A Comprehensive Study of Sustainability, Fashion and Consumption: Understanding Consumer Behaviour and Clothing Evaluation from a Cross-national Perspective

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ABSTRACT

A Comprehensive Study of Sustainability, Fashion and Consumption: Understanding Consumer Behaviour and Clothing Evaluation from a Cross-national Perspective

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The overarching objectives of this research are twofold: (1) gaining an in-depth understanding of the current trends and developments in "fashion and sustainability" research between 2010 and 2021, identifying research gaps and influential works; and (2) examining the influence of sustainable and non-sustainable product attributes on apparel consumer choices from a cross-national perspective, specifically focusing on Indian and Canadian consumers. Although previous research has explored fashion and sustainability, to the best of my knowledge, no study has undertaken a comprehensive examination of the aforementioned objectives. Prior to this study, no research has been conducted on the significance of (non-)sustainable evaluative cues from the perspectives of both Indian and Canadian apparel consumers.

This thesis comprises six chapters that unfold as follows: Chapter 1 establishes the contextual background and research rationale for the topic. Chapter 2 conducts a systematic literature review to provide a comprehensive overview of the research conducted and disseminated on "fashion and sustainability" since 2010. To facilitate data analysis and gain a deeper understanding of the research evolution, various free open-access software tools such as RAKE, VOSviewer and CitNetExplorer were employed. Boolean queries were utilised to search and retrieve 860 articles related to "fashion and sustainability" from the Web of Science. Based on

these publications, the research's geographic distribution, types and approaches (e.g., qualitative, quantitative, case study and systematic literature review), author's affiliations by country, publication trends, number of cross-national/cultural studies, and major sustainable and non-sustainable attributes were identified and examined. Chapter 3 delves into an extensive literature review of evaluative attributes in apparel, encompassing both sustainable and non-sustainable cues. This review provides insights into consumer buying behaviour across various dimensions, such as sustainable cues versus non-sustainable cues, differences between male and female consumers, and variations between developed and developing nations. Importantly, this information informs the formulation of relevant hypotheses for empirical testing in the subsequent chapter. The chapter also presents and discusses the typology of apparel cues, including intrinsic and extrinsic cues, psychic/aesthetic and physical/functional cues, sustainable and non-sustainable cues and "product-related cues and production-related cues. Chapter 4 outlines the research methodology employed for empirical testing and analysis. Data collection was conducted through self-administered online survey, with various measurement instruments developed based on prior literature. The collected data were analysed using SPSS, employing techniques such as descriptive analysis, *t*-test and correlation test. Chapter 5 presents the analytical results and discusses the salient impact of various apparel product cues. Additionally, it reports on the differences observed between Canadian and Indian consumers, as well as gender disparities in clothing choice. The final chapter summarised the findings, highlighted the contributions, implications and limitation of the current research, and provides recommendations for future research areas that warrant further investigation.

PUBLICATIONS

Journal Papers Derived from the Current Study

Rahman, O., Fung, B.C.M. & Kharb, D. (2021). Factors influencing consumer choice: A study of apparel and sustainable cues from Canadian and Indian consumers' perspective. *International Journal of Fashion Design, Technology and Education*, 14(4): 151-161.

Rahman, O**.** & Kharb, D. (2021). Product choice: Does eco-labeling play an important role in apparel consumption in India? *Fashion Practice: The Journal of Design, Creative Process & the Fashion Industry*, 14(2): 266-291. (JCI, AHCI: 1.1)

Rahman, O., Hu, D. & Fung, B.C.M. (2023). A systematic literature review of fashion, sustainability, and consumption using mixed methods approach. *Sustainability*. 15(16): 12213 (JCI, SSCI: 3.9)

Conference Paper/Abstract Derived from the Current Study

Rahman, O., Hu, D. & Fung, B.C.M. (2023). Fashion and sustainability: A systematic literature review. *2023 Global Marketing Conference*, July 20-23, Seoul, South Korea.

Rahman, O. & Fung, B.C.M. (2021). A data mining analysis of cross-national study of apparel consumption. In: Antipova, T. (eds) *Comprehensible Science*. ICCS 2021. Lecture Notes in Networks and Systems, Vol. 315, Springer, pp. 23-32.

Publications Related to this Study but Conducted in Different Countries

Rahman, O**.** & Koszewska, M. (2020). How age and gender affect consumer choice between sustainable and non-sustainable apparel cues: A new perspective from a transition economy in Poland. *Journal of Fashion Marketing and Management*, 24(4): 213-234. (JCI, SSCI: 3.5)

Rahman, O., Fung, B.C.M. & Chen, Z. (2020). Young Chinese consumers' choice between product-related and sustainable Cues: The effects of gender differences and consumer innovativeness. Special issue: Sustainable development and practices: production, consumption and presumption, *Sustainability*, 12(9): 1-29. (JCI, SSCI: 3.9)

Rahman, O., Chen, Z., Fung, B.C.M. & Kharb, D. (2020). A cross-national study of young female consumer behaviour, innovativeness and apparel evaluation: China and India. *The Journal of the Textile Institute*, 111(3): 334-344.

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It has been an arduous yet fulfilling journey, marked by numerous unforeseen disruptions including the COVID-19 pandemic and family issues. Specifically, a full-time faculty member at the School of Fashion of the Toronto Metropolitan University, I faced the challenges of commuting between Toronto and Montreal (TMU) to fulfill all my coursework and requirements whilst simultaneously balancing the responsibilities of caring for my family and meeting my job expectations in teaching, research and administration. Despite encountering both ups and downs during the process, I found immense enjoyment in every moment spent working on my research and collaborators. Throughout my PhD study, Professor Fung has provided me with invaluable insights and introduced me to the potential of integrating AI into my research, such as employing text mining and visualization tools for data analysis. This newfound perspective has broadened my research horizons and inspired me to delve into new areas of new knowledge and skills, thereby enabling me to expand existing research to different areas.

I express my sincere appreciation to every individual who took part in the anonymous online survey. I am also deeply grateful to Professor Devender Kharb, the Dean of the School of Fashion at the World University of Design in New Delhi, for providing invaluable assistance throughout the data collection process in India. Furthermore, I am thankful for the unwavering support and encouragement I received from my former Professor Raymond Au Wai Man, as well as from numerous research collaborators, with a special mention to Dr. Zhimin Chen at the Hong Kong Polytechnic University

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LIST OF ABBREVIATIONS

A/C/F/G	Apparel/Clothing/Fashion/Garment
B2C	Business to consumer
CitNetExplorer	Citation Network Explorer
COO	Country of origin
CSR	Corporate social responsibility
GOTS	Global Organic Textile Standard
H&M	Hennes and Mauritz
ILO	International Labour Organisation
In	Intrinsic
In-Ph	Intrinsic-physical
In-Ps	Intrinsic-psychic
In-Ph/Ps	Intrinsic-physical/psychic
In-Su	Intrinsic-sustainable
In-Su-S/E	Sustainable-Social/Ethical
Ex	Extrinsic
IR	Information retrieval
NFHS	National Family Health Survey
NLP	Natural Language Processing
NPO	Non-profit Organisation
NSAC	Non-sustainable Apparel Cue
RAKE	Rapid Automatic Keyword Extraction

SAC	Sustainable Apparel Cue
SME	Small and Medium Enterprise
SPC	Sustainable Production Cue
SVM	Support Vector Machine
TM	Text Mining
UNCED	The United Nations Conference on Environment and Development
UNICEF	The United Nations Children's Fund
WoS	Web of Science

CHAPTER 1: INTRODUCTION

1.1 Research Motives and Objective

Over the last ten years, I have conducted and disseminated various research projects related to product evaluation and fashion consumption. Some of these studies (Rahman et al., 2014, 2017, 2018, 2020a) were primarily focused on fashion consumer innovativeness through a cross-cultural perspective, whilst others were focused on specific demographic groups such as youths (Rahman & Kharb, 2018; Rahman et al., 2013), mature women in Taiwan (Rahman & Chang, 2018), aging consumers and baby boomers in Canada (Rahman & Yu, 2018, 2019), "Little Emperors"[1] in China (Rahman et al., 2011, 2013), and Millennials/Generation Z in India (Rahman & Kharb, 2018). However, most of my research was conducted in Canada and China, and primarily or exclusively focused on the functional and aesthetic aspects of clothing, with little attention paid to sustainable aspects.

Previous literature reviews have indicated a lack of research examining how sustainable attributes influence clothing choice, buying decisions, and consumption. As Rausch et al. asserted in their recent article (2021; p. 1), "It remains unclear whether sustainability really matters to consumers in a clothing context and, more specifically, which aspects are of importance to consumers during their purchase decision." Additionally, most prior studies (Harris et al., 2016; Norum, 2013; Rausch & Kopplin, 2021) were conducted in a single country or geographic location, despite multinational fashion retailers such as Zara (Spain), H&M (Sweden), Forever 21 (U.S.), Topshop (U.K.), and UNIQLO (Japan) selling products in multiple regions and countries.

[1] "Little Emperors" (*xiao huangdi*) or "spoiled child" were born after the launch of one-child policy in 1979. In general, they are self-centred, focused on personal needs and pampered throughout their childhood (Rahman et al., 2013).

Although these global retailers are considered key players in the fashion arena, they have been criticised due to their "fast fashion"[2] business model.

Fast-fashion retailers can quickly identify and respond to the latest fashion trends by offering a wide array of fashion styles to consumers. According to Radonic (2022), the number of new collections released by European fashion brands has increased from 2 to 24 per year since 2000, for example, H&M delivers 12 to 16 new collections and Zara delivers 24 new collections every year. Fast fashion often refers to fast-changing, inexpensive trendy fashion that subsequently leads to excessive consumerism (Jørgensen & Jensen, 2012). To change the negative perceptions toward a brand, many fast fashion companies have begun to pay more attention to the sustainable aspect during design, prototype development (e.g., circular product design), production, and supply chain management processes. For example, H&M, Topshop, and Zara unveiled their 'Conscious' collection in 2011, the eco-conscious label 'Ready to Reclaim' in 2012, and the 'Join Life' sustainable collection in 2016, respectively (Rahman et al., 2021). Although sustainable collections and "green" programs have been launched over the last decade, many consumers remain skeptical about the claims of sustainable values and benefits (Leonidou & Skarmeas, 2017). In many cases, the sustainable information about the products (e.g., manufacturing methods and processes) is unavailable, insufficient, or vague.[3] According to the Fashion Transparency Index 2022 (Fashion Revolution, 2022; p. 38), most fashion companies scored below 50%. Only three

[2] Fast fashion companies usually sell their trendy clothing at very competitive price points because of low manufacturing costs and inexpensive materials. Fast fashion retailers produce approximately 20 lines annually and account for about 20% of the total sales in the U.K. (BSR, 2013; Defra, 2008)

[3] According to (Segran, 2019), "H&M is not the only company whose sustainability claims lack satisfying detail. I recently reported about how Zara, another major player in the fast-fashion industry, released new sustainability targets, but they were vague."

companies (OVS[4], Kmart Australia, and Target Australia) scored 71-80% and 6 companies (H&M, The North Face, Timberland, United Colors of Benetton, Vans, and Gildan) scored 61-70% (See Appendix 1 for details), indicating a need for further research into sustainable fashion consumption and practices. Based on the findings of this fashion transparency report, it is clear that many multinational fashion companies/retailers either fail to provide sufficient information or are unwilling to disclose details about their sustainable practices and development. In essence, many fashion companies prioritise reducing cost reduction, productivity enhancement, and the emphasis on functional and aesthetic aspects, often at the expense of sustainability considerations for their products.

Against this backdrop, the present study aims to deepen our understanding of clothing choices and buying behaviour from a cross-national perspective. Building on my previous research, this study attempts to shed new light on sustainability and fashion consumption, explore research trends, address issues related to shopping behaviour, bridge the research-practice gap, and answer some outstanding queries that I have encountered but did not have a chance to unpack them systematically, empirically, and critically. For example, "What is the current/emerging research trend of fashion sustainability?", "How many cross-national studies have been conducted and focused on sustainable and non-sustainable aspects of clothing from the consumers' perspectives over the last decade?", "Do sustainable attributes play a significant role in the apparel selection and consumption process?", "Do apparel consumers have different perceptions toward sustainable attributes and certified eco-labelling?", "Do apparel consumers rely on eco-labels to guide their selection and evaluation processes?", "Are there any differences and similarities among apparel

[4] OVS is a leading Italian apparel brand specialising in menswear, womenswear, and childrenswear.

consumers in terms of their needs and preferences across nations?", "Do Asian consumers pay more attention to the functional and aesthetic benefits of clothing than psychological and philanthropic values?" and "Why?". To address the aforementioned questions, the present research was designed to examine both sustainable and non-sustainable evaluative cues of clothing from several aspects – functional, aesthetic, environmental, social/ethical, and financial.

To summarise, the overarching objectives of this research has twofold: (1) to gain an in-depth understanding of the current research trends of "fashion and sustainability" and identify the influential research work; and (2) to examine what sustainable and non-sustainable attributes may affect apparel consumer choices from a cross-national perspective. The results of this study can provide practical and theoretical implications for academicians, marketers, practitioners, and consumers in various fields, particularly fashion studies, consumer behaviour, sustainability, and product development.

1.2 COVID-19 Pandemic, Online Shopping and Sustainable Consumption

The outbreak of the coronavirus pandemic has disrupted and brought the entire fashion industry to a halt. In 2020, American retail sales across all sectors, excluding food and beverage and health and beauty, experienced a significant 10% drop (eMarketer, 2020). Similarly, fashion and luxury brands also faced a substantial decline in sales (Biondi, 2020). As a result, numerous fashion companies were compelled to downsize, undergo restructuring, declare bankruptcy, or seek creditor protection (such as Chapters 7 and 11 bankruptcy), including the up-scaled department store Lord & Taylor, Neiman Marcus, J.C. Penney chain, Brooks Brothers, Ann Taylor, J. Crew, True Religion, fast retailer Forever 21, Montreal-based fashion retailer Le Chateau, and many others. Despite the numerous challenges, there remains a sense of optimism among market analysts

and fashion practitioners for several reasons. These include the belief that only the strongest companies will survive the retail apocalypse, the continued growth of e-commerce, the anticipated economic rebound following the lifting of restrictions, and the gradual return to normalcy. Surveys and forecasts (Statista, 2021; U.S. Congressional Budget Office/CBO, 2021) further suggest that the economy and employment rates are expected to recover to pre-pandemic levels in 2021 and 2024, respectively. With this perspective in mind, it is crucial to comprehend the current economic landscape and the factors that may influence consumers' decision-making when it comes to shopping for clothing. Whilst the upcoming chapter will briefly touch upon the impact of the COVID-19 pandemic on consumer behaviour, it is important to note that this is not the primary focus of the present research.

Regarding the growth of e-commerce, numerous studies (eMarketer, 2019; IBEF, 2016; Geissdoerfer et al., 2017; Kachaner et al., 2020; Lu, 2004; Nielsen, 2007; Yining, 2014) highlighted a significant increase in online shopping and pro-environmental behaviour in recent decades. Since the mid-1990s, many companies have developed and launched their B2C (business-to-consumer) online shopping sites, resulting in a surge in global retail e-commerce sales from US$1,336 billion in 2014 to US$4,280 billion in 2020 (Statista, 2021). Throughout this period, annual growth rates ranged from 11% to 22.5%. From the consumer perspective, the continuous growth of e-commerce has empowered them with greater knowledge about the product features and properties. It has become increasingly convenient and easier for consumers to search for information prior to making a purchase, including details such as garment size, colour assortment, fabrication, measurements, retail price, and other available information.

In a similar vein, public awareness of environmental issues, such as climate change and ozone depletion, has grown since the Earth Summit (also known as the United Nations Conference

on Environment and Development or UNCED) in 1992. Previous studies (Bjørner et al., 2004; Brand, 1996; Claudio, 2007; Geissdoerfer et al., 2017; Kachaner et al., 2020) conducted both before and during the pandemic consistently demonstrate that people, particularly younger generations such as Millennials and Gen Zers (or Zillennials), are increasingly concerned about sustainable practices, social responsibility, and responsible consumption. For instance, the Capgemini Research Institute's study (Jacobs et al., 2020) revealed that 57% of the young consumers aged 18-24 have switched to less popular brands due to sustainability reasons. Additionally, prior literature (Kachaner et al., 2020) has suggested that the pandemic has heightened public awareness of environmental issues.

Given this evolving trend, it is reasonable to expect that the growth of e-commerce and sustainable consumption will continue regardless of whether we are in a pandemic situation with sporadic lockdowns and social restrictions or in a post-pandemic scenario characterised by a return to normal or a "new normal."

The rise of online shopping and growing environmental awareness has prompted domestic, multinational, and transnational retailers to re-evaluate and adjust their business models, strategies, products, and services to meet the evolving needs, desires and values of consumers. In today's apparel market, consumers are not merely seeking utilitarian and hedonic values in their clothing but also place importance on psychological, environmental, socio-ethical, cultural, and financial values. To gain a comprehensive understanding of global consumer needs and preferences, it is imperative to explore the following questions: Which product attributes hold relatively greater significance in the clothing evaluation and selection processes? Are there any variations in apparel choices among consumers from different countries? How do apparel consumers behave in different socio-economic and cultural contexts?

1.3 Levels of Sustainable Awareness between Developed and Developing Nations

As discussed in the preceding sections, sustainable consumption has emerged as a growing concern among modern-day consumers. The rise of "slow fashion" trends (Chi et al., 2021) and the mentality of "buy less, buy better" (Donaldson, 2020) are gaining momentum. Whilst sustainable clothing has gained popularity in developing countries, consumers in these regions still exhibit lower levels of knowledge, awareness, and consumption experiences of eco-products compared to their counterparts in developed nations (Kumar and Ali, 2011). A systematic review (Quoquab and Mohammad, 2020) highlighted a significant difference in sustainable consumption between developing and developed nations. However, according to Quoquab and Mohammad (2020), the majority of research papers on this topic have been conducted in developed countries such as the United States, the United Kingdom, the Netherlands, France, Spain, Denmark, Germany, Belgium, Switzerland, Sweden, and Japan, between 2000 and 2020. There is relatively less research focusing on developing or emerging countries such as India (Khare, 2020; Khare & Sadachar, 2017; Kumar & Yadav, 2021), Brazil (Garcia et al., 2019) and China (Wei & Jung, 2017; Zhao, 2019); as well as cross-cultural studies. Interestingly, whilst numerous cross-cultural/-national studies have been conducted on fashion renting (Jestratijevic et al., 2021; Lang et al., 2019; Lee and Huang, 2021; Shrivastava et al., 2021), second-hand clothing (Xu et al., 2014), and collaborative consumption (Iran et al., 2019), there has been relatively less research on consumers' choices and preferences concerning sustainable and non-sustainable apparel cues.

Given the variations in cultural values, financial situations, social and gender roles, and institutional structures across nations and socio-demographic groups, it is reasonable to propose that the levels of consumer sustainability awareness and pro-environmental purchasing behaviour

differ. As Quoquab and Mohammad (2020, p. 330) point out in their study, "consumers in developing countries are comparatively far behind developed countries in adopting and practicing sustainable consumption." Another study (Ma et al., 2016) also reveals a negative correlation between clothing production and socio-ethical practices, particularly in developing nations, including labour standards, human rights, and fair wages. To gain a better understanding of the similarities and differences among nations, this study focuses on a developed country (Canada) and an emerging country (India). The selection of these two countries is based on several criteria: (1) cultural differences such as individualism vs. collectivism and Euroamerican vs. Asian cultures, (2) levels of environmental awareness (Greendex Index[5]), (3) economic differences, including income inequality and varying levels of GDP per capita, and (4) diverse geographic locations, encompassing South Asia (India) and North America (Canada).

1.3.1 Development/Eastern Nation – India

India is the second most populous nation in the world and has a rich culture and history deeply rooted in traditional customs, values and beliefs. Since the implementation of its New Economic Policy in 1991, India has undergone a paradigm shift and rapid economic growth (Deloitte, 2013; McKinsey, 2007). Its Gross Domestic Product (GDP) per capita increased by nearly 60% from US$1357.6 in 2010 to US$2169.1 in 2019[6] (Trading Economics 2019). This impressive growth can be attributed to several factors. Firstly, the economic expansion has led to an increase in disposable income, enabling people to allocate more resources towards various consumer goods

[5] The Greendex Index is a global tracking survey complied by National Geographic and GlobeScan annually to measure consumer behaviour in many areas such as transportation, energy consumption, food, consumer goods, environmental concerns, etc. (National Geographic, 2014).
[6] However, it is worth noting that the GDP per capita growth in 2020 declined 8.9% from 2019 in India due to the effects of the global pandemic (The World Bank, 2021).

and services. As a result, consumer spending on discretionary goods is projected to increase from 52% in 2007 to 70% in 2025 (Beinhocker et al., 2007). Secondly, the roles of Indian women have undergone significant changes in recent decades. Despite a relatively lower labour force participation rate compared to other countries, Indian women have made substantial contributions to the labour market and household income, as reported in previous literature (Kamdar, 2020; Wazir Advisors, 2018). Thirdly, the country's high urbanization rates have played a role in bolstering the national income whilst simultaneously impacting poverty levels, inequity, and inclusive growth (Sabyasachi, 2013). A study conducted by McKinsey Global Institute (Narayanswamy & Zainulbhai, 2007) predicts that if the Indian economy continues its current trajectory, it will ascend to become the world's fifth-largest consumer economy by 2025.

According to a study conducted by Deloitte (2013), India's economy is projected to continue its rapid growth, potentially surpassing China and the USA to become the world's largest middle-class consumer market by 2030. In light of this tremendous economic expansion, many multinational fashion retailers such as H&M, Zara and Forever 21 have entered this alluring market focusing on major cities such as New Delhi, Mumbai, and Hyderabad. The number of shopping malls in India multiplied almost tenfold between 2005 and 2013, increasing from 50 to 470 (L.E.K. Consulting, 2014). This period also witnessed the emergence of premium shopping malls in India, such as DLF Emporio in Delhi (2008) and Palladium in Mumbai (2009). Despite the growth in the number of shopping malls over the past decade, the majority of consumers still shop at unorganised independent retailers or 'Kirana' stores (KS Oils Limited, 2008; L.E.K. Consulting, 2014).

In addition to economic growth and market structure, a study (McKinsey, 2007) conducted by McKinsey Global Institute predicts a significant expansion of India's middle-class population, projected to increase from 5% of the population (50 million people) in 2007 to 41% (583 million

people) by 2025. The consumer market in India is primarily characterised by its youthful demographic. With a median age of 28.43, India ranks fifth globally in terms of its youth population. This young population plays a crucial role in driving the economy (Statistics Times, 2020), as they are digital natives, technologically savvy, and value conscious. India currently ranks third in the world in terms of the number of Internet users, with further growth expected. According to a study on apparel consumption trends in India (Wazir Advisors, 2018), the youth segment is vital driver of economic growth. Most shoppers in India are under 30 years of age and possess high disposable income. They have grown up during an era of liberalisation, privatisation, and globalisation, and are often described as "a youthful exuberant generation weaned on success" (Gopal & Srinivasan, 2006, p. 22) or the "no-strings" generation (Sinha, 2012, p. 9). Generally, they exhibit optimism, aspiration, technologically savviness, urbanisation and openness to new ideas. Their clothing preferences go beyond functional benefits, as they also seek aesthetic, emotional and experiential values in the products they choose. To cater to Indian consumers effectively, it is crucial for fashion practitioners to understand the factors that influence their decision-making when shopping for clothing.

According to the 2014 Greendex Index (GlobeScan 2014), India ranked at the top among 18 countries, scoring 61.4, followed by China (57.5), South Korea (55.7), and Brazil (55.5). Interestingly, consumers in developed countries such as Canada (47.2) and the United States (44.6) showed less concern about environmental issues. One possible explanation for these results is that people in North America may face fewer sustainability challenges and environmental problems (e.g., air pollution, water consumption/contamination, energy use, fair trade, and child labour) compared to emerging countries in Asia. In developing countries, apparel production is often

associated with issues like unfair wages, poor working conditions, human rights violations, and non-compliance with international labour standards (Ma et al., 2016).

Anecdotal and empirical evidence has suggested that young people are generally more positive about green and responsible consumption. A study (Gandhi and Kaushik, 2016) conducted in India revealed that despite having less disposable income than older counterparts, young people display a higher inclination towards socially responsible consumption. However, some researchers (e.g., Gandhi and Kaushik, 2016; Goworek et al., 2013; McNeill and Moore, 2015) have pointed out that pro-environmental attitudes of consumers do not always translate into ethical buying behaviour due to various reasons such as limited disposable income, inadequate availability of sustainable product choices, or individuals over-reporting their intention. This discrepancy between attitudes and actions is commonly referred to as the "attitude-action" or "value-action" gap.

India was selected over other Asian countries for several reasons. It is an emerging market, a major clothing producer, and its economy is experiencing exponential growth. Moreover, there is a relatively higher number of research studies conducted in India compared to other nations such as Malaysia and Cambodia. In addition, China was excluded from the present study because I have conducted numerous studies there in the past, and I aimed to extend my research to other countries in Asia.

1.3.2 Developed/Western Nation – Canada

In 2020, Canada's GDP per capita was US$43,258, representing a decrease of 6.6% compared to 2019 (The World Bank, 2021), largely attributed to the global pandemic. In the same year, Canada's GDP per capita was 22 times higher than that of India. Given the economic disparity

between nations, it is reasonable to expect that consumers in developed countries with higher GDP per capita are generally less price-sensitive compared to consumers in less affluent nations.

Canadian consumers have exhibited an increasing awareness of sustainable practices, ethical conduct, environmental impact, and social responsibility. A recent study (PwC, 2021) reported that 32% of Canadian consumers are willing to spend more on brands that demonstrate ethical practices, whilst 50% are willing to pay a premium for locally produced or sourced groceries. In a similar vein, a survey conducted in 2010 with 1,362 Canadian participants found that 29% of them "would spend $15 or more on a $100 item if they were sure it was ethically made" (Abacus Data, 2010; p. 4).

Furthermore, an additional survey (Envronics Institute, 2012) conducted in Canada highlighted that 88% of participants agreed or strongly agreed the statement, "Canada should be a country where the environment is protected, even if this slows down economic development." This indicates that many Canadians prioritise environmental protection over economic growth. It is worth noting that research consistently suggests a connection between environmental sustainability and a country's economic situation. For instance, a study (Tomaselli et al., 2019; p. 44) involving 1,001 Canadians reported that 52% of the participants agreed that "economic growth and environmental sustainability are compatible".

Interestingly, Pyman and Pammett's (2010) research findings indicate that Canadians exhibit higher pro-environmental attitudes compared to their counterparts in the United States, despite similarities in consumer culture, social values, and economic systems. Kong and Ko's study (2017) conducted in Korea, China, and Japan within the East Asian cultural zone revealed different attitudes and levels of environmental concerns toward sustainable fashion products.

Given these discussions, it would seem valuable to explore and examine the correlation between income levels and sustainable purchasing behaviour in both developed and developing countries.

1.4 Research Gap and Approach

As discussed earlier, the increasing concern for sustainable practices and environmental issues among today's consumers varies across different countries due to socio-economic disparities, varying levels of ethical sensitivity, and diverse environmental concerns. However, there is limited research on how product claims of "sustainable manufacture" influence consumer choices when shopping for apparel products, particularly from a cross-socioeconomic perspective. As Varshneya et al. (2017) point out in their study, there is limited research on green products that have been undertaken in the context of emerging economies. Indeed, there has been limited empirical research on "green" consumption (Bechtel et al., 2006; Carey and Cervellon, 2014) investigating different socio-economic contexts – e.g., eastern vs. western; developed economy vs. emerging economy; individualistic society vs. collectivistic society. Most of the prior apparel studies (de Brito et al., 2008; Mair et al., 2016; Lawless & Medvedev, 2016; Peterson et al., 2012) have predominantly or exclusively focused on Western societies, such as the United States and Europe. In light of the limitations in cross-national research on sustainable fashion, it is essential to further our understanding of how global consumers perceive and respond to fashion sustainability. With this perspective, a systematic literature review was used, as well as empirical research was undertaken in two countries - Canada and India.

In addition to examining sociocultural differences between nations, the current study also investigated the effects of gender differences. Gender and age are commonly regard as the two

most important demographic variables for market segmentation. In some cases, gender may exert greater influential role on the meaning of fashion brands than age (Elliott, 1994). The interpretation and perceived value of fashion brands or clothing can differ between genders. Several researchers (Bohdanowicz and Clamp, 1994; Workman and Studak, 2006) argue that gender significantly influences individuals' purchasing decisions and product preferences. According to prior apparel research studies, in general, female consumers exhibit a greater interest in or awareness of fashion compared to their male counterparts. With this perspective, it is worthwhile to explore whether gender effects are consistent across nations. In the present study, the buying behaviour of both males and females was investigated in Canada and India.

The current research encompasses two main areas: (1) a systematic literature review, which utilised text mining and descriptive data analysis techniques, and (2) empirical research employing a quantitative approach to investigate apparel consumer buying behaviour and selection criteria from a cross-national perspective.

The next chapter presents the objectives, methodology, analytical processes of "Systematic Literature Review." I believe that the finding of systematic literature review can provide a broader perspective of fashion consumption and sustainability trends over the last eleven years. Subsequently, the "Literature Review for Empirical Research" chapter focuses on the current state of knowledge, relevant literature, and the development of research hypotheses for empirical testing. This is followed by the "Research Methodology" chapter, which describes the approach employed. The "Results and Discussion" chapter reports the data analysis and empirical findings. The subsequent chapter discusses the "Conclusion and Implications," whilst the final chapter addresses the "Limitations and Future Research Recommendations."

CHAPTER 2: SYSTEMATIC LITERATURE REVIEW

2.1 Literature Review – Objectives and Focus of Chapter 2 and Chapter 3

In this chapter, mixed methods research approach including descriptive analysis, text mining techniques, visualisation tools and content analysis were used to perform a systematic literature review with the following objectives: (1) to provide a comprehensive overview of scholarly articles (2010 - 2021) that focus on fashion sustainability research, (2) to identify research trends, development, and current knowledge pertaining to fashion and sustainability, and (3) to pinpoint significant sustainable indicators for empirical research related to clothing selection, evaluation, and consumption. The outcomes of this systematic review contribute to a holistic understanding of fashion sustainability, encompassing all stages from the pre-consumption stages to post-consumption. It is important to note that the systematic literature review did not prioritise literature solely focused on non-sustainable aspects, such as aesthetic and functional attributes of clothing. To meet the selection criteria, each paper had to encompass both keywords - "A/C/F/G" and "sustainability."

The subsequent chapter involves an extensive literature review that specifically delves into various aspects of clothing consumption. The objective is to gain a deeper understanding of the following areas: (1) consumer shopping behaviour of clothing, (2) perceptions and utilisation of apparel cues, including both sustainable and non-sustainable features, (3) cross-national differences in clothing evaluation, and (4) gender effects on clothing choices and preferences. This in-depth literature review primarily focuses on consumer buying behaviour from different perspectives. Conducting a thorough review of existing literature is a critical step in identifying research gaps and formulating appropriate research questions and/or hypotheses for empirical

investigation. Based on the findings from prior research, hypotheses were subsequently developed for empirical testing in the same Chapter 3.

In summary, this thesis comprises two chapters dedicated to literature reviews. Chapter 2 entails a systematic literature review aimed at providing a comprehensive overview and understanding of the current research trends in "fashion and sustainability." On the other hand, Chapter 3 involves a specific literature review focusing on a diverse range of "apparel evaluative cues" (both sustainable and non-sustainable) to develop hypotheses for further investigation.

2.2. Conceptual Model of Apparel Product Life Cycle

Based on various apparel studies (e.g., Rahman *et al.* 2008, 2009; Jin *et al.* 2010), it has been observed that consumers evaluate clothing using multiple product cues concurrently. These cues can generally be dichotomised into two groups, namely, intrinsic and extrinsic, tangible and intangible, concrete and abstract, functional and aesthetic, subjective and objective, psychic and physical, or utilitarian and hedonic. Whilst some of these terms are used interchangeably and the concepts are similar, defining and differentiating all these binary concepts is beyond the scope of this study. In this thesis, the focus will be on the intrinsic and extrinsic cues, with further elaboration provided in Chapter 3 regarding these product attributes. As shown in Figure 1, both sustainable and non-sustainable attributes have a significant impact throughout the clothing life cycle, encompassing the production stage (design, sourcing, and manufacturing), shopping stage (searching, assessing, and decision-making), consumption stage (using, experiencing and maintaining), and post-consumption stage (recycling, repurposing, and disposal).

During the production stage, fashion designers and manufacturers are responsible for product design and development, material sourcing and selection, as well as the adoption of

production methods and processes. It is important for them to provide innovative designs and solutions that align with consumers' evolving needs and aspirations. Consequently, fashion designers and producers bear the responsibility of carefully considering various product attributes, including the aesthetic and functional features, performance and sustainability. From this perspective, the following question should be posed: What production-/product-related attributes should be considered to deliver the optimal value and viable solution to stakeholders across the supply chain, including investors, fashion firms/houses, apparel manufacturers, distributors, retailers, and the end-users?

During the shopping stage, product attributes play a crucial role in the decision-making process. For example, attributes like price and brand name serve as guiding factors, especially when consumers are unfamiliar with or lack information about the products (Monroe, 2003). As Rahman et al. asserted in their study (2017; p. 798), "Consumers use brand name to help them to process and retrieve product information from their memories." In other words, product cues can serve as a proxy for product quality and value. In today's consumer market, purchases are rarely based on a single attribute or a singular feature. People often evaluate apparel products based on multiple attributes, including colour, style, fabric, price, brand name, and durability.

During the consumption stage, individuals exhibit varying degrees of product involvement. Certain clothing items in one's wardrobe may be perceived more favourably and use more frequently due to person preference such as product design and overall values encompassing functionality, aesthetics, experience, psychology, and sustainability. Shopping for and using clothing involves a complex interplay of numerous factors, as Rahman (2015) asserted in his study of hoodies, "People select certain clothing styles not only to express themselves and construct their identities, but also to fit into certain socio-cultural contexts, or to meet specific needs according to

the changing situations and circumstances. … This may imply that the appropriateness of use could enhance the wearer's physical and psychological comfort in public. (p. 116)" Thus, it is reasonable to suggest that individuals often seek different apparel cues to fulfill their needs and wants.

Apart from the stages of production, acquisition and consumption, it is also crucial to understand how individuals manage their worn-out, unworn or outdated garments in the post-consumption stage. During this stage, people may have different behavioural habits and practices to manage and organise their wardrobe. These practices may include creating additional storage space to accommodate new purchases (accumulation), regularly sorting and cleaning the wardrobe to create more space (disposal and donation) and minimising storage space through reduction and repurposing (buy less) (Banim & Guy, 2001; Gregson & Beale, 2004; Janigo & Wu, 2015). Similarly, individuals exhibit varying habits and routines when it comes to disposal behaviour (Goworek et al., 2012). Although there is an increasing awareness and concern about sustainability issues and environmental impacts, certain apparel products have a higher potential for recycling, repurposing or redesigning compared to others. Several factors contribute to this variation, such as the complexity of the garment (complicated design, mixed fibres), high or unjustifiable costs associated with recycling (making it unprofitable), and feasibility considerations (making certain processes almost impossible or potentially creating additional problems).

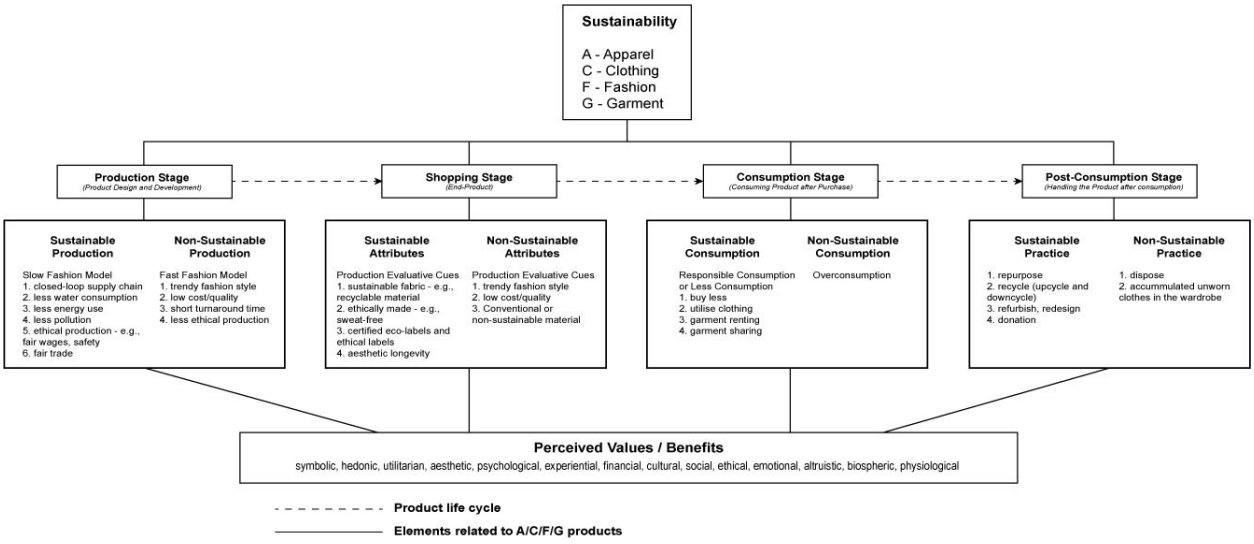


Figure 1. Conceptual model of A/C/F/G sustainability.

Luján-Ornelas and her colleagues (2020) divided the textile product life cycle comprises seven stages: fibre production, textile production, design, clothing production, commercialisation, use, and end-of-life. However, in the current study, the focus is on A/C/F/G, rather than textiles (e.g., spinning, weaving, knitting, printing and dyeing). As a result, fibre, yarn and textile production were not included in the conceptual model. As illustrated in Figure 1, the "design" and "clothing production" were combined and labeled as the "production stage". In other studies (Jiang et al., 2018; Ki et al., 2020), the term "pre-consumption stage" has been used for consumer research. In my study, with consumers as the primary focus, "pre-consumption" was adopted. Moreover, certain descriptors used in Luján-Ornelas et al.'s (2020) study were modified to align with the current topic. For instance, "commercialisation" was changed to "shopping stage", "use" was labeled as the "consumption stage", and "end-of-life" was labeled as the "post-consumption stage". Once this conceptual framework of four stages was established, key elements were identified and assigned to each stage based on (1) my knowledge and judgment, (2) the findings of the preliminary literature review, and (3) the relevance and appropriateness of each attribute.

Conducting a systematic literature review based on these four stages would provide a better understanding of fashion and sustainability within the context of the product life cycle.

2.3. Apparel Product Life Cycle – Sustainable and Non-Sustainable Aspects

As illustrated in the conceptual model (Figure 1), four stages of the product lifecycle were proposed, encompassing both sustainable and non-sustainable aspects. Nit is important to note that not all previous research studies on A/C/F/G have focused on sustainable practices. Many earlier apparel studies primarily focused on conventional approaches, such as aesthetic and functional aspects, rather than sustainable practices encompassing environmental, ethical and social aspects. This distinction is particularly evident in studies conducted before the twenty-first century. To unravel the intrinsic relationships and gain a deeper understanding, conducting a systematic literature review with a focus on sustainability becomes imperative. Furthermore, an in-depth literature review (Chapter 3) will delve into a specific topic encompassing both sustainable and non-sustainable attributes.

(1) A/C/F/G Production

In the production stage, A/C/F/G can be sourced and produced with either sustainable or non-sustainable practices.

Sustainable Production

- The adoption of a slow fashion business model emphasises sustainable practices such as a closed-loop supply chain, reduced water consumption and wastage, decreased energy use, minimised pollution, ethical production, fair wages and working conditions, workers' safety, and fair trade principles.

Non-sustainable Production

- The fast fashion business model emphasises trendiness and fashionability, low cost and price, and quick turnaround time, whilst placing less emphasis on sustainable practices, ethical production, and product quality and circularity.

According to several studies (Ji, 2007), manufacturers can enhance product value, reduce water and energy consumption, and minimise wastage by implementing a slow fashion business model and adopting closed-loop value chain approaches.

(2) A/C/F/G Shopping or Acquisition

During the shopping or acquisition stage, people often use various attributes (sustainable and non-sustainable) to evaluate a product and rationalise their purchases. Both types of attributes play a significant role in this stage.

Sustainable Attributes

- Product evaluative cues: sustainable fabrics (organic fibres, recyclable/reusable materials), ethical production (sweat-free), certified eco-labels, ethical labels; and aesthetic longevity

Non-sustainable Attributes

- Product evaluative cues: conventional/non-organic materials, brand name, price, functions/performance, and aesthetic appeal

(3) A/C/F/G Consumption

The way people approach consumption consume has undergone significant changes over the years. It is reasonable to assume that contemporary consumers are more mindful of the quality and sustainability of products compared to previous generations.

Sustainable Consumption

- Reduced consumption: buying less, investing in higher-quality items. utilising clothing for longer durations, garment renting; garment sharing, and engaging in collaborative consumption.

Non-sustainable Consumption

- Overconsumption: characterised by compulsive buying disorder, where individuals engage in excessive and unnecessary purchases.

(4) A/C/F/G Post-Consumption

During the post-consumption stage, various practices can be adopted for used products, including discarding, donating, repurposing, and recycling.

Sustainable Practices

- Repurposing, recycling (upcycling, downcycling), refurbishing/repairing, redesigning, vintage clothing, and donation.

Non-sustainable Practices

- Disposing of clothing items, and accumulating unworn clothing or junk in the wardrobe.

Whilst this model serves as a guide for my literature search, it is important to acknowledge that the list of sustainable and non-sustainable attributes presented here is not exhaustive and comprehensive. These attributes and keywords have been utilised for machine training purposes to facilitate the search for similar attributes and topics through text-mining techniques. Over time, text-mining technologies have advanced significantly, enabling the automatic categorisation and ranking of textual data based on relevance, surpassing traditional keyword-based searches.

To reiterate, this chapter employed a systematic literature review to examine the research trend of “fashion and sustainability.” Consequently, apparel studies that solely focused on non-

sustainable or conventional attributes were not included in this review. The next chapter will address and discuss research that specifically concentrates on non-sustainable attributes.

2.4. Research Trends - Systematic Literature Review, and Text Mining

Due to the rise of global environmental awareness and concerns, many journal articles related to "fashion sustainability" have been disseminated over the last 20 years, particularly between 2010 and 2021 (see Islam et al., 2021). According to Google Search Trends (2010-2021), the number of searches for "sustainable fashion," "fashion clothing" and "fast fashion" worldwide has increased tremendously since 2016, particularly "sustainable fashion" (see Figure 2).

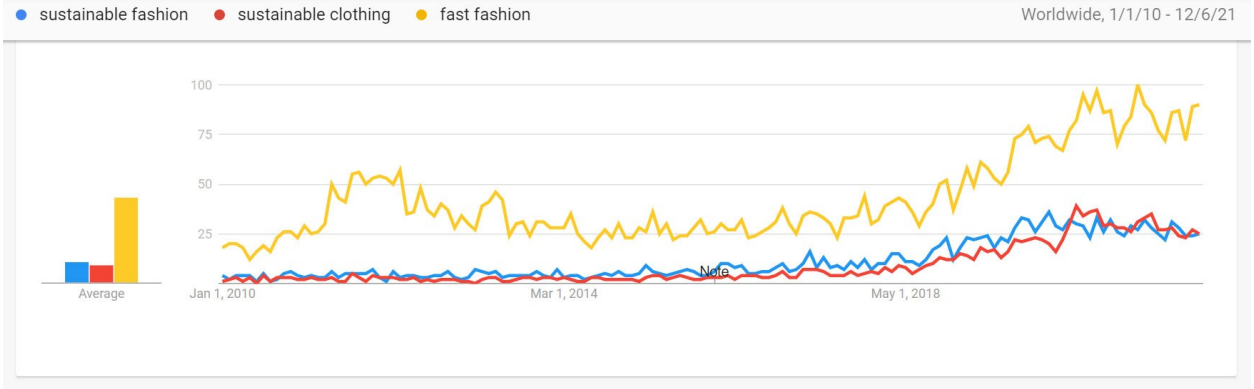


Figure 2. Google Trend Search from 2010 to 2021 based on 3 keywords.

Over the past decade, there has been a significant increase in the number of new fashion journals, along with a noticeable rise in the number of special issues focused on topics such as "sustainability in fashion and textiles," "sustainable development," "sustainable practices," and "green consumption." Notable additions to the field of "fashion" and "sustainability" journals include the *International Journal of Fashion Design, Technology and Education* (2008), *Journal of Global Fashion Marketing* (2010), *Fashion and Textiles* (2014), *International Journal of*

Fashion Studies (2014), *Fashion Practice* (2009), *Sustainable Production and Consumption* (2015), *Fashion, Style & Popular Culture* (2013), and *Clothing Culture* (2013), among others. This proliferation of scholarly research in the area of fashion sustainability can be attributed to the growing recognition of its importance. However, despite this wealth of research, many studies remain disconnected and fragmented due to their specific research objectives, focuses, and approaches (Tian et al., 2018). Conducting a systematic literature review can help identify key research themes, trends and developmental patterns, whilst also shedding light on the complexity of the field.

Meta-analysis and systematic reviews are often used interchangeably, but it is important to note that meta-analysis is always conducted within the context of a systematic review. Whilst these two research approaches share similarities and overlap, meta-analysis specifically involves "the statistical analysis of a large collection of analysis results from individual studies for the purpose of integrating the findings" (Glass, 1976). Both approaches offer objective and effective analytical results, facilitating the identification of prior research contributions and future directions. In essence, meta-analysis serves as a valuable tool for summarising, evaluating, and analysing quantitative research findings (Kirca & Yaprak, 2010).

In my thesis, I employed the systematic review approach to identify published academic literature pertaining to sustainable aspects of apparel, clothing, fashion, and garment (A/C/F/G[7]) across four key stages of the product life cycle: production, shopping, consumption, and post-consumption (as shown in Figure 1). This conceptual model was used guide and direct my

[7] The terms "fashion", "dress", "clothing/clothes", "apparel", "attire", "garments" and "costume" carry different meanings (Aspers and Godart, 2013; Kawamura, 2005), and they have been interpreted differently in different socio-cultural contexts and across disciplines. For example, the term "dress" is widely used in the research of fashion studies, culture, and history but rarely used in fashion marketing and consumer research. In this study, several keywords including "apparel", "clothing/clothes", "fashion" and "garment" were selected for literature search because these terms are more relevant for the study of fashion consumption.

literature search. To expedite the review, identification, and classification process, text mining techniques and visualisation tools were employed during the literature search and analysis.

