaviors is equally important. While recognizing the logistical challenges of doing so, where possible, research should examine actual behaviors. In addition, researchers could examine a broader set of intentional variables including changes in purchase intentions over time and combining past behaviors with future intentions. These approaches enable a more comprehensive application of theories such as TRA and a deeper understanding of the direct and indirect influences of stimuli factors. Other responses identified in our review include perception-based variables such as willingness to pay a premium (e.g., Lee, 2011), attitudes, and brand loyalty (Hill & Lee, 2015; Park & Kim, 2016). These variables may be combined with purchase intention variables for a more comprehensive understanding of the impacts of stimuli and organisms.

Furthermore, the theories discussed above highlight other potential behavioral responses, which may warrant consideration. These may include negative responses following a psychological contract violation such as switching intentions or negative word of mouth. In addition, other variables related to willingness may be relevant, such as willingness to wait longer for sustainable products. There may also be moderating variables intervening in the relationships between organisms and responses e.g., perceived value on the relationship between factors such as environmental knowledge and willingness to pay a premium.

5.4 Research gaps and Future Research Directions

The analysis of the reviewed studies sheds light on some important research gaps. We have grouped the future research avenues into four categories; (1) theoretical and methodological perspectives, (2) demographical and sampling issues; (3) segmentation approaches; and (4) social media marketing. Table 9 presents the future research directions, research gaps, and sample of research questions that might be considered for any future research in the context of consumer's behavior in sustainable fashion

First, our review revealed only 31% (n=27) of the 88 studies reviewed applied a theory or framework in building their research model. Social factors such as social influence, subjective norms, and social implications were examined in some of the reviewed studies. None of the reviewed studies used other social theories including social support theory, social influence, and social capital theory, to better understand consumer behavior in a sustainable fashion context. This research gap provides a fruitful future research avenue to investigate the effect of social aspects on consumer behavior. For example, social influence can be tied back to Bandura's (1977) social learning theory (SLT) which explains how individuals observe and learn from the behaviors of others and decide to engage in similar behaviors if they will be rewarded for doing so. Bandura (1986) extended SLT to account for individuals' cognition and the role of social influence. Social influence includes several processes including compliance, identification, and internalization (Zhou & Li, 2014), all of which would seem to be relevant in the sustainable fashion context. Future studies in this context could build on the work of marketing researchers in other contexts (e.g., Bagozzi & Dholakia, 2006) to investigate the role of social identity in the context of consumer behavior related to sustainable fashion, to determine how the various social influence processes influence the formation or transformation of consumers' sustainable fashion attitudes and ultimately behaviors.

The majority of the reviewed studies (71%) employed a quantitative research approach; of these studies, 54 used surveys to collect data. The results showed that there is a lack of variety on research approaches and methods such as qualitative, mixed-methods, and even more novel data science approaches. Given the nascence of the research domain, qualitative methods including interviews and focus groups may be useful in providing an in-depth understanding of the motivations behind consumers' behaviors in this context. In addition, mixed methods may be a superior avenue to conduct research in three areas to (1) answer research questions other methods cannot answer, (2) develop stronger inferences from data, and (3) present divergent views which force the re-examination of assumptions underlying the qualitative and quantitative components of a study (Tashakkori & Teddlie, 2003). In this context, for example, mixed methods could be employed using exploratory-explanatory sequential research designs beginning with qualitative methods to identify pertinent motivators or desires of sustainable consumers, and testing the effectiveness of these factors in influencing consumer purchasing behaviors or intentions using quantitative methods. None of the reviewed studies used Big Data and associated data science techniques to understand how consumers behave in new emerging marketplaces such as social media platforms. Silva, Hassani & Madsen (2019) call for more research on Big Data in fashion noting its potential for forecasting trends, enhancing consumer experience, engagement and marketing campaigns, improving quality control, and with respect to sustainable fashion, reducing wastage and shortening supply chains. Similarly, research by Acharya, Singh, Pereira, & Singh (2018) suggests that Big Data can support knowledge co-creation, and lead to evidence-based decisions in fashion. Social media is an exemplar of Big Data. Recent research by Kim, Kang, & Lee (2020) highlighted the prevalence of fashion-related topics on social media, and the influence of social capital on fashion products in general, and specifically sustainable fashion products. As such, it is surprising that none of the reviewed studies made use of Big Data and associated analytical techniques. We reiterate the call for further research using Big Data to understand consumer behavior, emotions and

preferences when it comes to sustainable clothing decisions (Jain, Bruniaux, Zeng, & Bruniaux, 2017).