Although systematic literature review is an effective method "to identify, appraise and synthesise all the empirical evidence that meets pre-specified eligibility criteria to answer a given research question" (Cochrane Library, 2021), the manual review, extraction and categorisation of information from a large amount of existing literature can be a daunting task. Thus, the current systematic literature review utilise both text mining techniques and bibliometric visualisation tools to enhance the identification and analytical process. As Hey and Trefethen (2003) and Huggett (2013) point out in their studies, the overwhelming amount of data, often referred to as the "data deluge," "information overload" and "filter failure" present an increasing challenge for conducting systematic review in the social science field. The traditional manual approach to systematic review becomes time-consuming, and difficult to manage in the light of the proliferation of textual information. Manual searching and screening of published literature and unpublished dissertations/theses can be fatigue-inducing and laborious. Many existing research methods and tools lack the capacity to handle such vast amounts of data. As Ananiadou et al. (2009; p. 511) asserts, "Complex systematic reviews can take more than a year to complete with up to half of that time being spent searching and screening hits." In summary, the utilisation of text mining techniques can help researchers reduce searching time, costs, and biases. In this study, text mining techniques were explored and utilised to extract and transform unstructured text into structured datasets for analysis.

However, it is important to acknowledge that text mining cannot completely replace human involvement, especially when dealing with complex tasks (Korhonen et al., 2012). Therefore, various techniques and research approaches were adopted in this study. Alongside text mining of

publications, content analysis was performed to facilitate the process of data classification, and visualization tools were employed for bibliometric analysis. Although content analysis may entail subjective judgment, this analytical process allows investigators and/or coders to ensure that the data (in this case, "publications") are classified in a way that aligns with the researcher's concepts or framework. Through the utilisation of various research methods and analytical tools, data triangulation can be achieved (Abbe et al., 2016). In essence, triangulation analysis enhances the reliability and validity of the data, whilst also complementing or reinforcing the findings derived from the employed methods.

As stated at the outset of this chapter, the goal of this systematic literature review is to acquire a comprehensive understanding of the research evolution, development, and emerging trends in field of fashion and sustainable consumption over the past decade. The review encompasses an eleven-year timeframe, spanning from 2010 to 2021. One of the primary purposes of this literature search and review was to identify, classify, and analyse all A/C/F/G articles related to sustainability throughout the lifecycle of apparel products. This includes the examination of both fashion production/design (from the producers' or practitioners' perspectives) and fashion consumption (from the consumers' or users' perspectives).

By conducting this literature search, I anticipate obtaining a comprehensive understanding of the number of articles that specifically address A/C/F/G sustainable production and consumption. Moreover, this process will facilitate the identification of key sustainable elements that are commonly considered throughout the A/C/F/G lifecycle – production → shopping (selection) → consumption → post-consumption.

2.4.1 Inclusion and Exclusion

2.4.1.1 Initial Search

As mentioned earlier, many new fashion journals were launched in the late 2000s and 2010s. Interestingly, Google analytics (Figure 2) has also revealed a growing interest in "fashion sustainability" since 2016. Considering these observations, it would be reasonable and logical to embark on an extensive literature review spanning from 2010 to 2021 in order to acquire a more profound comprehension of the latest research advancements to this specific field.

For the retrieval of pertinent research papers, Clarivate Analytics's Web of Science (WoS) was utilised as primary resource. Web of Sciences, with its inclusion of social sciences literature, makes it a more pertinent database for the current study in comparison to numerous others (Castillo-Vergara et al., 2018; Norris & Oppenheim, 2007). The search process involved scanning "all fields," which encompassed publication titles, affiliations, publishers, paper titles, author keywords, abstracts, and more. Despite its comprehensive nature, the search was focused exclusively on apparel, clothing/clothes, fashion and garment (A/C/F/G), deliberately excluding other consumer products such as mobile phones, automobiles, appliances, and electronics. It is worth noting that within the context of this study, all apparel products including footwear, fashion accessories (handbags, backpacks, gloves, etc.), beauty care, and cosmetics were considered, with clothing being the primary focus.

The literatures search was conducted using structured search strings consisting of topic-related keywords and Boolean[8] combinations of keywords: [fashion OR clothing OR clothes OR apparel OR garment] AND [sustainab*]. The application of these search criteria led to the

[8] Boolean operations or retrieval systems have been extensively utilised in systematic literature review research, as highlighted by Lee et al. (1993, p. 297) stated in their article "have been most widely used among commercially available IR systems."

identification of 4,971 research papers published within the years 2010 and 2021. WoS analysis revealed that 20.00% (n = 1,266) of the articles belonged to the category of "Green Sustainable Science Technology", followed by "Environmental Science" (18.52%, n = 1,172), "Environmental Studies" (13.22%, n = 837), and "Business" (10.93%, n = 692), as depicted in Figure 3.

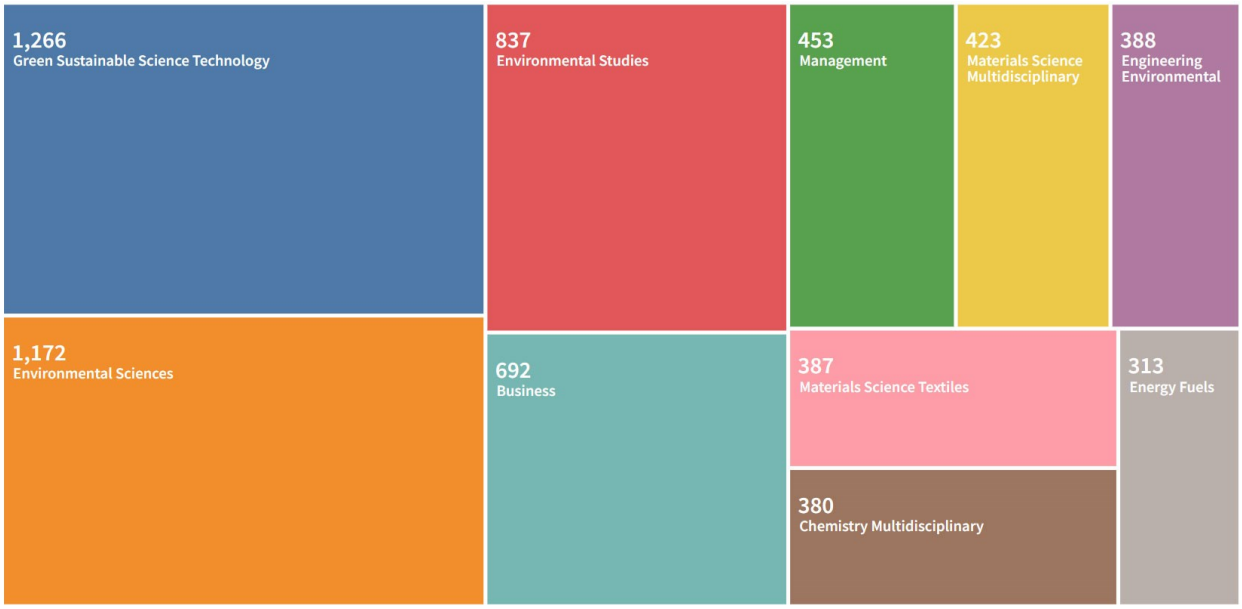


Figure 3. Visualisation of WoS categorisation. *(The visualization chart does not accurately represent the values of each entry as the areas are not proportionally scaled.)*

2.4.1.2 Stage 1 – First Round of Reviewing and Screening

A/C/F/G was used as the primary criterion for the initial search of relevant literature, and then a first-round screening was performed to ensure the selected publications were specifically related to A/C/F/G. To ensure the search results align with the current research scope and topic, a screening process was implemented. In this stage, only 860 publications related to A/C/F/G and sustainability were selected and retained for further analysis. The selected literature covers a wide range of disciplines, including fashion and clothing, consumer behaviour, design, education,

marketing, business, management, retailing, sustainability, and more. However, research centred around scientific and engineering disciplines or unrelated topics such as engineering sciences, textile chemistry, and textile engineering research (e.g., fibre science, textile engineering, textile production, nanotechnology, etc.) were excluded.

Although fashion and textiles are closely intertwined, it is important to note that the current research does not focus on textile engineering and production, as they fall outside the scope of this research. Instead, the primarily focus of this research revolves around cross-national consumer behvaiour and perceptions regarding different apparel cues, encompassing both sustainable and non-sustainable ones.

Apart from excluding literature from unrelated disciplines or topics, the current review also omits books, book chapters, book review articles, editorial materials, theses/dissertations, conference proceedings, working papers and public reports. The reason books, book chapters and conferences proceedings are not included in this study is that the Web of Science did not generate a comprehensive list of publications. The exclusion is unrelated to the quality of work; chapters from book can also provide valuable insights and serve as an important source of information. Moreover, only publications written in the English language were considered. A total of 77 publications written in languages other than English were excluded, which included 21 papers in Spanish, 18 in Portuguese, 8 in German, and various others.

Although many of the identified articles are relevant to A/C/F/G and sustainability, a significant portion of them focuses on “materials science” and “textile science and engineering” rather than apparel consumer behaviour in relation to sustainability. Therefore, a screening process was undertaken to narrow down the selection. After undergoing the review and screening, a total of 4,111 articles were removed from the dataset, leaving 860 papers for further review and analysis

in this stage (as indicated in Figure 4). These remaining articles were subsequently categorised according to the stages of the A/C/F/G lifecycle - production, shopping, consumption, and post-consumption, in order to grasp the general trends and research focuses of prior studies.

To categorise the publications into the product lifecycle stages, content analysis was employed. Text mining tools were also used to accelerate the search and identification process, as well as to transform unstructured text into structured datasets for analysis. As stated by Tkach (1998, p. 15) in an IBM white paper, various text mining tools can process "the Boolean condition efficiently, and it is easy to search several categories at once." The subsequent sections will provide further discussion on text mining, content analysis, bibliometric analysis and visualisation tools.

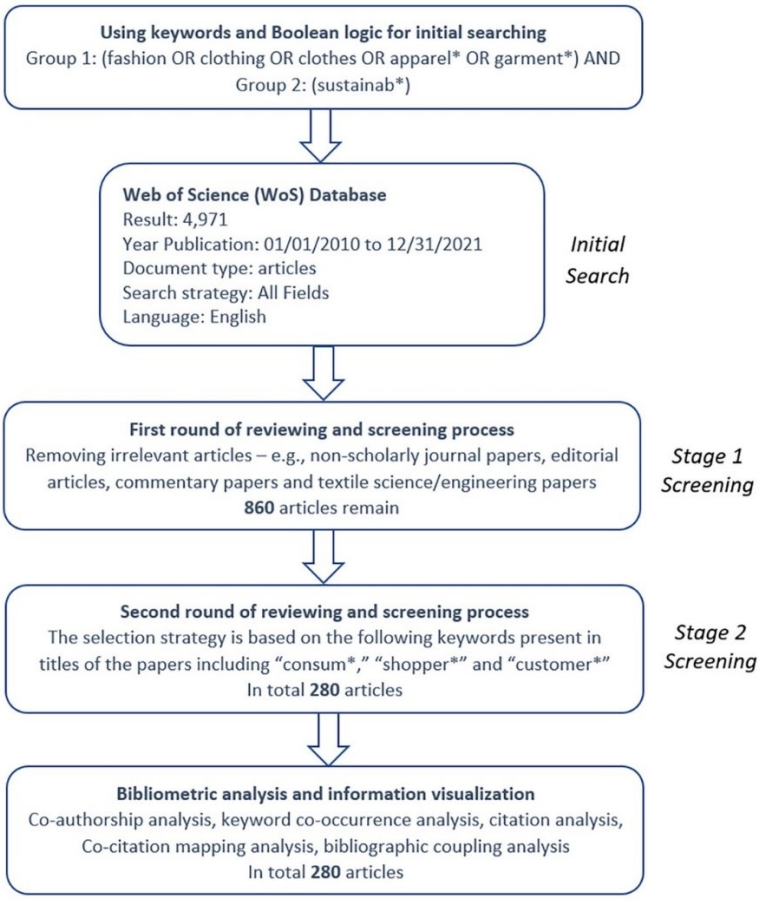


Figure 4. Summary of systematic literature review flow diagram.

2.4.1.3 Stage 2 – Second-round of Reviewing and Screening

In the initial round of screening, a total of 860 papers were selected for further review, covering a wide range of topics related to various stages of the fashion lifecycle, including "production," "shopping," "consumption," and "post-consumption." Since the primarily focus of the current study was to examine consumers' perspectives on shopping, evaluation, decision-making, and consumption behaviours, papers containing keywords such as "consumer(s)" and "consumption" were taken into consideration during the second round of screening. Additionally, based on previous experience and observations, I noticed that similar terms such as "customer(s)" "shopper(s)" and "buyer(s)" were also used in research studies, particularly within the field of retailing. Hence, the following Boolean keywords were identified for screening purposes: "consum*," "customer*," "shopper*" and "buyer*."

During the second round of screening, the titles of each paper were carefully scanned and reviewed to ensure their alignment with the research focus of the current study, which centres around three key areas: fashion, sustainability, and consumption. The findings presented in Table 1 revealed that the words "consum*" (n = 197) and "consumption" (n = 101) were frequently used words when studies investigated consumerism-related topics, followed by "customer*" (n = 14) and "shopper*" (n = 5). Interestingly, out of the 860 papers, none of them included the keyword "buyer*" in their titles, which is unexpected. As a result, 280 articles meeting these criteria were identified as relevant for further analysis. Some of these articles proved beneficial for developing hypotheses for empirical testing in Chapter 3, as they primarily focused on the consumers' perspective rather than from the producers' perspectives. To streamline the selection of articles for further review, I employed a "title" search approach. Since the search was based on the paper title,

it is important to note that the results may not encompass all papers related to "consumer" or "consumption." I recognised that certain articles may use keywords such as "H&M," "organic cotton" or "closed-loop economy" instead of "consumer," or "consumption." Therefore, I conducted screening based on the content analysis to ensure that essential articles were not overlooked. It is important to note that only the most relevant articles were thoroughly reviewed for the development of hypotheses in the next chapter. In other words, not all 280 articles were used for hypotheses development.

Keywords	Frequency of Occurrences
Consum*	298
Customer*	14
Shopper*	5
Buyer*	0

Table 1. Frequency occurrence related to consumption or consumerism.

2.5. Research Methods

2.5.1. An Overview of Text Mining

Feldman and Dagan (1995) introduced text mining (TM) or text analytics as a knowledge discovery tool, which has found wide application in numerous studies. For example, text mining has been employed for systematic literature review across various disciplines, encompassing medicine (Meystre et al., 2008), psychiatry (Abbe et al., 2016), mobile technologies (AbdelFattah et al., 2017), sustainability (Bach et al., 2019; Kim & Kim, 2017), fashion (Lang et al., 2020; Li et al., 2017; Li & Zhao, 2021; Rizun & Kucharska, 2017), customization research (Fogliatto et al., 2012) and information management (Rekik et al., 2018). Text mining serve as a potent analytical

tool capable of handling a large amount of literature and written text, thereby enhancing literature search and classification processes.

There are several compelling reasons or advantages for employing text-mining in systematic literature review:

1. It enables the identification, retrieval and extraction of key topics automatically and efficiently.
2. It facilitates the discovery of novel information and patterns from large text corpora.
3. Many text mining software options are user friendly.
4. The data obtained can be used for training, validation and predictions to improve generalization to a larger sample or population.
5. Text mining helps reduce processing time and minimises human error.

Text mining is closely associated with data mining and knowledge discovery techniques. It possesses the capability to retrieve information from diverse sources, encompassing structured data such as databases and unstructured data such as plain text documents. The utilisation of text mining can enhance the literature search process, enabling the identification, comparison, and interpretation of the occurrence of word occurrences within a language. It also facilitates the extraction and transformation of textual data into useful information and categories.

According to Miner et al. (2012), the key steps of TM can be summarized as follow: (1) creating a corpus, (2) preprocessing the corpus, (3) extracting knowledge, and (4) comparing and validating the results. Information retrieval (IR) plays a crucial role in searching, acquiring, and identifying information rather than performing data analysis. IR serves the purpose of obtaining relevant information from textual data such as PDF articles, which includes paper title, abstract, author keywords and content. Moreover, IR helps mitigate information overload by eliminating redundant, irrelevant, or unwanted information.

Once the information retrieval and extraction are complete, a classification model can be developed using various algorithms, such as Support Vector Machine (SVM), Regression, K-Nearest Neighbours, Naïve Bayes, Neutral Networks, Decision Trees, Association Rule-based, and/or Boosting. Text classification, an application of machine learning, involves training the machine with data from predefined categories to enable automatic classification of new textual information.

A previous study (Fung, 2001) reported that clustering is a process of grouping fuzzy information (words and phrases) with similar characteristics into the same cluster. This helps in improving organisation, management, navigation, and filtering of data. In essence, data within the same cluster are more similar to each other compared to data in other clusters. Among the numerous clustering techniques available, K-means is recognised as one of the popular and effective methods.

2.5.2. Keyword Search, Retrieval and Categorisation

Given the extensive volume of articles on "fashion and sustainability," text mining techniques and Natural Language Processing (NLP) technologies were used for this systematic literature review analysis. In the first round of reviewing and screening, keyword extractor models were used to extract key terms from the titles, author keywords, and abstracts of the publications, facilitating the identification of popular topics. Additionally, the researchers enhanced a transformer-based language model to classify the papers based on the research trends, author affiliations, geographic locations, and performed various text network visualisation analysis. For example, visualisation tools including VOSviewer and CitNetExplorer were used in this study to present the findings.

The bibliometric analysis encompassed co-citation analysis (Jeong et al., 2014; Small, 1973), bibliographic coupling (Habib & Afzal, 2019; Kessler, 1963), co-occurrence of author keywords, and collocation analysis (Ignatow & Mihalcea, 2016) can be performed. These analyses enabled the exploration of trends in publications, citations, authors, keywords, and countries, with network maps serving as visual representations of these trends.

Clarivate Analytics's Web of Science (WoS) was widely used in the systematic literature review to retrieve relevant research papers. This comprehensive database offers a broad array of data-intensive articles across diverse knowledge domains. In the current study, WoS was employed to search for pertinent papers and extract their metadata in plain text format. The exported tags included authors' names and affiliations, paper titles, journal titles, keywords, abstracts, cited references and publication years. As indicated in Figure 4, a total of 4,971 papers were retrieved from WoS databases. The data crawling procedure involved concatenating the known title with a public query searching Uniform Resource Locator (URL). This process commenced by fetching the synthesised URL to acquire the primary key paperID of the specific paper in the database, and then the metadata were searched using the unique paperID. Using this method, the metadata of all relevant papers were collected, followed by a descriptive analysis to identify the recent research trends and pattern relating to various facets of "fashion and sustainability". Although text mining can swiftly identify and categorise papers into different groups, manual content analysis is still necessary to ensure the accuracy of categorisation. In some cases, the frequency of keyword occurrence may not accurately reflect the research focus or intended meaning. For example, the keyword "brand" might encompass aspects such as branding strategy, brand positioning, brand assets, brand identity but may not be significantly related to fashion consumption or consumerism.

Apart from analysing publication keywords, the study also identified and categorised the geographic focus of each publication (e.g., eastern/western and developed/developing nations). Moreover, the type of research (e.g., case study, systematic literature review), and the employed research method (e.g., qualitative, quantitative, or mixed method) were revealed. This analysis enables the identification of research trends and gaps. In addition, the findings of this systematic literature review can offer valuable information, including narrowing the scope for conducting a more in-depth literature review in the next chapter. I believe that this information holds significance not only for fashion scholars and marketers involved in the study but also others in the field.

2.5.3. Keyword Extraction - RAKE

Keywords can be defined as a sequence of one or multiple words (a phrase) that concisely encapsulates the essence of a document's content. They are extensively used in many studies to formulate queries within information retrieval (IR) systems (Rose et al., 2010). Keyword extraction, also known as keyword detection or keyword analysis, is a text analysis method that automatically extracts the most frequently used and/or significant keywords found in a particular document. This method helps in summarising the content of the text and identifying the key topics discussed. In this research, I utilise a statistical keyword extraction algorithm called Rapid Automatic Keyword Extraction (RAKE) in Stage 1.

- Extraction or content words = Corpus – stopwords - delimiters[9]

[9] In terms of computer programming language, the purpose of a delimiter is to inform a system where to begin or end reading (parsing) the text. In English or western phonetic language, the delimiters are more obvious than in eastern languages such as Chinese.

Every journal paper comprises a diverse range of words that can be divided into sequences of contiguous words by specified word delimiters. RAKE is a novel, efficient, unsupervised and domain-independent tool used for extracting keywords/phrases from the textual content of documents, such as abstracts. This process involves parsing the text into a collection of candidate keywords[10], as illustrated in Figure 5. Once the candidate keywords have been identified from the text, the score of each keyword is calculated by considering the degree and frequency of word co-occurrences. This calculation involves three metrics: *word degree (deg(w))*, *word frequency (freq(w)),* and the *ratio of degree to frequency (deg(w)/freq(w))*.

during – past decades – fast fashion – emerged significantly – apparel industry – originated – u.s – 1980s – fast fashion refers – designs – move swiftly – runway – stores – capture – latest trend – emergence – sector worldwide – increasing number – researches – emphasized – aspects – management – marketing – evaluated – impacts – internal – external factors – general performances – taking – multidimensional perspective – research provides – depth analysis – performances – major fast fashion retailers – achieve – goal – evaluate – fast fashion quadrangle – ffq – includes fast retailing – inc – ltd – gap inc – hennes&maurtiz – h&m – inditex group – zara

Figure 5. Sample of candidate keywords parsed from an abstract.

In addition to examining the title and keywords of a paper, it is important to scan its abstract because the terms apparel, clothing/clothes, fashion and garments (A/C/F/G) may not appear in the paper titles. For instance, some articles might include terms like "CSR", "collaborative consumption", "zero-waste design", "organic T-shirts," "recyclable denim jeans" and "green retailers" in the titles without explicitly mentioning A/C/F/G. However, the abstracts could

[10] "A keyword candidate is a phrase that is between two stopwords or phrase delimiters" (Godec, 2021). It is worth noting that removing stopwords (commonly used words such as "a", "an", "the", and "that") or phrase delimiters (punctuation characters) does not affect the overall meaning of a phrase or message.

mention the terms like “fashion consumers” “clothing store” and “apparel industry. Moreover, in certain cases, fashion brand or company names like Zara, H&M, GAP Inc., Patagonia, Boohoo, Shein, etc., are used in the paper titles instead of A/C/F/G. Although text mining is capable of identifying and quantifying the frequency of keyword occurrences, it has limitations when it comes to fully interpreting all the data in an ideal and accurate manner. Therefore, alongside text mining, manual checking and analysis are deemed necessary to ensure a comprehensive understanding of the information.

2.5.3.1 Word Cloud

A word cloud is visualisation technique for text data where the most frequently occurring word is displayed in the largest font size. In the previous section, the RAKE algorithm was employed to assess the significance of each keyword identified from the previous literature. Using the Python library “Word-Cloud” (PyPi, 2022), a diagram (Figure 6) was created with the RAKE score representing the weight of each keyword. To enhance visual presentation, the words in the Word Cloud were assigned colours using a qualitative colour map called “Dark2” provided by the Python plotting library, “Matplotlib.”

However, it is important to note some drawbacks or limitations of Word Clouds, Firstly, they do not display multi-word phrases. Secondly, they do not provide explanations for the relationship between words. Thirdly, they do not group words with similar meanings (e.g., “clothing” and “clothes”). Lastly, they lack contextual information (Atenstaedt, 2021). Although Word Clouds cannot fully illustrate the relationship between words, they can serve as indicators to provide a high-level overview of the context or topic. As depicted in Figure 6, related words are positioned closer to the larger keywords in a semantic sense. For example, words such as

"organic," "comfort," "colour," "cost," 'child labour," and "made in" are placed in proximity to the keyword "material."

Figure 6. Word cloud: the occurrence of keywords associated with the topic of "fashion and sustainability."

It is essential to emphasise that the word cloud shown above exclusively displays the keywords associated with apparel attributes. These keywords can be served as a foundation for developing hypotheses in Chapter 3 for empirical testing to assess their relative significance in comparison to others, particularly in context of product evaluation. Although this word cloud offers useful information into the frequency occurrence of diverse attributes related to sustainable and non-sustainable aspects of clothing, it is imperative to acknowledge and address its inherent limitations and shortcomings.

2.5.3.2 Stage 1 – Identifying and Enhancing Data Quality

After identifying 860 papers in Stage 1, RAKE was employed to conduct a comprehensive scan of each PDF document, including paper title, author keywords, abstract and content. The scan aims to identify significant keywords related to product attributes, specifically focusing on both apparel sustainable and non-sustainable cues, for further analysis. Scanning the entire document is necessary because the title, author keywords and abstract lack sufficient space to enumerate all the investigated attributes. In many cases, intrinsic evaluative cues alone encompass a wide array of attributes, such as fabric, colour, style, garment fit, durability, comfort, ease of care, versatile, quality, and stretchability. Put simply, conducting a full scan ensures that the product cues are not overlooked or left undiscover. Subsequently, a word cloud of apparel attributes was generated and presented in Figure 6, as discussed in the preceding section.

To conduct data review and analyse manually, content analysis was used as a guiding method to analyse the identified keywords within their respective contexts. Content analysis is a systematic research tool for identifying, categorising, and generating reliable findings from literature review (Seuring & Gold, 2012). Both qualitative and quantitative approaches and open coding techniques were used to analyse the content of each paper. This process entails reading and comprehensive the selected papers and relevant keywords within their specific context. It also involved assigning codes to label the data, making notes, and identifying the emergent themes along the way (Rahman et al., 2016).

Data coding and categorization are important processes. Therefore, I had several discussions with my supervisor (Dr. Benjamin Fung) prior to the analysis and interpretation phase. As recommended by other researchers (Kassarjian, 1977; Montemurro & Gillen, 2013; Spiggle, 1994), this kind of discussions usually involve two independent coders, and through open dialogue,

a consensus was reached on how to effectively organise and interpret the data. Following the initial coding process, the coder revisited the datasets to identify and code sub-themes within the nodes. For example, sub-themes such as non-sustainable product cues, sustainable product cues, and sustainable production cues were identified and coded.

- Non-sustainable Apparel Cues (NAC): (1) psychic (Psy) or aesthetic cues – including colour, garment fit, style/design, fabric; (2) physical (Phy) or functional cues – such as durability, comfort, and garment fit, among others.
- Sustainable Apparel Cues (SAC): recyclable clothing, certified eco-label, certified ethical label
- Sustainable Production Cues (SPC): less energy usage, energy saving, less water usage, no child labour, fair wages, worker safety, no animal skin use, and mitigation of air pollution

Based on the keyword occurrences depicted in Word Cloud (Figure 6) and drawing from my previous research experience and knowledge, a variety of sustainable and non-sustainable cues related to apparel were identified for further analysis. During the content analysis, I observed that certain keywords might receive excessive weight or be overemphasised due to their overall frequency. For example, the word "brand" may appear multiple times in the title, author keywords, abstract and content of a paper (e.g., brand extension, brand knowledge, brand positioning, perceived brand value), but not all instances necessarily pertain to product attributes or how consumers use the "brand" cue to guide their purchasing decisions. Additionally, multiple counting of the same word can inflate or amplify its significance.

To mitigate overemphasis of keywords, I used an approach where multiple occurrences of the same keyword within a paper were treated as a single occurrence. I prioritised the relevance of

keywords to the research topic rather than their frequency. By doing so, I focused on the keywords that were directly connected to the subject matter, allowing for a more meaningful analysis.

This approach enabled me to determine the number of publications that focused on or investigated specific product attributes during the period from 2010 to 2021. As indicated in Appendix 2, the most extensively studied and discuss product attribute was style (n =71), followed by price (n = 63), quality (n = 58) and fabric/materials (n = 56). Regarding sustainable product cues, the attribute that garnered the most attention and discussion was energy usage/consumption (n = 47), followed by water usage/consumption (n = 41), and certified labels including all ethical/eco-labels (n = 41). It is important to note that all the chosen publications are specifically related to the topic of "fashion and sustainability." Thus, many studies did not include colour and comfort as investigated cues. However, in cases where the studies focus on fashion or clothing without considering sustainability aspects, colour and comfort are often included among a wide array of evaluative cues for empirical testing (see Appendix 3). As indicated in Appendix 3, a significant number of earlier studies on apparel primarily or exclusively focused on non-sustainable cues, incorporating both comfort and colour for empirical investigation. Hence, it is logical and justifiable to include these two intrinsic cues in the present study.

2.6. Results

2.6.1. Stage 1: Descriptive Findings based on 860 Data

2.6.1.1 Descriptive Analysis

After removing the duplicated and irrelevant papers, 860 papers remained in the dataset for descriptive analysis, providing insights into recent research trends and focuses. Figure 7 illustrates a significant surge in the number of publications on "fashion and sustainability" from 20 papers in

2010 to 171 papers in 2021. Notably, there was a substantial increase of approximately 28% from 2020 to 2021, underscoring the sustained interest and attention of researchers in this field.

These findings demonstrate the prevalence of "fashion and sustainability" as a subject of interest among researchers. The relevant papers (n = 860) were identified from 145 journals across different disciplines. Among these journals, 74 (51%) published only one paper, 57 (39.3%) published 2-10 papers, and 14 journals (9.7%) published more than 10 papers between 2010 and 2021. Figure 8 reveals that out of the 14 journals with higher publication numbers, eight belong to the category of "fashion and textiles," three are categorised as "consumer and retail," two fall under "sustainability," and one is classified as "design."

Remarkably, *Sustainability* journal has published the highest number of papers (n = 107) related to "fashion and sustainability" in the past 11 years. It is followed by the *Journal of Fashion Marketing and Management* (n = 87) and *Journal of Cleaner Production* (n = 63).

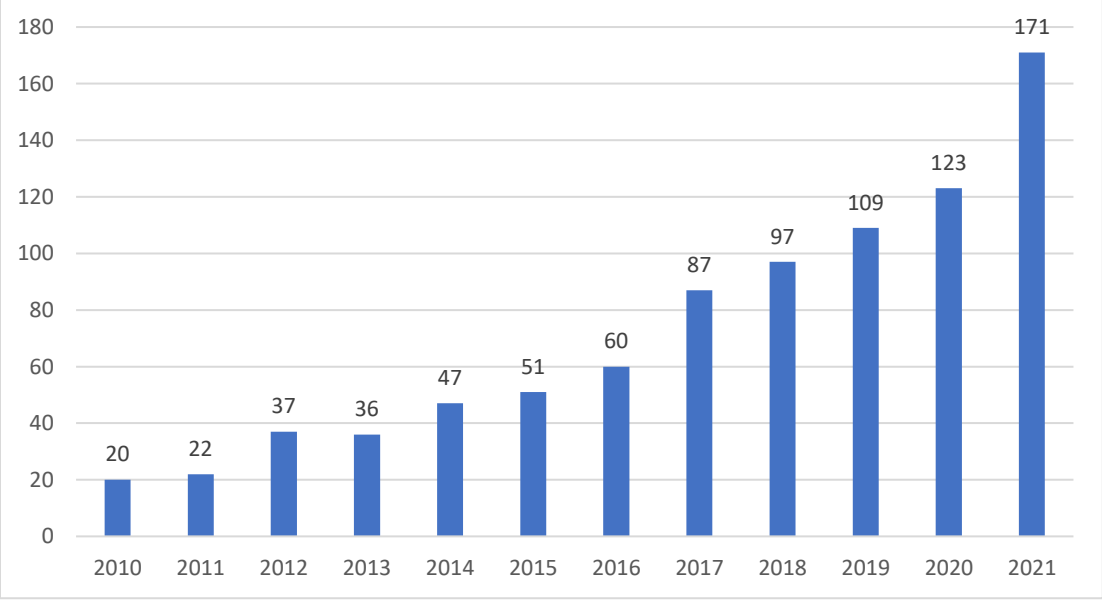


Figure 7. Number of papers published each year from 2010 to 2021.

Figure 8. Journals published more than 10 papers from 2010 to 2021.

Among the 860 papers analysed, 750 publications had one or two keywords (apparel, clothing/clothes, fashion, garment or A/C/F/G) included in their title, as shown in Table 2. This means that 110 publications did not use these keywords (A/C/F/G) in the paper title. Therefore, scanning keywords and abstracts provided by the authors becomes necessary. For example, some authors may employ alternative keywords or phrases like "corporate social responsibility "(CSR)," "H&M", "ZARA", "organic T-shirt", "zero-waste design", "green retailer", or "collaborative consumption" in their title, and the research is related to "fashion and sustainability."

The findings presented in Table 3 reveal that 346, 228, and 27 papers employed quantitative, qualitative, and mixed-method approaches, respectively. Moreover, apart from these three primary research approaches, other methods such as the experimental design approach and practice-led

research were also employed. Additionally, Table 3 reveals that out of the papers analysed, 93 were case studies, 35 were systematic literature reviews, 13 were other review papers, and 6 were conceptual papers. Notably, the number of "systematic literature review" papers have experienced growth since 2016, with the exceptional of 2019, as shown in Figure 9.

Keyword(s) Appear in the Paper Title	Number of Occurrence
Only "Fashion"	402
Only "Apparel"	152
Only "Clothing/Clothes"	120
Only "Garment"	18
Both "Clothing/Clothes" and "Fashion"	24
Both "Fashion" & "Apparel"	26
Both "Clothing/Clothes" and "Apparel"	2
Both "Fashion" and "Garment"	6
Total	750

Table 2. Number of occurrences of A/C/F/G in the title.

Research Approaches & Types of Paper	Number of Papers
Research Approach	
Quantitative	346
Qualitative	228
Mixed Methods	27
Types of Paper	
Case Study	93
Systematic Literature Review	35
Conceptual Paper	6
Other Review Paper (e.g., critical review)	13

Table 3. Research approaches and types of paper.

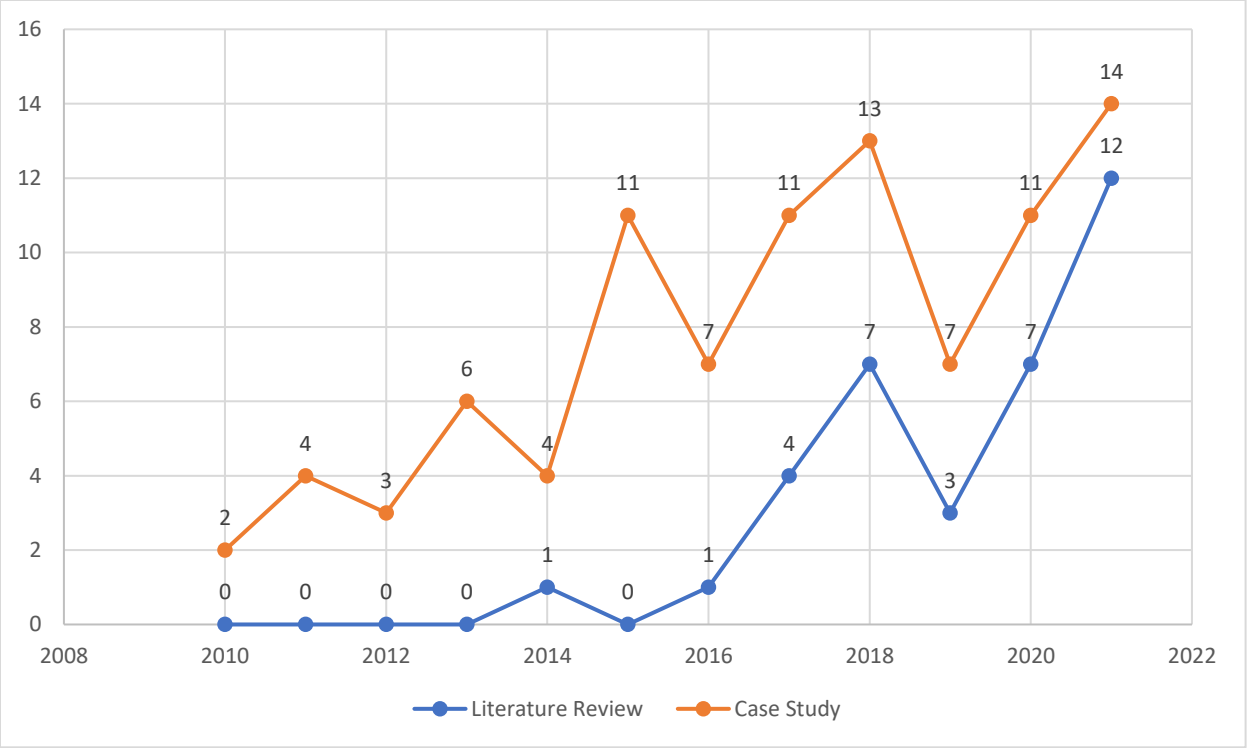


Figure 9. Case study and systematic literature review papers published from 2010 to 2021.

2.6.1.2 Case Study Papers

Regarding case study papers, some research focused on a single topic or company, whilst others examined multiple topics or companies. It is worth noting that some case studies emphasise sustainable production, supply chain or CSR rather than fashion organisations. Moreover, due to confidentiality and anonymity concerns, not all researchers disclosed the company or brand names in their article.

Out of all the case studies conducted on fashion companies and organisations, only 33 papers revealed the names of the companies. Among these, 23 papers focused on a single company, whilst 10 papers examined multiple companies, as illustrated in Table 4. The top four investigated companies over the 11-year period between 2010 and 2021 were H&M (n = 8), Inditex/Zara (n =

6), Gap Inc. (n = 3), and Nudie Jeans (n = 3). These findings suggest that a significant portion of previous case-study research primarily focused on western fast-fashion companies. Interestingly, Fast Retailing[11] in Japan was researched twice within the same period, apart from the western fashion companies.

Based on these findings, it is reasonable to conclude that many case studies were designed to explore sustainable practices and development from the perspectives of fashion companies, particularly in the West. However, it is equally important to understand consumers' perspectives and perceptions when it comes to apparel shopping and purchasing. Therefore, this study primarily focuses on apparel consumers from a cross-national perspective.

Company (origin or head quarter)	Author(s)	Year
Case Studies of Single Company		
1. H&M (Sweden)	Javed et al.	2020
2. H&M (Sweden)	Li et al.	2014
3. H&M (Sweden)	Bonilla et al.	2019
4. H&M (Sweden)	Shen	2014
5. ZARA / Inditex (Spain)	Aftab et al.	2018
6. ZARA / Inditex (Spain)	Gheorghe & Matefi	2021
7. ZARA / Inditex (Spain)	Esbeih et al.	2021
8. Maison Briz Vegas (Australia)	Binotto & Payne	2017
9. Nubi (S. Korea)	Ma	2021
10. Rant Clothing (Australia)	D'Souza	2015
11. MUD Jeans (The Netherlands)	Thatta & Polisetty	2020
12. Eileen Fisher (USA)	Curwen et al.	2012
13. Nudie Jeans Co. (Sweden)	Egels-Zandén & Hansson	2016
14. GAP Inc. (USA)	Arrigo	2013
15. Savile Row Company (UK)	Shih & Agrafiotis	2020
16. Nike (USA)	Fung et al.	2020
17. Doodlage (India)	Mishra et al.	2021
18. People Tree (UK)	Goworek	2011
19. Patagonia (USA)	Wang & Shen	2017
20. VAUDE (Germany)	Peters & Simaens	2020

[11] Fast Retailing was founded by Tadashi Yanai in 1963 and the first UNIQLO store was launched in 1984 in Hiroshima Japan. Fast Retailing operates multiple fashion brands including UNIQLO, GU, J Brand, Princesse Tam-Tam, and Theory. According to Gestal and Garcia (2019), UNIQLO surpasses H&M and became the second-largest fashion retailer in the world.

21. Vigga (Denmark)	Ræbild & Bang	2017
22. Bhalo (Bangladesh)	Khan	2019
23. Filippa K. (Sweden)	Kant Hvass	2015
Case Studies of Multiple Companies		
1. Gap Inc. (USA), Levi's Co. (USA), H&M (Sweden), Benetton Group (Italy), Fast Retailing (Japan), E-land Group (South Korea)	Woo & Jin	2016
2. H&M (Sweden) and ZARA (Spain)	Mo	2015
3. Country Road (Australia) & Billabong (Australia)	Payne	2014
4. Nike (USA) & Levi-Strauss (USA)	Doorey	2011
5. Rent the Runway (USA) & Gwynnie Bee (USA)	Clube & Tennant	2020
6. KappAhl (Sweden), Polarn O. Pyret (Sweden) & Nudie Jeans (Sweden)	Solér et al.	2015
7. Stella McCartney (UK) & Kering (France)	Yang et al.	2017a
8. H&M (Sweden), KappAhl (Sweden), Lindex (Germany), Gina Tricot (Sweden), Indiska (Sweden), Filippa K. (Sweden), Boomerang (Sweden), UFTD (Sweden), Nudie Jeans (The Netherlands)	Stål & Jansson	2017
9. Zara (Spain), Gap Inc. (USA) & H&M (Sweden)	Arrigo	2010
10. Marks & Spencer, Next, Primark, Arcadia Group, TK Maxx, New Look, Matalan, B.H.S., Peacock Group, Aurora Fashions (all UK-based companies except TK Maxx)	Jones et al.	2010

Table 4. Case study of single or multiple companies published from 2010 through 2021.

2.6.1.3 Prior Systematic Literature Review Papers

In addition to case study research, 35 "systematic literature review" papers were identified, as shown in Table 5. These papers were all published within the last eight years from 2014 to 2021. The topics covered in these papers include "sustainable development/practice" (Islam et al., 2021; Liu et al., 2021; Mukendi et al., 2020; Rotimi et al., 2021), "circular fashion/economy" (de Aguiar Hugo et al., 2021; Hultberg & Pal, 2021; Jia et al., 2020; Ki et al., 2020; Shirvanimoghaddam et al., 2020; Wagner & Heinzel, 2020), "recycling" (Wagner & Heinzel, 2020; Xie et al., 2021), "retailing" (Yang et al., 2017b), "life cycle" (Jutidamrongphan et al., 2021; Luján-Ornelas et al., 2020; Rotimi et al., 2021), "supply chain" (Fung et al., 2021; Köksal et al., 2017; Nayak et al., 2019; Rafi-Ul-Shan et al., 2018; Sirilertsuwan et al., 2018), "sustainable fashion business" (Hakan et al., 2016; Nguyen et al., 2021; Thorisdottir & Johannsdottir, 2019), "CSR" (Luque & Herrero-Garcia, 2019; White et al., 2017), "willingness to pay for sustainable apparel" (Tey et al., 2018), "reused-based clothing" (Paras et al., 2018), "fast fashion" (Stenton et al., 2021), "pro-

environmental behaviour" (Udall et al., 2020) and "collaborative consumption" (Arrigo, 2021; Becker-Leifhold & Iran, 2018). Although several systematic literature review studies (as shown in Table 5) have examined the collective knowledge of sustainable practices in the fashion and textile industry, there has been limited investigation into (non)sustainable apparel attributes. Numerous researchers (Dibb, 2001; Gandhi and Kaushik, 2016; Malhotra et al., 2002) have revealed the shifting landscape of the consumer market, highlighting a significant increase in socially and environmentally responsible consumption among younger consumers, including those from the Generation Z and Millennial segments. Therefore, it is important to identify the key sustainable trends to attain a deeper understanding of the role sustainable cues play in today's consumer market. Recognising the limitations of previous research, the current study aims to enrich our understanding of fashion sustainability through a systematic literature review of recent journal publications, providing an updated and comprehensive analysis. Furthermore, the findings of this review will offer evidence and valuable insights to guide a more in-depth literature review in the following chapter.

	Author(s)	Year	Journal Title	Paper Title
1.	Arrigo	2021	*Journal of Cleaner Production*	Collaborative consumption in the fashion industry: A systematic literature review and conceptual framework
2.	de Aguiar Hugo et al.	2021	*Sustainability*	Can Fashion Be Circular? A Literature Review on Circular Economy Barriers, Drivers, and Practices in the Fashion Industry's Productive Chain
3.	Fung et al.	2021	*International Journal of Production Economics*	Sustainable product development processes in fashion - Supply chains structures and classifications
4.	Henninger et al.	2021	*Journal of Cleaner Production*	Collaborative fashion consumption – A synthesis and future research agenda
5.	Hultberg & Pal	2021	*Sustainable Production and Consumption*	Lessons on business model scalability for circular economy in the fashion retail value chain - towards a conceptual model
6.	Rotimi et al.	2021	*Sustainability*	Towards a conceptual framework of sustainable practices of post-consumer textile waste at garment end of Lifecycle: A systematic literature review approach
7.	Islam et al.	2021	*Journal of Fashion Marketing and Management*	Mapping environmentally sustainable practices in textiles, apparel and fashion industries: a systematic literature review

8.	Jutidamrongphan et al.	2021	*Autex Research Journal*	Eco-fashion designing to ensure corporate social responsibility within the supply chain in fashion industry
9.	Liu et al.	2021	*Environment, Development and Sustainability*	Microfiber pollution: an ongoing major environmental issue related to the sustainable development of textile and clothing industry
10.	Nguyen et al.	2021	*Social Responsibility Journal*	Enhancing sustainability in the contemporary model of CSR: a case of fast fashion industry in developing countries
11.	Stenton et al.	2021	*Energies*	From Clothing Rations to Fast Fashion: Utilising Regenerated Protein Fibres to Alleviate Pressures on Mass Production
12.	Xie et al.	2021	*Sustainability*	A Systematic Literature Review for the Recycling and Reuse of Wasted Clothing
13.	Ki et al.	2020	*Corporate Social-responsibility and Environmental Management*	How fashion can achieve sustainable development through a circular economy and stakeholder engagement: A systematic literature review
14.	Luján-Ornelas et al.	2020	*Sustainability*	A life cycle thinking approach to analyse sustainability in the textile Industry - A literature review
15.	Mukendi et al.	2020	*European Journal of Marketing*	Sustainable fashion: current and future research directions
16.	Udall et al.	2020	*Journal of Consumer Behaviour*	How do I see myself? A systematic review of identities in pro-environmental behaviour research
17.	Wagner & Heinzel	2020	*Sustainability*	Human perceptions of recycled textiles and circular fashion: A systematic literature review
18.	Jia et al.	2020	*Journal of Cleaner Production*	The circular economy in the textile and apparel industry: A systematic literature review
19.	Shirvanimoghaddam et al.	2020	*Science of the Total Environment*	Death by waste: Fashion and textile circular economy case
20.	Luque & Herrero-Garcia	2019	*Corporate Social-responsibility and Environmental Management*	How corporate social (ir)responsibility in the textile sector is defined, and its impact on ethical sustainability: An analysis of 133 concepts
21.	Nayak et al.	2019	*Journal of Cleaner Production*	Recent sustainable trends in Vietnam's fashion supply chain
22.	Thorisdottir & Johannsdottir	2019	*Sustainability*	Sustainability within fashion business models - A systematic literature review
23.	Becker-Leifhold & Iran	2018	*Journal of Fashion Marketing and Management*	Collaborative fashion consumption – drivers, barriers and future pathways
24.	Desore & Narula	2018	*Environment, Development and Sustainability*	Microfiber pollution: an ongoing major environmental issue related to the sustainable development of textile and clothing industry
25.	Paras & Curteza	2018	*Research Journal of Textile and Apparel*	Revisiting upcycling phenomena: a concept in clothing industry
26.	Paras et al.	2018	*The International Review of Retail, Distribution and Consumer Research*	Systematic literature review to develop a conceptual framework for a reuse-based clothing value chain
27.	Tey et al.	2018	*Journal of Global Fashion Marketing*	Factors influencing willingness to pay for sustainable apparel: A literature review
28.	Rafi-Ul-Shan et al.	2018	*International Journal of Retail & Distribution Management*	Relationship between sustainability and risk management in fashion supply chains: A systematic literature review

29.	Sirilertsuwan et al.	2018	*The International Journal of Logistics Management*	Proximity manufacturing for enhancing clothing supply chain sustainability
30.	Aftab et al.	2017	*International Journal of Business and Management*.	Postponement Application in the Fast Fashion Supply Chain: A Review
31.	Köksal et al.	2017	*Sustainability*	Social Sustainable Supply Chain Management in the Textile and Apparel Industry—A Literature Review
32.	White et al.	2017	*Corporate Social-responsibility and Environmental Management*	CSR research in the apparel industry: A quantitative and qualitative review of existing literature
33.	Yang et al.	2017b	*Sustainability*	Sustainable retailing in the fashion industry: A systematic literature review
34.	Hakan et al.	2016	*Sustainability*	From a Systematic Literature Review to a Classification Framework: Sustainability Integration in Fashion Operations
35.	Laitala	2014	*International Journal of Consumer Studies*	Consumers' clothing disposal behaviour - a synthesis of research results

Table 5. Systematic literature review papers published from 2014 through 2021.

2.6.1.4 Geographic Information

To comprehensively understand the global distribution of research on "fashion and sustainability," it is imperative to review both the affiliation of the lead author and the geographic location where the research was conducted. In certain cases, the first author may be affiliated with an institution in North America, whilst the study itself was conducted in Asia. This review aims to document the location of the research study and the number of publications by country and region, with the primary objectives being to identify current research trends, assess the geographic distribution of studies, and pinpoint research gaps.

In terms of the country affiliation of the first author, the majority of previous studies were led by researchers from the United States (n = 241), followed by the United Kingdom (n = 102), China including Hong Kong (n = 75), South Korea (n = 55), Germany (n = 38), Italy (n = 40) and Sweden (n = 36). As depicted in Figure 10, recent research has predominantly been led by researchers affiliated with European institutions (n = 328) and North American institutions (n =

262). In contrast, there have been a smaller number of studies led by researchers in Asia (n = 190), Oceania (n = 39), the Middle East (n = 17), South America (n = 16), and Africa (n = 8) from the period 2010 to 2021.

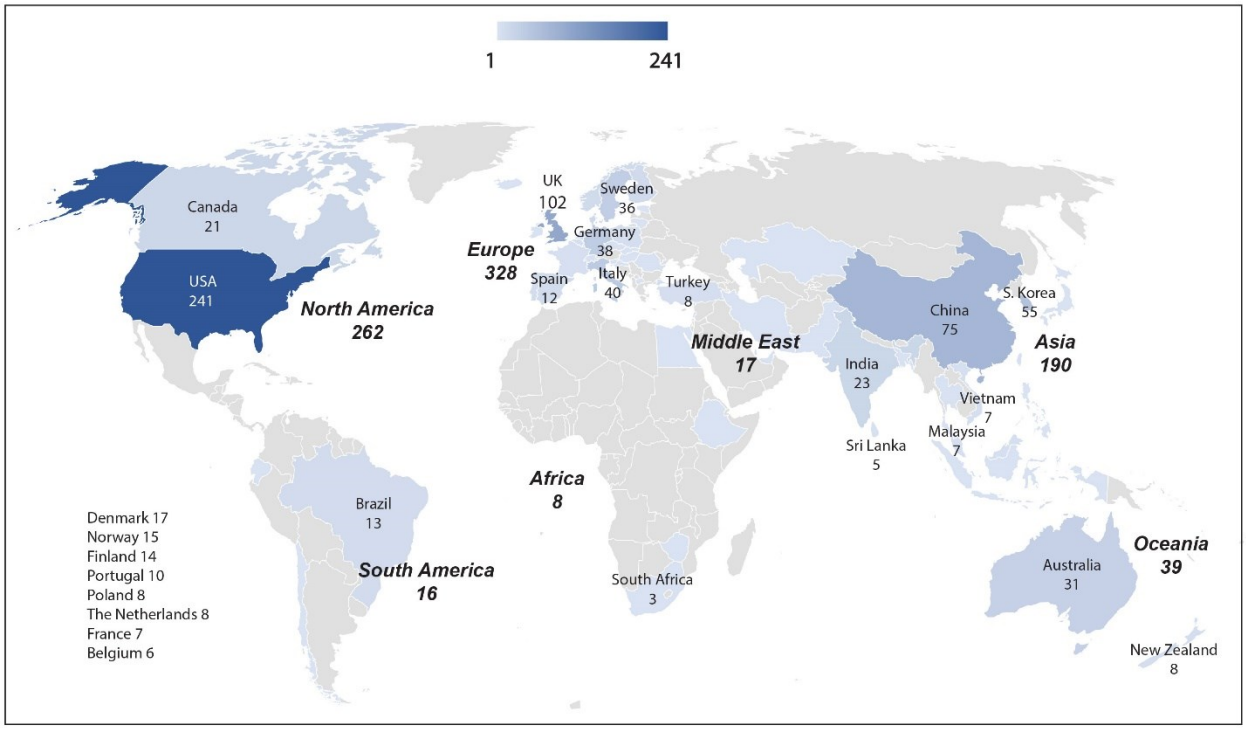


Figure 10. The first author's affiliation (2010-2021).

Many countries with less than 5 publications are not indicated on this map.

As discussed in the previous section, it is important to note that even if authors are affiliated with Western institutions, their research might not necessarily be conducted in Western societies. This indicates that relying solely on the author's affiliation may not yield accurate information about the research location. In addition to the geographic focus, the current investigation also examined the gender distribution of previous research. Moreover, it is worth mentioning that

certain articles collected for this study, such as literature reviews, conceptual-based research, or mathematical models, do not focus on any country or region. Therefore, these studies are not included in this section.

In total, 787 primary research studies were conducted in 65 countries. Among these 787 papers, 79 are cross-national/-cultural ("cross-national" is used hereafter) studies, with 62 papers focusing on multiple countries and 17 papers focusing on a single or multiple region(s)/continent(s) (e.g., Southeast Asia, Scandinavia, EU, West Africa, Europe and North America). In the case of a study conducted in five different nations, the study was counted five times based on its geographic focus. Therefore, it is important to note that the data presented in Figure 11 does not refer to the number of papers, but rather the number of research conducted in each country from 2010 through 2021. As summarised in Figure 11, the results align with the author's affiliation. The United States had the highest number of studies with 254, followed by the United Kingdom (n = 90), China (n = 81), South Korea (n = 60), Sweden (n = 47), Germany (n = 46) and Italy (n = 45). In terms of human subject recruitment, 217 papers (including 190 quantitative and 27 qualitative studies) focused more on females (if over 50% of the participants were females), 42 papers were male-oriented, 81 exclusively focused on females, 3 solely focused on males, and 13 had a 50/50 split (as shown in Table 6). This observation indicated that the majority of "fashion and sustainability" research is concentrated on females, consistent with many previous apparel studies (e.g., Auty & Elliott, 1998; Rahman, 2011; Rahman, 2012). Overall, women tend to display relatively higher interest in fashion compared to their male counterparts.

Gender/sexual orientation of Participants (number of paper)	Frequency
50/50 split of gender distribution	13
Only female participants	81

Over 50% were female participants:	217
Studies with more than 55% of female participants	*185*
The gender distribution is almost the same – less than 5% difference	*32*
Only male participants	3
Over 50% were male participants:	42
Studies with more than 55% of male participants	*29*
The gender distribution is almost the same – less than 5% difference	*13*

Table 6. Research involving human participants (2010-2022).

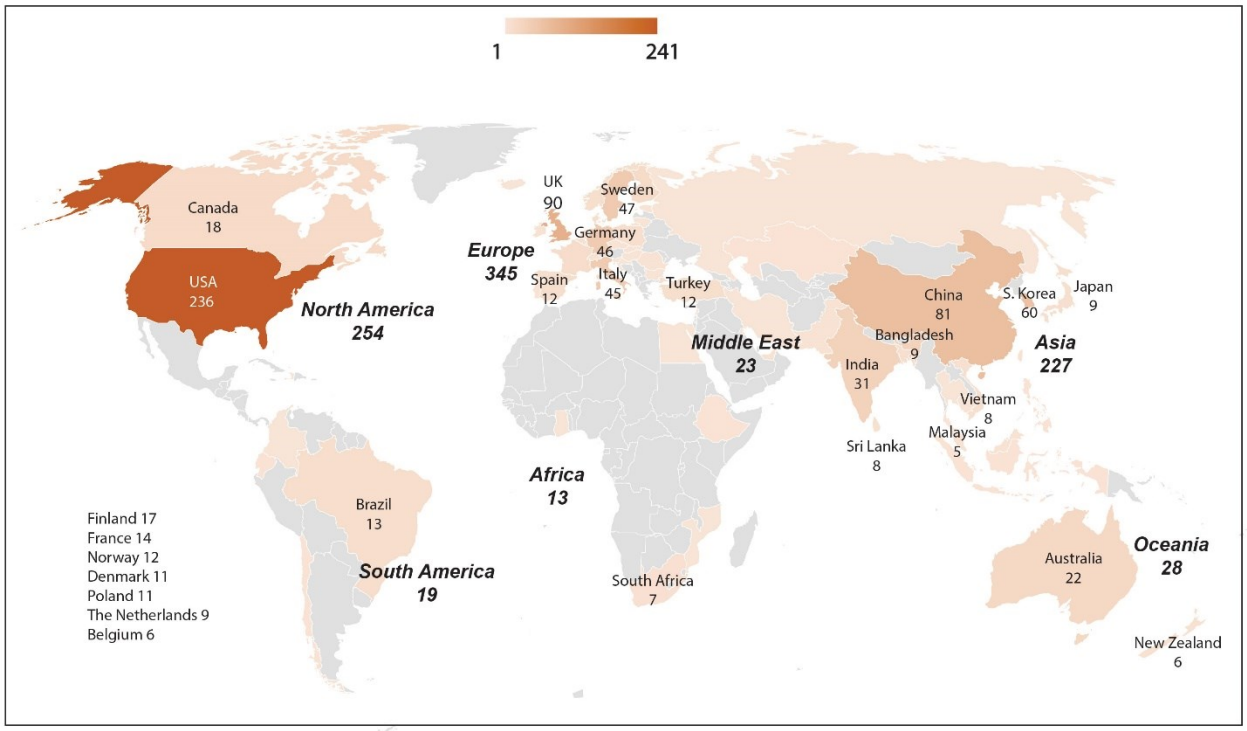


Figure 11. The geographic location of the research study (2010-2021).

Many countries with less than 5 publications are not indicated on this map.

A total of 79 cross-national papers were identified from the dataset. Among these papers, 17 focused on a single region with multiple countries or multiple regions without disclosing the

names or the number of countries investigated. Table 7 provides a summary of these studies, revealing that the majority of cross-national research focused on two (n = 33) or three (n = 14) countries. Of these, six papers examined differences between South Korea and the United States, whilst five papers explored differences between China and the United States.

The distribution of the studies across regions is as follows: fifteen papers were conducted in "Asia and North America" (n = 16), followed by "Europe and North America" (n = 10), "Asia and Europe" (n = 10), and "Europe with multiple nations" (n = 10). Moreover, only eight papers were conducted in multiple countries across 3 to 4 continents. The possible explanations for this pattern may include language barrier, cultural differences, research complexities, and moral and ethical considerations.

Notably, a higher number of studies were conducted in Western nations compared to Eastern nations, excluding China and South Korea. The empirical research conducted in Africa or South America was minimal, as indicated in Table 7. Western researchers/institutions led more than half of the cross-national studies (n = 49, 79%) aligning with the information presented in Figure 9 and 10. It is important to mention that these 49 papers do not include studies that did not specify the names of the countries investigated.

Countries (Number of study: N = 62)	Geographic focus	No. of countries	Citation [1st author affiliation]	Topic
China & S. Korea (2)	Asia	2	1. Jung & Oh (2019) [S. Korea] 2. Wang et al. (2019) [S. Korea]	1. Sustainability concepts – leather apparel 2. Sustainable fashion
Bangladesh, India & Vietnam (1)	Asia	3	Saha et al. (2021) [UK]	Circular economy
S. Korea, China & Japan (1)	Asia	3	Kong & Ko (2017) [S. Korea]	Consumer choice – sustainable fashion
China, Bangladesh, India, Turkey & Cambodia (1)	Asia	5	Repp et al. (2021) [The Netherlands]	Circular economy
Belgium & Ireland (2)	Europe	2	1. Caro & Gallien (2012) [USA] 2. Caro & Gallien (2010) [USA]	1. Fast fashion 2.Fast fashion
Italy & France (1)	Europe	2	Battaglia et al. (2014) [Italy]	CSR

Poland, France & Spain (1)	Europe	3	Gręposz-Krawczyk & Siuda (2019) [Poland]	Attitudes of consumers toward recycling
USA, UK & Switzerland (1)	Europe	3	Weiss et al. (2014) [USA]	Sustainable fashion
Sweden, Denmark & Estonia (1)	Europe	3	Farrant et al. (2010) [Denmark]	Reusing clothes
UK, Finland & Germany (1)	Europe	3	Henninger et al. (2019) [UK]	Fashion swapping
Germany, Italy & UK (1)	Europe	3	Norris (2019) [Germany]	Circular economy
Denmark, Norway, Sweden, Finland & Iceland (1)	Europe	5	Pedersen & Gwozdz (2014) [Denmark]	CSR
Germany, UK, France, Norway & Sweden (1)	Europe	5	Austgulen (2016) [Norway]	Sustainable textile consumption
Italy & China (1)	Asia & Europe	2	Lan & Zhu (2014) [USA]	Fast fashion
UK & Turkey (1)	Asia & Europe	2	Tokatli et al. (2018) [USA]	Fast fashion
Germany & S. Korea (1)	Asia & Europe	2	Kong et al. (2021) [S. Korea]	Sustainability and social media communication
S. Korea & UK (1)	Asia & Europe	2	Kim et al. (2016) [S. Korea]	Textile recycling systems
S. Korea & Spain (1)	Asia & Europe	2	Yoon et al. (2020) [S. Korea]	Corporate sustainability
Turkey & Kazakhstan (1)	Asia & Europe	2	Şener et al. (2019) [Kazakhstan]	Slow fashion
Bangladesh, India & Estonia (1)	Asia & Europe	3	Aus et al. (2021) [Estonia]	Circular fashion
The Netherlands & China (1)	Asia & Europe	3	Almanza & Corona (2020) [Netherlands]	Social life cycle assessment – sustainable development
France, Germany & China (1)	Asia & Europe	3	Wagner et al. (2019) [France]	Eco-fashion style
Japan, UK & Italy (1)	Asia & Europe	3	Goworek (2011) [UK]	Fair trade retailer
China & USA (6)	Asia & N. America	2	1. Lee et al. (2018) [Hong Kong] 2. Shen et al. (2016) [China] 3. Su et al. (2019) [USA] 4. Lee & Huang (2021) [USA] 5. Lang et al. (2019) [USA] 6. Ko & Jin (2017) [USA]	1. Corporate sustainability 2. Economic sustainability 3. Sustainable clothing 4. Fashion renting 5. Fashion renting 6. Purchase intention of green apparel
USA & S. Korea (6)	Asia & N. America	2	1. Lee & DeLong (2017) [S. Korea] 2. DeLong et al. (2016) [USA] 3. Workman et al. (2017) [USA] 4. Han, 2018 [USA] 5. DeLong et al. (2017) [USA] 6. Ramkumar et al. (2021) [USA]	1. Handcraft apparel 2. Education for fashion sustainability 3. Pro-environmental behaviour 4. Organic cotton apparel purchase 5. Sustainable clothing 6. Circular fashion services
Hong Kong & Canada (1)	Asia & N. America	2	Joy et al. (2012) [Canada]	Fast fashion
Canada & India (1)	Asia & N. America	2	Rahman et al. (2021) [Canada]	Consumer choice – apparel & sustainable cues
USA & Sri Lanka (1)	Asia & N. America	2	Clarke-Sather & Cobb (2019) [USA]	Onshoring fashion
USA, India, China & S. Korea (1)	Asia & N. America	4	Pan et al. (2015) [USA]	Fashion thinking fashion practices
USA & Finland (1)	Europe & N. America	2	Hirscher et al. (2018) [Finland]	Social manufacturing in fashion
Poland & Canada (1)	Europe & N. America	2	Malgorzata et al. (2020) [Poland]	Circular fashion

Monaco & Canada (1)	Europe & N. America	2	Cervellon & Carey (2014) [Monaco]	Consumers' perceptions of 'green'
Finland & USA (1)	Europe & N. America	2	Armstrong et al. (2016) [USA]	Sustainable clothing consumption
UK, France & Canada (1)	Europe & N. America	3	Carey & Cervellon (2014) [UK]	Ethical fashion
USA, Germany, Sweden & Poland (3)	Europe & N. America	4	1. Joanes (2019) [Denmark] 2. Sohn et al. (2021) [Denmark] 3. Gwozdz et al. (2017) [USA]	1. Reduced fashion consumption 2. The environmental impacts of fashion 3. clothing consumption
Sweden, the Netherlands, Germany UK & USA (1)	Europe & N. America	4	Gupta et al. (2019) [USA]	Sustainable apparel consumption
Germany, Poland, Sweden, USA & UK (1)	Europe & N. America	5	Joanes et al. (2020) [Germany]	Reducing personal consumption
Scotland (UK) & Australia (1)	Europe & Oceania	2	Bianchi & Birtwistle (2010) [Australia]	Disposal behaviour
Germany & Iran (1)	Europe & Middle East	2	Iran et al. (2019) [Germany]	Collaborative fashion consumption
Germany & Ethiopia (1)	Europe & Africa	2	Warasthe et al. (2020) [Germany]	Sustainability – textile & apparel supply chain
UK, USA & China (1)	Asia, Europe & N. America	3	Jung et al. (2021) [S. Korea]	Sustainable apparel product
USA, Canada, S. Korea & Sweden (1)	Asia, Europe & N. America	4	Choi & Han (2019) [USA]	Green innovation
Brazil, Russia, India & China (1)	Asia, Europe & S. America	4	Mair et al. (2018) [UK]	Fairness in global supply chain
India, Dubai (UAE) & USA (1)	Asia, N. America & Middle East	3	Patwa & Seetharaman (2016) [UAE]	Redesigning fashion industry – circular approach
Germany, USA, UK, Denmark, Italy, Sweden, Switzerland, Finland, the Netherlands, Brazil, Bulgaria & France (1)	Europe, N. America & S. America	12	Adam (2018) [Germany]	Sustainable product-service systems (PSS)
Chile, USA, France, Germany & Lebanon (1)	Europe, S. America & Middle East	5	Dickenbrok & Martinez (2018) [Portugal]	Communicating green fashion
China, Japan, S. Korea, USA, Singapore, UK & Australia (1)	Asia, Europe, N. America, & Oceania	7	Kim (2020) [S. Korea]	Collaborative fashion consumption
Pakistan, Malaysia, Spain, Saudi Arabia, USA, India, UK, Sweden & China (1)	Asia, Europe, N. America & Middle East	9	Ahmad et al. (2020) [Malaysia]	Sustainable textile and apparel industry

Table 7. Cross-nation/-cultural research papers (2010-2021).

2.6.2 Stage 2: Based on 280 Data

2.6.2.1 Identification of Consumer Research Papers

After selecting 280 relevant papers, they were categorised into two main groups – "consumer behaviour" (more related to consumer behaviour or micro level) and "fashion sustainability" (more related to sustainable practices or macro level) – with various sub-groups based on the occurrences of the keywords and phrases in the titles. In cases where the titles contained multiple keywords or phrases, the papers were placed in multiple sub-groups. For instance, a study on the "attitude and behaviour gap," were categorised into "attitude" and "behaviour" sub-groups.

The sub-groups in the "consumer behaviour" category included studies on consumer behaviour, perceptions, attitudes, motivations, intention, awareness, value, choice, preference, and knowledge, whilst the "fashion sustainability' category covered topics such as collaborative consumption, sharing economy, fast and slow fashion, among others. As indicated in Figure 12, some of the sub-groups have similar meanings and concepts. For example, the sub-groups of collaborative consumption, fashion sharing, and clothes swapping, or the sub-groups of clothes reuses, and fashion rental were similar in terms of their concepts.

According to the findings, many studies were focused on consumer behaviour (n = 52), followed by consumer purchases (n = 32), consumer intention (n = 31), fast fashion (n =30) and fashion brand (n =27). The results of this systematic literature review not only provide an overview of research trends and future directions but also guide the in-depth literature review in Chapter 3 and empirical research in Chapter 4. Chapter 3 will continue to focus on apparel consumer behaviour, particularly the product evaluative cues.

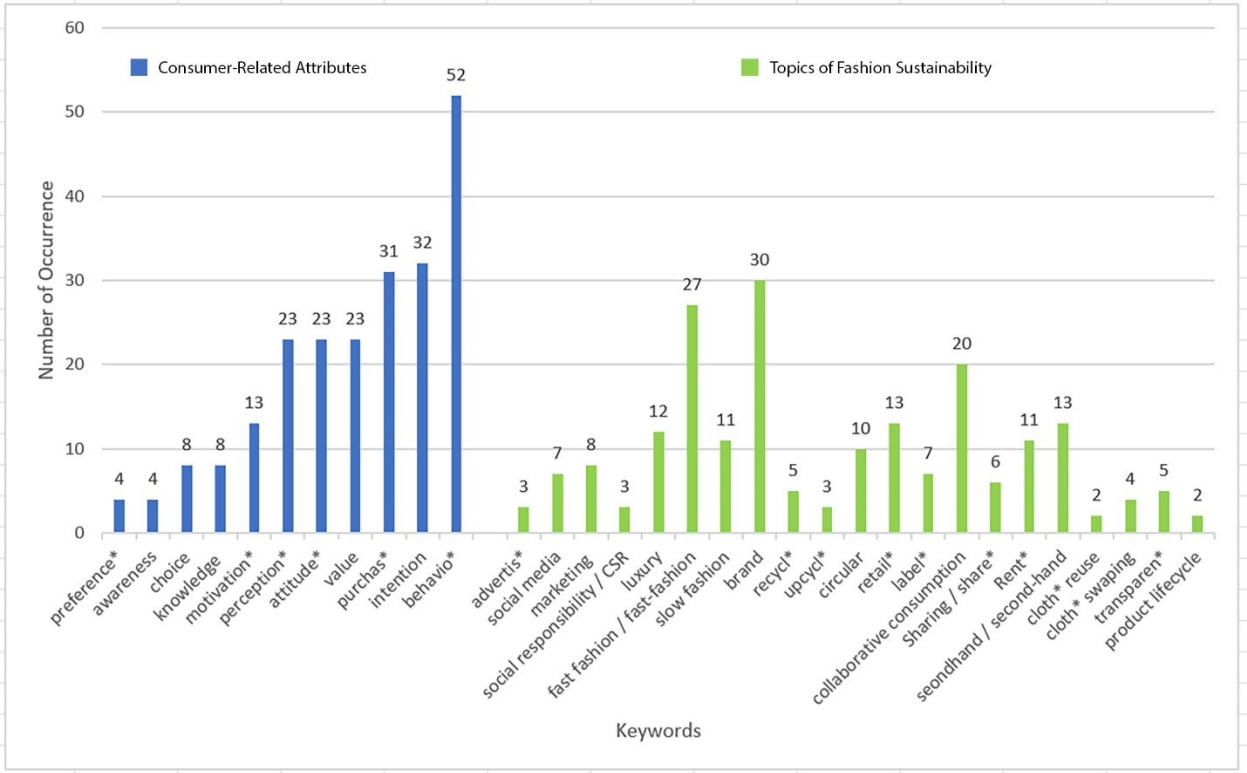


Figure 12. Key topics identified from the titles of 280 "Consumer" papers.

2.6.2.2 Bibliometric Analysis using Visualisation Tools

Bibliometrics is a statistical method to quantitatively analyze a research topic. It is particularly useful for the examining a large number of publications (Zupic & Cater, 2015), and mitigating potential biases (Fetscherin & Heinrich, 2015). To facilitate analysis and visual mapping, search results from Web of Science (WoS) can be exported to many types of visualization software such as VOSviewer, Pajek, HistCite[12], Citespace, RStudio, SciMAT, or CitNetExplorer. Employing bibliometric analysis offers numerous benefits, including the ability to (1) identify influential or

[12] HistCite, developed by Dr. Garfield Eugene and his colleagues (Garfield et al., 2003), is another visualization tool used for bibliometric analysis. This software enables the generation of a citation chronological chart, illustrating the citing relationships among the identified literature. However, it is important to note that HistCite has a limitation in reflecting the evolution of research themes (Wu et al., 2017).

seminal papers within a topic, (2) trace the genealogy of a specific field of study to unveil the current research streams and emerging streams, (3) depict the geographical scope and research approaches employed, (4) identify frequently used research theories and methods, (5) highlight research trends and major contributors such as leading scholars, journals and academic institutions, and (6) predict and recommend future research directions.

Whilst a considerable number of studies have explored the concept of "fashion sustainability," none of them have utilise VOSviewer and CitNetExplorer for conducting bibliometric analysis and data mapping. In order to gain a comprehensive understanding and establish research directions in the field of "fashion and sustainability," I exported the plain text data file, which comprised 280 literature sources obtained after the second round of screening, to VOSviewer and CitNetExplorer software for conducting bibliometric analysis. It is important to note that bibliometric analysis does not replace systematic literature review, instead, it serves to complement it and to provide a comprehensive overview of the focused topic (Guleria & Kaur, 2021). VOSviewer and CitNetExplorer were selected for this study because they are freely available, offer user-friendly interfaces, have the ability to generate relational networks among literature within a specific field, and can analyse the evolution paths and trends to show the changes over different time periods. These two programs are particularly useful for generating visualization bibliometric maps, thus facilitating the comprehension of data interpretation.

2.6.2.3 VOSviewer Analysis – Co-occurrences of Keywords

The bibliographic data were utilised to generate a visual map to illustrate the co-occurrence of all keywords in VOSviewer. All keywords, including the word occurrence in the article title, author keywords, and abstract, are considered. During the operational process, full counting was

employed, and the minimum of keyword occurrence was set at 10. Out of 306 keywords, 123 met the threshold, and network visualization map consists of 4 clusters was generated as depicted in Figure 13. The size of letters and circles in the map reflects the frequency of keyword occurrence, with larger sizes indicating a higher frequency. Similarly, the thickness of the curve lines in the map corresponds to the total strength of the links, where thicker lines signify stronger connections.

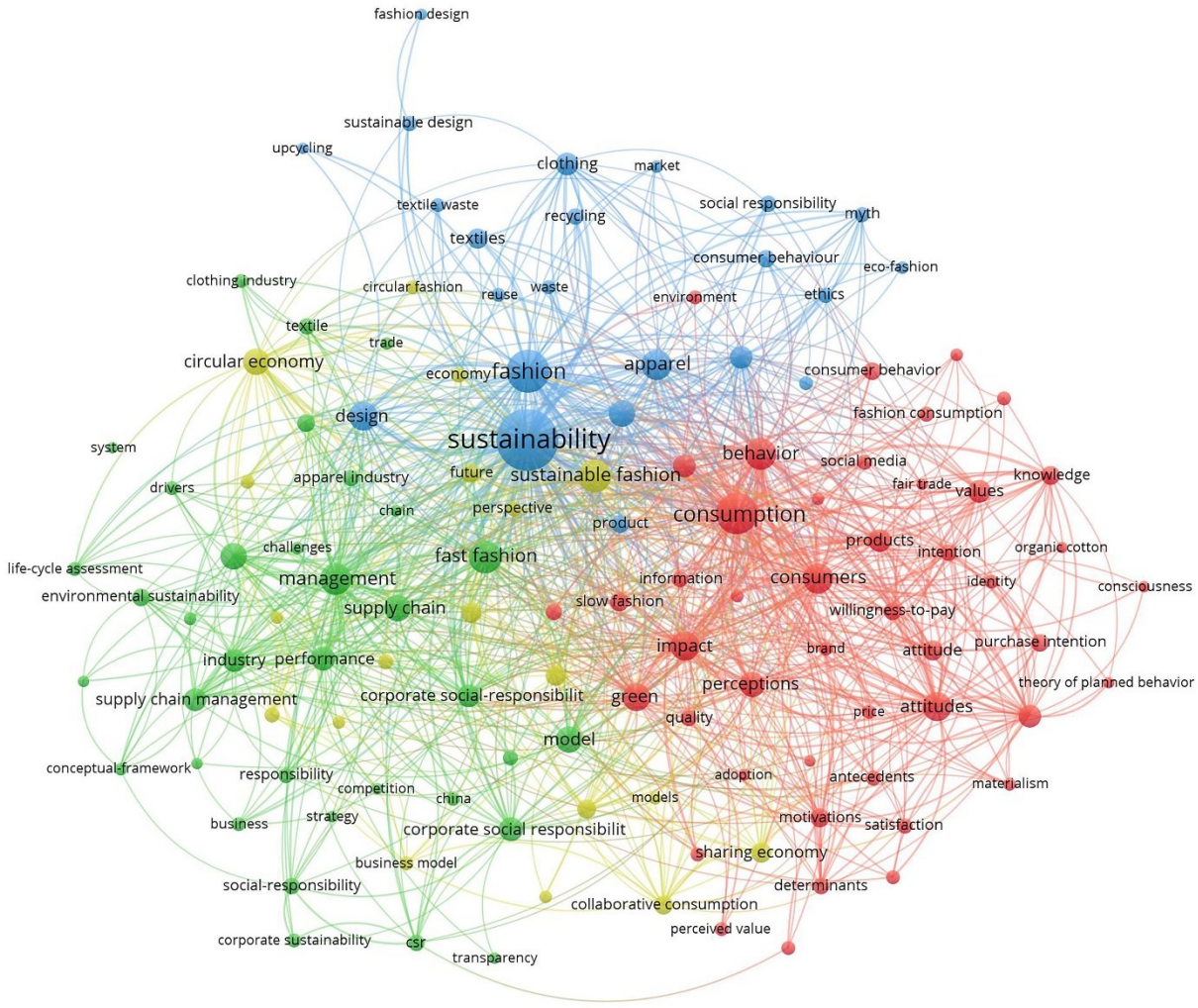


Figure 13. Network visualisation of co-citation.

In Figure 13, the results were grouped into four clusters, each represented by differently coloured circles. Cluster 1 is depicted in red contains 46 items, cluster 2 in represented in green and includes 35 items, cluster 3 is shown in blue and consists of 23 items, whilst cluster 4 is displayed in mustard with 19 items. For example, cluster 1 is depicted in red and the circle's size indicates the frequency of keyword occurrences. In cluster 1, the keyword "consumption" has the highest frequency with 128 occurrences and is linked to 113 other terms. As a result, the circle representing "consumption" is the largest in size and is connected to many smaller circles such as "behaviour," "consumers," "consumer behaviour," "attitude," "motivations," "perceptions," and "products." It is worth noting that keywords in cluster 1 may also link to keywords in other clusters. The co-linkages among the keywords generate the network visualization map shown in Figure 14. Strong co-linkages result in keywords being positioned in close proximity to each other with shorter curve lines. These findings are similar to Figure 12. However, the results of Figure 12 are solely derived from the article titles rather than from three different sources (article title, author keywords and abstract) as Figure 14.

To summarise, the following description will be used to explain the function of co-citation: Paper A cites papers B, C, and D, establishing mutual relationships between the respective pairs (B and C, B and D, C and D) (Kleminski et al., 2022; Small, 1973). It is worthwhile to note that co-citation is modelled with weighted edges, considering "the recurrent appearance of a citation relationship link. A pair of papers co-cited together once is less related than a pair for which the same happens dozens of times" (Kleminski et al., 2022, p. 355). , In this case, co-citation analysis was employed to identify the most influential topics, as well as their clusters and networks. For explanatory purposes, the size of the bubble and circle represents number of citations, whilst the

thickness of the lines and the link distance signify the strength of citation relations between publications. Bubbles of the same colour belong to the same cluster.

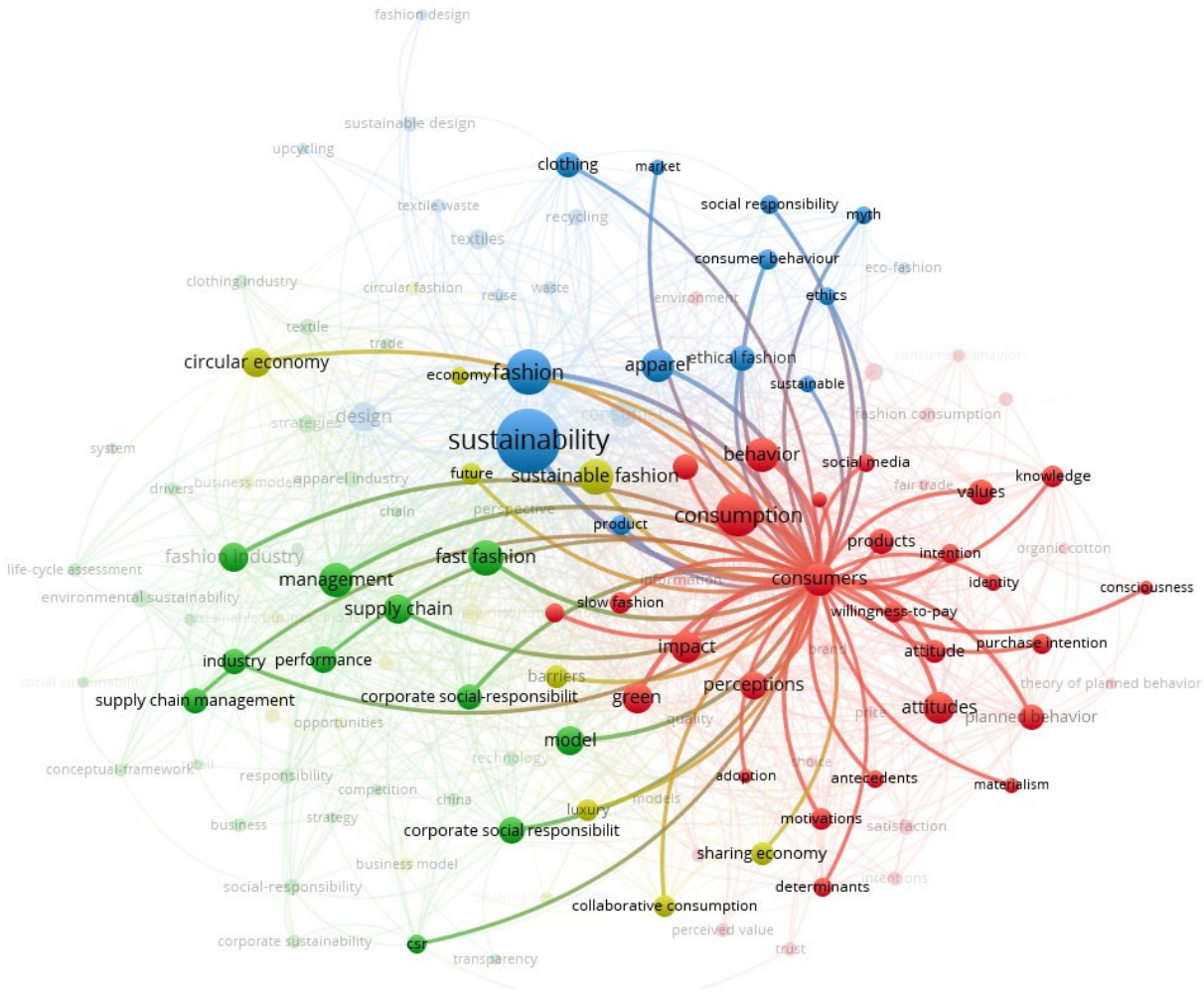


Figure 14. Network visualisation of Cluster 1 co-citation.

2.6.2.4 VOSviewer Analysis - Academic Organisation

In addition to visualising the co-occurrence of keywords, the co-authorship network among authors and organisations were analysed to identify the major contributors. To establish the selection parameter and operational process, the minimum number of documents and citations of an organisation was set at 5 and 0, respectively. Out of 657 organisations, 49 met the threshold,

resulting in a network visualization comprising 11 clusters, 69 links and a total link strength of 125. This analysis offers valuable insights and serves as a useful reference for researchers in the field of "sustainability, fashion and consumption" by highlighting the prominent global contributors. The ranking of organisations was based on their total link strength scores. As presented in Table 8 and Figure 15, Hong Kong Polytechnic University was ranked the first, followed by Oklahoma State University, Seoul National University, University of Minnesota, and Louisiana State University. In cluster 2, the Hong Kong Polytechnic University connects to seven universities including City University of Hong Kong (China), University of North Carolina (USA), Texas Tech University (USA), University of Missouri (USA), Kent State University (USA), Donghua University (China), and Seoul National University (South Korea).

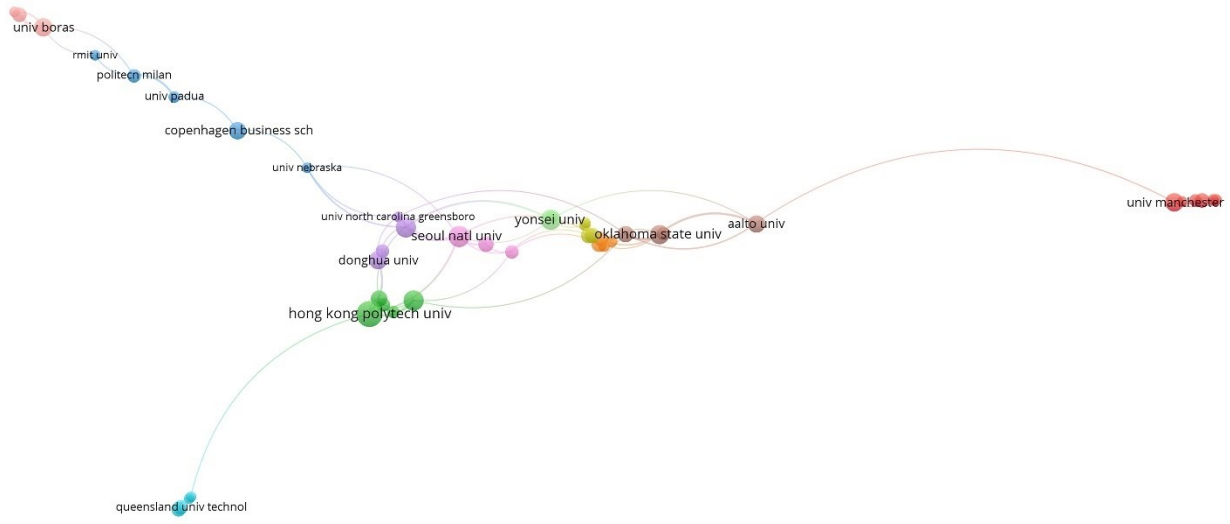


Figure 15. Network visualisation of co-authorship among organisations.

Organization	Documents	Citations	Total Link Strength
Hong Kong Polytechnic University	31	1420	18
Oklahoma State University	17	677	17
Seoul National University	20	309	16

University of Minnesota	19	213	14
Louisiana State University	12	321	12
University of Borås	15	312	12
Soochow University	10	181	11
University of Missouri	19	227	10
Iowa State University	11	216	9
Yonsei University	19	444	9
Aalto University	13	896	8
Illinois State University	11	323	8
University of Manchester	15	576	7
Donghua University	15	695	6
Politecnico Milano University	8	655	6

Table 8. The top 15 organisations.

2.6.2.5 VOSviewer- Co-citation Mapping Analysis

In this study, co-citation analysis provides valuable information on key publications, citation relationships between publications, and authors in the area of "sustainability, fashion and consumption" based on the citations. As Guleria and Kaur (2021) stated in their article, "A co-citation link is a link between two items that are both cited by the same document." To conduct the mapping analysis, the minimum number of citations of a cited reference was set as 20. In other words, any references that have fewer than 20 citations were not selected for analysis. Among the 29,147 cited references, 120 met the threshold. Figure 16 illustrates the mapping results, where each circle represents the first author's name and publication year of a paper. The size and colour of the circles indicate the citation weight and cluster, respectively. Circles of the same colour belong to the same cluster. Notably, Joergen's paper (2006) published in the *Journal of Fashion Marketing and Management* holds the highest total length strength of 1040, followed by Niinimäki (2010) and Joy et al. (2012) (see Table 9 for the top 10 papers). In total, 5 clusters were generated

and visually distinguished by different colours. For example, within the green cluster, Fletcher (2008) emerged as a significant co-cited item, being linked to 115 other items.

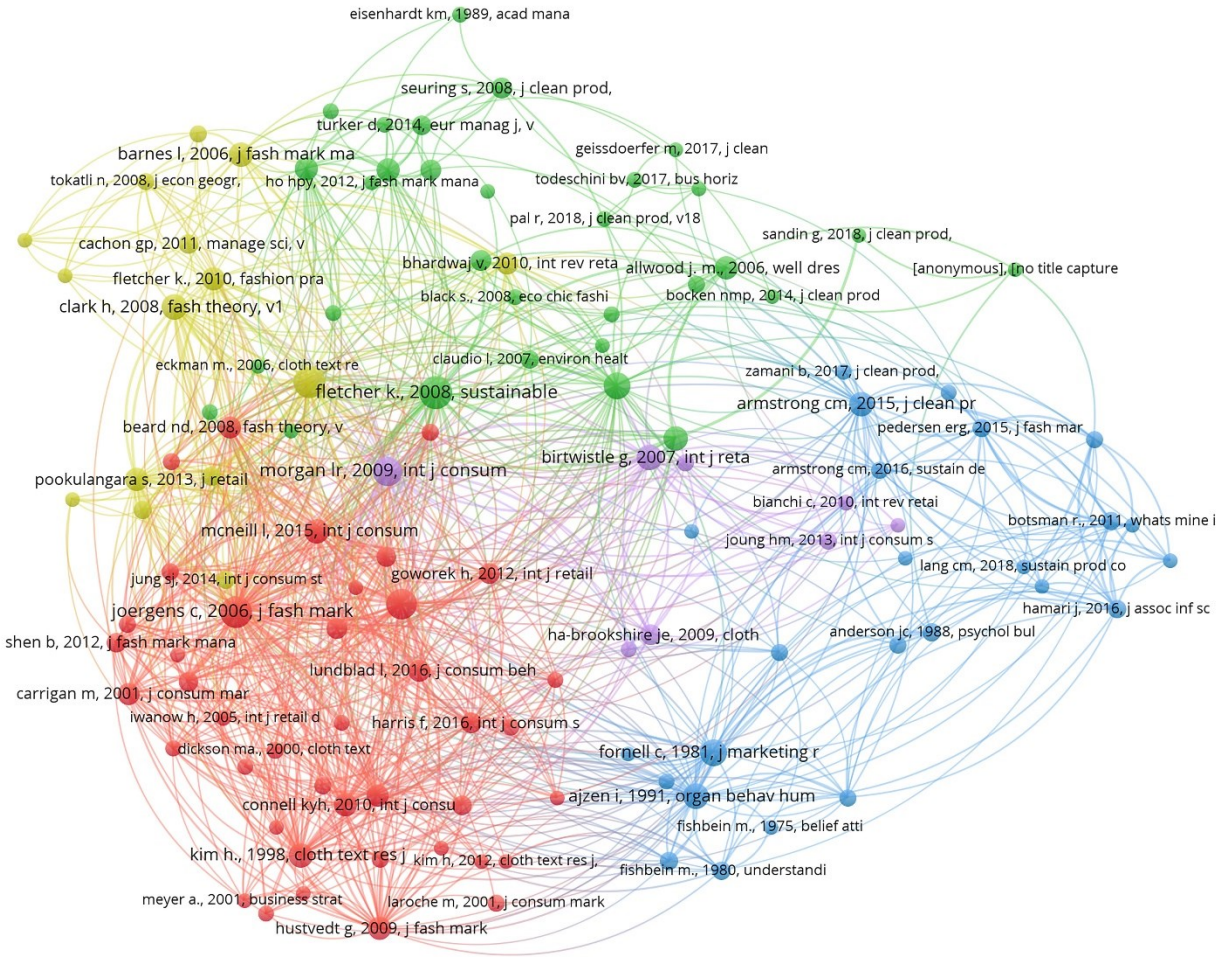


Figure 16. Network visualisation analysis of co-citation between publications.

Cited Reference	Citations	Total Link Strength
Joergen C. (2006), *Journal of Fashion Marketing and Management*	92	1040
Niinimäki K. (2010), *Sustainable Development*	87	979
Joy, A. (2012), *Fashion Theory*	96	860
Fletcher, K. (2008), *Sustainable Fashion*	101	818

Morgan, L.R. (2009), *International Journal of Consumer Studies*	79	757
Kim, H. (1998), *Clothing and Textiles Research Journal*	59	655
Niinimäki K. (2011), *Journal of Cleaner Production*	68	645
McNeill, L. (2015), *International Journal of Consumer Studies*	58	612
Birtwistle, G. (2007), *International Journal of Retail & Distribution*	60	605
Connell, K.Y.H. (2010), *International Journal of Consumer Studies*	52	600

Table 9. Top 10 papers.

2.6.2.6 CitNetExplorer Analysis - Chronological Citation Chart

In addition to VOSviewer, another visualization tool called "CitNetExplorer" was employed to examine the development trends and evolution paths, assisting researchers in predicting the future directions of development. CitNetExplorer, short for "Citation Network Explorer," is an open-source bibliometric tool developed by the Centre for Science and Technology Studies at the University of Leiden in the Netherlands. Figure 17 depicted the citation relationships among the literature, illustrating the transmission and development of knowledge pertaining to "sustainability, fashion and consumption." The analysis was conducted using the defaulted parameter, which included a maximum of 10 publications per layer and a minimum distance of 5 between publications. However, it is important to mention that CitNetExplorer was set to its default configuration, which displays only the 40 most frequently cited publications, as visualizing all 1108 publications within a single chronological chart is impractical. These 40 publications are labelled using the last name of the first author. As shown in Figure 17, out of all the frequently cited publications, only one of them was published in the 1980s. The first author of this article is Fornell, and it was published in the *Journal of Marketing Research* (Fornell & Larcker, 1981).