Second, there is a paucity of studies engaging in clear segmentation of consumers. In order to promote sustainable fashion, future research could focus on identifying the different consumer segments based on their emotional and shopping characteristics in this context and determine their values, needs, and responses to different stimuli. For example, consumer sentiment and self-expression may reshape consumer segmentation (Haines & Lee, 2021). In recent years, there has been a growing emphasis on consumer mindsets and a move beyond segmentation based purely on demographics. Research could seek to identify the core mindsets driving consumer perceptions and behaviors in the sustainable fashion context. This could aid marketers in developing targeting and messaging strategies and tailoring these messages based on the mindsets and likely responses of the different groups of consumers.

Third, we have noted a small number of studies in our review that examined demographic perspectives within their studies. For example, ten studies focused on female or male consumers only, and a small number of studies ($n=8$) collected data from consumers in more than one country. We call for research to engage in a deeper examination of the demographic influences across the breadth of the S-O-R Framework as consumers of different genders, cultures, and ages may hold different values, process sustainable messages differently, and engage in different behavioral responses. This includes differences in consumer behavior within the source of countries where the products are manufactured, and the destination countries, where the products are consumed. There are many avenues for future research to untangle demographic differences.

Fourth, recent research highlights the potential of social media to influence the adoption of sustainable fashion. De Lenne & Vandenbosch (2017) emphasized the importance of social media influence on young consumers' intentions to buy sustainable fashion products. Recently,

Salem & Alanadoly (2021) found that the active use of social media has a positive effect on the optimization of users' eco-friendly behavior and in users' concerns for fashion production. Despite this, only three studies in our sample addressed this topic (De Lenne & Vandenbosch, 2017; McKeown & Shearer, 2019; Zhao et al., 2019). This is consistent with the findings of other SLRs. For example, in their recent review, Kapoor et al. (2018) noted that no significant effort has been made to address the use of social media to impact institutional awareness and consumer behavior towards sustainable fashion consumption. As fashion brands are employing social media marketing to reach, interact, and change consumer buying behavior (Wu, Guaita Martínez, & Martín Martín, 2020), scholars need to consider how, and at what stage, social media marketing affects the consumer buying decision-making process.

Despite differences in the theoretical foundations and conceptualization of sustainable fashion within the existing literature, the attitude-behavior gap among consumers was a common theme. A number of studies highlighted consumers' reluctance to adopt sustainable fashion (Han et al., 2017; Hill & Lee, 2015; McNeill & Moore, 2015) and highlighted that growing awareness of the importance of sustainable fashion does not often translate into actual purchasing behavior (Park & Lin, 2018). This trend is worrying for proponents of sustainable fashion and has led some researchers to conclude that consumers are irresponsible from the perspective of sustainability (Buerke et al., 2017). We argue that exploring the role of social media use in bridging the attitude-behavior gap is a worthy research area to be considered by future studies. In this context, future research may also consider applying social theories such as social support, social presence, and social influence theories to further examine this attitude-behavior gap and determine if this represents a real enduring issue. By understanding the reasons behind this gap, new approaches and social media marketing strategies to educate consumers, raise sustainable fashion awareness, and develop interventions can be informed in an effort to close this gap.

Table 9. Selected future research questions

Future research area	Research question
Theoretical and methodological Perspective	<ul style="list-style-type: none"> • Does the social support offered by social media users encourage consumers to buy sustainable fashion products? • What is the role of social peers influence on the consumer sustainable fashion buying decision-making process? • What is the influence of social factors on consumer's sustainable fashion behavior?
Demographics	<ul style="list-style-type: none"> • How can a mixed-method approach be utilized to develop a new scale for measuring consumer engagement behavior with sustainable fashion ? • How can big fashion data could be used to generate new insights on consumer behavior and sustainable fashion? • What other methodological approaches including Big Data analytical techniques and longitudinal approaches can be used to understand consumer sustainable behavior, emotions and preferences?
Consumer Segments	<ul style="list-style-type: none"> • Is there a significant difference between gender classifications, including new gender identity classifications, in sustainable fashion attitudes and behavior? • Are there significant differences between geographically, generationally, and/or ethno-culturally different consumers in terms of the sustainable fashion attitudes and behavior?
Use of Social media and Consumer Attitude- Behavior Gap	<ul style="list-style-type: none"> • Is there any relationship between income, emotional and shopping characteristics, and sustainable consumption? • Are the segments in the sustainable fashion market new? What is the role of mindsets in sustainable fashion consumption? • What is the role of sustainable fashion products attribute in consumer segmentation and targeting approaches
	<ul style="list-style-type: none"> • What motivates consumers to buy sustainable fashion products online: Uses and Gratification theory perspective • What factors contribute to consumer resistance to sustainable fashion consumption? • What are the antecedents of social media buying in sustainable fashion ? • What is the suitable social media strategy that can be used to target sustainable fashion consumers