Moving into the 1990s, the number of frequently cited publications increased to three. These include Ajzen's seminal paper (1991) titled "The Theory of Planned Behaviour" published in *Organizational Behaviour and human Decision*, as well as Butler and Francis's (1997) and Kim and Deamhorst's (1998) publications, both featured in the *Clothing and Textiles Research Journal*. It is evident that the number of citations and citation-linkages has been increased drastically since 2000. This finding also provides support to the preceding discussions, people pay more attention to the topic of "sustainability, fashion and consumption" including the academicians.

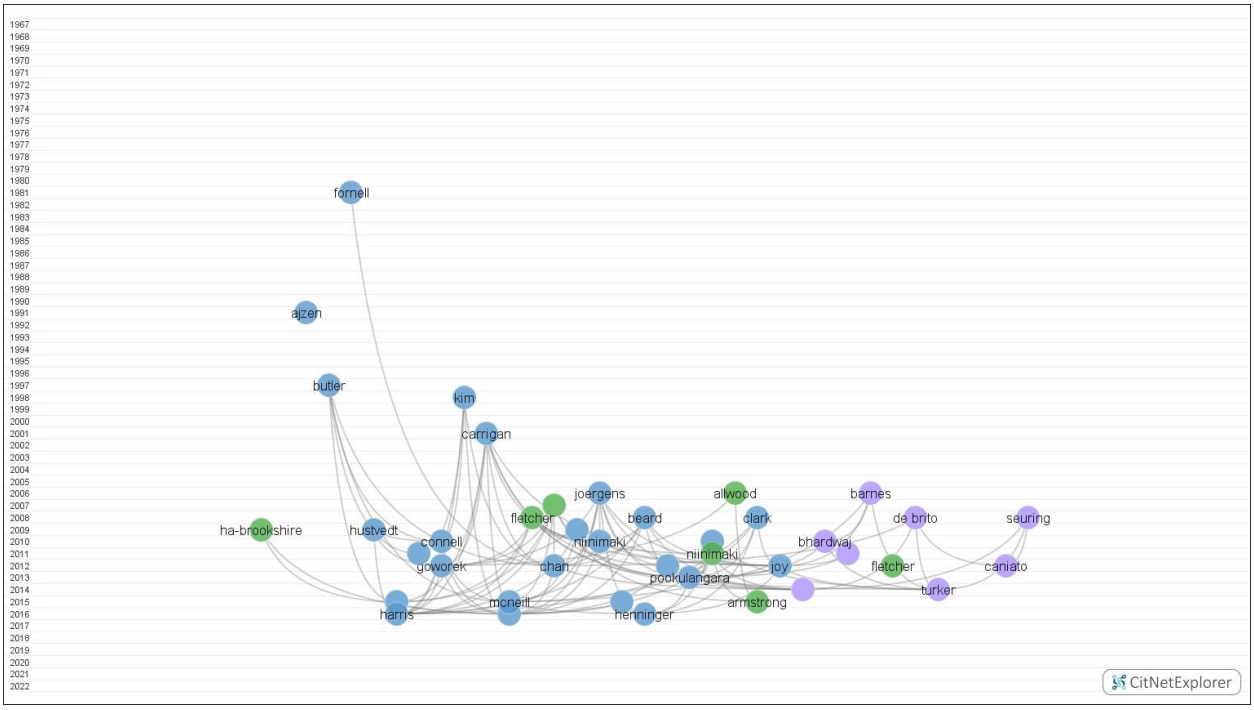


Figure 17. Chronological flow chart of publications.

2.7 Summary of the Findings and Implications

To reiterate, the present study focuses on three crucial areas: sustainability, fashion and consumption. It explores the shopping, selecting, and purchasing behaviours of fashion consumers through a systematic literature review, complemented by visualisation tools. In this study, I employed both VOSviewer and CitNetExplorer to analyse and visualise the citation networks, including clustering the publications based on their citation relations.

2.7.1 Research Trends, Development and Areas of Improvement

The information presented in Figure 7 clearly indicates an upward trend in the number of publications pertaining to "fashion and sustainability" since 2010. Out of the 860 publications identified in this particular field, approximately 30% were published in three specific journals: *Sustainability*, *Journal of Fashion Marketing and Management*, and *Journal of Cleaner Production*.

2.7.1.1 Case Study

Among the publications, 93 were case studies, whilst 35 were systematic literature reviews. It is worth noting that during the period from 2010 to 2021, H&M, Zara and The Gap emerged as the most extensively studied companies in the case studies. These multinational retailers, recognised as fast fashion companies, play a significant role in the consumer market and have a substantial impact on the global environment. As a result, there is considerable interest among both the general public and academic researchers to understand their evolving business models, company policies, operational strategies, and sustainability initiatives.

Whilst studying large corporations is indeed crucial, it is equally important to acknowledge the significant role that small and medium enterprises (SMEs) play in the global economy,

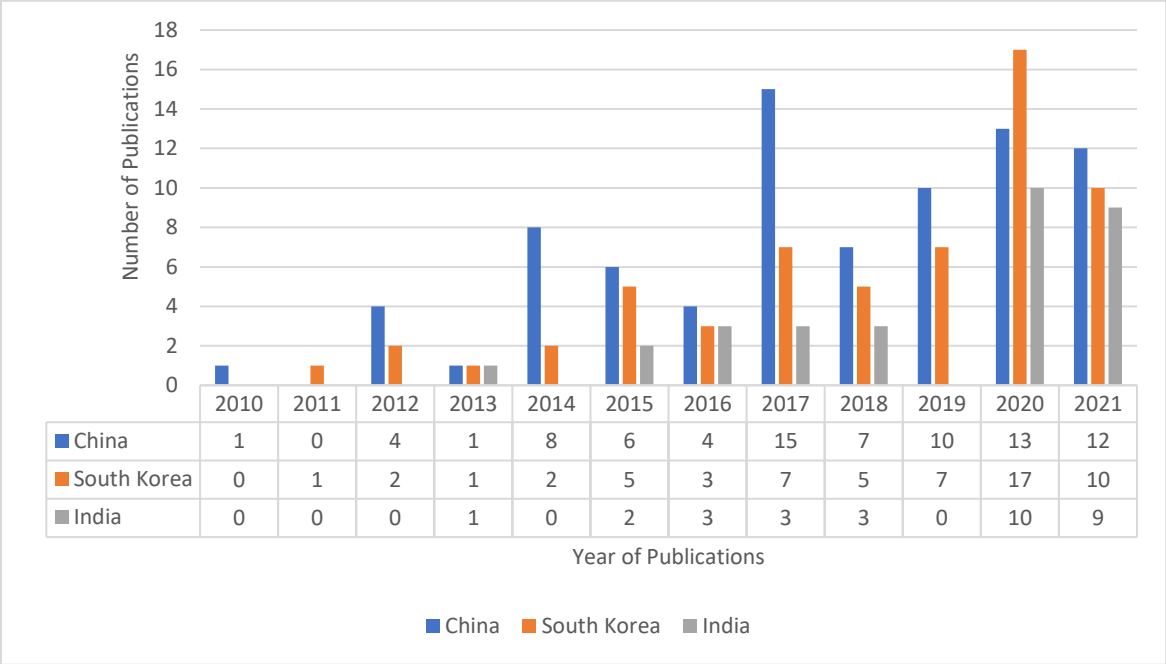
especially in developing or emerging nations. According to the World Bank (2023), SMEs "represent about 90% of business and more than 50% of employment worldwide." Therefore, conducting research on companies of smaller scale, including micro-sized businesses, startups, and non-profit organisations (NPOs) becomes imperative. Such research enables us to gain valuable insight into their unique business structures and the specific challenges they face. It is essential to understand the role these companies can play and the obstacles they encounter within today's fast-changing economy.

2.7.1.2 Gender Distribution and Orientations

As depicted in Table 6, a significant portion of the existing research has exclusively focused on female participants or displayed a bias towards women. Although female consumers have shown relatively higher involvement and interest in fashion (Auty & Elliott, 1998; Beaudoin *et al.*, 2003; Haynes *et al.*, 1993; Rahman 2012) it is vital to understand the cognitive and affective processes, as well as the buying behaviours of men in relation to clothing consumption. Several studies (Franko et al., 2015; Hall, 2015; Rahman & Navarro, 2022) have reported that men have become increasingly concerned about their physical appearance and have shown a heightened interest in personal grooming. As reported by Newman (2010) in *New York Times*, the expenditure on grooming products for men in the United States experienced a twofold increase, reaching US$4.6 billion between 1997 and 2009. Additionally, there is significant dearth of information regarding the buying behaviour of other gender identities, such as LGBTQ+ individuals, indicating a crucial gap that required attention and further investigation.

2.7.1.3 Geographic Scope of Research Studies

As illustrated in Figure 11, the majority of research studies were conducted across three continents: Europe (n = 345), North America (n = 254) and Asia (n =227). The highest concentration of research was carried out in the United States (n = 236), followed by the United Kingdom (n = 90), China (n = 81), South Korea (n = 60), Sweden (n = 47), Germany (n = 46) and Italy (n = 46). Figure 18 illustrates the substantial growth in the number of publications in China, South Korea, and India from 2010 to 2021, with a notable increase observed after 2013. However, when compared to the United States and the United Kingdom, the overall volume of publications in these countries still remains relatively low. According to the United Nations (2022), Asia has the largest global population, accounting for 59.4%, followed by Africa (17.6%), Europe (9.4%) and North America (7.5%). Despite Asia and Africa having the highest population of consumers, the number of research studies conducted in these regions is relatively low compared to North America and Europe. This indicates an imbalance in the proportion of studies relative to population ratios.



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
China	1	0	4	1	8	6	4	15	7	10	13	12
South Korea	0	1	2	1	2	5	3	7	5	7	17	10
India	0	0	0	1	0	2	3	3	3	0	10	9

Figure 18. Publication trends in China, South Korea and India.

In summary, the findings reveal notable research trends and advancements in the field of fashion and sustainability between 2010 and 2021. Although the United States and Europe exhibit a higher number of publications during this period, it is noteworthy that several academic institutions in Asia, including three in China (Hong Kong Polytechnic University, Soochow University and Donghua University) and two in South Korea (Seoul National University and Yonsei University), have also made significant contribution to the field (as shown in Table 8).

2.7.1.4 Cross-national Research Studies

Out of the 860 publications in the dataset, 79 were identified as cross-national research studies. Among these 79 papers, only 62 provided the names of the countries investigated, while the remaining papers referred to regions or continents without specifying all the countries involved. As presented in Table 7, the countries that were more frequently investigated in a cross-national context, including the United States (n = 29), China (n = 19), South Korea (n = 15), the United Kingdom (n = 15), Germany (n = 14) and Sweden (n = 11). This analysis unveils that many countries in the Middle East, South America, Africa, and Asia have been under-researched and have received little attention in cross-national investigations. Although conducting research in the two largest consumer markets (the United States and China) is crucial to provide insights to fashion practitioners, it is equally important to understand "fashion and sustainability" in other nations such as India and Vietnam. In 2022, India experienced a robust growth rate of 8.7% (Forbes India, 2023), whilst Vietnam experienced a growth rate of 8.02% (Vu, 2022).

2.7.2 Implications of Network Visualisation Mapping

According to Meho (2007, p. 1), citation analysis can be described as "a branch of information science in which researchers study the way articles in a scholarly field are accessed and referenced by others." The results of citation analysis can offer researchers valuable insights into influential papers, prominent organisations, and prolific researchers within the field. Many researchers have underscored the effectiveness of citation analysis in demonstrating the impact of scholarly research. For example, in a case study, Gooden (2001) pointed out that "citation analysis is an excellent unobtrusive method to determine which resources doctoral students [or scholars] are using." This method offers valuable information, including the volume of publications in a specific area, citation patterns, and authorship. Furthermore, co-citation analysis was conducted to identify frequently cited publications, uncover key publication topics and dissemination venues, and reveal the interdisciplinary nature of research disciplines. Co-citation refers to the frequency with which two publications are cited together by other works (McAllister et al., 2022).

Regarding the co-occurrence of all keywords, VOSviewer generated 4 clusters (see Figure 13 and Appendix 4 for keywords grouping). The formation of each cluster was determined by the relatedness of the keywords. In simple terms, each cluster consists of a specific number of related keywords and would be presented in the same colour. Although some similar keywords appear in multiple clusters, each cluster can be categorized into and labelled with different themes. Cluster 1 was labelled as "fashion consumers" due to the frequent occurrence of keywords associated with consumer behaviour, attitudes, perceptions, motivations, knowledge, decision-making, and buying intention. Cluster 2 comprises keywords such as corporate social responsibility (CSR), social sustainability, supply chain, retail, and fast fashion, and was designated as "corporation strategies." Cluster 3, labelled as "fashion products," consists of keywords like product, design, fashion design, sustainable design, recycling, reuse, and textile waste. The final cluster, labelled as "business

model," encompasses keywords such as sustainable "business model," business model, circular economy, sharing economy, and collaborative consumption. Based on these categorisations, it is reasonable to suggest that there are four key research themes related to the topic of "fashion, sustainability and consumption": fashion consumers, corporate social responsibility, fashion products, and business model.

As indicated in Table 10, it is apparent that numerous research studies focusing on "fashion consumer" in cluster 1 employed the Theory of Planned Behaviour for their investigation. This finding offers a plausible explanation for the frequent citations of Ajzen's (1991) seminal paper titled "The Theory of Planned Behaviour", as depicted in Figure 17. In addition, it is noteworthy to mention that among all the papers listed in Table 10, half of them utilised Structural Equation Modelling (SEM) as their analytical approach. This finding helps to explain the frequent citations of Fornell and Larcker's (1981) publication titled "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error" over the years, as depicted in Figure 17. Whilst Fornell and Larcker's (1981) and Ajzen's (1991) publications may not have direct relevance to fashion and sustainability, they offer valuable contributions in terms of theory and analytical approach that can be applied in various disciplines, such as consumer research and fashion studies. As a result, these publications play a significant role in fostering future advancements in these fields.

Author (Year) [First Author's Affiliation]	Title of Publication	Author Keywords	Research Method & Sample Size
Liu et al. (2021) [China]	The importance of knowledge and trust for ethical fashion consumption	ethical fashion, theory of planned behavior, SEM, knowledge, trust	Online survey N = 245 consumers (SEM)
Brandão & da Costa (2021) [Portugal]	Extending the theory of planned behaviour to understand the effects of barriers towards sustainable fashion consumption	sustainability, intention, consumption, fashion, theory of planned behaviour, barriers	Online questionnaire through social media N = 669 consumers

Pham et al. (2021) [Vietnam]	Sharing economy: Generation Z's intention toward online fashion rental in Vietnam	fashion rental, Generation Z, sharing economy, planned behavimr theory, technology acceptance Model	Survey N = 375 students (SEM)
Muposhi et al. (2021) [Zimbabwe]	Fashion designers' attitude-behaviour inconsistencies towards a sustainable business model: a neutralisation theory perspective	sustainable fashion, neutralisation techniques, fashion designers, sustainable fashion behaviour, South Africa, deviance threshold/neutralisation threshold	Online survey N= 590 fashion designers
Johnstone & Lindh (2021) [Sweden]	Sustainably sustaining (online) fashion consumption: Using influencers to promote sustainable (un)planned behaviour in Europe's millennials	online consumer behaviour, influencers, millennials, (un)planned behaviour, sustainable fashion, trust	Survey N = 448 millennials (SEM)
Sobuj et al. (2021) [Bangladesh]	Factors influencing eco-friendly apparel purchase behavior of Bangladeshi young consumers: case study	consumer behavior, theory of planned behavior, purchase intention, eco-friendly apparel, environmental apparel knowledge	Case study N = 198 consumers Survey
Zhang et al. (2020) [China]	Consumers' clothing disposal behaviors in Nanjing, China	clothing disposal, clothing recycling, intentions, online platform	Survey questionnaires N = 507 consumers
Blazquez et al. (2019) [UK]	Consumers' knowledge and intentions towards sustainability: A Spanish fashion perspective	sustainability, ethical fashion, eco-fashion, fast fashion, purchase intention, Spain	Mixed Method: Survey: N = 175 consumers Structured interviews: N = 8
Chi et al. (2019) [USA]	Why U.S. consumers buy sustainable cotton made collegiate apparel? A Study of the key determinants	sustainable cotton, collegiate apparel, U.S. consumers, purchase intention	Online survey N = 225 consumers
Jung & Oh (2019) [South Korea]	Exploring the sustainability concepts regarding leather apparel in China and South Korea	sustainable consumption behavior, theory of planned behavior; eco-friendly faux leather apparel (E-FLA), environmental knowledge, perceived consumer effectiveness, sustainable consumption beliefs, self-enhancement	Online survey N = 450 Chinese respondents N = 225 Korean respondents (SEM)
Seo & Kim (2019) [USA]	Understanding the purchasing behaviour of second-hand fashion shoppers in a non-profit thrift store context	second-hand shopping; nonprofit thrift store; consumer beliefs; theory of planned behaviour (TPB)	Web-based survey N = 197 thrift shoppers
Wiederhold & Martinez (2018) [Portugal]	Ethical consumer behaviour in Germany - The attitude-behaviour gap in the green apparel industry	attitude-behaviour gap, ethical consumer behaviour, fast fashion, green apparel, sustainable fashion, theory of planned behaviour, theory of reasoned action	In-depth semi-structured interview N = 13 consumers
Chang & Watchravesringkan (2018) [USA]	Who are sustainably minded apparel shoppers? An investigation to the influencing factors of sustainable apparel consumption	consumption, theory of planned behaviour, control beliefs, sustainable apparel	Survey N = 235 students (SEM)
Becker-Leifhold (2018) [Germany]	The role of values in collaborative fashion consumption: A critical investigation through the lenses of the theory of planned behavior	theory of planned behavior, value-belief-norm theory, collaborative consumption, sustainable consumption, clothing, sharing economy	Online questionnaire N = 1,009 respondents (SEM)
Han (2018) [USA]	Determinants of organic cotton apparel purchase: A comparison of young consumers in the U.S.A. and South Korea	organic cotton, consumers, cross-cultural, structural equation modeling; theory of planned behavior	Survey N = 334 US consumers N = 164 Korean consumers
Tu & Hu (2018) [Taiwan]	A study on the factors affecting consumers' willingness to accept clothing rentals	theory of planned behavior (TPB), technology acceptance model (TAM), diffusion of innovations (DOI), clothing rental	Online questionnaire N = 300 consumers (SEM)
Lang & Armstrong (2018) [USA]	Collaborative consumption: The influence of fashion leadership, need for uniqueness, and materialism on female consumers' adoption of clothing renting and swapping	collaborative consumption, renting, swapping, fashion leadership, need for uniqueness, materialism	Online survey N = 431 consumers (SEM)

de Lenne & Vandenbosch (2017) [Belgium]	Media and sustainable apparel buying intention	fast fashion, social media, theory of planned behavior, sustainable apparel, magazines	Cross-sectional survey N = 681 young adults
Han & Stoel (2016) [USA]	The effect of social norms and product knowledge on purchase of organic cotton and fair-trade apparel	organic cotton, fair trade, theory of planned behavior, knowledge, social norms	Online survey N = 500 Gen Yers (SEM)
Zheng& Chi (2015) [USA]	Factors influencing purchase intention towards environmentally friendly apparel: an empirical study of US consumers	environmentally friendly apparel; purchase intention; US consumers	Survey N = 187 college students (SEM)
Phau et al. (2015) [Australia]	Consumer attitudes towards luxury fashion apparel made in sweatshops	fashion, theory of planned behaviour, luxury brands, luxury consumers, premium products, sweatshops	Mail intercept survey N = 197 shoppers
Maloney et al. (2014) [USA]	Consumer willingness to purchase organic products: Application of the theory of planned behavior	organic apparel, theory of planned behavior, consumer purchasing intention, green fashion, consumer purchasing intentions	Survey N = 142 consumers (SEM)

Table 10. Previous research incorporating the Theory of Planned Behaviour.

Similarly, Table 11 indicated that numerous studies (Johnson & Plepys, 2021; Muthukumarana et al., 2018; Sohn et al., 2021; Wiedemann et al., 2021; Zamani et al., 2017) within cluster 2 employed Life Cycle Assessment (LCA) to investigate various facets of sustainability (e.g., sustainable development goals, end-of-life management) and specifically assess the environmental impacts associated with apparel industry and clothing.

Author (Year) [First Author's Affiliation]	Title of Publication	Author Keywords	Research Method
Wiedemann et al. (2021) [Norway]	Reducing environmental impacts from garments through best practice garment use and care, using the example of a Merino wool sweater	apparel, textiles, carbon, water, footprint, LCA, use phase	Inventory data Life Cycle Assessment (LCA)
Zhao et al. (2021) [China]	Virtual carbon and water flows embodied in global fashion trade - a case study of denim products	denim, fashion industry, international trade, footprint, life-cycle assessment, sustainability	Life Cycle Assessment (LCA)
Johnson & Plepys (2021) [Sweden]	Product-service systems and sustainability: analysing the environmental impacts of rental clothing	product-service system; life cycle assessment; rental clothing; environmental impact; sustainable business model; consumer behaviour	Case study research, data is derived from the literature, consumer survey & interviews
Sohn et al. (2021) [Denmark]	The environmental impacts of clothing: Evidence from United States and three European countries	clothing, environmental impacts, consumer behavior, clothing consumption and production, life cycle assessment	Online survey Life Cycle Assessment (LCA)
van Rensburg et al. (2020) [South Africa]	Life cycle and End-of-Life management options in the footwear industry: A review	environmental impacts, footwear materials, life cycle assessment, pyrolysis, waste management	Literature review

Almanza & Corona (2020) [Netherlands]	Using Social Life Cycle Assessment to analyze the contribution of products to the Sustainable Development Goals: a case study in the textile sector	S-LCA, SDG, social hotspot, textile, supply chain, product level	Case study Site-specific data Questionnaire
McNeill et al. (2020) [New Zealand]	Waste not want not: Behavioural intentions toward garment life extension practices, the role of damage, brand and cost on textile disposal	fashion disposal, sustainability, garment life extension, consumer behaviour	Survey Life Cycle Assessment (LCA)
Clarke-Sather & Cobb (2019) [USA]	Onshoring fashion: Worker sustainability impacts of global and local apparel production	Sustainable sourcing, Life cycle assessment, Apparel product development, Sustainability assessment, Apparel industry	Life Cycle Assessment (LCA)
Paras & Pal (2018) [Sweden]	Application of Markov chain for LCA: a study on the clothes 'reuse' in Nordic countries	fashion value chain, closed loop, reuse, Markov chain, textile waste	Mathematical model to calculate the average life of clothes Life Cycle Assessment (LCA) framework
Muthukumarana et al. (2018) [Sri Lanka]	Life cycle environmental impacts of the apparel industry in Sri Lanka: Analysis of the energy sources	Apparel industry in Sri Lanka, Life cycle assessment, Energy use,4Environmental impact reduction, Sustainable production	A literature survey Life Cycle Assessment (LCA)
Zamani et al. (2018) [Sweden]	Hotspot identification in the clothing industry using social life cycle assessment—opportunities and challenges of input-output modelling	fashion, social hotspot identification, SHDB, SLCA, social hotspots database, social impact	Social Life Cycle Assessment (SLCA)
Zamani et al. (2017) [Sweden]	Life cycle assessment of clothing libraries - can collaborative consumption reduce the environmental impact of fast fashion	problem shifting, apparel, climate change, ecotoxicity, eutrophication, water use	Life Cycle Assessment (LCA)
Yasin et al. (2016) [France]	Statistical analysis of use-phase energy consumption of textile products	Energy consumption, Life-cycle assessment, Principal component analysis, Procrustes analysis, Textile products, Use-phase	Life Cycle Assessment (LCA) plus principle component analysis (PCA)
Roos et al. (2016) [Sweden]	A life cycle assessment (LCA)-based approach to guiding an industry sector towards sustainability: the case of the Swedish apparel sector	life cycle assessment, social assessment, life cycle interpretation, planetary boundaries, actor-oriented advice, textile	Life Cycle Assessment (LCA)
Zhang et al. (2015) [China]	Life cycle assessment of cotton T-shirts in China	cleaner production, clothing, consumer behavior, cotton textile, environmental management, laundry washing, life cycle assessment, sustainability	Survey & secondary data Life Cycle Assessment (LCA)
Manda et al. (2015) [The Netherlands]	Prospective life cycle assessment of an antibacterial T-shirt and supporting business decisions to create value	modal fibres, antimicrobial textiles, antibacterial textiles, nanosilver, nanoparticles, T-shirt, life cycle assessment, resource conservation, business value creation	Life Cycle Assessment (LCA)
Laitala & Boks (2012) [Norway]	Sustainable clothing design: use matters	clothing use, textile, sustainable design, eco-design, durability, clothing maintenance, mending, design for sustainable behaviour, laundry, consumption, consumer research	Surveys & Interviews Life Cycle Assessment (LCA)

Table 11. Previous research incorporating the Life Cycle Assessment.

CHAPTER 3: LITERATURE REVIEW FOR EMPIRICAL RESEARCH

3.1 Research Motive and Focus

In this chapter, the literature review will primarily focus on apparel consumer behaviour, clothing choice, and evaluative cues. Scholars have highlighted that fashion consumption or sustainability is a broad topic (Geissdoerfer et al., 2017), and it is not feasible for a single research study to address every question or issue associated with it. Therefore, the current study narrows its scope to primarily investigate the shopping and consumption stages, rather than the production and post-consumption stages. To collect data, an online survey was developed to capture the perspectives of apparel shoppers/consumers, rather than clothing manufacturers/producers.

Based on the results of the systematic literature review presented in Chapter 2, as well as anecdotal observations (Henninger, 2015; Mittelstaedt et al., 2014; Phau & Ong, 2007), it becomes clear that both fashion practitioners and consumers are increasingly concerned about environmental, social, ethical and financial issues. Various studies (Ellis et al., 2012; Hustvedt & Dickson, 2019) have indicated that many consumers are willing to spend more money on "sustainable", "sweat-free" or "environmentally friendly" products. For instance, an experimental study (Ellis et al., 2012) conducted in the United States found that consumers were willing to pay 25% more for an organic T-shirt over a non-organic or conventional cotton T-shirt. In a similar vein, a survey of 1,362 Canadians in 2010 revealed that 29% of the participants indicated a willingness to spend "$15 or more on a $100 item if they were sure the product was ethically made" (Abacus Data, 2010; p. 4).

However, it is important to note that other studies have found that consumers' eco-awareness/consciousness does not always translate into actual buying behaviour. Many consumers

exhibit skepticism towards manufacturers' claims regarding environmental and ethical products, suspecting "greenwashing" or perceiving a lack of transparency and trust. This disparity between attitudes and actions is commonly referred to as the "attitude-action" or "value-action" gap (Gross, 2006). Despite an increasing number of consumers expressing a desire to reduce or minimise negative environmental impacts, they often remain skeptical of green advertisements and sustainable claims. For example, a study (Moon et al., 2015) conducted in South Korea found that there was no significant correlation between fashion involvement and sustainable practices. Simply having a higher level of fashion involvement does not necessarily lead to sustainable purchasing decisions. Similarly, another study (Goh & Balaji, 2016) discovered that green skepticism does not directly impact future purchase intentions.

Clearly, the findings presented thus far are not conclusive or comprehensive. Further research is needed to delve into the underlying preferences of apparel consumers and unravel their buying behaviour and selection criteria.

Hopkins (2009) asserted that consumers' buying decisions are influenced by a diverse range of factors, including price, style, brand, and quality. In other words, the presence of sustainable benefits alone cannot guarantee the sales of "green" fashion products. When shopping for clothing, consumers typically seek multiple values and benefits encompassing functional, aesthetic, psychological, experiential, and sustainable considerations. Furthermore, sustainable values can be further sub-categorised into egoistic/self, altruistic/other people, and biospheric/environmental dimensions (Swami et al., 2010). It is important to acknowledge that consumers from different cultures may prioritise different attributes of a product to fulfill their distinct needs and aspirations.

Drawing from the systematic literature review, numerous consumer research papers, specifically related to "consumer/consumerism" and "sustainable consumption" (as indicated in Table 7), were identified for further examination to formulate and develop various hypotheses for empirical testing.

3.2 Terms and Definitions – Sustainability and Product Cues

The term "sustainability" has been used interchangeably with other terms such as sustainable development, ecological/green system, triple bottom line, and corporate social responsibility (Amran & Haniffa, 2011; Carey & Cervellon, 2014). However, there is a lack of consensus or universally agree-upon definition, as critics have pointed out that the challenge of providing an adequate definition (Costanza & Patten, 1995). In this study, sustainability is conceptualised as maximising positive impacts and minimising negative environmental, social, and ethical effects. Thus, sustainable buying behaviours refer to individuals who prioritise these three aspects (environmental, social, and ethical) during the apparel shopping process.

It is noteworthy that throughout this thesis, the terms "sustainability" and "green," as well as "attribute" and "cue," are used interchangeably. Previous studies on cue utilisation (Hines & Swinker, 2001; Rahman, 2015) have indicated that consumers often consider multiple informational cues when evaluating a product prior to making a purchasing decision. To identify the factors that may play a relatively more significant role in apparel evaluation, 20 product cues were selected for the present study. These cues include 10 non-sustainable cues and 10 sustainable cues, as shown in Table 12. The selection of these 20 products cues was based on several factors, including (1) the findings from the systematic literature review presented in Chapter 2 (refer to Figures 10 and 11 for specific details), (2) the relevance of these cues to apparel research, and (3) the frequency of their use in prior studies on "fashion" or "fashion sustainability."

The designation of 10 product cues as "non-sustainable" was made to ensure that the evaluation of these cues would not be influenced by sustainable characteristics or features of the product. Non-sustainable product cues can be dichotomised into two types: intrinsic and extrinsic (Hines & Swinker, 2001; Rahman et al., 2008); psychic and physical (Swan and Combs, 1976); or functional and aesthetic (Rahman et al., 2010). In the context of apparel evaluation, intrinsic cues refer to the physical composition and performance of clothing (e.g., style, colour, fabric, durability, and garment fit), whilst extrinsic cues encompass product-related attributes not directly attached to the physical product (e.g., price, brand name and country of origin). Moreover, intrinsic cues can be further divided into psychic and physical cues. Psychic utility (or aesthetic cues) is associated with the aesthetic aspects of a product such as style and colour, whereas physical utility (or functional/performance cues) is linked to functional and utilitarian aspects such as durability and comfort (Rahman et al., 2017). Thus, in this article, the terms 'psychic' and 'aesthetic' are used interchangeably, as well as 'physical' and 'functional'.

Many apparel studies (Rahman, 2015; Jegethesan et al., 2012) have revealed that consumers consider a wide array of cues to justify their choices. However, there is limited empirical research (Geiger & Keller, 2018) exploring the influential effects of both sustainable and non-sustainable cues on apparel purchases, particularly in a cross-national perspective.

3.3. Product Cues for Empirical Testing

Based on the preceding discussion, product cues can be categorised into various typologies according to their distinct characteristics. This study identified 20 product cues by reviewing the existing literature, which encompassed prior research on apparel (e.g., Hsu & Burns, 2002; Moon et al., 2013; Rahman, et al. 2017; Speranskaya et al., 2018). For more information about the

selection and categorisation of these 20 product cues, please refer to Table 12, as well as Appendices 4 and 5. These 20 product attributes can be classified in various ways, such as:

1. Sustainable cues and non-sustainable cues.
2. Production-related cues (e.g., environmental, social/ethical cues) and product-related cues (e.g., physical product cues).
3. Extrinsic cues (not directly related to the physical product) and intrinsic cues (directly related to the physical product).

Following these guidelines, the 20 product cues/attributes were categorised into different types, as shown in Table 12. Among these 20 cues, 13 are primarily associated with the physical product, whilst the remaining seven are linked to the production processes. The product-related cues can be further divided into an extrinsic group comprising three items and an intrinsic group comprising ten items. Out of the 10 intrinsic cues, three are specifically related to sustainability.

	Apparel Cues	Types	Definitions and Characteristics
Product-Relate Cues	Colour	Intrinsic (In)	Colour information (e.g., hue, value, and intensity) is the most visible element for apparel products (Rasband, 2001).
	Style	Intrinsic (In)	Combination of design features within a garment (Kunz, 1998).
	Durability	Intrinsic (In)	Length of time a garment is suitable for use (Rosenau and Wilson, 2006).
	Comfort	Intrinsic (In)	Physical interaction and experience with the clothing material (Metje et al., 2008).
	Garment fit	Intrinsic (In)	Sufficient room for movement, comfortable to wear, aesthetic appeal, and fashionability (Stamper et al., 1991).
	Fabric	Intrinsic (In)	Fabric tactile properties, weight, and texture providing protection, aesthetic appearance, and physical comfort (Rahman, 2012).
	Quality *(workmanship)*	Intrinsic (In)	The ability of a garment to meet both functional and aesthetic expectations (O'Neal et al., 1990).

	Brand name	Extrinsic (Ex)	Name, symbol, design, or mark used as a signal to communicate social status, wealth, and group affiliation (Kotler, 1997; Rahman and Petroff, 2014).
	Country of origin *(made-in label)*	Extrinsic (Ex)	Country of origin (country-of-manufacture or assembly) influences consumer perception (Lee and Schaninger, 1996).
	Price	Extrinsic (Ex)	Price is linked to financial and perceived risks or uncertainty (Agarwal and Teas, 2001).
	Garment life *(ability to recycle/reuse/dispose)*	Intrinsic-Sustainable (In-Su)	Keeping end-of-life-cycle products from disposal through recycling and reuse if possible (Fletcher, 2008).
	Certified ethical label *(sweatshop-free product)*	Sustainable-Social/Ethical (In-Su-S/E)	Certified labelling informing consumers about ethical consumption (Carrigan et al., 2004).
	Certified eco-friendly label	Intrinsic-Sustainable (In-Su-En)	Certified labelling to inform consumers of the environmental impact of a specific product (Bratt et al., 2011).
Production-Relate Cues	Less water usage	Sustainable-Environmental (Su-En)	Reduce or minimizing water usage for textile and apparel production (Merchant, 2009; WWF, 2013).
	Air quality	Sustainable-Environmental (Su-En)	Strive for "pollution-free" textile and apparel production (Fletcher, 2008).
	Less energy usage	Sustainable-Environmental (Su-En)	Reduce or minimizing energy usage for textile and apparel production (Merchant, 2009; WWF, 2013).
	Worker safety	Sustainable-Social/Ethical (Su-S/E)	Working conditions, health, and safety (Fair Trade, 2015).
	Fair wages	Sustainable-Social/Ethical (Su-S/E)	Wages are based on fair and reasonable market rates (Fair Trade, 2015).
	No child labour	Sustainable-Social/Ethical (Su-S/E)	Without exploitation of children (Gandhi and Kaushik, 2016).
	No animal skin usage	Sustainable-Social/Ethical (Su-S/E)	Without exploitation of animals (Gandhi and Kaushik, 2016).

Table 12. Selected product cues – categorizations and definitions.

3.4 Characteristics of Selected Product Cues

Prior to the 1960s, research on product evaluation primarily focused on a single cue of products such as price or brand name (Brucks et al., 2000). However, this single-cue approach has been criticised for its low reliability, biased results, overemphasis on one specific cue, and failure to capture important latent constructs like perceived value (Rahman et al., 2018). To address these limitations, researchers (e.g., Davis et al., 1990; Rahman et al., 2017) have advocated for a

multiple-cue approach, which can generate more reliable results, avoid exaggerating the effect of a single product cue, and bring research closer to the real market situation.

Indeed, many consumers do not rely solely on a single feature or attribute when making purchasing decisions. Instead, they consider multiple cues to meet their diverse needs and fulfil personal goals and aspirations. Since the early 1970s, scholars have shown increasing interest in multiple-cue research, leading to many apparel studies (see Appendix 3 for the evolution of apparel cues studies) that examined various product cues, rather than focusing on a single cue or two relational cues (e.g., price-quality or brand-quality tradeoffs).

Based on previous studies of cue utilisation (Jamal & Goode, 2001; Rahman et al., 2010), product cues can be categorised as intrinsic and extrinsic. Extrinsic cues include price, brand name, and country of origin, which are external to the physical product and not directly attached to it. Changing these attributes would not affect the physical properties of the product. On the other hand, intrinsic cues such as style, fabric, and colour are inherent physical characteristics of the product. Altering these cues would affect the product's physical appearance and performance. Moreover, intrinsic cues can be further subdivided into two sub-categories: psychic and physical utility (Rahman et al., 2017). Psychic utility is associated with the aesthetics of a product, whilst physical utility is associated with performance and functionality.

Previous studies (Hofstede, 2001; Rahman et al., 2010) have indicated that consumers from individualistic cultures (e.g., Canada and the United States) tend to rely more on psychic/aesthetic cues when making apparel choices in comparison to consumers from collectivistic cultures (e.g., India and China).

3.4.1 Aesthetic and Functional Cues: Colour, Style, Comfort, and Durability

Colour and style are the two most visible attributes for clothing evaluations and purchases (Rasband, 2001). Both attributes can greatly affect the consumers' perceptions, emotional reactions, aesthetic responses, or purchasing intentions (Valdez & Mehrabian 1994). In terms of colour choice, socio-cultural and personal preferences exert great influence on consumers' buying decisions. Colour cues can convey the latest fashion trends, establish brand recognition (e.g., Coca-Cola distinctive red hue), and even imply product qualities such as weight and temperature. However, the colour associations may differ across countries (in terms of colour-culture relationships) and among different product categories (in terms of colour-object association). For example, Indians perveive black as dull and stupid (Grossman and Wisenblit, 1999) whereas Germans, Americans, and Mexicans associate it with fear, anger, and jealousy (Hupka et al., 1997). Similarly, in Western societies, black is often linked to evening gowns and formal attire, whilst white is closely associated with wedding dresses.

It is worthwhile to note that the terms "design," "style" and "visual appearance" share similar meanings and are frequently used interchangeably within apparel research (Tselepis & De Klerk, 2004). Style can be defined as a combination of features (Kunz, 1998) or the silhouette and structure of a garment (Miller et al., 2005). Silhouette is one of the critical aesthetic features of clothing design (Sproles, 1981), can undergo various transformations, ranging from mini shirts to maxi skirts, form-fitting to baggy styles, or unconstructed jackets to constructed ones (e.g., the boxy power suits popular in the 80s). The adoption of a new clothing style is often influenced by social conformity, seeking approval, and designing acceptance from significant others and affiliated societal groups. A study (Hugo & van Aardt, 2012) examining the evaluation of casual daywear among South African female consumers discovered that individuals with higher levels of education were less likely to rely solely on style when making clothing purchase decisions.

Apart from colour and style, clothing comfort and durability also plays a significant role in the evaluation and consumption of clothing. Comfort encompasses aspects such as thermophysiological comfort, ease of movement, and the ability to provide wearers protection in various climates and situations. Previous apparel studies have consistently highlighted that comfort is an important evaluative cue, particularly for certain types of clothing such as brassiere (Chan et al. 2001), sleepwear (Labhard & Morris, 1994; Rahman et al., 2009), pyjamas (Rahman et al., 2008), tennis wear (Chae et al. 2006), outdoor sportswear (Liu, 2012), denim jeans (Bennur & Jin, 2013; Rahman, 2010) and footwear (Rahman, 2018). When making apparel purchases, consumers consider comfort as the most sought-after attribute, followed by garment fit (Liu, 2012). In a study conducted by Chae et al. (2006) on tennis wear purchases, comfort emerged as the most salient cue during both the shopping (pre-purchase) and consumption (post-purchase) stages.

In the context of clothing and textile, "durability" denotes the ability of textile apparel to withstand deformation and abrasion (resulting from high rubbing effects) during usage (Rosenau and Wilson, 2006). Durability is closely associated with factors such as product's weight, strength, and thickness (Rahman, 2012). Enhancing the durability of fashion products can contribute to a reduction in their environmental impact. Similarly, implementing durability standards and promoting sustainable practices can prolong the lifespan of a product, encourage its reuse, resale, or repurposing, and ultimately enhance its overall value.

However, consumers' preferences and perceptions regarding these four attributes can vary significantly across different countries. According to a cross-national apparel study (Rahman et al., 2010), Canadian consumers showed a higher inclination towards aesthetic features such as colour and style, whereas Chinese consumers demonstrated a greater emphasis on functional factors such as comfort and durability. Another study (Zhang et al., 2002) conducted in China

yielded similar findings, with many participants rating comfort as relatively more important than colour and style when shopping for casual wear products. In a similar vein, a study (Rahman & Kharb, 2018) focusing on Indian consumers found that apparel consumers are relatively more concerned about garment comfort than style and colour. Moreover, numerous studies examining apparel cue have found that American consumers place greater emphasis on clothing style and aesthetics (Eckman et al., 1990; Wu & Delong, 2006), whilst Chinese consumers prioritise price and brand name considerations (Delong et al., 2004; Dickson et al., 2004).

Although the Indian wardrobe has undergone a significant transformation, many women still maintain a preference for traditional attire, exemplified by their choice to wear the salwar kameez[13] for work (Sandhu, 2015). This observation leads to the reasonable inference that consumers in Asia tend to prioritise the functional and traditional aspects of apparel products over their aesthetic and contemporary qualities. Building upon the preceding discussion, the following hypotheses were developed:

H1: Canadian and Indian consumers are significantly different in the use of (a) colour and (b) style (psychic cues) for clothing evaluation

H2: Canadian and Indian consumers are significantly different in the use of (a) durability and (b) comfort (physical cues) for clothing evaluation

3.4.2 Intrinsic Cue: Garment Fit

When shopping for apparel products in different countries, garment fit is an essential evaluative cue to consider, along with comfort. From the apparel perspective, the relationship between

[13] Salwar kameez (or Shalwars Kameez) is a female traditional costume. This ethnic attire became popular in the Punjab region and slowly spread throughout all the Indian states (Klepp et al., 2014). Salwar is a form of baggy trousers with narrow cuffs at the bottom and Kameez is a long shirt or tunic top.

garment fit and comfort is highly correlated. Well-fitting clothes not only offer physical comfort but also enhance the proportions of the human body. On the contrary, ill-fitting clothes often lead to discomfort and prompt customers to return the merchandise (Gardyn, 2003). A recent study (Rahman & Navarro, 2022; p. 3) found that "When a garment fails to provide a comfortable fit, it leads to returns of merchandise, financial losses for retailers, as well as consumers' dissatisfaction and psychological disturbance."

Several research studies (Abraham-Murali & Littrell, 1995; DesMarteau, 2000; Wang et al., 2021) have reported a significant number of apparel returns occur due to poor fit. Another study conducted on catalogue purchases (Gardyn, 2003) supports this observation, revealing that garment fit accounts for one-third of clothing returns. Fit and comfort play a vital role as determining factors when purchasing intimate clothing (Chan et al., 2001; Mintel, 1997; Rahman et al., 2009) athletic sportswear (Chae *et al.*, 2006; Dickson & Pollack, 2000), and denim jeans (Bennur & Jin, 2013; Rahman, 2010). Fit refers to how well a piece of clothing conforms to the wearer's body (Workman & Lentz, 2000) or the relationship between a clothing item and the human body (Ashdown & DeLong, 1995). A well-fitting garment should offer wearers comfort, ease of movement, balanced and, proportionate appearance. It not merely provides physical comfort but also contributes to the visual and aesthetic aspects (Heaton, 2000). In this regard, fit can be classified as both psychic and physical attributes.

Several apparel studies (Kwon & Parham, 1994; Markee et al., 1990; Tate, 2004) have indicated that individuals often use specific clothing styles to camouflage or conceal their perceived imperfections, thereby enhancing their overall body cathexis[14]. Individuals who are less

[14] Body cathexis is a somatic or physical self-concept. It can be defined as a feeling (positive/satisfaction or negative/dissatisfaction) towards one's body or body parts (Secord and Jourard 1953; Manuel et al., 2010).

satisfied with their bodies tended to conceal their perceived body flaws, whilst those who are more satisfied choose clothing to accentuate their desirable body parts (Harden et al., 1998). Additionally, prior research has consistently reported that fit and comfort are among the most important factors in apparel evaluation, as demonstrated in Table 13.

Author(s)	Year	Country	Sample Size & Subject	Product	No. of Apparel Cues	Fit and Comfort [Rank]
May & Koester	1985	U.S.A.	n = 490 Subject: college students	Clothing	9	Fit [1] Comfort was not selected for this study
Gipson & Francis	1991	U.S.A.	n = 181 Subject: adult female sweater purchasers	Women's sweater	15	Fit [1] Comfort was not included in this study
Labhard & Morris	1994	U.S.A.	n = 114 Subject: female college students	Sleepwear	10	Comfort [1] Fit [3]
Kawabata & Rabolt	1999	U.S.A. & Japan	n = 186 (U.S.) n = 278 (Japan) Subject: female college students	Clothing	11	Fit: U.S. [1]; Japan [2] Comfort was not selected for this study
Fowler	1999	U.S.A.	n = 97 Subject: college students	Sports apparel	8	Comfort: Women [1]; Men [1] Fit: Women [2]; Men [2]
Chan *et al.*	2001	Hong Kong	n = 80 Subject: women	Brassiere	7	Comfort [1] Fit [2]
Hsu and Burns	2002	Taiwan & U.S.A.	n = 119 (Taiwan) n = 84 (U.S.) Subject: college women	Clothing	12	Fit [1] Comfort [2]
Zhang *et al.*	2002	China	n = 3,534	Casual wear	15	Fit [1] Comfort [2]
Chae *et al.*	2006	U.S.A.	n = 124 Subject: women	Tennis wear	14	Comfort [1] Fit [2]
Wu & Delong	2006	China	n = 219 Subject: shoppers wearing jeans	Denim jeans	19	Comfort [1] Fit [2]
Rahman *et al.*	2008	China	n = 203 Subject: female students	Pyjamas	7	Comfort [1] Fit was not selected for this study
Rahman *et al.*	2010	Canada /China	n = 247 (China) n=380 (Canada) Subject: female students	Women's denim jeans	9	Fit: Canada [1]; China [2] Comfort: Canada [4]; China [1]
Rahman	2011	Canada	n = 380 Subject: female undergraduate students	Women's denim jeans	9	Fit: [1] Comfort [4]

Table 13. The significance of fit and comfort in prior research.

H3: Both Canadian and Indian consumers rely more significantly on (a) comfort and (b) garment fit to evaluate clothing than on other product attributes

3.4.3 Intrinsic Cues: Correlation between Fit, Comfort, and Fabric

Previous research studies (e.g., Metje et al., 2008; Rahman, 2011; Rahman et al., 2017) found that garment fit, comfort, and fabric are closely related. Tselepis and de Klerk (2004) have pointed out the significant impact of fabric weight and thickness on the fit and comfort of a garment. For example, soft, delicate, flimsy, and flowing fabrics such as silk, satin, and chiffon tend to have more pronounced draping quality compared to thick, heavy fabrics such as canvas and denim. Additionally, lightweight and stretchy garments generally offer greater comfort in comparison to those made with coarse materials. It is crucial to avoid inappropriate textile materials that can lead to undesired physical effects such as restricted movement, reduced protection, or discomfort (such as itchiness). Moreover, wearing garments made with unsuitable fabric can lead to psychological discomfort, including a perception of being unfashionable or evoking negative emotional responses among wearers (Metje et al., 2008; Yoo, 2003). Furthermore, several studies (e.g., Rahman, 2011; Rahman et al., 2009) have consistently demonstrated a positive correlation among these three product cues. Based on these findings, the following hypothesis was developed:

H4: Fabric, fit, and comfort are strongly correlated from the perspectives of both Canadian and Indian consumers.

3.4.4 Extrinsic Cues: Brand Name and Country of Origin (COO)

A brand can be defined as "the name associated with one or more items in the product line that is used to identify the source or character of the items" (Kotler, 1997; pp. 432). However, when it comes to purchasing apparel, many consumers do not purchase an apparel item merely based on its name but also on its economic, functional, and aesthetic attributes. For example, people do not buy a desirable brand if the garment does not fit or cannot be altered to fit their body type. As Rahman et al. pointed out in their study (2011, p. 292), "many consumers will not consider buying a pair of trousers with a malfunctioning zipper." Although the brand name may not serve as the primary evaluative cue, it can still differentiate a brand from its competitors, express personal taste and ideologies, enhance social image and status, and mitigate risk and shopping effort (Rahman et al., 2019). According to previous research (Ackerman & Tellis, 2001; Puddick & Menon, 2012), urban youths in emerging countries such as China and India are increasingly brand conscious, yet they remain highly concerned about the overall product value of the product. Many consumers are willing to trade up for branded goods that offer the most benefit. However, it is evident that consumers do not solely rely on the brand label when making clothing purchases. Considering the aforementioned points, it is reasonable to suggest that other product attributes may play a more significant role in clothing selection and purchases than the brand name alone.

Similarly, if a product fails to meet people's basic needs, personal aspirations, and intrinsic values upon initial examination, they are unlikely to pay significant attention to the COO or "made-in label." According to Lascu and Babb's (1995) findings, Polish consumers were less concerned about the COO, particularly for basic, inexpensive, and commonly used items such as socks and pyjamas. However, when shopping for expensive, prestigious, and high-end products such as designer fashion items (e.g., Hermès handbag or a Giorgio Armani jacket), the COO becomes more important. Furthermore, Ahmed et al. (2004) and Hui and Zhou (2003) also found that the

significance of the COO as an evaluative cue diminishes when another extrinsic cue, such as brand name, is present. Whilst the brand name may hold a relatively more significant role than the COO, it is reasonable to suggest a correlation between these two product cues. According to Lin and Chen (2006), consumers tend to utilise country or origin or "made-in" as a cue to assess the "superiority" or "inferiority" of a product based on their perception of the country's competence. In addition, several multi-cue apparel studies conducted in Canada, China, Japan, and the United States (Kawabata & Rabolt, 1999; Rahman et al., 2008; Rahman et al., 2009) revealed that the COO is often perceived as the least important or second-least important cue among various other apparel attributes, as indicated in Table 14.

The findings of numerous previous studies (e.g., Hsu & Burns, 2002; Rahman et al., 2017; Zhang et al., 2002) remain consistent across various types of apparel products and cultures. Certain studies (Cordell, 1992) have indicated that when consumers are familiar with or knowledgeable about the functionality of a product, they rely less on the brand name and COO cues to guide their evaluation and purchasing decisions. In light of the collective evidence from previous research (see Table 14), it becomes clear that consumers generally consider brand name and COO as the two least important cues in apparel evaluation. With this perspective, the following hypotheses were proposed.

Author(s)	Year	Country	Sample Size & Subject	Product	No. of Apparel Cues	Brand Name and Country of Origin (COO) [Rank]
Bergeron & Carver	1988	U.S.A.	n = 190 (college students, 91% female)	Clothing	3	COO [3] Brand name was not selected for this study
Gipson and Francis	1991	U.S.A.	n = 181 (adult female sweater purchasers)	Women's sweater	15	Brand name [14] COO [15]
Labhard & Morris	1994	U.S.A.	n = 114 Subject: female college students	Sleepwear	10	Brand name [15] COO was not selected for this study

Kawabata & Rabolt	1999	U.S.A. & Japan	n = 186 (U.S. female college students) n = 278 (Japanese female college students)	Clothing	11	Brand name: U.S. [10]; Japan [10] COO: U.S. [11]; Japan [11]
Fowler	1999	U.S.A.	n = 97 college students (56% female and 44% male)	Sports apparel	8	Brand name: women [7]; men [4] COO was not selected for this study
Chan et al.	2001	Hong Kong	n = 80 (women)	Bra	7	Brand name [7] COO was not selected for this study
Hsu & Burns	2002	Taiwan & U.S.A.	n = 119 Taiwanese and 84 U.S. college women)	Clothing	12	Brand name [11] COO [12]
Chen et al.	2004	China	n = 167 surveys n = 18 females (focus group interview)	Children's clothing	8	Brand name [8] COO was not selected for this study
Chae et al.	2006	U.S.A.	n = 124 women	Tennis Wear	14	Brand name [13] COO was not selected for this study
Rahman et al.	2008	China	n = 203 (female students)	Pyjamas	6	Brand name [5] COO [6]
Rahman et al.	2009	China	n = 256 (male students)	Sleepwear	6	Brand name [5] COO [6]
Rahman et al.	2010	Canada /China	N = 247 (Chinese female students) n=380 (Canadian female students)	Women's denim jeans	9	Brand name: Canada [8]; China [8] COO: Canada [9]; China [9]
Rahman	2011	Canada	n = 380 females undergraduate students	Women's denim jeans	9	Brand name [8] COO [9]

Table 14. The significance of brand name and country of origin (COO) in prior research.

H5: Both Canadian and Indian consumers rely less significantly on (a) brand name and (b) country of origin to evaluate clothing than on other product attributes

3.4.5 Extrinsic Cue: Price

Consumers' purchasing decisions are heavily influenced by their financial situations and personal needs (Parkvithee & Miranda, 2012). Price is one of the most investigated product attributes, and often serves as a guide for consumers in their product selection and purchases. Consumers typically have a preconceived price range that helps them navigate their choices. This perceived cue can act as a surrogate indicator or proxy for product quality, especially when consumers lack sufficient

information about intrinsic attributes of the product such as style, durability, comfort, and garment fit. In this respect, it would seem reasonable to suggest that price cue becomes less significant if other intrinsic product cues are available. Despite prior studies (Chae *et al.*, 2006; Viciunaite & Alfnes, 2020) investigating the relationship between price and quality, the results have been inconclusive. Higher prices can be perceived positively or negatively in relation to product quality. From a cross-cultural perspective, several studies (Jo & Sarigollu 2007; Zhou et al., 2002) have indicated that consumers may hold different perceptions of price due to socioeconomic disparities among nations.

The World Bank (2019) reported that the GDP per capita of Canada and India was US$46,233 and US$2,010 in 2018, respectively. Due to the economic disparity between Canada and India, it is reasonable to expect that Indian consumers are likely to be more concerned about the price of clothing than their Canadian counterparts. An exploratory study on price/perceived quality **(**Johnson & Kellaris, 1988) found that lower-income consumers relied more heavily on price when making purchasing decisions than higher-income consumers. Studies conducted in India (Adnan et al., 2017; Puddick & Menon, 2012; Recchione & Misra, 2012) also indicated that Indian consumers are both price-conscious and quality sensitive, actively seeking the best value and not hesitating to shop around. In fact, according to Nielsen's research, Indians were found to be the most price-sensitive shoppers among 12 surveyed countries in the Asia-Pacific region (Gale, 2011). As Puddick and Menon (2012, p. 51) mention in their study, "Indians know the price of items in different markets, and they will absolutely shop around for the best deal" before making a purchase. With this perspective, it is reasonable to assume that people from less affluent societies exhibited more cautious spending habits compared to consumers in developed and affluent societies. Therefore, the following hypothesis was developed:

H6: Indian consumers rely more significantly on product price to evaluate clothing than Canadian consumers

3.4.6 Product-related Sustainable Cues – Eco-Label and Ethical Label

In this thesis, the term "sustainable labels/labelling" was used to represent both eco-labels (pertaining to environmental aspects) and social/ethical labels (relating to social responsibility and ethical aspects). However, several studies (e.g., Henninger, 2015) reported that many consumers associated eco-labelling specifically with environmentally friendly, fairly traded, and cruelty-free products. In other words, sustainable labels and eco-labelling are often used interchangeably in many contexts. Although a considerable amount of research has been conducted on eco-labelling in recent decades, only a handful of studies have been carried out in developing/emerging countries (e.g., Goswami 2008) or in a cross-national context. As shown in Table 15, the majority of labelling studies have focused on North America and Europe. Many of these studies solely examined sustainable labels without considering other product attributes. However, in real shopping situations, many consumers do not base their purchases solely on a single attribute, such as an eco-label. They often consider, compare, and judge overall product quality between a wide array of attributes, and subsequently make trade-off decisions. To gain a deeper understanding of the factors influencing consumer decision-making, it is imperative to further investigate the role of sustainable labels and consumer choice in both Western and Eastern countries.

Author(s)	Year	Countries	Sample	Focus of Study	Label	Product
McCarthy & Burdett	1998	Europe	Non-empirical approach - without primary data collection; a review of leading textile-related schemes	Eco-labelling and textile-related schemes	Eco-label	Textiles
Nimon & Beghin	1999	U.S.A.	750 observations from retail order catalogues	Eco-labels and apparel market valuation	Eco-label	Apparel

Dickson	2001	U.S.A.	547 adults	The influence of "no sweat" label on apparel purchasing decisions	No sweat label	Apparel
Atilgan	2007	Turkey	Non-empirical approach - without primary data collection	Application of eco-labels in Turkey	Eco-label	Textiles & apparel
Goswami	2008	India	480 adults (42% females and 58% males)	Consumers' readiness for clothing with eco-labels	Eco-label	Clothing
Targosz-Wrona	2009	Poland	130 students (75% females and 25% males)	Eco-labels for textiles and consumers' understanding	Eco-label	Textiles
Koszewska	2011	Poland	981 adult consumers	The importance of social and eco-labelling of textile and clothing	Social and eco-label	Textiles & clothing
Laitala & Klepp	2013	Norway	16 informants (13 females & 3 males) In-depth interviews	Environmental and ethical perceptions related to clothing labels	Clothing labels and eco-labels	Clothing
Žurga & Tavčer	2014	Slovenia	535 consumers (80% females and 20% males)	Eco-labels and apparel purchases	Eco-label	Apparel
Choudhury	2015	Global perspective	Non-empirical approach - without primary data collection	Eco-labels for sustainable textiles	Eco-label	Textiles
Clancy et al.	2015	Sweden	Secondary data from published literature and online information; and 4 interviews with managers at 3 Swedish clothing companies	The connection between eco-labels and clothing design	Eco-label	Clothing
Henninger	2015	U.K.	300 surveys from consumers; and semi-structured interviews with 11 owner-managers of slow-fashion companies	Micro-companies' responses and consumers' perceptions towards eco-labelling	Eco-label	Fashion
Ma et al.	2017	U.S.A.	903 sustainable product consumers	Consumers' perceptions of sustainability labels on apparel products	Sustainable label	Apparel

Table 15. Previous literature on textiles and apparel sustainable labelling.

Labelling is a highly effective method of conveying crucial product information to consumers, and it plays a significant role in the apparel industry. Typically, apparel labelling includes essential details such as size and fit (sizing guides and measurements), fiber content, traceability-specific information, brand identification (trademark, symbol, logo), product safety/warnings, as well as wash and care instructions (laundry information and symbols). In addition to these labels, sustainability certifications and eco-labels are frequently used in many apparel products. Although sustainable labelling for apparel is not mandatory, it can serve as proxy indicators that guide heuristics in the purchasing decisions, particularly for environmentally conscious individuals (Henninger 2015). In the clothing and textile industry, sustainable labelling has gained recognition as one of the essential tools for providing sustainability information. The number of eco-labels has

increased significantly over the past few decades, with more than 460 labels currently in existence, 107 of which are specifically focused on textiles (Eco Label Index 2018).

By incorporating sustainable labelling, companies can demonstrate their commitment to ethical, social, and environmental practices, whilst also gaining a competitive edge by differentiating themselves from rival brands. Informed by certified eco-labels, environmentally conscious consumers are more likely to make choices align with their values (D'Souza et al., 2007; Yeonshin & Sejung, 2005). According to a report published by the Eurobarometer (2009), 47% of EU citizens expressed that certified eco-labels play a critical role in their purchasing decision, However, it is worth noting that 25% of consumers admitted to not using eco-labels when making purchasing decisions.

Furthermore, Hustvedt & Bernard (2008) found that consumers are willing to pay a higher price for socks labeled as organic fibre or locally made, underscoring the impact of labelling on consumer preferences and willingness to pay.

3.4.6.1 Sustainable Labels: Visual Stimuli

A survey conducted by KPMG (2019) indicated that people in Hong Kong and Shanghai demonstrated a greater embrace of sustainable fashion compared to those in London and New York. Another research (Kumar & Ali, 2011) also revealed variations in consumers' knowledge and consumption experiences of eco-products across different nations. For instance, awareness of the EU Ecolabel ranged from higher levels in countries like Lithuania, Denmark, and Estonia to relatively lower levels in the United Kingdom, Italy, and Sweden (Eurobarometer, 2009). Due to the disparities in socioeconomic conditions, ethical sensitivity, and environmental concerns among nations, perceptions of fashion sustainability may differ among people from various countries.

However, it is noteworthy that the majority of previous studies have predominantly or exclusively focused on Western societies, specifically the United States and Europe. This observation has also been extensively discussed in Chapter 2.

In this study, a questionnaire survey incorporating visual stimuli was conducted to assess consumers' awareness of sustainable labels. The visual stimuli consisted of six sustainable labels: Fair Trade, Care & Fair-Siege, Global Organic Textile Standard, Fair Wear Foundation, Clean Clothes Campaign, and Oeko-Tex Standard 100, as presented in Table 16. The selection criteria for these labels were based on their industry focus (textiles and clothing), different representations (environmental, ethical, and social), as well as their popularity and relevance. For example, according to Rawes (2017), "Fair Trade" and "Fair Wear Foundation" are among the most commonly used labels. All of these labels were included in the online survey, where participants from Canada and India were asked to identify the most important, familiar or recognizable label from the options listed in Table 16.

Sustainable Label Logos (Year of Establishment)	Mission and Focus
Fair Trade (1997)	The Fairtrade standards focus on three key areas: social, economic, and environmental development to improve working conditions, ensure fairer wages, protect human rights, prohibit child labor, and provide support to producers and organizations (Fairtrade International 2020).
Care and Fair (1994)	A worldwide organization dedicated to fight illegal child labor, improve living conditions, promote socially acceptable production, and help to enhance corporate social responsibility (Care & Fair 2020).
Oeko-Tex® Standard 100 (1992)	An independent certification system to test textile articles for harmful substances, and issues Standard 100 certificates to

	manufacturers whose products meet these standards (Oeko-Tex® 2020).
Fair Wear Foundation (1999) 	Focus on garment production, specifically sewing, cutting, and trimming processes; with a commitment to promoting the highest standards in clothing manufacture. Involvement and engagement with garment factories to promote human rights, safety, and fair wages (Fair Wear 2020).
Clean Clothes Campaign (1989) 	"It is a global network dedicated to improving working conditions and empowering workers in the global garment and sportswear industries" (Clean Clothes Campaign 2020).
Global Organic Textile Standard (2002) 	A global processing standard for organic textiles and fibers to ensure their organic status without the use of toxic, persistent pesticides and fertilisers - from harvesting of raw materials through environmentally and socially conscious manufacturing practices (Organic Trade Association, 2023).

Table 16. Visual stimuli and general information of chosen sustainable labels.

3.4.7 Production-related Sustainable Cues

3.4.7.1 Environmental Factors – Air Quality, Water Consumption, and Energy Consumption

Based on the comprehensive literature review, it is evident that many prior studies have predominantly focused on product-related cues rather than production-related or sustainable cues. In the textiles and clothing industry, a significant portion of the environmental footprint and toxicological impact arises during the production phase (Walters et al., 2005). This sector has been classified as the 'red category' in terms of sustainability due to its substantial contribution to air and water pollution (Domainb.com, 2007). Textile and clothing production also consumes vast

amounts of water and energy. In fact, according to Speranskaya et al. (2018), 'the textile industry is the #1 industrial polluter of freshwater on the planet.' In a similar vein, previous studies (Merchant, 2009; WWF, 2013) also reported that the extensive water usage in the clothing industry, with around 2,700 litres required to produce a cotton T-shirt and 1,800 gallons for a pair of jeans. In terms of energy consumption, approximately 0.45–0.55 kWh of electrical energy is needed to produce one square metre of cloth (O Eco Textiles, 2009). These manufacturing practices result in significant fossil fuel consumption each year.

Furthermore, a study (Hill & Lee, 2012) conducted among young female students aged 18-25 in the United States revealed that many participants considered "energy efficiency" (58.8%), and "water usage control" (50.1%) as important factor in sustainable production, compared to many other attributes such as "long-lasting garments" (45.1%), "biodegradable materials" (30%), "environmentally friendly dyes" (26.5%), "organic materials" (11.4%) and "information about laundering and care" (11.4%). Notably, prior research (Abacus Data, 2010; Ethical Consumer, 2016; Gandhi & Kaushik, 2016) has indicated that people are increasingly concerned about environmental issues, including air quality and effective use of water and energy usage.

However, several studies have also found that consumers exhibit high levels of skepticism towards claims of "green production" (Leonidou & Skarmeas, 2017), environmentally friendly practices (Thøgersen et al., 2010), as well as doubts regarding the actual environmental benefits (Delmas & Burbano, 2011) and philanthropic contributions to ecology and fair trade (Meyer, 2001). As a result, there exists a discrepancy between consumers' attitudes and their purchasing behaviours, often referred to as an attitude-action gap or value-action gap (Gandhi & Kaushik, 2016). When consumers are unfamiliar with certain sustainable attributes or skeptical about sustainability claims, they tend to rely more on intrinsic (concrete/observable) cues rather than

sustainable (abstract/altruistic) cues to evaluate products and guide their purchasing decisions. Studies on cue utilisation and adaptation (e.g., Forsythe et al., 1999; Rahman et al., 2017) have suggested that intrinsic cues generally have higher predictive or diagnostic values compared to extrinsic and sustainable cues. Based on this discussion, the following hypothesis was put forth:

H7: Both Canadian and Indian consumers rely less significantly on sustainable-environmental cues (Su-E) to evaluate clothing than they do on intrinsic psychic and physical cues (In-Ps, In-Ph, and In-Ps/Ph).

3.4.7.2 Social/Ethical Factors – Worker Safety, Fair Wages, No Child Labour, No Animal Skin Usage

Many developing or underdeveloped nations heavily rely on the textile and clothing industry to sustain their economy. For example, Bangladesh and India have been dependent on labor-intensive sectors such as jute and cotton agriculture, the textile industry, and the garment trade. Social and ethical responsibility can be described as a commitment to improving and strengthening the socio-ecological system, as well as upholding ethical practices within society. These two elements of sustainability often encompass opposition to sweatshop environments, dedication to safe working conditions, fair wages, the elimination of child labour, abstaining from the use of animal hide in products and animal testing, adherence to social justice principles, and increase transparency and accountability in manufacturing and supply chain processes.

Some researchers (Bray et al., 2010; Pookulangara & Shephard, 2013) have reported that consumers lack sufficient knowledge and information to make informed decisions regarding social and ethical factorss. The absence of comprehensive sustainability information leaves consumers uncertain about whether products truly meet claims of minimal negative societal impact, freedom

from animal testing, or adherence to social justice principles. Thus, many consumers exhibit ambivalent toward ethical and social responsible consumption due to skepticism surrounding "greenwashing" practices and the perception that philanthropy has been marketised to improve sales (Meyer, 2001). Furthermore, some researchers (Joergens, 2006; Shaw & Tomolillo, 2004) have found that many ethical consumers expressed dissatisfaction with ethical clothing options due to unattractive styles and limited choices.

With this perspective, the following hypothesis was formulated:

H8: Both Canadian and Indian consumers rely less significantly on sustainable-social/ethical (Su-S/E) cues to evaluate clothing than they do on intrinsic psychic and physical cues. (In-Ps, In-Ph, and In-Ps/Ph)

Whilst consumers may not heavily rely on sustainable cues when evaluating clothing, it is plausible to argue that sustainable cues might elicit more engaged responses from consumers or exert greater influence in certain countries. For example, child labour stands as a significant socio-ethical issues in numerous developing nations. According to an executive summary on child labour jointly published by the International Labour Organisation (ILO) and UNICEF (2021), an estimated 160 million children aged 5 to 17 were engaged in child labour globally, with a surprising 79 million of them involved in hazardous work. India holds the largest population of child workers worldwide, contributing approximately 20% to India's GDP each year. According to census data (Census India, 2011) released by the Government of India, the population of child workers aged 5 to 14 years was recorded at 4.35 million, many of whom work for 6 to 12 hours per day. Their earnings "vary between 0 and 200 (US$2.61) to 300 rupees (US$3.92) per month, depending on the nature of the work and the sector of employment" (Shukia & Ali, 2006, p. 154).

Despite various measures and efforts, including national campaigns and international agreements (ILO Convention 182), as well as the implementation of the Child Labour (Prohibition and Regulation) Amendment Act in 2016, the issue of child labour and exploitation persists in India. Thus, it is reasonable to propose that Indian consumers are more likely to express concern about child labour compared to Canadian consumers, as child labour is an everyday problem faced by many individuals in India.

H9: Indian consumers rely more significantly on "child labour" to evaluate clothing than Canadian consumers

The anti-fur campaign can be traced back to the mid-1980s, and it gained significant momentum. As a result of successful political campaigns by organisations like "Respect for Animals," the United Kingdom implemented a ban on fur farming almost two decades ago. In recent years, a growing number of fashion retailers have played a vital role in raising global awareness about the ethical concerns surrounding fur production, such as the implementation of "fur-free" policies, (Respect for Animals, 2019).

Although anti-fur and anti-cruelty campaigns have raised global awareness, fur farming continues to exist in Canada, albeit regulated by statutory measures. A recent report (Statistics Canada, 2020) indicates that the number of mink and fox fur farms has declined from 287 in 2014 to 125 in 2018. Despite this decline, Canadian consumers and producers remain cognizant of the ethical implications associated with the usage of animal hides.

Since 2017, the Indian government has implemented a ban on the import of exotic animal skins, including those reptiles, as well as the fur of chinchillas, mink, and foxes (Mohan, 2017). This regulatory measure reflects the commitment to protect wildlife and preserve biodiversity in India.

Interestingly, certain studies (e.g., Sreen et al., 2018) suggest that beliefs in karma may influence sustainable consumption and practices in India. The law of karma revolves around moral causation, emphasising the relationship between cause and effect, action and reaction. It posits that an individual's past or present actions will impact their future. In addition, Hinduism, the predominant religion in India, regards all living beings as sacred and deserving of profound respect. Considering these cultural and spiritual perspectives, the following hypothesis was proposed:

H10: Indian consumers rely more significantly on "no animal skin usage" to evaluate clothing than Canadian consumers

3.5 Gender Effects

Despite the substantial attention given to sustainability in academia and industry, there remains a research gap concerning the examination of gender effects on fashion consumption and sustainability. Gender has been extensively explored as a demographic variable in various marketing and consumer research studies (Jegethesan et al., 2012; Khare et al., 2012; Seock & Bailey, 2008; Wedel & Kamakura, 1999; Zelezny et al., 2000). For example, Cleveland et al. (2011) and Do Paço (2009) found that gender plays a critical role in market segmentation. In a similar vein, several apparel studies also revealed that gender significantly influences consumers' purchasing intentions when it comes to clothing choices (Kim & Kim, 2004; Rahman et al., 2018). Additionally, Bohdanowicz and Clamp's research (1994) found that gender is an important factor in influencing consumers' clothing preferences.

With these perspectives, the current study focused primary on consumers' gender, given its relevance and impact. Due to the specific scope and focus of the study, other demographic

variables such as age, marital status, income level, and educational attainment were not included in the analysis.

3.5.1 An Overview of Indian and Canadian Gender Distribution

According to a report released by the United Nations, India is projected to surpass China and become the most populous nation in 2023 (Roy, 2022). As of 2021, the population of India was stood at approximately 1.393 billion (The World Bank, 2022). However, India has been gained the reputation of being "a country of missing women" due to factors such as illegal sex-selective abortions. In 1990, the sex population ratio was 927 women to 1,000 men. Nevertheless, according to the National Family Health Survey (NFHS, 2019-2021), there has been a significant shift, marking the first time the population of women had surpassed men[15]. The gender ratio is now 1,020 women to 1,000 men (Pandey, 2021). One contributing factor to this changing phenomenon is that Indian females, on average, have a longer life than their male counterparts by 2.7 years (Chakrabarti, 2021). However, it is important to exercise caution in interpreting these findings as the NFHS survey (2019-2021) is not a national census and is based on approximately 630,000 responses. Whilst the survey results cannot be generalised to the entire population, exploring the gender effects on clothing consumption in this rapidly evolving Indian society holds significance.

In 2021, Canada's total population was estimated to be 38.07 million, consisting of 18.9 million males and 19.17 million females. The sex ratio was reported as 986 men for every 1,000

[15] It is important to note that the total sex ratio is always higher than the sex ratio at birth. The reason why the total population of Indian women was higher is because of longer life expectancy rather than a higher birth rate. In India, many people still prefer sons over daughters due to the cultural beliefs and practices such as the patrilineal and patrilocal kinship systems. For example, according to the India Human Development Survey (IHDS), about 77% of Indian parents would like to live with their sons in old age whilst only 7% want to live with their daughters (Salve & Tewari, 2016).

women (United Nations, 2022). According to the latest report by Statistics Canada, the average life expectancy for men was 79.9 years, whilst for women it was 84 years (Canada Protection Plan, 2020). Over the years, the income disparity between genders in Canada has gradually narrowed, although the average personal income of Canadian women still remains lower than that of men. Statistics Canada (Fox & Moyser, 2018; p. 4) states that "the gender disparity in average personal income was reduced by half from 1976 ($32,300) to 2015 ($16,100)."

3.5.2 Gender and Product Cues

In general, women are more concerned about aesthetic attributes such as colour, when it comes to visible or publicly consumed products like clothing. The emphasis on aesthetics is less prominent for invisible or privately consumed products like household items such as hand soap, and lawn mowers (Sweeney and Soutar, 1993). In a study conducted by Taylor and Cosenza (2002), it was found that young female consumers pay significant attention to garment fit, style, and overall appearance. Garment fit not only contributes to physical comfort, allowing ease of movement, but also influences psychological comfort through its aesthetic appeal. According to Lee et al. (2013), Asian women demonstrated a higher concern for outward appearance and physical attractiveness than Asian men. This difference helps explain why female consumers show greater interest and concern for aesthetic aspects like colour and style in clothing compared to their male counterparts (Creusen, 2010). In summary, women are more attuned to aesthetic cues and have a better understanding of the visual language conveyed by clothing, whilst men place relatively more emphasis on utilitarian aspects such as durability and comfort (McCracken & Roth, 1989; Rahman et al., 2010).

A qualitative research study conducted by De Klerk and Lubbe (2006) in South Africa supports these findings, emphasising the significant role of colour in stimulating the experiences,

emotional responses, and pleasure of female consumers during the clothing consumption process. On the contrary, men tend to prioritise utilitarian aspects and functional benefits, using clothing to enhance self-perception and social status (Cox & Dittmar, 1995). They value personal achievement, power, capability, ambition, status, and success more than women (Fukukawa et al., 2007; Schwartz & Rubel, 2005). In essence, women place greater importance on the emotional and symbolic values of a product, whilst men prioritise functional and instrumental benefits.

Another study (Austgulen et al., 2013) also corroborate this pattern, indicating that women pay more attention to the colour of textile products but less emphasis on durability compared to men. In conclusion, women focus more on the aesthetic aspects of clothing, including visual and sensory attributes, whereas men prioritise performance, utilitarian attributes, and the quality of clothing (Azevedo et al., 2008). Based on these observations, the following hypotheses were postulated.

H11: Female consumers rely more significantly on aesthetic/psychic cues such as style and colour to evaluate apparel products than their male counterparts in (a) Canada and (b) India

H12: Male consumers rely more significantly on functional/physical cues such as durability and comfort to evaluate apparel products than their female counterparts in (a) Canada and (b) India

The existing body of research literature provides ample evidence that there are variations in apparel shopping behaviour between genders (e.g., Campbell, 1997; Chang et al., 2004; Otnes & McGrath, 2001). Men and women exhibit differences in their thinking and behaviour when it comes to shopping for apparel products. Specifically, women display a greater interest in fashion and dedicate more time and mental effort to browsing and searching product information than men (Rahman et al., 2018). Hart et al. (2007) found that female shoppers tend to visit more stores in a

single shopping trip, and many of them enjoyed shopping as a leisure activity and a means for self-gratification. Other studies (Gitimu et al., 2013; Gupta & Gentry, 2016; Seock & Bailey, 2008) have consistently reported that women possess higher awareness, knowledge, and experience in fashion consumption compared to men. This indicated that women are generally more fashion-conscious than their male counterparts (Kozar, 2010; Parker et al., 2004; Seock and Bailey, 2008; Workman & Lee, 2010). This finding holds true across various countries, including Croatia (Anić & Mihić, 2015), India (Paul, 2019), the United States (Gould & Stern, 1989; Shephard et al., 2016; Workman & Cho, 2012), Sri Lanka (Rathnayake, 2011), and Malaysia (Naim & Khan, 2012).

Many female consumers possess the ability to evaluate the overall quality of apparel products based on physical characteristics, such as garment fit, style, and fabric (Rahman, 2012). A study (Apeagyei, 2008) conducted in the United Kingdom revealed that 56% of the young female participants were able to assess how well a garment would fit on their bodies by simply looking at it. Therefore, it can be argued that women rely less on brand names and country of origin as guiding factor for their product evaluation and purchasing decisions compared to men. Interestingly, a study conducted in China (Klein et al., 1998) found that buyers, especially those who less familiar with the product or lack time for extensive research, are more likely to utilise brand names and country of origin as surrogate indicators in their purchasing decisions. In a similar vein, a recent study (Rahman et al., 2020b) in China also reported that male consumers exhibit a stronger reliance on brand names and country of origin for evaluating and purchasing clothing compared to female consumers. Based on these findings, the following hypothesis was formulated:

H13: Male consumers rely more significantly on the brand name to evaluate apparel products than their female counterparts in (a) Canada and (b) India.

H14: Male consumers rely more significantly on their country of origin to evaluate apparel products than their female counterparts in (a) Canada and (b) India.

3.5.3 Gender and Sustainability

From the socialization perspective, females tend to exhibit relatively higher levels of interdependence, expressiveness, and compassion, often assuming nurturing and caregiving role. On the contrary, males tend to display greater independence and competitiveness (Lee, 2009). These traditional caregiving roles of women often lead to the perception or interpretation that "women are naturally more caring than men." This perception is supported by some researchers who find that women generally show more concern for the environment and dedicate more time to sustainable practices than men (Iyer & Kashyap, 2007; Zelezny et al., 2000). Bennett et al. (2011) and Brough et al. (2016) also found that many consumers associated "green products" and "going green" with femininity rather than masculinity.

A study (Zelezny et al., 2000) on gender differences in environmentalism revealed that females displayed a greater commitment to mitigating the negative impact on the environment compared to males. Similarly, Austgulen et al.'s research (2013) found that women are more concerned about sustainable issues than men. It is evident that women are more likely to engage in sustainable behaviours (Eisler & Eisler, 1994; Luchs & Mooradian, 2012), demonstrating higher interest in moral obligations and attitudes toward apparel products, such as organic or recyclable materials and fair-trade labels, compared to male consumers (Hwang et al., 2015). Another study conducted in Greece (Abeliotis et al., 2010) also discovered that female consumers are more willing to change their buying behavior and lifestyle to address environmental concerns than their male counterparts. Whilst women may be more engaged in sustainable practices, men generally

possess more knowledgeable about these environmental issues than women (Mostafa, 2007). For example, Gendall and Smith's (1995) comparison of scientific and environmental knowledge between genders across six countries revealed that men tend to be better informed. Consequently, due to potentially lower environmental knowledge among female consumers, it is reasonable to suggest that women are more likely to rely on sustainable labels. including eco-friendly and ethical certifications, as a guide for their apparel purchases. In addition to consumers' environmental knowledge, women generally display a higher interest in clothing consumption compared to men (Gupta & Gentry, 2016). Therefore, it is understandable why women tend to prioritise sustainable cues, such as sustainable labels more than men (Bulut et al., 2017; Khan & Trivedi, 2015). Based on these observations, the following hypotheses were formulated:

H15. Female consumers rely more significantly on sustainability cues to evaluate apparel products than their male counterparts in (a) Canada and (b) India

H16: Female consumers are more aware of sustainable labels than their male counterparts in (a) Canada and (b) India

H17: Female consumers rely more significantly on sustainable labelling to evaluate apparel products than their male counterparts in (a) Canada and (b) India

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Research Methodology and instrument

A self-administered online survey, consisting of five sections, was used to collect data from Canada and India using Survey Monkey (see Appendix 5 for details). The first section of the survey centred on environmental commitment and behaviour. As shown in Table 17, eight items were adapted or slightly modified from D'Souza's (2015) measures with statements such as "I would rather spend my money on eco-friendly clothes more than anything else," "I would avoid buying clothing items if it had potentially harmful environmental effects," and "I would be willing to reduce my consumption to help protect the environment." A 5-point Likert scale was used for this section, with responses ranging from 1 as "strongly disagree" to 5 as "strongly agree."

In the second section, a total of 20 apparel cues were chosen, comprising 10 sustainable cues and 10 non-sustainable cues. To address the limitations of previous research and offer a more comprehensive perspective, the present study expanded the scope and included 13 apparel-related cues (10 intrinsic and 3 extrinsic), as well as 7 production-related cues (3 environmental and 4 social/ethical). These apparel cues were further categorised into two groups: "sustainable and non-sustainable" and "intrinsic and extrinsic." Table 17 displays the categorisation of product-related cues, with intrinsic cues divided into four genres: (1) "psychic/aesthetic" (In-Ps), including style and colour, directly related to the visual aspects and aesthetic appeal of the product; (2) "physical/functional" (In-Ph), including comfort and durability, associated with the functional and performance aspects; (3) "psychic and physical" (In-Ps/Ph), comprising fit, quality/workmanship and fabric, which offer both functional benefits (ease of movement, warmth, sturdiness) and aesthetic benefits (visual appeal, fashionable); and (4) "sustainable" (In-Su) including eco-label,

ethical label, and garment life, which are linked to sustainable aspects. Moreover, the survey also included three extrinsic product-related cues (Ex), namely price, brand name and country of origin. In addition to these product-related cues, the study incorporated 7 production-related sustainable cues: 3 environmental cues (Su-En) such as less water usage, air pollution, and less energy usage, and 4 social/ethical cues (Su-S/E) including worker safety, fair wages, absence of child labour, and no use of animal skin. Participants were asked to rate the significance of each cue using five-point Likert scale, ranging from 1 (unimportant) to 5 (very important). The selection criteria for these cues were based on their significance, relevance, and frequency of use in previous fashion/clothing research on product cues and sustainability/environmental studies (Hines & Swinker, 2001; Hsu & Burns, 2002; Jegethesan et al., 2012; Moon et al., 2013; Rahman et al., 2016; Rahman & Kharb, 2018; Speranskaya et al., 2018).

In the third section, six items were adapted from Goswami (2008) to measure the importance of certified eco-/environmental product and labelling. Participants were asked to rate their agreement on a 5-point Likert scale, ranging from "5 = strongly agree" to "1 = strongly disagree." The questions included statements such as "I believe that environmental information on product label is important," "I believe environmental certification can be helpful for buyers," and "If available, I would seek out environmentally certified clothes." As mentioned in the literature review, previous apparel studies (Rahman et al., 2020; Zhang et al. 2002) have highlighted that consumers often consider multiple product cues simultaneously when selecting and evaluating clothing. However, sustainable cues have received limited attention in these studies. Hence, the inclusion of these six measurement items aimed to explore the level of interest and awareness among the Canadian and Indian samples regarding environmental certification for fashion

products. This was done before examining consumers' awareness and recognition of various certified environmental and ethical labels in the following section.

The fourth section of the study consisted of several questions and six visual stimuli showcasing eco-/ethical labels. The purpose was to gather demographic information, behavioral responses, and assess the participants' awareness of eco-labelling in relation to apparel purchases. Participants were asked questions regarding their recognition of various sustainable labels, and visual stimuli of certified labels were presented, including Fair Trade, Care & Fair-Siege, Global Organic Textile Standard, Fair Wear Foundation, Clean Clothes Campaign, and Oeko-Tex Standard 100 (refer to Table 16 for specific details). The selection of these labels was based on industry focus (textiles and clothing), different types of representation (environmental, ethical and social) as well as their popularity and relevance. For example, according to Rawes (2017), "Fair Trade" and "Fair Wear Foundation" are among the most commonly used labels. Participants were asked to choose the sustainable labels they recognised from the provided choices.

The final section of the study consisted of questions aimed at eliciting sociodemographic and behavioural responses related to apparel evaluation and purchases. Participants were asked about their age, sex, level of education, employment status, and annual expenditure on apparel. All in all, these questions were included to gain a better understanding of the participants' background and behaviours in relation to apparel consumption.

	Apparel Cues		Sub Groups
Product-Related Cues	Colour	Non-Sustainable Cues	Intrinsic (In)
	Style		Intrinsic (In)
	Durability		Intrinsic (In)
	Comfort		Intrinsic (In)
	Garment fit		Intrinsic (In)
	Fabric		Intrinsic (In)

	Quality *(workmanship)*		Intrinsic (In)
	Brand name		Extrinsic (Ex)
	Country of origin *(made-in label)*		Extrinsic (Ex)
	Price		Extrinsic (Ex)
	Garment life *(ability to recycle/reuse/dispose)*	Sustainable Cues	Intrinsic-Sustainable (In-Su-En)
	Certified ethical label *(sweatshop-free product)*		Sustainable-Social/Ethical (In-Su-S/E)
	Certified eco-friendly label		Intrinsic-Sustainable (In-Su-En)
Production-Relate Cues	Less water usage		Sustainable-Environmental (Su-En)
	Air quality		Sustainable-Environmental (Su-En)
	Less energy usage		Sustainable-Environmental (Su-En)
	Worker safety		Sustainable-Social/Ethical (Su-S/E)
	Fair wages		Sustainable-Social/Ethical (Su-S/E)
	No child labour		Sustainable-Social/Ethical (Su-S/E)
	No animal skin usage		Sustainable-Social/Ethical (Su-S/E)

Table 17. Selected product cues – categorizations and definitions.

4.2 Ethics Approval and Subject Recruitment

The ethics protocol of this study was approved by the Human Research Ethics Committee at Concordia University on March 23, 2021 (certificate number: 30014900). For the approval letter, please refer to Appendix 6.

Participation in the survey was voluntary, and both male and female adults aged 18 years or older were invited to participate. Participants did not receive any monetary incentive for their participation in the study. Before beginning the online survey, prospective participants were presented with the informed consent form for their review and consideration. To proceed with the questionnaire, participants were required to provide their consent by clicking on the "Agree" button.

The survey underwent a pretest with 20 individuals in both countries to eliminate any irrelevant questions and misunderstandings. Corresponding amendments were made based on their recommendations. Web-based surveys were chosen over traditional paper surveys for several reasons: (1) to reduce administrative time and financial costs, (2) to minimise coding time and errors, and (3) to provide greater convenience for the participants (Kang and Park-Poaps, 2010). Convenience sampling was primarily employed to collect the data.

In Canada, potential participants were invited to take part in the survey through personal connections, whilst the snowballing method was used to enhance the response rate. In India, data collection was facilitated with the assistance of acquaintances and friends in New Dehli.

4.3 Analytical Method

For data analysis, the analysis was conducted using IBM SPSS Statistics 26 software. To ensure data quality, a preliminarily data screening process was carried out to identify errors and outliners. Additionally, the amount of missing data was examined to ensure that it accounted for less than 10% across the scale scores. As Bennett (2001) pointed out in his study, the result of subsequent statistical analysis may be biased if the amount of missing data exceeds 10%.

Several analytical techniques were employed for the different aspects of the study. Descriptive analysis was used to analyse the demographic information, whilst Cronbach's Alpha (α) was employed to assess scale reliability and internal consistency. Paired-sample *t*-test were conducted to compare means and determine significant difference between groups (e.g., males and females), and the Pearson Coefficient was employed to measure the strength of associations among variables.

CHAPTER 5: RESULTS AND DISCUSSION

5.1 Demographic Information

A total of 321 and 309 usable data were collected from Canada and India, respectively. As depicted in Table 18, both samples exhibited a higher proportion of females than males. The participants were predominately consisted of women in both samples. The gender imbalance can be attributed to the nature of the current research topic, which aligns with many prior apparel studies such as de Lenne & Vandenbosch (2017), Kim et al. (2012), Peterson et al. (2012) and Su (2016) (see Table 5 for more information). Generally, women demonstrate more interest and involvement in fashion consumption than men (Rahman et al., 2018; Žurga & Tavčer, 2014). Regarding education level, many Canadian (54.8%) and Indian (32.4%) participants held 'Bachelor's degrees.' Additionally, over half of the participants in both samples reported spending 0–10% of their income on apparel products annually.

	Canada (N = 321)		India (N= 309)	
	n	%	n	%
Gender				
Male	83	25.9	111	35.9
Female	232	72.3	198	64.1
No response	6	1.9	0	0.0
Age				
18-24 years old	90	28.0	123	39.8
25-34 years old	117	36.4	71	23.0
35-44 years old	56	17.4	34	11.0
45-54 years old	53	16.5	80	25.9
No response	6	1.6	1	0.3
Level of Education				
High school	69	20.8	94	30.4
Bachelor's degree	176	54.8	100	32.4
Master's degree	58	18.1	67	21.7
Doctorate degree	13	4.0	22	7.1
No response	5	1.6	21	6.8

Employment status				
Student	84	26.2	119	38.5
Full-time employed	145	45.2	109	35.3
Part-time employed	26	8.1	13	4.2
Self employed	40	12.5	45	14.6
Other	19	6.0	23	7.4
No response	7	2.2	0	0.0
How much money do you spend on apparel annually?				
Less than 5% of my income	102	31.8	80	25.9
5-10% of my income	99	30.8	96	31.1
11-15% of my income	47	14.6	54	17.5
16-20% of my income	32	10.0	43	13.9
21-25% of my income	24	7.5	21	6.8
More than 25% of my income	13	4.0	15	4.8
No response	4	1.2	0	0.0

Table 18. Demographic profile and annual apparel expenditure.

5.1.1 Canadian Sample

As shown in Table 18, a total of 321 data were used for analysis, including 232 females (72.3%) and 83 males (25.9%). Similar to the Indian sample, the gender was skewed toward females, and more than 50% of the participants fell into the younger age group, with 28% (n = 90) aged 18-24 and 36.4% (n = 117) aged 25-34. Regarding employment status, 145 (45.2%) participants were employed full-time, whilst 84 (36.2%) were students. The majority of participants (n = 189 or 61.2%) had either attained or were pursuing a bachelor's degree or higher. In terms of annual expenditure on apparel products, the findings were consistent with Indian sample, as more than 50% of the participants reported spending 10% or less of their income on clothing.

5.1.2 Indian Sample

A total of 309 usable surveys were collected, with 198 females (64.1%) and 111 males (35.9%). As presented in Table 18, the participants' ages ranged from 18 to 54 years, with over 50% falling within the younger demographic segment, Specifically, 39.8% (n =123) were from the 18-24 age

group, and 23% (n = 71) were from 25-34 age groups. Among the sample, there were 119 students (38.5%) and 109 participants (35.3%) who were employed full-time. In terms of the level of education, 32.4% of the participants either held or were pursuing a bachelor's degree, followed by 30.4% who were high school graduates. Additionally, more than half of the participants reported spending 10% or less of their income on apparel products annually.

5.2 Environmental Commitment and Behaviour

The results of the reliability analysis indicated that the measures of environmental commitment and behaviour were considered reliable, as evidenced by the satisfactory Cronbach's Alpha value of both Canadian ($\alpha = 0.839$) and Indian ($\alpha = 0.819$) samples. Previous studies (Malhotra et al., 2002; Nunnally & Bernstein, 1994) have established that a Cronbach's Alpha exceeding 0.70 is deemed "good" and reliable. As shown in Table 19, all eight measurement items scored above the mean of 3.0 on a 5-point scale across all three data sets, except one item related to spending on eco-clothing was rated below the mean of 3.0 among Canadian participants – 'I would rather spend my money on eco-friendly clothes more than anything else' ($\bar{x} = 2.77$, SD = 0.990). These findings suggested that both Canadian and Indian participants were generally concerned about environmental protection and displayed commitment through their consumption practices. Thus, it is reasonable to conclude that sustainable cues played a critical role in the process of selecting and evaluating clothing products. The participants were inclined to use multiple cues (intrinsic, extrinsic, and sustainable) concurrently when evaluating the apparel items. Furthermore, a series of independent samples *t*-tests demonstrated statistically significant mean differences in all items between Canadian and Indian samples. Based on these findings, it is plausible to believe that Indian

participants exhibited higher level of commitment to environmental protection and displayed concern regarding the impact of their consumption.

	Total Sample (N = 630)			Canada (n = 321, α = 0.839)			India (n = 309; α = 0.819)					
Eco commitment & behaviour	*M*	*SD*	*N*	*M*	*SD*	*n*	*M*	*SD*	*n*	*t*	*df*	*p*
Protecting the natural environment increases my quality of life	4.27	0.817	629	4.06	0.912	321	4.48	0.638	308	6.742	627	**0.000**
Supporting environmental protection makes me more committed to the environment	4.09	0.762	630	3.97	0.809	321	4.21	0.690	309	3.968	628	**0.000**
Supporting environmental protection makes me more socially responsible	4.27	0.651	628	4.20	0.737	320	4.34	0.540	308	2.788	628	**0.000**
When I have the choice between two equal clothing items, I purchase the one less harmful to others and the environment	4.17	0.877	630	3.95	0.994	321	4.40	0.665	309	6.622	628	**0.000**
I would avoid buying clothing items if it had potentially harmful environmental effects	4.12	0.836	628	3.93	0.907	319	4.33	0.702	309	6.151	626	**0.000**
I would be willing to reduce my consumption to help protect the environment	4.24	0.741	630	4.15	0.805	321	4.33	0.656	309	3.080	628	**0.002**
I would rather spend my money on eco-friendly clothes more than anything else	3.17	1.058	629	2.77	0.990	320	3.57	0.970	309	10.249	627	**0.000**
I prefer to purchase eco-clothing even if it is somewhat more expensive	3.38	0.868	630	3.13	0.895	321	3.63	0.760	309	7.598	626	**0.005**

$P < 0.05$ (indicated in bold type)

Table 19. Environmental commitment and behaviour: sample, and significant mean differences between Canadian and Indian consumers.