5.5 Contribution

5.5.1 Contribution to theory

This study among the first reviews to provide a critical and systematic evaluation of the extent of consumer behavior research in sustainable fashion for a ten-year period from 2009 to 2019. First, this systematic review records the pattern of and trends in theoretical underpinning, research methodology, study themes, and the factors associated with the body of the reviewed studies. Second, it identifies research gaps that need particular attention, and provides future research agenda. Third, we synthesized the factors in the literature using the stimulus-

organism-response (S-O-R) framework highlighting the different stimuli, organism, and response factors explored in the literature to date. This classification provides a clear map of the factors that received notable research attention in the period under review and potential future avenues for research.

5.5.2 Contribution to practice.

This systematic review also provides a useful practical contribution to marketers. First, this study helps marketing practitioners in understanding the direct and indirect factors that influence the consumer buying decision, which can help in formulating appropriate sustainable fashion campaigns. Second, this systematic review enlightens the marketers to the obstacles facing the slow fashion market due to consumers' attitude-behavior gap when it comes to purchasing apparel, and inform marketing practitioners how this could affect their marketing strategies (e.g., new consumer/market segmentation)

6. Limitations

Similar to other review studies, this study has limitations. Firstly, the findings of our study are constrained by the pool of studies (journal articles) that meet the inclusion criteria. For example, we only consider studies that relate to sustainable fashion products and consequently don't include other products influenced by growing awareness of sustainable practices. In addition, we include only empirical studies that meet other inclusion criteria. For instance, conference proceedings are not included in our primary studies. Given the breadth of our review, conference proceedings would have yielded an unmanageable volume of studies but may have identified some newer research trends within this domain and could be useful to consider for studies interested in one product segment within sustainable fashion. Secondly, while we argue that the S-O-R framework can be harnessed to understand literature trends in the broader consumer behavior context or indeed narrow segments, it is not without limitations.

Other frameworks, for example ADO and TCCM, may be employed for synthetic analysis and provide different insights. Thirdly, while this review analyzed both the methodologies and methods deployed in studies within the sample, specific paradigmatic approaches were not explored in detail. Similarly, in Section 2, we highlight the definitional ambiguity in the sustainable fashion domain. These may be worthy of attention. Lastly, our study focuses primarily on consumer behavior and does not consider industrial buyer behavior and organizations within the value chain, which may present interesting research opportunities for marketers to understand the motivations behind organizations' sustainability practices and communications.

7. Conclusion

Consumer attitudes and behaviors with respect to sustainable fashion have attracted a great deal of attention from policymakers, firms, and consumers in the last decade. This is reflected in a corresponding growth in consumer behavior research. The aim of this study is to systematically review and assess previous studies of consumer behavior in sustainable fashion to identify unexplored research gaps and highlight future research opportunities. This systematic literature review investigated 88 articles published from 2009 to 2019. The overwhelming majority of the examined research concentrated on the antecedents of sustainable fashion behavior and primarily through an environmental lens. Furthermore, the examined research was dominated by quantitative studies that were typically cross-sectional using samples from one country. While progress has been made in identifying the antecedents that influence consumer attitudes towards sustainable fashion, the research identifies that this does not generally translate into consumer behavior, and in particular sustainable fashion purchases. To date, this attitude- behavior gap has not been explored adequately within the literature. More worryingly, is the finding that much of the research examined does not ground itself or advance theory significantly with respect to consumer behavior and sustainable

fashion. This may explain the paucity of publications on this topic in leading marketing journals i.e., those journals that are indexed in the Web of Science core collection indices. The combination of all these factors is an opportunity for consumer behavior research. The prominence of sustainable shopping and the demand for sustainable fashion are increasing worldwide. For those willing to address the gaps and limitations in the current literature base, this represents a fruitful and long-term research opportunity.

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