5.3 The Importance of Intrinsic and Extrinsic Cues

In order to assess the internal consistency of all items, a reliability analysis was conducted using Cronbach's Alpha. The results of Cronbach's Alpha score indicated that the construct of product cues demonstrated "good" or acceptable reliability (see Table 20). According to the *t*-test results, a statistically significant mean difference was observed in the evaluation of colour ($t = 4.289$, $df = 628$, $p = 0.000$) as a salient cue between Canadian and Indian consumers, whilst no significant difference was found for style ($t = -0.019$, $df = 628$, $p = 0.492$). Thus, H1a was supported, but H1b

was not supported. In terms of examining durability and comfort as salient cues for apparel evaluation, the *t*-test revealed significant mean differences in durability ($t = 1.780$, $df = 622$, $p = 0.038$) and comfort ($t = 5.232$, $df = 627$, $p = 0.000$) between Canadian and Indian consumers, providing support for both H2a and H2b.

As shown in Table 20, comfort and garment fit were rated as the two most crucial evaluative cues by Canadian and Indian participants. These findings align with previous studies (Hsu & Burns, 2002; Rahman et al., 2018) conducted in the field of apparel. To examine the significant differences between these two primary cues and other product cues, paired samples *t*-tests were performed. The results clearly indicated that the Canadian participants considered 'comfort' ($\bar{x} = 4.60$, SD = 0.568) more significant compared to 'style' ($\bar{x} = 4.39$, $SD = 0.581$), $t(319) = 4.064$, $p < 0.001$; and Indian viewed 'comfort' ($\bar{x} = 4.82$, $SD = 0.458$) more significant than 'fabric' ($\bar{x} = 4.10$, $SD = 0.764$), $t(308) = 7.389$, $p < 0.001$. Similarly, garment fit was also rated as one of the two most significant evaluative cues in comparison to other product attributes in both countries. Hence, these findings provide support for H3a and H3b.

Product Cues	Canada ($n = 321$, $\alpha = 0.788$)			India ($n = 309$, $\alpha = 0.823$)					
Apparel product-related cues (Types)	*n*	*M*	*SD*	*n*	*M*	*SD*	*t*	*df*	*p*
Fit (Intrinsic – psychic/physical)	320	4.67	0.673	307	4.75	0.535	1.588	625	**0.056**
Comfort (Intrinsic – physical)	320	4.60	0.568	309	4.82	0.458	5.232	627	**0.000**
Style (Intrinsic – Psychic)	321	4.39	0.681	309	4.39	0.701	-0.019	628	0.492
Price (Extrinsic)	321	4.27	0.714	309	3.98	0.837	-4.642	628	**0.000**
Quality (Intrinsic – psychic/physical)	321	4.19	0.707	307	4.45	0.610	4.854	626	**0.000**
Colour (Intrinsic – Psychic)	321	4.17	0.738	309	4.41	0.700	4.289	628	**0.000**
Durability (Intrinsic – physical)	320	4.08	0.789	304	4.20	0.796	1.780	622	**0.038**
Fabric (Intrinsic – psychic/physical)	321	4.10	0.764	309	4.55	0.651	8.011	628	**0.000**
Garment life (Intrinsic – sustainable)	321	3.80	0.905	309	4.10	0.795	4.504	628	**0.000**
Ethical label (Intrinsic – sustainable)	320	3.52	0.899	301	3.83	0.910	4.294	619	**0.000**
Eco-label (Intrinsic – sustainable)	321	3.21	0.831	309	3.90	0.917	9.962	628	**0.000**
Brand name (Extrinsic)	320	2.92	1.135	307	3.45	0.973	6.312	625	**0.000**

Country of origin (Extrinsic)	321	2.97	0.982	305	3.21	1.140	2.840	624	**0.002**
Sustainable production-related cues									
No child labour (Social/ethical)	316	4.42	0.860	307	4.62	0.600	3.432	621	**0.000**
Worker safety (Social/ethical)	316	4.20	0.833	307	4.31	0.775	1.671	621	0.047
Fair wages (Social/ethical)	316	4.18	0.861	306	4.25	0.763	1.043	620	0.148
Air quality (Environmental)	317	3.70	0.999	307	4.10	0.799	5.932	621	**0.000**
Less energy usage (Environmental)	315	3.70	0.890	308	4.00	0.813	4.412	621	**0.000**
Less water usage (Environmental)	317	3.58	0.989	308	3.99	0.905	5.395	623	**0.000**
No animal skin usage (Environmental)	316	3.37	1.229	308	4.48	0.805	13.355	622	**0.000**

$P < 0.05$ (indicated in bold type)

Table 20. The significant difference in evaluative cues between Canadian and Indian consumers – the means, standard deviation, and *t*-test.

In addition to examining the influential apparel cues, coefficient correlations were conducted to evaluate the significance of the relationship among fit, comfort, and fabric. The results, as presented in Table 21 that fit and comfort were significantly correlated – Canadian sample: $r(320) = 0.270$, $p < 0.001$; and Indian sample: $r(307) = 0.262$, $p < 0.001$. These findings suggest that garment fit plays as a significant role in determining wearers' comfort. Likewise, fabric and comfort also exhibited correlation among the Canadian consumers $r(320) = 0.273$, $p < 0.001$ as well as among the Indian consumers $r(309) = 0.409$, $p < 0.001$. However, there was no significant correlation found between fabric and fit in either country – Canadian sample: $r(320) = 0.093$, $p = 0.098$, and Indian sample: $r(307) = 0.079$, $p = 0.170$. This finding is in line with a previous study of denim jeans in Canada (Rahman, 2011), which showed that fabric was not significantly correlated with garment fit. One possible explanation for this is that the majority of consumers in Canada and India do not perceive fabric as an important determinant for clothing. It is worth noting that the same type of material, such as cotton twill, can be used to produce various fits and silhouettes, including straight-leg pants, boot-cut pants, loose pants, or wide-leg pants. Based on these findings, H4 is partially supported.

Although the correlation between style and colour was not specifically hypothesised, it is worth mentioning that these two cues exhibit a significantly correlation based on the calculation of Pearson's coefficient correlation. It is interesting to note that consumers who rely on clothing style to evaluate a product or to make a purchasing decision are more likely to rely on the colour attribute as well.

	Canada (n = 321)					India (n = 309)				
Product Cues	1. Style	2. Colour	3. Fabric	4. Comfort	5. Fit	1. Style	2. Colour	3. Fabric	4. Comfort	5. Fit
Min-max	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5
Median	4	4	4	5	5	5	5	5	5	5
Frequency	321	321	321	320	320	309	309	309	309	307
Mean	4.39	4.17	4.10	4.60	4.67	4.39	4.41	4.20	4.55	4.75
SD	0.681	0.738	0.789	0.568	0.673	0.701	0.700	0.796	0.458	0.535
1. Style (In-Ps)	1	**0.612**	0.039	-0.081	**0.162**	1	**0.375**	0.075	**0.194**	**0.204**
2. Colour (In-Ps)		1	0.043	-0.026	**0.150**		1	0.048	0.075	0.110
3. Fabric (In-Ps/Ph)			1	**0.273**	0.093			1	**0.409**	0.079
4. Comfort (In-Ph)				1	**0.270**				1	**0.305**
5. Fit (In – Ps/Ph)					1					1

Correlation is significant at the 0.01 level (indicated in bold type)

Table 21. Descriptive and correlation analysis of the top six product evaluative cues.

When it comes to brand name and country of origin, both attributes were rated as the two least important considerations among all the other product cues. For instance, the results revealed that the Canadian participants considered 'brand name' ($\overline{x}$ = 2.92, SD = 1.135) as less significant compared to other product cues such as 'eco-label' ($\overline{x}$ = 3.21, SD = 0.831), $t(318) = -7.196$, $p < 0.001$. Similarly, Indian consumers viewed 'brand name' ($\overline{x}$ = 3.45, SD = 0.973) less significant than 'ethical label' ($\overline{x}$ = 3.83, SD = 0.910), $t(298) = -5.797$, $p < 0.001$. The country of origin was also rated as one of the two least significant evaluative cues in comparison to other product

attributes in Canada and India (refer to Table 20 for further details). These findings are consistent with numerous prior research studies (e.g., Hsu & Burns, 2022; Kawabata & Rabolt, 1999; Rahman, 2011). As a result, H5a and H5b were supported.

With respect to the price cue, the *t*-test result revealed that there was no significant mean difference between Canadian ($\overline{x}$ = 4.27, *SD* = 0.714) and Indian consumers ($\overline{x}$ = 3.98, SD = 0.837), $t(628) = -4.642$, $p < 0.001$. One possible explanation for this finding is that apparel products in India are comparatively more affordable compared to other consumer goods such as smartphones, computers and appliances. Moreover, India is a major global producer of textiles and clothing. Consequently, consumers in India may pay less attention to price or exhibit a lower degree of price sensitivity when shopping for apparel, which does not support H6.

5.4 The Importance of Sustainable Cues

As shown in Table 20, both Canadian and Indian participants rated all three environmental cues (air quality, less water usage, and less energy usage) lower than all psychic and physical cues, indicating that functional and aesthetic cues were more influential in evaluating apparel products compared to environmental cues. Therefore, H7 was supported. In terms of social/ethical cues, many Canadian consumers rated 'no child labour' higher than several intrinsic cues including price, quality, colour, durability, and fabric. Likewise, Indian consumers placed greater emphasis on 'no child labour,' 'worker safety,' and 'no animal skin usage' compared to price and durability. However, neither Canadian nor Indian participants rated all social/ethical cues higher than all intrinsic cues, resulting in partial support for H7. The *t*-test analysis revealed statistically significant mean differences in 'no child labour' ($t = 3.432$, $df = 621$, $p < 0.001$) and 'no animal skin usage' ($t = 13.355$, $df = 622$, $p < 0.001$) as salient evaluative cues between Canadian and

Indian consumers. Indian consumers showing greater concern for these two social/ethical cues than their Canadian counterparts. Thus, H9 and H10 were supported.

5.5 Gender Effects

5.5.1 Psychic or Aesthetic Cues: Colour and Style

Based on the *t*-test analysis (see Table 22), no statistically significant mean differences were found in the use of colour (t = -0.981, df = 313, p = 0.327) and style (t = -1.906, df = 313, p = 0.059) as salient evaluative cues between Canadian males and females, indicating a lack of support for H11a. However, the *t*-test conducted on the Indian sample revealed a significant mean difference in the use of colour (t = 2.283, df = 307, p = 0.023) and style (t = 2.367, df = 307, p = 0.019) as evaluative cues between men and women. Interestingly, Indian male consumers relied more on colour ($\overline{x}_{female}$ = 4.34, $\overline{x}_{male}$ = 4.53) and style ($\overline{x}_{female}$ = 4.32, $\overline{x}_{male}$ = 4.51) when evaluating clothing compared to their female counterparts, contracting previous studies (Cox & Dittmar, 1995; McCracken & Roth, 1989; Rahman et al., 2010; Rahman et al., 2020b). Therefore, H11b was not supported.

	Canada (N = 321)							India (N = 309)						
	Female (n = 232)			Male (n = 83)				Female (n = 198)			Male (n = 111)			
Apparel product-related cues (Types)	*n*	*M*	*SD*	*n*	*M*	*SD*	*p*	*n*	*M*	*SD*	*n*	*M*	*SD*	*p*
Fit (In – Ps/Ph)	232	4.73	0.548	82	4.51	0.892	**0.009**	196	4.72	5.32	111	4.79	5.41	0.283
Comfort (In – Ph)	232	4.59	0.038	82	4.61	0.561	0.839	198	4.79	0.434	111	4.86	0.495	0.156
Style (In – Ps)	232	4.43	0.693	83	4.27	0.646	0.058	198	4.32	0.716	111	4.51	0.659	**0.019**
Price (Ex)	232	4.27	0.682	83	4.25	0.809	0.877	198	3.95	0.868	111	4.03	0.780	0.466
Quality (In – Ps/Ph)	232	4.18	0.596	83	4.25	0.763	0.404	197	4.37	0.606	110	4.59	0.595	**0.002**
Colour (In – Ps)	232	4.19	0.761	83	4.10	0.692	0.327	198	4.34	0.722	111	4.53	0.644	**0.023**
Durability (In – Ph)	232	4.10	0.723	82	4.02	0.968	0.464	195	4.19	0.837	109	4.21	0.721	0.824
Fabric (In – Ps/Ph)	232	4.11	0.803	83	4.07	0.659	0.686	198	4.59	0.629	111	4.49	0.686	0.176
Garment life (In – Su - En)	232	3.82	0.874	83	3.75	0.998	0.536	198	4.10	0.761	111	4.11	0.857	0.940
Ethical label (In – Su – S/E)	231	3.62	0.875	83	3.19	0.890	**<0.001**	192	3.85	0.862	109	3.79	0.991	0.551
Eco-label (In – Su - En)	232	3.24	0.812	83	3.06	0.860	0.087	198	3.96	0.842	111	3.80	1.034	0.147
Brand name (Ex)	232	2.82	1.113	82	3.12	1.159	**0.037**	198	3.42	0.967	109	3.50	0.987	0.463
Country of origin (Ex)	232	3.01	0.942	83	2.83	1.080	0.148	196	3.16	1.091	109	3.31	1.222	0.260
Sustainable production-related cues (Types)	*n*	*M*	*SD*	*n*	*M*	*SD*	*p*	*n*	*M*	*SD*	*n*	*M*	*SD*	*p*
No child labour (Su - S/E)	232	4.53	0.761	81	4.07	1.034	**<0.001**	196	4.58	0.615	111	4.70	0.566	0.077
Worker safety (Su - S/E)	232	4.32	0.818	81	3.81	0.937	**<0.001**	197	4.24	0.770	110	4.42	0.734	0.054
Fair wages (Su - S/E)	232	4.33	0.793	81	3.75	0.916	**<0.001**	196	4.22	0.796	110	4.31	0.701	0.325
Air quality (Su - En)	232	3.76	0.859	81	3.54	1.013	**0.032**	197	4.07	0.805	110	4.16	0.784	0.330
Less energy usage (Su - En)	231	3.77	0.860	81	3.47	0.950	**0.008**	198	4.01	0.803	110	3.98	0.835	0.811

Less water usage (Su - En)	232	3.69	0.980	81	3.26	0.971	**<0.001**	197	3.98	0.875	111	4.00	0.963	0.851
No animal skin usage (Su - S/E)	232	3.44	1.240	81	3.19	1.163	0.101	197	4.59	0.669	111	4.29	0.976	**0.002**

$P < 0.05$ (indicated in bold type)

Table 22. The significant difference of evaluative cues between genders in Canada and India – the means, standard deviation, and *t*-test.

5.5.2 Physical or Functional Cues: Durability and Comfort

When considering intrinsic/physical cues, no significant differences were found in the use of durability (t = -0.733, df = 312, p = 0.464) and comfort (t = 0.204, df = 312, p = 0.839) as salient evaluative cues between genders in Canada. These findings indicate that Canadian male and female consumers do not differ significantly in their reliance on functional cues, such as durability and comfort when shopping for apparel products. Therefore, H12a was not supported. Similarly, in India, no significant differences were observed in durability (t = 0.223, df = 302, p = 0.824) and comfort (t = 1.421, df = 307, p = 0.156) between genders. These consistent findings with the Canadian sample suggest that H12b was not supported.

5.5.3 Extrinsic Cues: Brand Name and Country of Origin

According to the *t*-test analysis (see Table 22), statistically significant mean differences were found in the use of brand name as salient evaluative cues between males and females in Canada (t = 2.096, df = 312, p = 0.037), whereas no significant differences were observed in India (t = 0.735, df = 305, p = 0.463). Specifically, the results of the Canadian sample indicated that males had a significantly higher mean score on brand name compared to females ($\overline{x}_{\text{female}}$ = 2.82, $\overline{x}_{\text{male}}$ = 3.12). These findings suggest that Canadian men tended to rely more on the brand name when making apparel purchases than women. Therefore, H13a was supported, whilst H13b was not supported.

In terms of the use country of origin as salient evaluative cues, no significant differences were found between genders when consumers in Canada and India shopped for apparel products. In both countries, male and female consumers did not show a significant preference for the country of origin or the "made-in" label when evaluating and making purchasing decisions for clothing. Based on the current findings, H14a and H14b were not supported. These results suggest that the "made-in" label is not commonly used by most consumers as a reliable indicator to assess the overall quality of a product. This could be attributed to various reasons such as skepticism, lack of awareness, or being ill-informed about its significance.

5.5.4 Sustainable Cues

Regarding sustainable cues, the *t*-test scores revealed statistically significant mean differences in all ten attributes (3 In-Su cues; 3 Su-En cues and 4 Su-S/E cues) as salient evaluative cues between genders in Canada, except for "no animal skin usage" (t = -1.642, df = 311, p = 0.101) (refer to Table 22 for specifics). Whilst there was no significant difference in the use of "no animal skin usage," female consumers ($\overline{x}$ = 3.44, SD = 1.240) tends to rely relatively more on this sustainable cue for evaluating clothing than male consumers ($\overline{x}$ = 3.10, SD = 1.163). Based on this analytical result, it is reasonable to suggest that H15a was supported.

Conversely, no statistically significant mean differences were found in all ten attributes as salient evaluative cues between genders in India, except for "no animal skin usage" (t = -3.193, df = 306, p = 0.002). In general, Indian women exhibit greater concern for the usage of animal skin or animal welfare compared to men. Thus, H15b was not supported.

5.5.5 Importance and Awareness of Certified Labels

In this study, six items were utilised to assess participants' perceptions of certified labels. The Cronbach's Alpha analysis demonstrated "good" reliability (Malhotra et al. 2002), as shown in Table 23. The results also indicated that all six measurment items received scores higher than the mean of 3.0 on a 5-point scale across both female and male data sets in Canada and India. These findings suggest that Canadian and Indian participants perceive certified eco-labelling as an important factor or indicators in clothing consumption. In other words, both certified eco-labels and ethical labels hold significance in apparel selection and purchasing decisions. With this perspective, it is essential to incorporate sustainable cues (such as eco-label, ethical label, garment life) in apparel studies. Moreover, a series of independent samples *t*-tests indicated no statistically significant mean differences in all items between Indian males and females. In the Canadian sample, no statistically significant mean differences were observed in three items between males and females. However, female participants perceived the remaining three items as more significant than their male counterparts. These items include "I believe that there is a need for environmental certification of fashion-related products" ($\overline{x}_{female} = 4.32$, $\overline{x}_{male} = 4.07$; $t(313) = -2.394$, $p = 0.017$), "I believe environmental certification can be helpful for buyers" ($\overline{x}_{female} = 4.23$, $\overline{x}_{male} = 3.94$; $t(313) = -2.885$, $p = 0.004$), and "If available, I would seek out environmentally certified clothes" ($\overline{x}_{female} = 3.84$, $\overline{x}_{male} = 3.58$; $t(313) = -2.204$, $p = 0.028$).

	Canada (n = 321, α = 0.768)							India (n = 309, α = 0.792)						
	Female (n = 232)			Male (n = 83)				Female (n = 198)			Male (n = 111)			
Importance and awareness of certified labels	*n*	*M*	*SD*	*n*	*M*	*SD*	*p*	*n*	*M*	*SD*	*n*	*M*	*SD*	*p*
I believe that environmental information on product label is important	232	4.26	0.791	83	4.14	0.843	0.269	198	4.50	0.511	111	4.45	0.599	0.443
I generally believe in the environmental information on product label	232	3.74	0.812	83	3.78	0.766	0.684	198	4.04	0.659	111	4.05	0.903	0.879
I understand the concept of environmental certification	232	3.57	1.012	83	3.42	0.989	0.240	198	3.92	0.564	111	3.99	0.986	0.416
I believe that there is a need for environmental certification of fashion-related products	232	4.32	0.808	83	4.07	0.852	**0.017**	198	4.27	0.694	109	4.42	0.684	0.062
I believe environmental	232	4.23	0.775	83	3.94	0.802	**0.004**	198	4.16	0.676	111	4.17	0.631	0.852

certification can be helpful for buyers															
If available, I would seek out environmentally certified clothes	232	3.84	0.930	83	3.58	0.930	**0.028**	196	4.03	0.683	111	4.12	0.806	0.291	

$P < 0.05$ (indicated in bold type)

Table 23. The significant difference in certified labels between Canadian and Indian consumers – the means, standard deviation, and *t*-test.

5.5.6 Gender and Awareness of Sustainable Labels

To examine the participants' awareness of different sustainable labels, a *t*-test analysis was conducted across genders in both countries. The analysis of the Canadian sample indicated that female participants exhibited slightly higher awareness of sustainable labels than male participants. However, no statistically significant mean differences in sustainable label recognition were found between genders, except for "Oeko-Tex" $F(1, 310) = 2.109$, $p = 0.041$ (see Table 24 for details). Notably, as shown in Table 25, 47.6% of men ($n = 40$) reported not being familiar with any sustainable labels, compared to 41.4% of women.

In terms of the differences in label recognition between Indian women and men, a higher proportion of women were able to recognise the "Fair Trade" label and the "Global Organic Textile Standard (GOTS)" label than men. As presented in Table 24, the results indicated statistically significant mean differences in several items of sustainable label recognition between genders, including "Fair Trade" $F(1, 307) = 4.911$, $p = 0.027$, "GOTS" $F(1, 307) = 4.271$, $p = 0.040$, and "I know none of them" $F(1, 307) = 7.794$, $p = 0.006$. In total, 56.8% ($n = 63$) of men reported not being familiar with any sustainable labels, whilst only 40.9% ($n = 81$) of women had the same response. Based on these findings, it is reasonable to suggest that female consumers in India exhibit a higher awareness of sustainable labels than their male counterparts, whereas no significant gender differences in sustainable label awareness were observed in Canada. Therefore, H16 was partially supported.

The present study also revealed that the "Fair Trade" certified label was the most widely recognised among all selected labels based on the responses of both Canadian (n = 112) and Indian participants' (n = 71) responses. This finding is consistent with a previous study (Rawes, 2017). The second most recognizable label was Global Organic Textile (GOT) label, whilst the two least recognizable labels were "Care and Fair," and "Fair Wear Foundation."

	Canada						India					
	Female		Male				Female		Male			
Sustainable Labels	*M*	*SD*	*M*	*SD*	*F*(1, 305-310)	*p*	*M*	*SD*	*M*	*SD*	*F*(1, 306-311)	*p*
Fair Trade	1.51	0.501	1.63	0.487	3.163	0.076	1.73	0.446	1.84	0.370	4.911	**0.027**
Fair & Care	1.99	0.134	1.98	0.154	0.431	0.512	1.98	1.414	1.98	0.134	0.018	0.894
GOTS	1.88	0.329	1.90	0.297	0.413	0.521	1.77	0.423	1.86	0.343	4.271	**0.040**
Fair Wear	1.98	0.148	2.00	0.000	1.874	0.172	1.99	0.71	2.00	0.000	0.560	0.455
Clean Clothes	1.92	0.278	1.96	0.188	2.109	0.147	1.96	0.185	1.92	0.274	3.039	0.082
Okeo-Tex	1.91	0.291	1.98	0.154	4.204	**0.041**	1.97	0.172	1.96	0.187	0.074	0.786
Don't know any	1.58	0.495	1.51	0.503	1.242	0.266	1.60	0.492	1.43	0.498	7.794	**0.006**

$P < 0.05$ (indicated in bold type)

Table 24. The significant differences in the recognition of sustainable labels between genders in Canada and India.

	Canada				India			
	Female (*n* = 232)		Male (*n* = 84)		Female (*n* = 198)		Male (*n* = 111)	
Sustainable Labels	*n*	*%*	*n*	*%*	*n*	*%*	*n*	*%*
Fair Trade	83	35.8	29	34.5	53	26.8	18	16.2
Care and Fair	2	0.8	2	2.4	4	2.0	2	1.8
Global Organic Textile (GOT)	22	9.5	8	9.5	46	23.2	15	13.5
Fair Wear Foundation	3	1.3	0	0.0	1	0.5	0	0.0
Clean Clothes Campaign	13	5.6	3	3.5	7	3.5	9	8.1
Oeko-Tex	13	5.6	2	3.5	6	3.0	4	3.6
I don't know these labels	96	41.4	40	47.6	81	40.9	63	56.8

Table 25. The frequency and percentage of consumers' recognition of sustainable labels between genders in Canada and India.

According to the results presented in Table 26, there was a significant difference in the use of ethical labels (t = -3.827, df = 312, p = <0.001) between Canadian females and males but no significant difference was found in eco-label usage (t = -1.716, df = 313, p = 0.087). Therefore,

H17a was partially supported, indicating that Canadian women ($\overline{x}_{female}$ = 3.62, $\overline{x}_{male}$ = 3.19) demonstrate a higher level of concern and reliance on ethical labels when evaluating and purchasing clothing products compared to men ($\overline{x}_{female}$ = 3.24, $\overline{x}_{male}$ = 3.06). In addition, similar support was observed in the results of several measurement items reported in Table 23, including "I believe that there is a need for environmental certification of fashion-related products" (t = 2.394, df = 313, p = 0.017), "I believe environmental certification can be helpful for buyers" (t = 2.885, df = 313, p = 0.004), and "If available, I would seek out environmentally certified clothes" (t = 2.204, df = 313, p = 0.028). Thus, H17a was partially supported.

Regarding the responses from Indian participants, no statistically significant differences were found in the usage of eco-label and ethical label between genders for guiding their clothing purchases. These findings suggested that both female and male consumers exhibit similar levels of concern and reliance on these two product cues when shopping for apparel products. Similarly, the results displayed in Table 23 provide consistent support, as no significant differences were observed among all six measurement items. Consequently, H17b was not supported.

	Canada (N = 321)							India (N = 309)						
	Female (n = 232)			Male (n = 83)				Female (n = 198)			Male (n = 111)			
Apparel product-related cues (Types)	*n*	*M*	*SD*	*n*	*M*	*SD*	*p*	*n*	*M*	*SD*	*n*	*M*	*SD*	*p*
Ethical label (In – Su – S/E)	231	3.62	0.875	83	3.19	0.890	**<0.001**	192	3.85	0.862	109	3.79	0.991	0.551
Eco-label (In – Su - En)	232	3.24	0.812	83	3.06	0.860	0.087	198	3.96	0.842	111	3.80	1.034	0.147

Table 26. The significant differences in eco-label and ethical label between genders in Canada and India.

To summarise the findings, twelve hypotheses were supported, ten were not supported and five were partially supported, as reported in Table 27.

Hypotheses	Results
H1: Canadian and Indian consumers are significantly different in the use of (a) colour and (b) style (psychic cues) for clothing evaluation	H1a: Supported H1b: Not Supported

H2: Canadian and Indian consumers are significantly different in the use of (a) durability and (b) comfort (physical cues) for clothing evaluation	H2a: Supported H2b: Supported
H3: Both Canadian and Indian consumers rely more significantly on (a) comfort and (b) garment fit to evaluate clothing than on other product attributes	H3a: Supported H3b: Supported
H4: Fabric, fit, and comfort are strongly correlated from the perspectives of both Canadian and Indian consumers	H4: Partially Supported
H5: Both Canadian and Indian consumers rely less significantly on (a) brand name and (b) country of origin to evaluate clothing than on other product attributes	H5a: Supported H5b: Supported
H6: Indian consumers rely more significantly on product price to evaluate clothing than Canadian consumers	H6: Not Supported
H7: Both Canadian and Indian consumers rely less significantly on sustainable-environmental cues (Su-E) to evaluate clothing than they do on intrinsic psychic and physical cues (In-Ps, In-Ph, and In-Ps/Ph).	H7: Supported
H8: Both Canadian and Indian consumers rely less significantly on sustainable-social/ethical (Su-S/E) cues to evaluate clothing than they do on intrinsic psychic and physical cues. (In-Ps, In-Ph, and In-Ps/Ph)	H8: Partially Supported
H9: Indian consumers rely more significantly on "child labour" to evaluate clothing than Canadian consumers	H9: Supported
H10: Indian consumers rely more significantly on "no animal skin usage" to evaluate clothing than Canadian consumers	H10: Supported
H11: Female consumers rely more significantly on aesthetic/psychic cues such as style and colour to evaluate apparel products than their male counterparts in (a) Canada and (b) India	H11a: Not Supported H11b: Not Supported
H12: Male consumers rely more significantly on functional/physical cues such as durability and comfort to evaluate apparel products than their female counterparts in (a) Canada and (b) India	H12a: Not Supported H12b: Not Supported
H13: Male consumers rely more significantly on the brand name to evaluate apparel products than their female counterparts in (a) Canada and (b) India.	H13a: Supported H13b: Not supported
H14: Male consumers rely more significantly on their country of origin to evaluate apparel products than their female counterparts in (a) Canada and (b) India.	H14a: Not Supported H14b: Not supported
H15. Female consumers rely more significantly on sustainability cues to evaluate apparel products than their male counterparts in (a) Canada and (b) India	H15a: Supported H15b: Not supported

H16: Female consumers are more aware of sustainable labels than their male counterparts in (a) Canada and (b) India	H16a: Partially Supported H16b: Partially Supported
H17: Female consumers rely more significantly on sustainable labelling to evaluate apparel products than their male counterparts in (a) Canada and (b) India	H17a: Partially Supported H17b: Not Supported

Table 27. The summary report of hypotheses.

CHAPTER 6: CONCLUSION, IMPLICATIONS AND LIMITATIONS

Although a substantial body of research has focused on exploring various environmental, social and ethical aspects of sustainable fashion consumption, the majority of studies have been conducted in Western developed countries (Auger & Devinney, 2007; Bratt et al., 2011; Diamantopoulos et al., 2003), rather than in developing or transitioning economies. To enhance our understanding of fashion and sustainability trends, as well as the evolving needs and consumer behaviour of individuals, it is imperative to conduct additional systematic literature review and empirical research. These efforts will help elucidate the underlying impact of both sustainable and non-sustainable attributes in a more comprehensive manner. The findings of the systematic literature review have already presented and discussed in Chapter 2; therefore, the primary focus of this chapter lies on the results derived from empirical testing.

6.1 Product Cues

6.1.1 Non-Sustainable Cues

In contrast to many other countries, India stands out with a significant population of young consumers under the age of 25[16]. These individuals are known for being technologically savvy, brand conscious, sophisticated, and having higher disposable income compared to previous generations (KS Oils Limited, 2008). In general, young Indian consumers exhibit similar fashion and trend consciousness as consumers in developed or Western countries. In the current study,

[16] According to a survey conducted by the Registrar General and Census Commissioner of India in 2018, people below the age of 25 constitute 46.9% of the total population. This young demographic segment consists of 47.4% male and 46.5% female. The male population is marginally higher than the female populatio (Mint, 2020).

more than fifty percent of the participants from India (n = 194, 62.8%) and Canada (n = 207, 64.4%) were under the age of 35. These findings provide compelling evidence that aesthetic (colour and style) and experiential (comfort and fit) values of clothing products indeed hold a vital role in their shopping and decision-making process. Moreover, based on the findings of this study, it appears that non-sustainable attributes have a stronger impact on consumer choices of apparel products compared to sustainable cues. This observation will be discussed and elaborated upon in the subsequent section.

6.1.2 Aesthetic Cues – Style and Colour

Previous studies have consistently shown that women typically place a greater emphasis on aesthetic cues, such as style and colour, when evaluating apparel products compared to men. This discrepancy may be attributed to the fact that female consumers generally exhibit higher levels of engagement and interest in fashion shopping compared to their male counterparts. However, the current study conducted in Canada did not yield a significant difference between genders. Intriguingly, significant differences were observed between male and female consumers in India, particularly in terms of their consideration of style and colour. Contrary to prior research, the male consumers in this study displayed a higher level of concern for aesthetic cues compared to their female counterparts. This finding contradicts earlier research.

In both countries, colour played a relatively lesser role compared to other attributes such as fit, comfort, style and quality. Several studies (Chu & Rahman, 2012; Holmes & Buchanan 1984) suggest that colour preferences are closely tied to the type of product. Colour choice is influenced not only by fashion trends but also by socially accepted norms and cultural values. Personal colour preferences do not always dictate product choices. For instance, denim jeans are commonly perceived and preferred in blue, wedding dresses in white, formal attire in black, and

Christmas decorations in red, green and gold. Individuals who like the colour pink may not choose a pink suit because it deviates from socially acceptable norms, and they may wish to avoid being seen as "unprofessional," "weird" or "ridiculous."

However, whilst determining suitable colours for specific clothing types, particularly fashion staples, it does not imply that fashion designers cannot explore alternatives or think creatively. Socio-cultural values are not static, and the meanings associated with colours have evolved over time. To cater to changing consumer needs and desires, fashion practitioners should consider the relationship between "colour symbolism" and "socio-cultural values," as well as the concepts of "incremental improvement" and "radical invention." Trueman (1998) reveals that many successful new consumer products fall under the category of "incremental innovation" rather than "radical invention." In other words, slight or moderate changes from existing fashion may be more readily accepted than a drastic departure from current style.

6.1.3 Fit and Comfort

The findings from this study indicate that Canadian and Indian consumers were more concerned about fit, comfort, and style over extrinsic (e.g., brand name and country of origin) and sustainable cues when shopping for apparel products. Specifically, clothing fit and comfort were cited as the two most crucial factors. These findings are in line with many prior apparel studies (refer to Table 12) and suggest that a significant number of consumers have likely encountered negative experiences with garment fit and comfort in the past. Thus, it would seem reasonable to conclude that if these two intrinsic criteria are not met, consumers may lose interest in the product or adjourn their purchases. The results of the present study also revealed a positive and significant correlation between garment fit and comfort (Canadian: $r(320) = 0.270$, $p = 0.001$; and Indian: $r(307) = 0.262$,

p = 0.001), as well as fit and style (Canadian: r(320) = 0.162, p = 0.004; and Indian: r(307) = 0.204, p = 0.001) (see Table 19). Therefore, it is crucial for fashion designers, developers and producers to give greater attention to the intrinsic properties of apparel. For instance, a well-fitting garment should be both fashionable and comfortable for the wearers. Previous research (Rahman et al., 2018; Tate, 2004) in the field of apparel has reported that consumers may opt for loose-fitting and less revealing styles to camouflage or conceal figure flaws or choose form-fitting styles to accentuate and compliment the desirable body parts. To provide a desirable garment to the consumers, it is crucial to comprehend their evolving needs and aspirations, carefully choose materials that are both suitable and comfortable, design the garment model and silhouette that can accommodate or conform to diverse body types, refine and establish a relevant sizing system, and creatively draft and engineer garment patterns that address their physiological, experiential and psychological needs.

In addition, it is essential to prioritise and extensively explore the development of virtual garment fitting technologies and solutions to enhance online shopping experiences, particularly as e-commerce has not only become the prevailing norm for many consumers during the COVID-19 pandemic but also continue to be relevant in the post-pandemic era (Grover, 2020).

6.1.4 Durability

The concept of ‘sustainability’ is often associated with the durability of a product. According to a study conducted by Hill and Lee (2012), more than half of the participants (58.75%) defined ‘sustainability’ with reference to long-lasting and durable goods. The results of the current study revealed that Indian consumers placed greater attention on physical cues such as durability and comfort when evaluating and making purchasing decision of apparel products than Canadian

consumers. As a result, it comes as no surprise that Indian participants rated 'garment life' as more significant than their Canadian counterparts (see Table 19). To create products that have a longer lifespan and offer multiple benefits, clothing manufacturers need to develop innovative ideas and designs whilst select appropriate materials. Anecdotal evidence suggests that if garments can provide multiple values and benefits, they are more likely to be worn for an extended period (Pierre-Louis, 2019). Consequently, this approach can help reduce clothing consumption and waste disposal.

6.1.5 Brand Name and Country of Origin

Although brand name and country of origin were viewed as the two least important product cues, Canadian male consumers relied more significantly on brand name than their female counterparts. The possible explanation is that male consumers are less sensitive to fashion and unfamiliar with clothing properties. Thus, it could be a challenge for them to judge, compare and select a better product among many similar alternatives. Therefore, brand name and country of origin can be served as a proxy variable or quick surrogate indicator to guide their purchasing decisions and justify their choice. These findings concur with that of previous research (Klein et al., 1998; Kwang et al., 2008; Maheswaran, 1994) on the effects of brand name. For example, Maheswaran (1994) reveals that if the consumers are not familiar with a product, they tend to use the extrinsic cues (country or brand image) as a "halo effect" in the product selection and evaluation. Although brand name and country of origin did not play an important role in apparel evaluation as compared to other product cues in India and Canada, fashion practitioners and marketers should not ignore these two attributes. These product cues can be very useful when consumers are not motivated to think about or have no time to search for product information. In other words, brand name and country

of origin can reduce a consumer's shopping effort by conveying a bundle of product values and associative meanings (e.g., innovative and fashionable design, high-quality and reliable product) to the buyers. People can use them as a heuristic basis for evaluation, particularly for new and innovative products.

6.1.6 The Impact of Sustainable Cues

Although consumers in both nations did not pay much attention to sustainable cues compared to aesthetic features and functional utilities, Indian consumers are more concerned about 'no child labour' and 'no animal skin usage' than Canadian consumers when shopping for clothing. However, in many situations, consumers only have access to limited product-related information (e.g., 100% organic cotton, biodegradable materials, transformable/reversible garments) but not production-related information regarding sustainable production, social responsibility and ethical practices. For instance, consumers are often uninformed about the manufacturing process (e.g., dyeing ingredients and methods), worker safety, working conditions, and labour ethics/wages. It is evident and indisputable that increased corporate accountability and transparency can assist consumers in making more informed choices, avoiding risks, and acquiring sustainable knowledge and trust. Consequently, it is crucial for fashion companies to disclose additional information about their products and production process to the public through various channels, such as certified labels, in-store kiosks, mobile apps, annual reports, company websites, and printed and digital media. Regarding sustainable labels, retailers are increasingly adopting certified and eco-/ethical labels as a business strategy to showcases their commitment to sustainability, educate shoppers about product and environmental impacts, and promote more mindful behaviour. Nevertheless, the findings indicated that both Canadian and Indian consumers relied less on certified eco-/ethical

labels and more on intrinsic cues when purchasing apparel. This may be attributed in part to consumers' skepticism, confusion, lack of knowledge, or limited understanding of 'green' values. Hence, sustainability information should be more trustworthy, reliable, informative, straightforward, and easily comprehensible. Numerous previous studies (Goh & Balaji, 2016; Leonidou & Skarmeas, 2015; Morel & Pruyn. 2003) have documented that green skepticism not only affects consumers' current purchases but also exerts an impact on their future buying decisions as well as their perceptions of the brand.

Although the current findings indicated that the sustainable cues play a relatively less significant role in clothing evaluation and purchases as compared to the non-sustainable cues such as comfort, fit, style, both Indian and Canadian viewed "no animal skin" usage as the most important among all the sustainable cues, followed by worker safety. This finding suggests that fashion designers should refrain from using fur and animal skins for their products, including clothing, footwear, and accessories. In many instances, "cruelty-free" products (clothing and cosmetics) not only attract the right consumers but also contribute to building a stronger brand image. Interestingly, our findings (refer to Table 21) indicated that Canadian female consumers expressed greater concern about the environmental aspects including no child labour," "worker safety," "fair wages," "air quality," "less energy usage" and "less water usage" than the male consumers. However, no significant differences were found between Indian male and female consumers, except "no animal skin use." Thus, it is reasonable to suggest that environmental issues play a relatively more important role in the clothing evaluation and consumption of Canadian females. Participants from both countries appeared to be more concerned about the ethical aspects rather than the environmental aspects in their perceptions of sustainable production.

It is noteworthy that whilst modern consumers expressed concern about the negative environmental impact, many are unwilling to compromise or sacrifice their personal needs and desires when it comes to the products they purchase. Intriguingly, previous research (Ellis et al., 2012; Hustvedt & Dickson, 2009) reported that individuals are willing to pay higher price for a product "if they were sure it was ethically made" (Abacus Data, 2010, p. 4). The current research findings in line with this notion, indicating that consumers in both countries prioritise environmental considerations but tend to rely more on non-sustainable cues than sustainable cues when evaluating apparel products. With this perspective, fashion designers and marketers should employ innovative approaches in communicating the egoistic value (individual self and wellbeing), altruistic value (well-being of other individuals) and ecological value (ecosystem, living organisms) through their product designs and marketing strategies.

To effectively promote sustainable fashion and lifestyle, companies should promote and showcase eco-products on social media platforms such as Tik Tok, Instagram and Youtube. A report published by KPMG (KPMG, 2017) highlights the significance of "digital content, social media, celebrities, and fashion influencers" in capturing the attention of millennials and influencing their consumption behaviour towards more sustainable practices. Therefore, it is reasonable to assert that by collaborating with fashion influencers, bloggers, and celebrities, including popular figures and vegan activists, a sustainable lifestyle can be more effectively promoted and communicated, particularly amongst younger demographics.

6.2 Gender Differences and Sustainable Labels

The majority of participants were unfamiliar with or unable to recognise the "Fair and Care Standard" label and the "Fair Wear Foundation" label. However, out of the six sustainable labels,

"Fair Trade" and "Global Organic Textile Standard" were the two most widely recognised ones. In India, female consumers demonstrated a higher awareness of sustainable labels than their male counterparts, whereas no significant gender differences in sustainable label awareness were detected in Canada. The reason behind the heightened concern among Indian women may be attributed to their greater involvement in clothing consumption and sustainable practices. Khare et al.'s (2012) study further supports this explanation as it reveals that modern Indian women are highly fashion-conscious, financially independent, and engage in purchases more frequently than their male counterparts. This finding is in line with previous research (Gupta and Gentry 2016). However, it is imperative to acknowledge that consumer awareness does not always translate into actions or practices. The results indicated that men and women in both countries did not significantly differ in their utilisation of sustainable labels to assess apparel products and guide their purchases.

Despite the growing concerns surrounding environmental issues, fair wages, and child labor, certified eco-/ethical labels were found to have a less significant impact on apparel evaluation processes compared to aesthetic and functional aspects such as garment fit, comfort, and style. This phenomenon could be attributed to the social/ethical sustainability market still being in its infancy stage, or not widely adopted in many nations. Consequently, consumers may lack sufficient knowledge, information, and experiences to fully comprehend the socio-ethical implications and benefits associated with such labels. Based on the present findings, it is reasonable to suggest that Indian and Canadian consumers did not heavily rely on eco-/ethical labels as a source of information to guide their clothing purchases. This finding could be attributed to several possible explanations, including (1) limited utilization of sustainable labels within the apparel industry, (2) consumers did not pay attention to sustainable labels, (3) the selected labels

not being popular in both countries, (4) consumers are more concerned about or interested in other product attributes such as style, colour, comfort, and price than certified eco-/ethical labels.

6.3 Summary: Key Determining Factors and Implications

Although the current study was conducted in Canada and India, I believe that the findings can offer valuable insights and information to fashion practitioners and academicians in worldwide. In summary, these findings and observations underline several crucial factors and implications for fashion industry practitioners in product development and resource allocation.

1) Aesthetic longevity (Style/Design, Fit/Silhouette): It is important to consider classically aesthetic design, ageless design, and slow fashion approaches.
2) Versatility (Design Engineering and Methods): Transformable and adjustable designs can address changing body types. Products should offer multiple functions and benefits and be suitable for various social settings.
3) Durability (Fabric Properties): Material selection should prioritise sturdiness, long-lasting utility performance, and comfort.
4) Sustainability (Environmental, Social and Ethical Responsibilities): Transparency and integration of sustainability should be incorporated into production and design processes.
5) Affordability (Price): Maintaining a reasonable price is essential as some consumers, particularly the Canadian participants, are unwilling to pay high premiums for eco-friendly clothing.

It is important to note that when purchasing apparel products, consumers consider not only functional benefits but also aesthetic, altruistic, psychological, and sustainable values. Due to different life stages and socio-cultural contexts, people may apply varying criteria when making

product choices and buying decisions. Building a database to identify consumers' selection criteria and purchasing decisions would be useful in the long term. Big data analysis can enhance our understanding of consumer choices and buying behaviour. From the theoretical perspective, the results of this study can provide additional knowledge and empirical evidence to researchers regarding the influence of different product attributes on apparel consumers' buying decisions. Unlike previous cue utilisation research, which focused on limited product cues (e.g. Hsu & Burns, 2002; Rahman et al., 2009), the present study has covers a comprehensive list of product cues for empirical testing. Additionally, this study can serve as a foundation for cross-sectional research on sustainable practices across different nations, encompassing eastern and western, developed and developing, and individualistic and collectivistic contexts.

6.4 Implications

Consumers often rely on multiple cues when making clothing purchases. Whilst certain factors may hold greater influence in their decision-making process, it is important for fashion designers to avoid excessive emphasis on a single cue or a dominant feature of a product. Merely focusing on improving one attribute, following an "atomistic approach," may overlook the holistic nature of consumer preferences.

Instead, apparel designers should adopt a "holistic approach" that considers multiple cues during product design and development. Many of these cues, such as style, garment fit, comfort, fabric properties, and durability are interrelated. By integrating these various attributes, designers can create products that cater to a boarder range of consumer preferences.

In many cases, if a clothing item fails to meet the aesthetic expectations of consumers, they may not even consider other attributes such as durability, country of origin, environmental

friendliness, and social/ethical responsibilities. In order to address this challenge, fashion practitioners have a vital role in educating their consumers about the attractiveness and fashionability of eco-friendly clothing and domestically made apparel.

I believe that these implications offer practical insights and empirical evidence for both fashion practitioners and researchers. The findings provide valuable information that can guide the decision-making processes of industry professionals and contribute to further research in the field.

To create desirable products that have a higher adoption rate, fashion designers and product developers should consider multiple aspects of a product. This includes paying attention to the aesthetic appeal, experiential qualities, functional attributes, and psychological factors (Rahman et al., 2018). By prioritizing these various dimensions, designers can enhance the overall appeal and desirability of their clothing products.

6.5 Limitations and Direction for Future Research

The current study offers valuable insights into fashion consumption and sustainability, providing practical information for fashion practitioners. It enhances their ability to identify and target appropriate market segments, offer relevant products to satisfy changing consumers needs, and deliver effective messages to both existing and potential customers. However, this study does have certain limitations and shortcomings that should be acknowledged.

Firstly, the data collected for this study were specific to Canada and India, limiting the generalizability of the findings to other regions or countries. Conducting additional research in different countries or considering various demographic factors such as population size, social

classes, educational levels, marital status, or age cohorts (e.g., pre-teen, baby boomers) would enhance the reliability and enrich our knowledge and understanding.

Secondly, this study focused solely on apparel products, and future research could expand to investigate the role of sustainable labelling and consumer buying motives in other consumer product categories.

Thirdly, as qualitative research approaches gain importance in product design and development, the incorporating of eye-tracking technologies, ethnography and observational research can provide additional insights and generate further information. Similarly, conjoint analysis and longitudinal studies could be conducted to gain a better understanding of how consumers think, feel and behave in trade-off situations or over extended periods of time.

Fourthly, future research may explore consumers' cognitive and affective responses to eco-clothing. Comparative research on urban and rural consumers' attitudes and perceptions toward eco-labelling could also be valuable. In addition, cross-cultural examinations of sustainable practices and eco-marketing strategies are recommended.

Furthermore, to deepen our understanding of consumers' purchasing behaviour, it would be worthwhilst to investigate (1) other potential apparel cues, such as wardrobe coordination and versatility (e.g., ability to transform); and (2) conduct a comparative study of online and offline eco-clothing evaluation across multiple generational cohorts.

Finally, further research on consumer-centric approaches to sustainability is necessary, including an in-depth exploration of whether consumer decision-making is driven by fashion trends to identify buying patterns and choices.

REFERENCES

Abacus Data (2010). Ethical consumerism and Canadians. *Abacus Data*. Retrieved from: http://abacusdata.ca/wp-content/uploads/2011/01/CCSR-Ethical-Consumerism-Final.pdf

Abbe, A., Grouin, C., Zweigenbaum, P. & Falissard, B. (2016). Text mining applications in psychiatry: A systematic literature review. *International Journal of Methods in Psychiatric Research*, 25(2): 86-100.

AbdelFattah, M., Galal, D., Hassan, N., Elzanfaly, D. & Tallent, G. (2017). A sentiment analysis tool for determining the promotional success of fashion images on Instagram. *International Journal of Interactive Mobile Technologies*, 11(2): 66-73.

Abeliotis, K., Koniari, C. & Sardianou, E. (2010). The profile of the green consumer in Greece. *International Journal of Consumer Studies*, 34 (2): 153–160.

Abraham-Murali, L. & Littrell, M.A. (1995). Consumers' conceptualization of apparel attributes: An exploratory study. *Clothing and Textiles Research Journal,* 13: 65-74.

Ackerman, D. & Tellis, G. (2001). Can culture affect prices? A cross-cultural study of shopping and retail prices. *Journal of Retailing*, 77, 57-82.

Adam, M. (2018). The role of Human Resource Management (HRM) for the implementation of sustainable product-service systems (PSS)—An analysis of fashion retailers. *Sustainability*, 10(2518): 1-27.

Adnan, A., Ahmad, A. & Khan, M.N. (2017). Examining the role of consumer lifestyles on ecological behavior among young Indian consumers. *Young Consumers*, 18(4): 348-377.

Aftab, Md. A., Yuanjian Q., Kabir, N. & Barua, Z. (2018). Super responsive supply chain: The case of Spanish fast fashion retailer Inditex-Zara. *International Journal of Business and Management*. 13(5): 212-227.

Agarwal, S. & Teas, R. (2001). Perceived value: mediating role of perceived risk. *Journal of Marketing Theory and Practice*, 9(4): 1-14.

Ahmed, S.A. & d'Astous A. (2004). Perceptions of countries as producers of consumer goods: A T-shirt study in China, *Journal of Fashion Marketing and Management*, 8(2): 187-200.

Ahmad, S., Miskon, S., Alabdan, R. & Tlili, I. (2020). Towards sustainable textile and apparel industry: Exploring the role of business intelligence systems in the era of industry 4.0. *Sustainability*, 12(2632): 1-23.

Ahmed, Z.U., Johnson, J.P., Yang, X., Chen, K.F., Han, S.T. & Lim, C.B. (2004). Does country of origin matter for low-involvement products?, *International Marketing Review*, 21(1): 102-120.

Almanza, A.M.H. & Corona (2020). Using social life cycle assessment to analyze the contribution of products to the Sustainable Development Goals: a case study in the textile sector. *International Journal of Life Cycle Assess*, 25: 1833-1845.

Ajzen, I. (1991). The theory of planned behavior. *Organization Behavior and Human Decision*, 50(2): 179-211.

Amran, A. & Haniffa, R. (2011). Evidence in development of sustainability reporting: a case of a developing country. *Business Strategy and the Environment*, 20(3): 141-156.

Ananiadou, A., Rea, B., Okazaki, N., Procter, R. and Thomas, J. (2009). Supporting systematic reviews using text mining. *Social Science Computer Review*, 27(4): 509-523.

Anić, I.-D. & Mihić, M. (2015). Demographic profile and purchasing outcomes of fashion conscious consumers in Croatia. *Ekonomski Pregled*, 66(2): 103-118.

Apeagyei, P.R. (2008). Significance of body image among UK female fashion consumers: The cult of size zero, the skinny trend. *International Journal of Fashion Design, Technology and Education*, 1(1): 3-11.

Armstrong, C.M.J., Connell, K.Y.H., Lang, C., Ruppert-Stroescu, M. & LeHew, M.L.A. (2016). Educating for sustainable fashion: Using clothing acquisition abstinence to explore sustainable consumption and life beyond growth. *Journal of Consumer Policy*, 39: 417-439.

Arrigo, E. (2010). Innovation and market-driven management in fast fashion companies. *Symphonya*, 2: 1-19.

Arrigo, E. (2013). Corporate responsibility management in fast fashion companies: the Gap Inc. case. *Journal of Fashion Marketing and Management*, 17(2): 175-189.

Arrigo, E. (2021). Collaborative consumption in the fashion industry: A systematic literature review and conceptual framework. *Journal of Cleaner Production*, 325(129261): 1-32.

Ashdown, S.P. & DeLong, M. (1995). Perceptual testing of apparel ease variation. *Applied Ergonomics*, 26(1): 47-54.

Aspers, P. & Godart, F. (2013). Sociology of fashion: Order and change. *The Annual Review of Sociology*, 39: 171-192.

Atenstaedt, R.L. (2021). Word cloud analysis of historical changes in the subject matter of public health practice in the United Kingdom. *Public Health*, 197: 39-41.

Atilgan, T. (2007). Eco-labeling applications in the textile & apparel sector in Turkey. *Fibers & Textiles in Eastern Europe*, 15 (2): 14-19.

Aus, R., Moora, H., Vihma, M., Unt, R., Kiisa, M. & Kapur, S. (2021). Designing for circular fashion: integrating upcycling into conventional garment manufacturing processes. *Fashion and Textiles*, 8(34): 1-18.

Auger, P. & Devinney, T.M. (2007). Do what consumers say matter? The misalignment of references with unconstrained ethical intentions. *Journal of Business Ethics*, 76(4): 361-383.

Austgulen, M.H. (2016). Environmentally sustainable textile consumption - What characterizes the political textile consumers. *Journal of Consumer Policy*, 39: 441-466.

Austgulen, M.H., Stø, E. & Jatkar, A. (2013). The dualism of eco-labels in the global textile market. *An Integrated Indian and European Perspective, Research Paper of Collaborative Project between CUTS International and SIFO*. Available at: http://www.globalstandard.org/media/com_acymailing/upload/ecolabels__2013_paper_ _es__194.pdf

Auty, S., & Elliott, R. (1998). Fashion involvement, self-monitoring and the meaning of brands. *Journal of Product and Brand Management*, *7*(2), 109-123.

Azevedo, S.G., Pereira, M., Ferreira, J. & Pedroso, V. (2008). Consumer buying behaviour in fashion retailing: Empirical evidences. University of Beira Interior, MPRA Paper No. 11908, 407-411. Available at: https://mpra.ub.uni-muenchen.de/11908/

Bach, M.P., Krstić, Z., Seljan, S. & Turulja, L. (2019). Text mining for big data analysis in financial sector: A literature review. *Sustainability*, 11: 1-27.

Banim, M. & Guy, A. (2001). Discontinued selves: Why do women keep clothes they no longer wear? In A. Guy, E. Green, & M. Banim (Eds.), *'Through the Wardrobe': Women's Relationships with their Clothes*, pp. 203–219. Oxford: Berg.

Battaglia, M., Testa, F., Bianchi, L., Iraldo, F. & Frey, M. (2014). Corporate social responsibility and competitiveness within SMEs of the fashion industry: Evidence from Italy and France. *Sustainability*, 6: 872-893.

Beaudoin, P., Lachance, M.J. & Robitaille, J. (2003). Fashion innovativeness, fashion diffusion and brand sensitivity among adolescents, *Journal of Fashion and Marketing Management*, 7(1): 23-30.

Becker-Leifhold, C. & Iran, S. (2018). Collaborative fashion consumption – drivers, barriers and future pathways. *Journal of Fashion Marketing and Management*, 22(2): 189-208.

Bechtel, R.B., Verdugo, V.C., Asai, M. & Riesle, A.G. (2006). A cross-cultural study of environmental belief structures in USA, Japan, Mexico, and Peru. *International Journal of Psychology*, 41(2): 145-151.

Becker-Leifhold, C.V. (2018). The role of values in collaborative fashion consumption - A critical investigation through the lenses of the theory of planned behavior. *Journal of Cleaner Production*, 199: 781-791.

Beinhocker, E. D., Farrell, D. & Zainulbhai, A. S. (2007). Tracking the growth of India's middle class. *The McKinsey Quarterly*, 3: 51–61.

Bennur, S. & Jin, B. (2013). Cross-cultural investigation of US and Indian consumer's apparel attribute choices applying Kano's theory. *Journal of Fashion Marketing and Management*, 17(3): 306-321.

Bergeron, D.P. & Carver, M.N. (1988). Student preferences for domestic-made or imported apparel as influenced by shopping habits. *Journal of Consumer Studies and Home Economics*, 12(1): 87-94.

Bennett, G., Williams, F. & Mainstream (2011). Green: Moving sustainability from niche to normal. Available at: http://assets.ogilvy.com/tru_es_email/ogilvyearth/Mainstream_Green.pdf

Bergeron, D.P. & Carver, M.N. (1988). Student preferences for domestic-made or imported apparel as influenced by shopping habits, *Journal of Consumer Studies and Home Economics*, 12: 87-94.

Bianchi, C. & Birtwistle, G. (2010). Sell, give away, or donate: an exploratory study of fashion clothing disposal behaviour in two countries. *The International Review of Retail, Distribution and Consumer Research*, 20(3): 353-368.

Biondi, A. (2020). Fashion and luxury face $600 billion decline in sales. *Vogue Business*. Available at: Fashion and luxury face $600 billion decline in sales | Vogue Business

Binotto, C. & Payne, A. (2017). The poetics of waste: Contemporary fashion practice in the context of wastefulness. *Fashion Practice*, 9(1): 5-29.

Birtwistle, G. & Moore, C.M. (2007). Fashion clothing – where does it all end up?, *International Journal of Retail & Distribution Management*, 35(3): 210-216.

Bjørner, T.B., Hansen, L.G. and Russell, C.S. (2004). Environmental labeling and consumers' choice – An empirical analysis of the effect of the Nordic Swan. *Journal of Environmental Economics and Management*, 47: 411-434

Blazquez, M., Henninger, C.E., Alexander, B. & Franquesa, C. (2019). Consumers' Knowledge and Intentions towards Sustainability: A Spanish Fashion Perspective. *Fashion Practice*, 12(1): 34-54.

Bohdanowicz, J. & Clamp, L. (1994). *Fashion Marketing*, Routledge, New York.

Brand, J. (1996). Sustainable development: The international, national and local context for women. *Built Environment*, 22(1): 58-71.

Brandão, A. & da Costa, A.G. (2021). Extending the theory of planned behaviour to understand the effects of barriers towards sustainable fashion consumption. *European Business Review*, 33(5): 742-774.

Bratt, C., Hallstedt, S., Robert, K., Broman, G. & Oldmark, J. (2011). Assessment of ecolabelling criteria development from a strategic sustainability perspective. *Journal of Cleaner Production*, 19(14): 1631-1638.

Bray, J., Johns, N. & Kiburn, D. (2010). An exploratory study into the factors impeding ethical consumption. *Journal of Business Ethics*, 98: 597–618.

Brough, A.R., Wilkie, J.E.B., Ma, J., Isaac, M.S. & Gal, D. (2016). Is eco-friendly unmanly? The green-feminine stereotype and its e_ect on sustainable consumption. *Journal of Consumer Research*, , 43(4): 567–582.

Brucks, M., Zeithaml, V. A., & Naylor, G. (2000). Price and brand name as indicators of quality dimensions for consumer durables. *Journal of the Academy of Marketing Science*, 28(3): 359–374.

BSR (2013). Sustainable Fashion Design: Oxymoron No More? *Business for Social Responsibility and Subsidiaries*. Available at: http://www.bsr.org/reports/BSR_Sustainable_Fashion_Design.pdf

Butler, S.M. & Francis, S. (1997). The effects of environmental attitudes on apparel purchasing behavior, *Clothing and Textiles Research Journal*, 15(2): 76-85.

Bulut, Z.A., Çimrin, F.K. & Doˇgan, O. (2017). Gender, generation and sustainable consumption: Exploring the behavior of consumers from Izmir, Turkey. *International Journal of Consumer Studies*, 41(6): 597–604.

Bye, E.K. & Reiley, K. (2003). Comparison of information about the quality of apparel in three retail formats, *Perceptual and Motor Skills*, 96: 839-846.

Campbell, C.S. (1997). Shopping pleasure and the sex war. In *The Shopping Experience*, Falk P. and Campbell, C., eds. London: Sage, 166-167.

Capgemini Research Institute (2020). Consumer product and retail: How sustainability is fundamentally changing consumer preferences. *Capgemini Research Institute*. Available at: https://www.capgemini.com/wp-content/uploads/2021/02/20-06_9880_Sustainability-in-CPR_Final_Web-1-2.pdf

Cassill, N.L. & Drake, M.F. (1987). Apparel selection criteria related to female consumers' lifestyle, *Clothing and Textiles Research Journal*, 6(1): 20-28.

Canada Protection Plan (2020). What is the life expectancy in Canada? *Canada Protection Plan*, April 1. Available at: https://www.cpp.ca/blog/what-is-the-life-expectancy-in-canada/

Care & Fair (2020). Many people talk about child labor. And we do something to prevent it! *Care & Fair*. Available at: https://www.care-fair.org/about-care–fair.html

Carey, L. & Cervellon, M.-C. (2014). Ethical fashion dimensions: pictorial and auditory depictions through three cultural perspectives. *Journal of Fashion Marketing and Management*, 18(4): 483-506.

Carrigan, M., Szmigin, I. & Wright, J. (2004). Shopping for a better world? An interpretive study of the potential for ethical consumption within the older market. *Journal of Consumer Marketing*, 21(6): 401-417.

Caro, F. & Gallien, J. (2010). Inventory management of a fast-fashion retail network. *Operations Research*, 58(2): 257-273.

Caro, F. & Gallien, J. (2012). Clearance Pricing Optimization for a Fast-Fashion Retailer. *Operations Research*, 60(6): 1404-1422.

Castillo-Vergara, M., Alvarez-Marin, A. & Placencio-Hidalgo, D. (2018). A bibliometric analysis of creativity in the field of business economics. *Journal of Business Research*, 85: 1-9.

CBO (2021). An overview of the economic outlook: 2021 to 2031. Congressional Budget Office. Available at: An Overview of the Economic Outlook: 2021 to 2031 (cbo.gov)

Cervellon, M.-C. & Carey, L. (2014). Sustainable, hedonic and efficient interaction effects between product properties and consumer reviews on post-experience responses, *European Journal of Marketing*, 48(7/8): 1375-1394.

Census India. (2011). Census data. Office of the registrar general & census commissioner. Available at: http://censusindia.gov.in/2011-Common/CensusData2011.html

Chae, M.-H., Black, C. & Heitmeyer, J. (2006). Pre-purchase and post-purchase satisfaction and fashion involvement of female tennis wear consumers. *International Journal of Consumer Studies*, 30(1): 25-33.

Chakrabarti, A. (2021). Women in India live longer than men but don't have healthier lives, finds new report, *The Print*, July 11. Available at: https://theprint.in/health/women-in-india-live-longer-than-men-but-dont-have-healthier-lives-finds-new-report/693104/

Chan, C.Y.C., Yu, W.W.M. & Newton, E. (2001). Evaluation and analysis of bra design. *The Design Journal*, 4(3): 33-40.

Chang, E., Burns, L. D., & Francis, S. K. (2004). Gender differences in the dimensional structure of apparel shopping satisfaction among Korean consumers: The role of hedonic shopping value. *Clothing and Textiles Research Journal*, 22(4): 185-199.

Chang, H.J. & Watchravesringkan, K.T. (2018). Who are sustainably minded apparel shoppers? An investigation to the influencing factors of sustainable apparel consumption. *International Journal of Retail & Distribution Management*, 46(2): 148-162.

Chen, X., Au W.M. & Li K. (2004). Consumption of children's wear in a big city in Central China: Zhengzhou. *Journal of Fashion Marketing and Management*, 8(2): 154-165.

Chen-Yu, H.J. & Kincade, D.H. (2001). Effects of product image at three stages of the consumer decision process for apparel products: alternative evaluation, purchase and post-purchase, *Journal of Fashion Marketing and Management,* 5(1): 29-43.

Chi, T., Garard, J., Dephillips, A., Liu, H. & Sun, J. (2019). Why U.S. consumers buy sustainable cotton made collegiate apparel? A study of the key determinants. *Sustainability*, 11(3126): 1-15.

Chi, T., Gerard, J., Yu, Y. & Wang, Y. (2021). A study of U.S. consumers' intention to purchase slow fashion apparel: understanding the key determinants. *International Journal of Fashion Design, Technology and Education*, 14(1): 101-112.

Choi, D. & Han, T.I. (2019). Green practices among fashion manufacturers: Relationship with cultural innovativeness and perceived benefits. *Social Sciences*, *8(*138): 1-16.

Choudhury, A.K.R. (2015). Development of eco-labels for sustainable textiles. *Roadmap to Sustainable Textiles and Clothing*, 137-173.

Chowdhary, U. & Ryan, L. (2003). Self-esteem and apparel satisfaction with appropriate clothing: Value of product attributes and support groups for mastectomy survivors. *Perceptual and Motor Skills*, 97: 35-44.

Chu, A. & Rahman, O. (2012). Colour, clothing, and the concept of 'green': colour trend analysis and professionals' perspectives. *Journal of Global Fashion Marketing*, 3(4): 147-157.

Clancy, G., Fröling, M. & Gregory, P. (2015). Ecolabels as drivers of clothing design. *Journal of Cleaner Production*, 99: 345-353.

Clarke-Sather, A. & Cobb, K. (2019). Onshoring fashion: Worker sustainability impacts of global and local apparel production. *Journal of Cleaner Production*, 208: 1206-1218.

Claudio, L. (2007). Waste couture. Environmental impact of the clothing industry. *Environmental Health Perspectives*, 115: A448-A454.

Clean Clothes Campaign (2020). Who we are. *Clean Clothes Campaign*. Available at: https://cleanclothes.org/about

Cleveland, M., Papadopoulos, N. & Laroche, M. (2011). Identity, demographics, and consumer behaviours: International market segmentation across product categories. *International Marketing Review*, 28(3): 244–266.

Clube, R.K.M. & Tennant, M. (2020). Exploring garment rental as a sustainable business model in the fashion industry - Does contamination impact the consumption experience. *Journal of Consumer Behaviour*, 19: 359-370.

Cochrane Library (2021). About Cochrane Reviews: What is a systematic review? Cochrane Library. Available at: About Cochrane Reviews | Cochrane Library

Connell, K.Y.H. (2010). Internal and external barriers to eco-conscious apparel acquisition. *International Journal of Consumer Studies*, 34: 279-286.

Cordell, V.V. (1992). Effects of consumer preferences for foreign sourced products. *Journal of International Business Studies*, 23(2): 251-69.

Costanza, R. & Patten, B.C. (1995). Commentary: defining and predicting sustainability. *Ecological Economics*, 15(3): 193-196.

Cox, J. & Dittmar, H. (1995). The functions of clothes and clothing (dis)satisfaction: a gender analysis among British students, *Journal of Consumer Policy*, 18(2/3): 237-267.

Creusen, M.E.H. (2010). The importance of product aspects in choice: The influence of demographic characteristics. *Journal of Consumer Marketing*, 27(1): 26–34.

Curwen, L.G., Park, J. & Sarkar, A.K. (2012). Challenges and solutions of sustainable apparel product development: A case study of Eileen Fisher. *Clothing and Textiles Research Journal*, 31(1): 32-47.

Davis, B.D., Kern, S.A., & Sternquist, B. J. (1990). The influence of country of origin, the 'Buy American' campaign, and store prestige on consumers' perceptions of quality and estimates of price. *Advances in International Marketing*, 4(1): 69–91.

Davis, L.L. (1985). Effects of physical quality and brand labeling on perceptions of clothing quality, *Perceptual and Motor Skills*, 61: 671-677.

de Aguiar Hugo, A., de Nadae, J. & da Silva Lima, R. (2021). Can fashion be circular? A literature review on circular economy barriers, drivers, and practices in the fashion industry's productive chain. *Sustainability*, 13(12246): 1-17.

de Brito, M.P., Carbone, V. & Blanquart, C.M. (2008). Towards a sustainable fashion retail supply chain in Europe - Organisation and performance. *International Journal of Production Economics*, 114: 534-553.

Defra (2008). Sustainable clothing roadmap. Department for Environment, Food and Rural Affairs, *UK Government Web Archive*. Available at: http://www.defra.gov.uk/environment/consumerprod/products/clothing.html

De Klerk, H.M. & Lubbe, S. (2006). Female consumers' evaluation of apparel quality: Exploring the importance of aesthetics. *Journal of Fashion Marketing and Management*, 12(1): 36-50.

Deloitte. (2013). India matters: Winning in growth markets. *Deloitte*. Available at: https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/about-deloitte/deloitte-uk-about-india-matters.pdf

de Lenne, O. & Vandenbosch, L. (2017). Media and sustainable apparel buying intention. *Journal of Fashion Marketing and Management*, 21(4): 483-498.

Delmas, M.A., & Burbano, V.C. (2011). The drivers of greenwashing. *California Management Review*, 54(1): 64–87.

Delong, M., Bao, M., Wu, J., Chao, H. & Li, M. (2004). Perception of US branded apparel in Shanghai. *Journal of Fashion Marketing and Management*, 8(2): 141-153.

DeLong, M., Casto, M.A., Min, S. & Lee, Y.K. (2016). Education for apparel sustainability from perspectives of design students from differing cultural contexts. *International Journal of Fashion Design, Technology and Education*, 9(3): 248-260.

DeLong, M., LaBat, K., Nelson, N., Koh, A. & Kim Y. (2002). Global products, global markets: Jeans in Korea and the United States, *Clothing and Textiles Research Journal*, 20(4): 238-245.

DeLong, M., Min, S., Casto, M.A. & Lee, Y.K. (2017). Sustainable clothing from the older female user's perspective. *Clothing Cultures*, 4(3): 219-234.

Bonilla, M.D.R., del Olmo Arriaga, J.L. & Andreu, D. (2019). The interaction of Instagram followers in the fast fashion sector: The case of Hennes and Mauritz (H&M). *Journal of Global Fashion Marketing*, 10(4): 342-357.

Desore, A. & Narula, S.A. (2018). An overview on corporate response towards sustainability issues in textile industry. *Environment, Development and Sustainability*, 20: 1439-1459.

DesMarteau, K. (2000). Pre-production & CAD: Let the fit revolution begin. *Bobbin*, 42: 42-56.

Devlin, J., Chang, M.-W., Lee, K. & Toutanova, K. (2018). BERT: Pre-training of deep bidirectional transformers for language understanding. Cornell University. Available at: https://arxiv.org/abs/1810.04805

Diamantopoulos, A., Schlegelmilch, B.B., Sinkovics, R.R. & Bohlen, G.M. (2003). Can socio demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business Research*, 56(6): 465–480.

Dickenbrok, C. & Martinez, L.F. (2018). Understanding US millennials' perceived values of denim apparel recycling: insights for brands and retailers. *International Review on Public and Nonprofit Marketing,* 15: 127-141.

Dickson, M.A. (2001). Utility of no sweat labels for apparel consumers: Profiling label users and predicting their purchases."= *Journal of Consumer Affairs*, 35 (1): 96-119.

Dickson, M.A. and Pollack, A. (2000), Clothing and identity among female in-line skaters, *Clothing and Textiles Research Journal,* Vol. 18, pp. 65-72.

Dickson, M.A., Lennon, S.H., Montalto, C.O., Shen, D. & Zhang, L. (2004). Chinese consumer market segments for foreign apparel products. *Journal of Consumer Marketing*, 21(4/5): 301-317.

Dibb, S. (2001). New millennium, new segments: Moving towards the segment of one? *Journal of Strategic Marketing*, 9(3): 193-213.

Domain-b.com. (2007). World Bank warns of severe environment impact of India's growth. Domain-b. Available at: http://www.domainb.com/finance/banks/world_bank/20070411_warns/html

Donaldson, T. (2020). Is slow fashion the new luxury? *WWD*, September 15, pp. 42.

Doorey, D.J. (2011). The transparent supply chain: From resistance to implementation at Nike and Levi-Strauss. *Journal of Business Ethics*, 103: 587-603.

Do Paço, A.M.F., Raposo, M.L.B. & Filho,W.L. (2009). Identifying the green consumer: A segmentation study. *Journal of Targeting and Measurement Analysis for Marketing*, 17(1): 17–25.

D'Souza, C., Gilmore, A.J., Hartmann, P.V.A. & Sullivan-Mort, G. (2015). Male eco-fashion: a Market reality. *International Journal of Consumer Studies*, 39(1): 35-42.

D'Souza, C., Taghian, M., Lamb, P. & Peretiatko, R. (2007). Green decisions: Demographics and consumer understanding of environmental labels. *International Journal of Consumer Studies*, 31(4): 371-376.

Eco Label Index (2018). All ecolabels on textiles. *Eco Label Index*. Available at: http://www.ecolabelindex.com/ecolabels/?st=category,textiles

Eckman, M., Damhorst. M.L. & Kadolph, S.J. (1990), Toward a model of the in-store purchase decision process: consumer use of criteria for evaluating women's apparel. *Clothing and Textiles Research Journal*, 8(2): 13-22.

Egels-Zandén, N. & Hansson, N. (2016). Supply chain transparency as a consumer or corporate tool: The case of Nudie Jeans Co. *Journal of Consumer Policy*, 39: 377-395.

Eisler, A.D. and Eisler, H. (1994). Subjective time scaling: influence of age, gender, and type A and type B behavior. *Chronobiologia*, 21(3-4): 185–200.

Elliott, R. (1994), Exploring the symbolic meaning of brands. *British Journal of Management*, 5: S13-S19.

Ellis, J.L., McCracken, V.A. & Skuza, N. (2012). Insights into willingness to pay for organic cotton apparel. *Journal of Fashion Marketing and Management*, 16(3): 290-305.

eMarketer (2019). The future of retail 2019: Top 10 trends that will shape retail in the year ahead. eMarketer. Available at: eMarketer_Future_of_Retail_Report_Braze_2019.pdf

eMarketer (2020). US retail sales to drop more than 10% in 2020. *eMarketer*. Available at: US Retail Sales to Drop More than 10% in 2020 - Insider Intelligence Trends, Forecasts & Statistics (emarketer.com)

Environics Institute (2012). The common good: Who decides? A national survey of Canadians. *Environics Institute*.

Esbeih, K.N., Molina-Moreno, V., Núñez-Cacho, P. & Silva-Santos, B. (2021). Transition to the circular economy in the fashion industry: The case of the Inditex family business. *Sustainability*, 13(10202): 1-18.

Etgar, M. & Malhotra, N.K. (1981), Determinants of price dependency: Personal and perceptual factors, *Journal of Consumer Research*, 8: 217-222.

Ethical Consumer. (2016). Ethical consumer market report 2016. *Ethical Consumer*, 1–31. Available at: http://www.ethicalconsumer.org/portals/0/downloads/ethical%20consumer%20markets%20report%202016.pdf

Ettenson, R., Wagner, J. & Gaeth, G. (1988). Evaluating the effect of country of origin and the "Made in the USA" campaign: A conjoint approach, *Journal of Retailing*, 64(1): 85-100.

Eurobarometer (2009). Europeans' attitudes towards the issue of sustainable consumption and production, analytic report by the European Commission. Flash Eurobarmeter 256 – The Gallup Organization, *Eurobarometer*. Available at: http://ec.europa.eu

Fairtrade International (2020). Aims of the fairtrade standards. *Fairtrade International*. Available at: https://www.fairtrade.net/standard/aims

Fair Wear (2020). Who we are. *Fair Wear*. Available at: https://www.fairwear.org/about-us/get-to-know-fair-wear

Farrant, L., Olsen, S.I. & Wangel, A. (2010). Environmental benefits from reusing clothes. *International Journal of Life Cycle Assess*, 15: 726-736.

Fashion Revolution (2022). Fashion Transparency Index 2022. *Fashion Revolution*. Available at: file:///C:/Users/Osmud/Downloads/FTI_2022-12Sept%20(2).pdf

Feldman, R. & Dagan, I. (1995). Knowledge discovery in textual databases (KDT). *KDD-95 Proceedings*, 112–117.

Fetscherin, M. & Heinrich, D. (2015). Consumer brand relationships research: a bibliometric citation meta-analysis. *Journal of Business Research*, 68(2): 380–390.

Fiore, A.M. & Damhorst, M.L. (1992). Intrinsic cues as predictors of perceived quality of apparel, *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 5: 168-178.

Fletcher, K. (2008). *Sustainable Fashion and Textiles: Design Journeys*, Earthscan, London.

Fogliatto, F.S., da Silveira, G.J.C. & Borenstein, D. (2012). The mass customization decade: An updated review of the literature. *International Journal Production Economics*, 138: 14–25.

Forbes India (2023). GDP of India: Current and historical growth rate, India's rank in the world, June 12, *Forbes India*. Available at: GDP Of India: Current And Historical Growth Rate, India's Rank In The World - Forbes India

Fornell, C. & Larcker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1): 39-50.

Forsythe, S., Kim, J.O. & Peter, T. (1999). Product cue usage in two Asian markets: A cross-cultural comparison. *Asian Pacific Journal of Management*, 16: 275–292.

Forsythe, S., Presley, A.B. & Caton, K.W. (1996), Dimensions of apparel quality influencing consumers' perceptions, *Perceptual and Motor Skills*, 83: 299-305.

Fox, D. & Moyser, M. (2018). Women in Canada: A gender-based statistical report - The economic well-being of women in Canada. *Statistics Canada*, May 16. Catalogue no. 89-503-X. Available at: https://www150.statcan.gc.ca/n1/en/pub/89-503-x/2015001/article/54930-eng.pdf?st=JQp6cTGN

Fowler, D. (1999). The attributes sought in sports apparel: A ranking. *Journal of Marketing Theory and Practice*, 7(4): 81-88.

Franko, D.L., Fuller-Tyszkiewicz, M., Rodgers, R.F., Gattario, K.H., Frisen, A., Diedrichs, P.C. Ricciardelli, L.A., Yager, Z., Smolak, L., Thompson-Brenner, H. & Shingleton, R.M. (2015). Internalization as a mediator of the relationship between conformity to masculine norms and body image attitudes and behaviours among young men in Sweden, US, UK, and Australia. *Body Image*, 15, 54–60.

Fukukawa, K., Shafer, W. E. & Lee, G. M. (2007). Values and attitudes toward social and environmental accountability: A study of MBA students. *Journal of Business Ethics*, 71(4): 381–394.

Fung, G. (2001). A comprehensive overview of basic clustering algorithms, 1-37. Available at: https://sites.cs.ucsb.edu/~veronika/MAE/clustering_overview_2001.pdf

Fung, Y.-N., Chan, H.-L., Choi, T.-M. & Liu, R. (2021). Sustainable product development processes in fashion - Supply chains structures and classifications. *International Journal of Production Economics*, 231(107911): 1-15.

Fung, Y.-N., Choi, T.-M. & Liu, R. (2020). Sustainable planning strategies in supply chain systems: proposal and applications with a real case study in fashion. *Production Planning & Control*, 31(11-12): 883-902.

Gale, P. (2011). Promotion-seeking Asia Pacific shoppers present opportunities. Available at: http://blog.nielsen.com/nielsenwire/consumer/promotion-seeking-asia-pacific-shoppers-present-opportunities/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+NielsenWire+%28Nielsen+Wire%29

Gandhi, M. & Kaushik, N. (2016). Socially responsive consumption behaviour – an Indian perspective. *Social Responsibility Journal*, 12(1): 85-102.

Garcia, S., Cordeiro, A., de Alencar Nääs, I. & de Oliveira Costa Neto, P.L. (2019). The sustainability awareness of Brazilian consumers of cotton clothing. *Journal of Cleaner Production*, 215 (126239): 1490-1502.

Gardyn, R. (2003). The shape of things to come. *American Demographics*, 25(6), 24.

Garfield, E., Pudovkin, A.I., & Istomin, V.S. (2003). Why do we need algorithmic historiography? *Journal of the American Society for Information Science and Technology*, 54, 400–412.

Geiger, S.M. & Keller, J. (2018). Shopping for clothes and sensitivity to the suffering of others: the role of compassion and values in sustainable fashion consumption. *Environment and Behavior*, 50(10): 1119-1144.

Geissdoerfer, M., Savaget, P., Bocken, N.M.P. & Hultink, E.J. (2017). The circular economy – a new sustainability paradigm. *Journal of Cleaner Production*, 143: 757-768.

Gendall, P. & Smith, T. (1995). Knowledge of scientific and environmental facts: A comparison of six countries. *Marketing Bulletin*, 6: 65–73.

Gestal, I.P. & Garcia, D. (2019). Fast Retailing overcomes H&M as world's second largest fashion retailer. *MDS – The Global Fashion Business Journal*, October 11. Available at: Fast Retailing overcomes H&M as world's second largest fashion retailer | MDS (themds.com)

Gheorghe, C.A. & Matefi, R. (2021). Sustainability and transparency—necessary conditions for the transition from fast to slow fashion: Zara Join Life Collection's analysis. *Sustainability*, 13(19): 11013 – 1-16.

Gipson, K. & Francis, S.K. (1991). The effect of country of origin on purchase behaviour: An intercept study, *Journal of Consumer Studies and Home Economics*, 15: 33-44.

Gitimu, P.N., Work, J. & Robinson, J.R. (2013). Garment quality evaluation: Influence of fashion leadership, fashion involvement, and gender. *International Journal of Fashion Design, Technology and Education*, 6(3): 173–180.

Glass, G.V. (1976). Primary, secondary, and meta-analysis of research. *Review of Research in Education*, 10(5): 351-379.

Organic Trade Association (2023). Global Organic Textile Standard (GOTS). Available at: https://ota.com/advocacy/organic-standards/fiber-and-textiles/global-organic-textile-standard-gots

GlobeScan (2014). Greendex 2014: Consumer Choice and the Environment – A Worldwide Tracking Survey. *GlobeScan*, pp. 1-20. Available at: https://globescan.com/wpcontent/uploads/2017/07/Greendex_2014_Highlights_Report_NationalGeographic_GlobeScan.pdf

Godec, P. (2021). Keyword extraction methods - The overview. *Towards Data Science*, September 19. Available at: Keyword Extraction Methods — The Overview | by Primož Godec | Towards Data Science

Goh, S.K. & Balaji, M.S. (2016). Linking green skepticism to green purchase behaviour. *Journal of Cleaner Production*, 131: 629-638.

Gooden, A.M. (2001). Citation analysis of chemistry doctoral dissertations: An Ohio State University case study. *Issues in Science and Technology Librarianship*, 32.

Gopal, A. & Srinivasan, R. (2006). The new Indian consumer. *Harvard Business Review*, 84(10), 22–39.

Goswami, P. (2008). Is the urban Indian consumer ready for clothing with eco-labels? *International Journal of Consumer Studies*, 32(5): 438–446.

Goswami, P. (2008). Is the urban Indian consumer ready for clothing with eco-labels? Available at: *International Journal of Consumer Studies*, 32 (5): 438–446.

Gould, S.J. & Stern, B.B. (1989). Gender schema and fashion consciousness. *Psychology & Marketing*, 6(2): 129-145.

Goworek, H. (2011). Social and environmental sustainability in the clothing industry: a case study of a fair trade retailer. *Social Responsibility Journal*, 7(1): 74-86.

Goworek, H., Fisher, T., Cooper, T., Woodward, S. & Hiller, A. (2012). The sustainable clothing market - an evaluation of potential strategies for UK retailers. *International Journal of Retail & Distribution Management*, 40(12): 935-955.

Goworek, H., Hiller, A.I., Fischer, T., Cooper, T. & Woodward, S. (2013). Consumers' attitudes towards sustainable fashion: clothing usage and disposal, in Gardetti, M.A. and Torres, A.L. (Eds), *Sustainability in Fashion and Textiles*, Greenleaf Publishing, Sheffield.

Gręboszk-Krawczyk, M. & Siuda, D. (2019). Attitudes of young European consumers toward recycling campaigns of textile companies. *Autex Research Journal*, 19(4): 394-399.

Gregson, N. & Beale, V. (2004). Wardrobe matter: The sorting, displacement and circulation of women's clothing, *Geoforum*, 35: 689-700.

Gross, J. (2006). Geographies of consumption: The work of consumption. *Progress in Human Geography*, 30(2): 237-249.

Grossman, R. P. & Wisenblit, J. Z. (1999). What we know about consumers' color choices. *Journal of Marketing Practice: Applied Marketing Science*, 5(3): 78–88.

Grover, S. (2020). Covid-19 aftermath: Online retail shopping becoming the new normal. *Entrepreneur India*. Available at: https://www.entrepreneur.com/article/353801

Guleria, D. & Kaur, G. (2021). Bibliometric analysis of ecopreneurship using VOSviewer and RStudio Bibliometrix, 1989-2019. *Library Hi Tech*, 39(4): 1001-1024.

Gupta, S. & Gentry, J.W. (2016). Construction of gender roles in perceived scarce environments–Maintaining masculinity when shopping for fast fashion apparel. *Journal of Consumer Behavour*, 15(3): 251-260.

Gupta, S., Gwozdz, W. & Gentry, J. (2019). The role of style versus fashion orientation on sustainable apparel consumption. *Journal of Macromarketing*, 39(2): 188-207.

Gwozdz, W., Steensen, K. & Müller, T. (2017). An environmental perspective on clothing consumption: Consumer segments and their behavioral patterns. *Sustainability*, 9(762): 1-27.

Habib, R. & Afzal, M.T. (2019). Sections-based bibliographic coupling for research paper recommendation. *Scientometrics*, 119: 643-656.

Hakan, K., Morales-Alomso, G. & Brun, A. (2016). From a systematic literature review to a classification framework: Sustainability integration in fashion operations. *Sustainability*, 9(30): 1-19.

Hall, M. (2015). *Metrosexual Masculinities*. Palgrave Macmillan: London, UK.

Han, T.-I. (2018). Determinants of organic cotton apparel purchase: A comparison of young consumers in the U.S.A. and South Korea. *Sustainability*, 10(2025): 1-13.

Han, T.-I. & Stoel, L. (2016). The effect of social norms and product knowledge on purchase of organic cotton and fair-trade apparel. *Journal of Global Fashion Marketing*, 7(2): 89-102.

Hatch, K.L. & Roberts, J.A. (1985). Use of intrinsic and extrinsic cues to assess textile product quality, *Journal of Consumer Studies and Home Economics*, 9: 341-357.

Harden, A.J., Butler, S. & Scheetz, M. (1998). Body perceptions of bulimic and nonbulimic groups. *Perceptual and Motor Skills*, 87: 108-110.

Harris, F., Roby, H. & Dibb, S. (2016). Sustainable clothing: Challenges, barriers and interventions for encouraging more sustainable consumer behaviour. *International Journal of Consumer Studies*, 40: 309-318.

Hart, C., Farrell, A., Stachow, G., Reed, G. & Cadogan, J. (2007). Enjoyment of the shopping experience: Impact on consumers' repatronage intentions and gender influence. *The Service Industries Journal*, 27(5): 583–604.

Haynes, J.L., Burts, D.C., Dukes, A. & Cloud, R. (1993). Consumer socialization of preschoolers and kindergartners as related to clothing. *Psychology and Marketing*, 10(2): 151-166.

Heaton, L.M. (2000). 'Setting the stage: The consumer viewpoint', consumer fit and industry sizing: Aligning vision and reality, special topics session presented at the *Annual Meeting of the International Textile and Apparel Association (ITAA),* Cincinnati, OH.

Heisey, F.L. (1990). Perceived quality and predicted price: Use of the minimum information environment in evaluating apparel, *Clothing and Textiles Research Journal*, 8(4): 22-28.

Henninger, C.E. (2015). Traceability the new eco-label in the slow-fashion industry? – Consumer perceptions and micro-organizations responses, *Sustainability* 7: 6011-6032.

Henninger, C.E., Alevizou, P.J. & Oates, C.J. (2016). What is sustainable fashion? *Journal of Fashion Marketing and Management*, 20(4): 400-416.

Henninger, C.E., Brydges, T., Iran, S. & Vladimirova, K. (2021). Collaborative fashion consumption – A synthesis and future research agenda. *Journal of Cleaner Production*, 319(128648): 1-12.

Henninger, C.E., Bürklin, N. & Niinimäki, K. (2019). The clothes swapping phenomenon – when consumers become suppliers. *Journal of Fashion Marketing and Management*, 23(3): 327-344.

Herbst, F. & Burger C. (2002). Attributes used by young consumers when assessing a fashion products: A conjoint analysis approach, *Journal of Family Ecology and Consumer Studies*, 30: 40-45.

Hey, T. & Trefethen, A. (2003). The data deluge: An e-science perspective. In Berman, F., Fox, G. & Hey, T. (eds.) *Grid Computing: Making the Global Infrastructure a Reality*. Wiley online Library, pp. 825-835.

Hill, J. & Lee, H.-H. (2012). Young generation Y consumers' perceptions of sustainability in the apparel industry. *Journal of Fashion Marketing and Management*, 16(4): 477-491.

Hines, J.D. & Swinker, M.E. (2001). Knowledge: a variable in evaluating clothing quality. *International Journal of Consumer Studies*, 25(1): 72-76.

Hirscher, A.-L., Niinimäki, K. & Armstrong, C.M.J. (2018). Social manufacturing in the fashion sector: New value creation through alternative design strategies? *Journal of Cleaner Production*, 172: 4544-4554.

Hofstede, G. (2001). *Culture's Consequences: Comparing Values, Behaviours, Institutions, and Organizations Across Nations* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Holmes, C.B. & Buchanan, J. (1984). Color preference as a function of the object described. *Bulletin of the Psychonomic Society*, 22: 423-425.

Hopkins, M.S. (2009). What the 'green' consumer wants. *MIT Sloan Management Review*, 50(4): 87-89.

Hsiao, C.F. & Dickerson, K. (1995). Evaluative criteria for purchasing leisurewear: Taiwanese and U.S. students in a U.S. university, *Journal of Consumer Studies and Home Economics*, 19: 145-153.

Hsu, H. J., & Burns, L. D. (2002). Clothing evaluative criteria: A cross-national comparison of Taiwanese and United States consumers. *Clothing and Textiles Research Journal*, 20(4): 246–252.

Huggett, S. (2013). Journal bibliometrics indicators and citation ethics: A discussion of current issues. *Atherosclerosis*, 230(2): 275–277.

Hugo, S.H. & van Aardt, A.M. (2012). Evaluative criteria applied by South African female fashion consumers when purchasing casual daywear, *International Journal of Consumer Studies*, 36: 460-471.

Hui, M.K. & Zhou, L. (2003). Country-of-manufacture effects for known brands. *European Journal of Marketing*, 37(1/2): 133-53.

Hultberg, E. & Pal, R. (2021). Lessons on business model scalability for circular economy in the fashion retail value chain - towards a conceptual model. *Sustainable Production and Consumption*, 28: 686-698.

Hupka, R. B., Zaleski, Z., Otto, J., Reidl, L. & Tarabrina, N. V. (1997). The colors of anger, envy, fear, and jealousy: a cross-cultural study. *Journal of Cross-cultural Psychology*, 28(2): 156–171.

Hustvedt, G. & Bernard, J.C. (2008). Consumer willingness to pay for sustainable apparel: The influence of labelling for fibre origin and production methods. *International Journal of Consumer Studies*, 32(5): 491-498.

Hustvedt, G. & Dickson, M.A. (2009). Consumer likelihood of purchasing organic cotton apparel: Influence of attitudes and self-identity. *Journal of Fashion Marketing and Management*, 13(1): 49-65.

Hwang, C.G., Lee, Y. & Diddi, S. (2015). Generation Y's moral obligation and purchase intentions for organic, fair-trade, and recycled apparel products, *International Journal of Fashion Design, Technology and Education*, 8(2): 97-107.

IBEF (2016). Retail. *India Brand Equity Foundation (IBEF).* January. Available at: https://www.ibef.org/download/Retail-January-2016.pdf

Ignatow, G. & Mihalcea, R. (2016). *An Introduction to Text Mining: Research Design, Data Collection, and Analysis*. SAGE, Los Angeles, U.S.

ILO & UNICEF (2021). Executive summary: Child labour – global estimates 2020, trends and the road forward. *International Labour Organization (ILO) & UNICEF* joint publication. Available at: https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---ipec/documents/publication/wcms_800278.pdf#:~:text=Child%20Labour%3A%20Global%20estimates%202020%2C%20trends%20and%20the,of%20child%20labour%20today%2C%20and%20changes%20over%20time

Iran, S., Geiger, S.M. & Schrader, U. (2019). Collaborative fashion consumption – A cross-cultural study between Tehran and Berlin. *Journal of Cleaner Production*, 212: 313-323.

Islam, Md. M., Perry, P. & Gill, S. (2021). Mapping environmentally sustainable practices in textiles, apparel and fashion industries: a systematic literature review. *Journal of Fashion Marketing and Management*, 25(2): 331-353.

Iyer, E.S. & Kashyap, R.K. (2007). Consumer recycling: Role of incentives, information, and social class. *Journal of Consumer Behaviour*, 6 (1): 32–47.

Jacobs, K, van Beaumont, K., Rietra, M., Buvat, J., Cherian, S., Robey, J., Lago, C., Hewett, S., Manchanda, N. & B, Abirami. (2020). Consumer products and retail: How sustainability is

fundamentally changing consumer preferences. Capgemini Research Institute. Available at: Final-Web-Report-Sustainability-In-CPRD-2.pdf (capgemini.com)

Jamal, A., & Goode, M. (2001). Consumers' product evaluation: A study of the primary evaluative criteria in the precious jewellery market in the UK. *Journal of Consumer Behaviour*, 1(2): 140–155.

Janigo, K.A. & Wu, J. (2015). Collaborative redesign of used clothes as a sustainable fashion solution and potential business opportunity. *Fashion Practice: The Journal of Design, Creative Process & the Fashion Industry*, 7(1): 75–97.

Javed, T., Yang, J., Gilal, G. & Gilal, N.G. (2020). The sustainability claims' impact on the consumer's green perception and behavioral intention: A case study of H&M. *Advances in Management and Applied Economics*, 10(2): 1-22.

Jegethesan, K., Sneddon, J.N. & Soutar, G.N. (2012). Young Australian consumers' preferences for fashion apparel attributes. *Journal of Fashion Marketing and Management*, 16 (3): 275-289.

Jeong, Y.K., Song, M. & Ding, Y. (2014). Content-based author co-citation analysis. *Journal of Informetrics*, 8(1): 197-211.

Jestratijevic, I., Uanhoro, J.O. & Creighton, R. (2021). To disclose or not to disclose? Fashion brands' strategies for transparency in sustainability reporting. 2019). Motivations and obstacles

for fashion renting - a cross-cultural comparison. *Journal of Fashion Marketing and Management*, 26(1): 1361-2026.

Ji, G. (2007). Virtual enterprise and performance evaluation by using exergoeconomics in cloased-loop supply chain. In *Research and Practical Issues of Enterprise Information Systems II*, edited by L. D. Xu, A. Min Tjoa and S. S. Chaudhry, 135–143. New York, NY: Springer.

Jia, Fu, Yin, S., Chen, L. & Chen, X. (2020). The circular economy in the textile and apparel industry: A systematic literature review. *Journal of Cleaner Production*, 259: 1-20.

Jiang, K., Luk, S. T.-K. & Cardinali, S. (2018). The role of pre-consumption experience in perceived value of retailer brands: Consumers' experience from emerging markets. *Journal of Business Research*, 86: 374-385.

Jin, B. & Bennur, S. (2015). Does the importance of apparel product attributes differ by country? Testing Kano's Theory of attractive quality in four countries. *Clothing and Textiles Research Journal*, 33(1): 35-50.

Jin, B., Park, J.Y. & Ryu, J.S. (2010). Comparison of Chinese and Indian consumers' evaluative criteria when selecting denim jeans: A conjoint analysis. *Journal of Fashion Marketing and Management*, 14(1): 180–94.

Jo, M.-S. & Sarigollu, E. (2007). Cross-cultural differences of price-perceived quality relationships, *Journal of International Consumer Marketing*, 19(4): 59-74.

Joanes, T. (2019). Personal norms in a globalized world: Norm-activation processes and reduced clothing consumption. *Journal of Cleaner Production*, 212: 941-949.

Joanes, T., Gwozdz, W. and Klöckner, C.A. (2020). Reducing personal clothing consumption: A cross-cultural validation of the comprehensive action determination model. *Journal of Environmental Psychology*, 71: 1-10.

Joergens, C. (2006). Ethical fashion: Myth or future trend? *Journal of Fashion Marketing and Management* 10 (3): 360-371.

Jørgensen, M.S. & Jensen, C.L. (2012). The shaping of environmental impacts from Danish production and consumption of clothing. *Ecological Economics*, 83: 164-173.

Johnson, E. & Plepys, A. (2021). Product-service systems and sustainability: Analysing the environmental impacts of rental clothing. *Sustainability*, 13(2118): 1-29.

Johnson, R.L. & Kellaris, J.J. (1988). An exploratory study of price/perceived-quality relationships among consumer services, in NA - Advances in Consumer Research, eds. Micheal J. Houston, Provo, UT : Association for Consumer Research, 15: 316-322.

Jones, P., Comfort, D., Bown, R. & Hillier (2010). Sustainable consumption and the UK's leading clothing retailers. *World Review of Entrepreneurship, Management and Sustainable Development*. 6(3): 244-259.

Johnstone, L. & Lindh, C. (2021). Sustainably sustaining (online) fashion consumption: Using influencers to promote sustainable (un)planned behaviour in Europe's millennials. *Journal of Retailing and Consumer Services*, 64(102775).

Joy, A., Sherry, J.F., Venkatesh, A., Wang, J. & Chan, R. (2012). Fast Fashion, Sustainability, and the Ethical Appeal of Luxury Brands. *Fashion Theory*, 16(3): 273-296.

Jung, H.J. & Oh, K.W. (2019). Exploring the sustainability concepts regarding leather apparel in China and South Korea. *Sustainability*, 11: 1-19.

Jung, H.J., Oh, K.W. & Kim, H.M. (2021). Country differences in determinants of behavioral Intention towards sustainable apparel products. *Sustainability*, 13(558): 1-23.

Jutidamrongphan, W., Rahman, Md A., Hossain, T., Khatun, S.A. & de QueirózLamas, W. (2021). Eco-fashion designing to ensure corporate social responsibility within the supply chain in fashion industry. *Autex Research Journal*, 21(4): 467-481.

Kachaner, N., Nielsen, J., Portafaix, A. & Rodzko, F. (2020). The pandemic is heightening environmental awareness. Boston Consulting Group (BCG). Available at: The Pandemic Is Heightening Environmental Awareness | BCG

Kamdar, B. (2020). Women left behind: India's falling female labour participation, July 31. *The Diplomat*. Available at: Women Left Behind: India's Falling Female Labor Participation – The Diplomat

Kang, J. & Park-Poaps, H. (2010). Hedonic and utilitarian shopping motivations of fashion leadership. *Journal of Fashion Marketing and Management*, 14 (2): 312-328.

Kant Hvass, K. (2015). Business model innovation through second hand retailing - A fashion industry case. *The Journal of Corporate Citizenship*, 57: 11-32.

Kassarjian, H.H. (1977). Content analysis in consumer research, *Journal of Consumer Research*, 4(1): 8-18.

Kawabata, H. & Rabolt, N.J. (1999). Comparison of clothing purchase behaviour between US and Japanese female university students, *Journal Consumer Studies & Home Economics,* 23(4): 213-223.

Kawamura Y. (2005). *Fashion-ology: An Introduction to Fashion Studies*. Oxford, UK: Berg.

Kessler, M.M. (1963). Bibliographic coupling between scientific papers. *American Documentation*, 14(1): 10-25.

Khan, N. & Trivedi, P. (2015). Gender differences and sustainable consumption behavior. *British Journal Marketing Studies*, 3(3): 29–35.

Khan, R. (2019). 'Be creative' in Bangladesh? Mobility, empowerment and precarity in ethical fashion enterprise. *Cultural Studies*, 33(6): 1029-1049.

Khare, A. (2020). Antecedents to Indian consumers' perception of green apparel benefits. *Research Journal of Textile and Apparel*, 24(1): 1-19.

Khare, A., Mishra, A. & Parveen, C. (2012). Influence of collective self-esteem on fashion clothing involvement among Indian women. *Journal of Fashion Marking and Management*,16(1): 42–63.

Khare, A. & Sadachar, A. (2017). Green apparel buying behavior - A study on Indian youth. *International Journal of Consumer Studies*, 41: 558-569.

Ki, C.-W., Chong, S.M. & Ha-Brookshire, J.E. (2020). How fashion can achieve sustainable development througha circular economy and stakeholder engagement: A systematic literature review. *Corporate Social-responsibility and Environmental Management*, 27: 2401-2424.

Kim, C.S., Kim, K.R. & Hee, K. (2016). *Journal of Textile and Apparel Technology and Management*, 10(1): 1-11.

Kim, D. & Kim, S. (2017). Sustainable supply chain based on news articles and sustainability reports: Text mining with Leximancer and DICTION. *Sustainability*, 9: 1008.

Kim, E.Y. & Kim, Y. (2004). Predicting online purchase intentions for clothing products. *European Journal of Marketing*, 38(7): 883-897.

Kim, H., Lee, E.-J. & Hur, W.-M. (2012). The normative social influence on eco-friendly consumer behavior - The moderating effect of environmental marketing claims. *Clothing and Textiles Research Journal*, 30(1): 4-18.

Kim, H.-S. & Damhorst, M.L. (1998). Environmental concern and apparel consumption. *Clothing and textiles Research Journal*, 16(3): 126-133.

Kim, J. (2020). Collaborative fashion consumption in the sharing economy: Philosophical and aesthetic perspectives. *Journal of Global Fashion Marketing*, 11(3): 289-305.

Kirca, A.H. & Yaprak, A. (2010). The use of meta-analysis in international business research: Its current status and suggestions for better practice. *International Business Review*, 19(3): 306-314.

Klein, J.G., Ettenson, R. & Morris, M.D. (1998). The animosity model of foreign product purchase: An empirical test in the People's Republic of China. *Journal of Marketing*, 62(1), 89-100.

Kleminski, R., Kazienko, P. & Kajdanowicz, T. (2022). Analysis of direct citation, co-citation and bibliographic coupling in scientific topic identification. Journal of Information Science, 48(3) 349–373.

Klepp, I.G., Vramo, L. & Laitala, K. (2014). Too old: Clothes and value in Norwegian and Indian wardrobes. In M.-L. Nosch, F. Zhao & Varadarajan, L. (eds.), *Global Textile Encounters*. Oxbow Books, Oxford, U.K.

Ko, S.B. & Jin, B.2017). Predictors of purchase intention toward green apparel products: A cross-cultural investigation in the USA and China. *Journal of Fashion Marketing and Management,* 21(1): 70-87.

Köksal, D., Strähle, J., Müller, M. & Freise, M. (2017). Social sustainable supply chain management in the textile and apparel industry: A literature review. *Sustainability*, 9(100): 1-32.

Kolter, P. (1997). *Marketing Management Analysis, Planning, Implementation and Control*, Prentice Hall, Upper Saddle River, NJ.

Kong, H.M. & Ko, E. (2017). Why do consumers choose sustainable fashion? A cross-cultural study of South Korean, Chinese, and Japanese consumers. *Journal of Global Fashion Marketing*, 8(3): 220-234.

Kong, H.M., Witnater, A. & Ko, E. (2021). Sustainability and social media communication: How consumers respond to marketing efforts of luxury and non-luxury fashion brands. *Journal of Business Research*, 131: 640-651.

Korhonen, A., Ó Séaghdha, D., Silins, I., Sun, L., Högberg, J. & Stenius, U. (2012). Text mining for literature review and knowledge discovery in cancer risk assessment and research. *PLoS ONE*, 7(4): e33427.

Koszewska, M. (2011). Social and eco-labeling of textile and clothing goods as means of communication and product differentiation. *Fibers & Textiles in Eastern Europe*, 19 (4): 20-26.

Kozar, J.M. (2010). Women's responses to fashion media images: A study of female consumers aged 30-59. *International Journal of Consumer Studies*, 34(3): 272-278.

KPMG (2017). China's connected consumers: The rise of the Millennials, 4th ed.; *KPMG*, p. 9. Available online: https://assets.kpmg/content/dam/kpmg/cn/pdf/en/2017/12/chinas-connected-consumers-the-riseof-the-millennials.pdf

KPMG (2019). Sustainable fashion: A survey on global perspectives. *KPMG*, January. Available at: https://assets.kpmg/content/dam/kpmg/cn/pdf/en/2019/01/sustainable-fashion.pdf

KS Oils Limited. (2008). Indian consumer market: A change from pyramid to sparkling diamond. *KS Oils Limited*, 1–7. Available at: http://www.ksoils.com/whitepapers/KS_WHITEPAPER_INDIAN_CONSUMER_MARKET.pdf

Kumar, S. and Ali, J. (2011). Analyzing the factors affecting consumer awareness on organic foods in India, *21st Annual IFAMA World Forum and Symposium on the Road to 2050: Sustainability as a Business Opportunity*, Frankfurt, 20-23 June.

Kumar, S. & Yadav, R. (2021). The impact of shopping motivation on sustainable consumption - A study in the context of green apparel. *Journal of Cleaner Production*, 295 (126239): 1-13.

Kunz, G.I. (1998). *Merchandising: Theory, Principles, and Practice*, Fairchild, New York, NY

Kwang, J.N., Holland, R., Shackleton, J., Hwang, Y.-Y. & Melewar, T.C. (2008). The effect of evaluation criteria on design attributes and brand equity in the product evaluation process. *Journal of Brand Management*, 16: 195–212.

Kwon, Y.H. & Parham, E.S. (1994). Effects of state of fatness perception on weight conscious women's clothing practices. *Clothing and Textiles Research Journal*, 12: 16-21

Labhard, L.A. & Morris, N.A. (1994). Sleepwear acquisitions and attributes: Preferences related to personality types. *Journal of Consumer Studies and Home Economics*, 18 (2): 183–201.

Laitala, K. (2014). Consumers' clothing disposal behaviour - a synthesis of research results. *International Journal of Consumer Studies*, 38: 444-457.

Laitala, K. & Boks, C. (2012). Sustainable clothing design - use matters. *Journal of Design Research*, 10(1/2): 121-139.

Laitala, K. & Klepp, I.G. (2013). Environmental and ethical perceptions related to clothing labels among Norwegian consumers. *Research Journal of Textile and Apparel*, 17 (1): 50-58.

Lan, T. & Zhu, S. (2014). Chinese apparel value chains in Europe: low-end fast fashion, regionalization, and transnational entrepreneurship in Prato, Italy. *Eurasian Geography and Economics*, 55(2): 156-174.

Lang, C. & Armstrong, C.M.J. (2018). Collaborative consumption: The influence of fashion leadership, need for uniqueness, and materialism on female consumers' adoption of clothing renting and swapping. *Sustainable Production and Consumption*, 13: 37-47.

Lang, C., Li, M. & Zhao, L. (2020). Understanding consumers' online fashion renting experiences: A text-mining approach. *Sustainable Production and Consumption*, 21: 132-144.

Lang, C., Seo, S. & Liu, C. (2019). Motivations and obstacles for fashion renting: a cross-cultural comparison. *Journal of Fashion Marketing and Management*, 20(2): 191-207.

Lang, Q.L. & Crown, E.M. (1993). Country-of-origin effect in apparel choices: A conjoint analysis, *Journal of Consumer Studies and Home Economics*, 17: 87-98.

Lascu, D.N. & Babb, H.W. (1995). Market preference in Poland: Importance of product country of origin. In Kaynak, E. and Eren, Y. (eds), *Technology and Information Management for Global Development and Competitiveness*, Istanbul, pp. 216-22.

Lawless, E. & Medvedev, K. (2016). Assessment of sustainable design practices in the fashion industry - experiencesof eight small sustainable design companies in the Northeastern and Southeastern United States. *International Journal of Fashion Design, Technology and Education*, 9(1): 41-50.

Lee, D. & Schaninger, C. (1996). Country of production/assembly as a new country image construct: a conceptual application to global transplant decision. *Advances in International Marketing*, 7: 233-54.

Lee, E., Park, N.-K. & Han, J.H. (2013). Gender difference in environmental attitude and behaviors in adoption of energy-efficient lighting at home. *Journal of Sustainable Development*, 6(9): 38-50.

Lee, J.H., Kim, W.Y., Kim, M.H. & Lee, Y.J. (1993). On the evaluation of Boolean Operators in the extended Boolean retrieval framework. *The 16th Annual International ACM SIGIR Conference on Research and Development Information Retrieval*, July 1993, pp. 291-297. Available at: 160688.160741 (acm.org)

Lee, K. (2009). Gender differences in Hong Kong adolescent consumers' green purchasing behavior. *Journal of Consumer Marketing*, 26 (2): 87–96.

Lee, M. & Burns, L.D. (1993). Self-consciousness and clothing purchase criteria of Korean and United States college women, *Clothing and Textiles Research Journal*, 11(4): 32-40.

Lee, S.H.N., Ha-Brookshire, J. & Chow, P.-S. (2018). The moral responsibility of corporate sustainability as perceived by fashion retail employees: a USA-China cross-cultural comparison study. *Business Strategy and the Environment*, 27: 1462-1475.

Lee, S.H. & Huang, R. (2021). Consumer responses to online fashion renting - exploring the role of cultural differences. *International Journal of Retail & Distribution Management*, 49(2): 187-203.

Lee, Y.K. & DeLong, M. (2017). American and Korean youths' attachment to handcraft apparel and its relation to sustainability. *Clothing and Textiles Research Journal*, 35(2): 67-80.

L.E.K. Consulting. (2014). Spotlight on India: Understanding the Indian consumer. *L.E.K. Consulting Consumer Spotlight*. Available at: http://www.lek.com/sites/default/files/0114_LEK_IndiaSpotlight(v3).pdf

Leonidou, C.N. & Skarmeas, D. (2015). Gray shades of green: Causes and consequences of green skepticism. *Journal of Business Ethics*, 144(2): 401-405.

Lennon, S.J. & Fairhurst, A.E. (1994). Categorization of the quality concept, *Home Economics Research Journal*, 22(3): 267-285.

Li, M. & Zhao, L. (2021). Exploring global fashion sustainability practices through dictionary-based text mining. *Clothing and Textiles Research Journal*, 41(3):

Li, Y., Cao, L., Zhu, J. & Luo, J. (2017). Mining fashion outfit composition using an end-to-end deep learning approach on set data. *IEEE Transactions on Multimedia*, 19(8): 1-10.

Li, Y., Zhao, X., Shi, D. & Li, X. (2014). Governance of sustainable supply chains in the fast fashion industry. *European Management Journal*, 32: 823-836.

Lin, L.W. & Sternquist, B. (1994). Taiwanese consumers' perceptions of product information cues: Country of origin and store prestige, *European Journal of Marketing*, 28(1): 5-18.

Lin, L.Y. & Chen, C.S. (2006). The influence of the country-of-origin image, product knowledge

and product involvement on consumer purchase decisions: an empirical study of insurance and catering services in Taiwan. *Journal of Consumer Marketing*, 23(5): 248-65.

Liu, J., Liang, J., Ding, J., Zhang, G., Zeng, X., Yang, Q., Zhu, B. & Gao, W. (2021). Microfiber pollution: an ongoing major environmental issue related to the sustainable development of textile and clothing industry. *Environment, Development and Sustainability*, 23: 11240-11256.

Liu, Y., Liu, M.T., Pérez, A., Chan, W., Collado, J & Mo, Z. (2021). The importance of knowledge and trust for ethical fashion consumption. *Asia Pacific Journal of Marketing and Logistics*, 33(5): 1175-1194.

Liu, Z. (2012). A survey of outdoor sportswear requirement for Chinese consumers. *Advanced Materials Research*, 479–481: 676–679.

Lu, X. (2004), Consumption and ambivalent attitudes of Chinese young elite towards occidental luxury goods: An exploratory study, *American Marketing Association*, winter, pp. 219-227.

Luchs, M.G., Naylor, R.W., Irwin, J.R. and Raghunathan, R. (2010). The sustainability liability: potential negative effects of ethicality on product preference. *Journal of Marketing*, 74(5): 18-31.

Luján-Ornelas, C., Güereca, L.P., Franco-Garcia, M.-L. & Heldeweg, M. (2020). A life cycle thinking approach to analyse sustainability in the textile Industry - A literature review. *Sustainability*, 12(10193): 1-19.

Luque, A. & Herrero-Garcia, N. (2019). How corporate social (ir)responsibility in the textile sector is defined, and its impact on ethical sustainability: An analysis of 133 concepts. *Corporate Social-responsibility and Environmental Management*, 26: 1285-1306.

Ma, J.J. (2021). Traditional Fashion Practice and Cultural Sustainability: A Case Study of Nubi in Korea. *Fashion Practice,* 15(1), 64-90.

Ma, Y.J., Gam, H.J. & Banning, J. (2017). Perceived ease of use and usefulness of sustainability labels on apparel products: Application of the technology acceptance model. *Fashion and Textiles*, 4 (3): 1-20.

Ma, Y.J., Lee, H.-H. & Goerlitz, K. (2016). Transparency of global apparel supply chains: Quantitative analysis of corporate disclosures. *Corporate Social Responsibility and Environmental Management*, 23(5): 308-318.

Maheswaran, D. (1994). Country of origin as a stereotype: Effects of consumer expertise and attribute strength on product evaluations. *Journal of Consumer Research*, 21(2): 354–365.

Mair, S., Druckman, A. & Jackson, T. (2016). Global inequities and emissions in Western European textiles and clothing consumption. *Journal of Cleaner Production*, 132: 57-69.

Mair, S., Druckman, A. & Jackson, T. (2018). Investigating fairness in global supply chains: applying an extension of the living wage to the Western European clothing supply chain. *International Journal of Life Cycle Assess*, 23: 1862-1873.

Malgorzata, K., Rahman, O. & Dyczewski, B. (2020). Circular fashion – Consumers' attitudes in cross-national study - Poland and Canada. *Autex Research Journal*, 20(3): 327-337.

Malhotra, N., Hall, J., Shaw, M. & Oppenheim, P. (2002). *Marketing Research*, 2nd ed., Prentice-Hall, French's Forest.

Maloney, J., Lee, M.-Y., Jackson, V. & Miller-Spillman, K.A. (2014). Consumer willingness to purchase organic products: Application of the theory of planned behavior. *Journal of Global Fashion Marketing*, 5(4): 307-320.

Manda, B.M.K., Worrell, E. & Patel, M.K. (2015). Prospective life cycle assessment of an antibacterial T-shirt and supporting business decisions to create value. *Resources, Conservation and Recycling*, 103: 47-57.

Manuel, M.B., Connell, L.J. & Presley, A.B. (2010). Body shape and fit preference in body cathexis and clothing benefits sought for professional African-American women. International *Journal of Fashion Design, Technology and Education*, 3(1): 25-32.

Markee, N.L., L.S.C. Inez & Pedersen, E.L. (1990), Body cathexis and clothed body cathexis: is there a difference? *Perceptual and Motor Skills*, 70: 1239-1244.

Martin, C.R. (1971-72). What consumers of fashion want to know, *Journal of Retailing*, 47(4): 65-71; 94.

May, J.K. & Koester, A.W. (1985). Clothing purchase practices of adolescents, *Home Economics Research Journal*, 13(3): 226-236.

May-Plumlee, T. & Little, T.J. (2001). Consumer purchase data as a strategic product development tool, *Journal of Textile and Apparel, Technology and Management*, 1(3): 1-10.

McAllister, J.T., Lennertz, L. & Mojica, Z.A. (2022). Mapping a discipline: A guide to using VOSviewer for bibliometric and visual analysis, *Science & Technology Libraries*, 41(3): 319-348.

McCarthy, B.J. & Burdett, B.C. (1998). Eco-labeling and textile eco-labeling. *Review of Progress in Coloration* 28 (1): 61-70.

McCracken, G. & Roth, V. (1989). Does clothing have a code? Empirical findings and theoretical implications in the study of clothing as a means of communication. *International Journal of Research in Marketing*, 6(1): 13–33.

McCullough, E.S. & Morris, M.A. (1980). Development of a model for quality grading of textile products, *Home Economics Research Journal*, 9: 116-123.

McKinsey. (2007). The 'bird of gold': The rise of India's consumer's market. *McKinsey Global Institute*, May. Available at: http://www.mckinsey.com/localions/india/mckinseyonindia/pdf/India_Consumer_Market.pdf

McLean, F.P., Roper, L.L. & Smothers, R. (1986). Imported versus domestic blouses: Women's preferences and purchase motives. *Home Economics Research Journal*, 14(3): 306-313.

McNeill, L.S., Hamlin, R.P., McQueen, R.H., Degenstein, L., Wakes, S., Garrett, T. & Dunn, L. (2020). Waste not want not: Behavioural intentions toward garment life extension practices, the role of damage, brand and cost on textile disposal, *Journal of Cleaner Production*, 260: 121026.

McNeill, L. & Moore, R. (2015). Sustainable fashion consumption and the fast fashion conundrum: fashionable consumers and attitudes to sustainability in clothing choice, *International Journal of Consumer Studies*, 39(3): 212-222.

Meho, L.I. (2007). The rise and rise of citation analysis. *Physics World*, 20(1): 32–36.

Merchant, B. (2009). How many gallons of water does it take to make. *Treehugger*. Available at: https://www.treehugger.com/clean-technology/how-many-gallons-of-water-does-it-take-tomake.html

Metje, N., Sterling, M.C.J. & Baker, C.J. (2008). Pedestrian comfort using clothing values and body temperatures. *Journal of Wind Engineering and Industrial Aerodynamics*, 96(4): 412-435.

Meyer, A. (2001). What's in it for the customers? Successfully marketing green clothes. *Business Strategy and the Environment,* 10(5): 317–330.

Meystre, S.M., Savova, G.K., Kipper-Schuler, K.C. & Hurdle, J.F. (2008). Extracting information from textual documents in the electronic health record: A review of recent research. *Yearbook of Medical Informatics*, 47(Suppl 1): 128-144.

Miller, N.J. (1998). Susceptibility of consumers to normative and informational influences in selecting colors for apparel, *Perceptual and Motor Skills*, 87: 1131-1136.

Miller, N.J., Campbell, J.R., Littrell, M.A. & Travnicek, D. (2005). Instrument development and evaluation for measuring USA apparel product design attributes, *Journal of Fashion Marketing and Management*, 9(1): 54-70.

Miner, G., Elder, J., Fast, A., Hill, T., Nisbet, R. & Delen, D. (2012). *Practical Text Mining and Statistical Analysis for Non-structured Text Data Applications*, London: Academic Press.

Mint (2020). More than 50% of India's population 25 yrs or older: Survey. *Mint*, July 3. Available at: More than 50% of India's population 25 yrs or older: Survey | Mint (livemint.com)

Mintel Marketing Intelligence (1997). Bras and pants, November, *Mintel International Group Limited*.

Mishra, S., Jain, S. & Malhotra, G. (2021). The anatomy of circular economy transition in the fashion industry. *Social Responsibility Journal*, 17(4): 524-542.

Mittelstaedt, J.D., Schultz, C.J. II, Kilbourne, W.E. & Peterson, M. (2014). Sustainability as megatrend: Two schools of macromarketing thought. *Journal of Macromarketing*, 34: 253-264.

Mo, Z. (2015). Internationalization process of fast fashion retailers: Evidence of H&M and Zara. *International Journal of Business and Management*. 10(3): 217-236.

Mohan, V. (2017). India bans import of exotic skins used for leather or fur clothing and accessories. *The Times of India*. Available at: https://timesofindia.indiatimes.com/home/environment/india-bans-import-of-exotic-skins-used-for-leather-or-fur-clothing-and-accessories/articleshow/56357714.cms

Monroe, K.B. (2003). *Pricing: Making Profitable Decision*, Burr Ridge, IL: McGraw-Hill/Irwin.

Moon, K.K.L., Lai, C.S.-Y., Lam, E. Y.-N. & Chang, J.M.T. (2015). Popularization of sustainable fashion: Barriers and solutions. *The Journal of the Textile Institute*, 106(9): 939-952.

Moon, K. K. L., Youn, C., Chang, J. M. T., & Yeung, A. W. H. (2013). Product design scenarios for energy saving: A case study of fashion apparel. *International Journal of Production Economics*, 146(2): 392–401.

Montemurro, B. and Gillen, M.M. (2013). Wrinkles and sagging flesh: Exploring transformations in women's sexual body image. *Journal of Women & Aging*, 25(1): 3-23.

Moore, M. & McGowan, K.M. (2001). The Polish consumer's concept of price as a marketplace cue, *Journal of Textile and Apparel Technology and Management*, 2(1): 1-10.

Morel, K.P. & Pruyn, A.T.H. (2003). Consumer skepticism toward new products. *European Advances in Consumer Research*, 6: 351-358.

Morgan, L.R. & Birtwistle, G. (2009). An investigation of young fashion consumers' disposal habits. *International Journal of Consumer Studies*, 33: 199-205.

Mostafa, M.M. (2007). A hierarchical analysis of the green consciousness of the Egyptian consumer. *Psychology and Marketing*, 24(5): 445–473.

Mukendi, A., Davies, I., Glozer, S. & McDonagh, P. (2020). Sustainable fashion: current and future research directions. *European Journal of Marketing*, 54(11): 2873-2909.

Muposhi, A., Nyagadza, B. & Mafini, C. (2021). Fashion designers' attitude-behaviour inconsistencies towards a sustainable business model: a neutralisation theory perspective. *Journal of Fashion Marketing and Management*, 24(2): 213-234.

Muthukumarana, T.T., Karunathilake, H.P., Punchihewa, H.K.G., Manthilake, M.M.I.D. & Hewage, K.N. (2018). Life cycle environmental impacts of the apparel industry in Sri Lanka: Analysis of the energy sources. *Journal of Cleaner Production*, 172: 1346-1357.

Naim, N. & Khan, G. (2012). Gender differences in fashion consciousness among Malaysian youth. *2012 Global Marketing Conference Proceedings*, Seoul, 1220-1235.

Narayanswamy, S. & Zainulbhai, A. (2007). India's consumer evolution. *McKinsey Global Institute*, May 7. Available at: India's consumer evolution | McKinsey

National Geographic (2014). Who's the greenest of them all? *National Geographic*. Available at: Who's the Greenest of Them All? – National Geographic Education Blog

Nayak, R., Akbari, M. & Far, S.M. (2019). Recent sustainable trends in Vietnam's fashion supply chain. *Journal of Cleaner Production*, 225: 291-303.

Neilsen (2007), China trend watch, *A Nielsen Consumer Report*, June, available at: http://cn.en.nielsen.com/reports/documents/ENtrendwatch3june07.pdf (assessed 2 July, 2009)

Newman, A.A. (2010). Men's cosmetics becoming a bull market. *The New York Times*, 2 September, E3.

Nguyen, H.T., Le, D.M.D., Ho, T.T.M. & Nguyen, P.M. (2021). Enhancing sustainability in the contemporary model of CSR: a case of fast fashion industry in developing countries. *Social Responsibility Journal*, 17(4): 578-591.

Niinimäki, K. (2010). Eco-clothing, consumer identity and ideology. *Sustainable Development*, 18: 150-162.

Niinimäki, K. (2011). Emerging design strategies in sustainable production and consumption of textiles and clothing. *Journal of Cleaner Production*, 19: 1876-1883.

Nimon, W. & Beghin, J. (1999). Are eco-labels valuable? Evidence from the apparel industry. *American Journal of Agricultural Economics*, 81: 801-811.

Norris, L. (2019). Waste, dirt and desire: Fashioning narratives of material regeneration. *The Sociological Review*, 67(4): 886-907.

Norris, M. & Oppenheim, C. (2007). Comparing alternatives to the web of science for coverage of the social sciences literature. *Journal of Informetrics*, 1(2): 161–169.

North, E.J., de Vos, R.B. & Kotzé, T. (2003). The importance of apparel product attributes for female buyers, *Journal of Family Ecology and Consumer Sciences*, 31: 41-51.

Norum, P.S. (2013). Examination of apparel maintenance skills and practices - Implications for sustainable clothing consumption. *Family and Consumer Sciences Research Journal*, 42(2): 124-137.

Nunnally, J.C. & Bernstein, I.H. (1994). *Psychometric Theory*, 3rd ed., McGraw-Hill, New York.

O Eco Textiles. (2009). What is the energy profile of the textile industry? *O Eco Textiles*. Available at: https://oecotextiles.wordpress.com/2009/06/16/what-is-the-energyprofile-of-the-textile-industry/

Oeko-Tex© (2020). Standard 100 by Oeko-Tex©. *Oeko-Tex©.* Available at: https://www.oeko-tex.com/en/our-standards/standard-100-by-oeko-tex

O'Neal, G., Hines, J. & Jackson, H. (1990). Interpreting the meaning of consumer perceptions of clothing quality, Proceedings of the 1990 Annual Meeting, Monument CO: Association of College Professors of Textiles and Clothing.

O'Reilly, S. & Kumar, A. (2016). Closing the loop: An exploratory study of reverse ready-made garment supply chains in Delhi NCR. *The International Journal of Logistics Management.* 27(2): 486-510.

Otnes, C. & McGrath, M.A. (2001). Perceptions and realities of male shopping behaviour, *Journal of Retailing*, 77(1): 111-137.

Pan, Y., Roedi, D., Blevis, E. & Thomas, J.C. (2015). Fashion thinking: Fashion practices and sustainable interaction design. *International Journal of Design*, 9(1): 53-66.

Pandey, G. (2021). NFHS: Does India really have more women than men? *BBC News*, November 27. Available at: https://www.bbc.com/news/world-asia-india-59428011

Paras, M.K. & Curteza, A. (2018). Revisiting upcycling phenomena: a concept in clothing industry. *Research Journal of Textile and Apparel*, 22(1): 46-58.

Paras, M.K. & Pal, R. (2018). Application of Markov chain for LCA: a study on the clothes 'reuse' in Nordic countries. *International Journal of Advanced Manufacturing Technology*, 94: 191-201.

Paras, M.K., Pal, R. & Ekwall, D. (2018). Systematic literature review to develop a conceptual framework for a reuse-based clothing value chain. *The International Review of Retail, Distribution and Consumer Research*, 28(3): 231-258.

Parker, S.P., Hermans, C.M. & Schaefer, A.D. (2004). Fashion consciousness of Chinese, Japanese and American teenagers. *Journal of Fashion Marketing and Management*, 8(2): 176-186.

Parkvithee, N. & Miranda, M.J. (2012). The interaction effect of country-of-origin, brand equity and purchase involvement on consumer purchase intentions of clothing labels. *Asia Pacific Journal of Marketing and Logistics*, 24(1): 7-22.

Patwa, N. & Seetharaman, A. (2016). Redesigning fashion industry: A transformational circular approach. *The Journal of Applied Business and Economics*, 21(8): 92-105.

Payne, A. (2014). Spinning a sustainable yarn: Environmental sustainability and brand story in the Australian fashion industry. *International Journal of Fashion Studies*, 1(2): 185-208.

Pedersen, E.R.G. & Gwozdz, W. (2014). From Resistance to Opportunity-Seeking - Strategic Responses to Institutional Pressures for Corporate Social Responsibility in the Nordic Fashion Industry. *Journal of Business Ethics*, 119: 245-264.

Peters, J. & Simaens, A. (2020). Integrating sustainability into corporate strategy: A case study of the textile and clothing industry. *Sustainability*, 16(6125): 1-35.

Peterson, H.H., Hustvedt, G.M. & Chen, Y.-J. (2012). Consumer preferences for sustainable wool products in the United States. *Clothing and Textiles Research Journal*, 30(1): 35-50.

Pham, H.T., Hoang, K.T., Nguyen, T.T., Do, P.H. & Mar, M.T.C. (2021). Sharing economy: Generation Z's intention toward online fashion rental in Vietnam. *Journal of Asian Finance, Economics and Business*. 8(3): 0997-1007.

Phau, I. & Ong, D. (2007). An investigation of the effects of environmental claims in promotional messages for clothing brands. *Marketing Intelligence & Planning*, 25(7): 772-88.

Phau, I., Teah, M. & Chuah, J. (2015). Consumer attitudes towards luxury fashion apparel made in sweatshops. *Journal of Fashion Marketing and Management*, 19(2): 169-187.

Pierre-Louis, K. (2019). How to buy clothes that are built to last. *The New York Times*. Available at: https://www.nytimes.com/interactive/2019/climate/sustainable-clothing.
html

Pookulangara, S. & Shephard, A. (2013). Slow fashion movement: Understanding consumer perceptions: An exploratory study. *Journal of Retailing and Consumer Services*, 20(2): 200–206.

Puddick, M. & Menon, P. (2012). Contemporary lustre. In G. Atwal & S. Jain (eds.) *The Luxury Markets in India: Maharajas to Masses*, Palgrave MacMillan, pp. 48-68

PwC (2021). The retail landscape of the future: Canadian Consumer Insights April 2021 pulse survey. PwC Canada. Available at: https://www.pwc.com/ca/en/industries/consumer-markets/consumer-insights-2021.html

Pyman, H. & Pammett, J. (2010). Environmental attitudes: A comparison of Canada, Europe and the United States over time. Carleton University Survey Centre.

PyPi. (2022). Wordcloud, August 14. Available at: https://pypi.org/project/wordcloud/

Quoquab, F. & Mohammad, J. (2020). A review of sustainable consumption (2000 to 2020): What we know and what we need to know. *Journal of Global Marketing*, 33(5): 305-334.

Radonic, D. (2022). 27 Revealing fast fashion statistics you need to know in 2022. *Fashion Discounts*, March 3. Available at: 27 Revealing Fast Fashion Statistics for 2022 (fashiondiscounts.uk)

Ræbild, U. & Bang, A.L. (2017). Rethinking the fashion collection as a design strategic tool in a circular economy. *The Design Journal*, 20: sup1, S589-S599.

Rafi-Ul-Shan, P.M., Grant, D.B., Perry, P. & Ahmed, S. (2018). Relationship between sustainability and risk management in fashion supply chains: A systematic literature review. *International Journal of Retail & Distribution Management*, 46(5): 466-486.

Rahman, O. (2011). Understanding consumers' perceptions and behaviour: Implications for denim jeans design. *Journal of Textile and Apparel, Technology and Management*, 7(1): 1–16.

Rahman, O. (2012). The influence of visual and tactile inputs on denim jeans evaluation. *International Journal of Design*, 6(1): 11-25.

Rahman, O. (2015). Denim jeans: a qualitative study of product cues, body type and appropriateness of use. *Fashion Practice*, 7(1): 53-74.

Rahman, O. (2018). Online consumer choice: Footwear design and visual presentation. *Journal of Textile and Apparel, Technology and Management*. 10(4): 1-19.

Rahman, O. & Chang, W.-T. (2018). Understanding Taiwanese female baby boomers through their perceptions of clothing and appearance. *Fashion Practice: The Journal of Design, Creative Process & the Fashion Industry*, 10(1): 53-77.

Rahman, O., Chen, X. & Au, R. (2011). An empirical study of 'Little Emperor' shopping behavior, *Revista Portuguesa de Marketing/Portuguese Journal of Marketing*, 27: 105-117.

Rahman, O., Chen, X. & Au, R. (2013). Consumer behaviour of Chinese pre-teen and teenage youth", *Journal of Global Fashion Marketing*, 4(4): 247-265.

Rahman, O., Chen, Z., Fung, B.C.M. & Kharb, D. (2020a). A cross-national study of young female consumer behaviour, innovativeness and apparel evaluation: China and India. *The Journal of the Textile Institute*, 111(3): 334-344.

Rahman, O., Fung, B.C.M. & Chen, Z. (2020b). Young Chinese consumers' choice between product-related and sustainable Cues: The effects of gender differences and consumer innovativeness. *Sustainability*, 12(9): 1-29.

Rahman, O., Fung, B.C.M., Chen, Z., Chang, W.-L. & Gao, X. (2018). A study of apparel consumer behaviour in China and Taiwan. *International Journal of Fashion Design, Technology and Education*, 11(1): 22-33.

Rahman, O., Fung, B.C.M., Chen, Z. & Gao, X. (2017). A cross-national study of apparel consumers' preferences and the role of product evaluative cues. *Asia Pacific Journal of Marketing and Logistics*, 29(4): 1-19.

Rahman, O., Fung, B.C.M. & Kharb, D. (2021). Factors influencing consumer choice: A study of apparel and sustainable cues from Canadian and Indian consumers' perspective. *International Journal of Fashion Design, Technology and Education*, 14(4): 151-161.

Rahman, O., Fung, B. & Liu, W.-S. (2014). Using data mining to analyze fashion consumers' preferences from a cross-national perspective. *International Journal of Fashion Design, Technology and Education*, 7(1): 42-49.

Rahman, O., Fung, B. & Yeo, A. (2016). Exploring the meanings of hijab through online comments in Canada. *Journal of Intercultural Communication Research*, 45(3): 214-232.

Rahman, O., Jiang, Y. & W.-S Liu. (2009). Evaluative Criteria for Sleepwear: A Study of Privately Consumed Product in the People's Republic of China. *International Journal of Fashion Design, Technology and Education*, 2(2/3), 81–90.

Rahman, O., Jiang, Y. & Liu, W.-S. (2010). Evaluative criteria of denim jeans: a cross-national study of functional and aesthetic aspects. *The Design Journal*, 13(3): 291-311.

Rahman, O**.** & Kharb, D. (2018). Fashion innovativeness in India: Shopping behaviour, clothing evaluation and fashion information sources. *International Journal of Fashion Design, Technology and Education*, 11(3): 287-298.

Rahman, O. & Navarro, H.D. (2022). Men's physical stature: Tackling heightism and challenges in fashion consumption. *Behavioral Sciences*, 12(270): 1-13.

Rahman, O. & Petroff, L. (2014). Communicating brand image through fashion designers' homes, flagship stores and ready-to-wear collection, in Hancocks II, J.H., Manlow, V., Muratovski, G. and Peirson-Smith, A. (Eds), *Global Fashion Brands: Style, Luxury & History*, Intellect Publisher, pp. 179-198.

Rahman, O., Wong, K.K.-K. & Yu, H. (2016). The effects of mall personality and fashion orientation on shopping value and mall approach behaviour among Chinese shoppers. *Journal of Retailing and Consumer Services*, 28: 155-164.

Rahman, O**.** & Yu, H. (2018). A study of Canadian female baby boomers: Physiological and psychological needs, clothing choice and shopping motives. *Journal of Fashion Marketing and Management*, 22(4): 509-526.

Rahman, O. & Yu, H. (2019). Key antecedents to the shopping behaviours and preferences of aging consumers: A qualitative study. *Journal of Fashion Marketing and Management*, 23(2): 193-208.

Rahman, O., Zhu, X. & Liu W.-S. (2008). A study of the pyjamas purchasing behaviour of Chinese consumers in Hangzhou, China. *Journal of Fashion Marketing and Management*, 12: 217-231.

Ramkumar, B., Woo, H. & Kim, N. (2021). The cross-cultural effects of brand status and social facilitation on enhancing consumer perception toward circular fashion services. *Corporate Social-responsibility and Environmental Management*, 1-16.

Rasband, J. (2001). *Art Essentials in Color*, Fairchild, New York, NY.

Rathnayake, C.V. (2011). An empirical investigation of fashion consciousness of young fashion consumers in Sri Lanka. *Young Consumers*, 12(2): 121-132.

Rausch, T.M., Baier, D. & Wening, S. (2021). Does sustainability really matter to consumers? Assessing the importance of online shop and apparel product attributes. *Journal of Retailing and Consumer Services*, 63: 102681.

Rausch, T.M. & Kopplin, C.S. (2021). Bridge the gap - Consumers' purchase intention and behavior regarding sustainable clothing. *Journal of Cleaner Production*, 278: 1-15.

Rawes, G. (2017). Ethical fashion labeling. *Ethical Consumer*. Available at: https://www.ethicalconsumer.org/fashion-clothing/labeling

Recchione, T. & Misra, A. (2012). New consumer, new luxury. In G. Atwal, & S. Jain (Eds.), The luxury market in India: Maharajas to masses (pp. 69–79). New York, NY: Palgrave Macmillan.

Reimers, N. (2022). SentenceTransformers documentation. *SBERT.net*. Available at: https://www.sbert.net/index.html

Reimers, N. & Gurevych, I. (2019). Sentence-BERT: Sentence embeddings using Siamese BERT-Networks. *EMNLP*. Available at: https://arxiv.org/abs/1908.10084

Rekik, R., Kallel, I., Casillas, J. & Alimi, A.M. (2018). Assessing web sites quality: A systematic literature review by text and association rules mining. *International Journal of Information Management*, 38: 201–216.

Repp, L., Hekkert, M. & Kirchherr, J. (2021). Circular economy-induced global employment shifts in apparel value chains: Job reduction in apparel production activities, job growth in reuse and recycling activities. *Resources, Conservation and Recycling*, 171(105621): 1-18.

Respect for Animals. (2019). Fur for animals: Fighting the international fur trade. *Respect for Animals*. Available at: http://www.respectforanimals.org/about/

Rizun, N., & Kucharska, W. (2018). Text mining algorithms for extracting brand knowledge. The fashion industry case, in Soliman, K.S. (Ed) *Innovation Management and Education Excellence through Vision 2020*, International Business Information Management Association (IBIMA), pp. 1972-1983.

Roos, S., Zamani, B., Sandin, G., Peters, G.M. & Svanström, M. (2016). A life cycle assessment (LCA)-based approach to guiding an industry sector towards sustainability: the case of the Swedish apparel sector. *Journal of Cleaner Production*, 133: 691-700.

Rosenau, J.A. & Wilson, D.L. (2006). *Apparel Merchandising: The Line Starts Here*, 2nd ed., Fairchild Publications, New York.

Rose, S., Engel, D., Cramer, N. & Cowley, W. (2010). Automatic keyword extraction from individual documents. *Text Mining*, 1–20.

Rotimi, E.O.O., Topple, C. & Hopkins, J. (2021). Towards a conceptual framework of sustainable practices of post-consumer textile waste at garment end of Lifecycle: A systematic literature review approach. *Sustainability*, 13(2965): 1-18.

Roy, E. (2022). India projected to surpass China as world's most populous country during 2023: United Nations report. *The Indian Express*, July 12. Available at: https://indianexpress.com/article/india/india-to-be-most-populous-country-in-2023-8021711/

Sabyasachi, T. (2013). An overview of India's urbanization, urban economic growth and urban equity. *Institute for Social and Economic Change*. Available at: https://mpra.ub.uni-muenchen.de/45537/1/MPRA_/

Saha, K., Dey, P.K. & Papagiannaki, E. (2021). Implementing circular economy in the textile and clothing industry. *Business Strategy and the Environment*, 30: 1497-1530.

Salve, P. & Tewari, S. (2016). Most Indian parents prefer having sons. *The Wire*, May 17. Available at: https://thewire.in/gender/most-indian-parents-prefer-having-sons

Sandhu, A. (2015). *Indian Fashion: Tradition, Innovation, Style*. London, UK: Bloomsbury Academic.

Schroff, F., Kalenichenko, D. & Philbin, J. (2015). FaceNet: A unified embedding for face recognition and clustering. *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, pp. 815-823.

Schwartz, S. H. & Rubel, T. (2005). Sex differences in value priorities: Cross-cultural and multimethod studies. *Journal of Personality and Social Psychology*, 89(6): 1010-1028.

Secord, P. & Jourard, S. (1953). The appraisal of body cathexis: body cathexis and the self. *Journal of Consulting Psychology*, 17: 343–347.

Segran, E. (2019). H&M, Zara, and other fashion brands are tricking shoppers with vague sustainability claims. *Fast Company*. Available at: H&M and Zara trick consumers with vague sustainability claims (fastcompany.com)

Şener, T., Bişkin, F. & Kilinç, N. (2019). Sustainable dressing: Consumers' value perceptions towards slow fashion. *Business Strategy and the Environment*, 28: 1548-1557.

Seo, M.J. & Kim, M. (2019). Understanding the purchasing behaviour of second-hand fashion shoppers in a non-profit thrift store context. *International Journal of Fashion Design, Technology and Education*, 12(3): 301-312.

Seock, Y. & Bailey, L. (2008). The influence of college students' shopping orientations and gender differences on online information searches and purchase behaviours. *International Journal of Consumer Studies*, 32(2): 113-121

Seuring, S. & Gold, S. (2012). Conducting content-analysis based literature reviews in supply chain management. *Supply Chain Management*, 17(5): 544-555.

Shaw, D. & Tomolillo, D.A.C. (2004). Undressing the ethical issues in fashion: A consumer perspective. In *International Retail Marketing: A Case Study Approach* (ed. By M. Bruce, C. Moore and G. Birtwistle), pp. 141-151. Elsevier Publications, Oxford, UK.

Shen, B. (2014). Sustainable fashion supply chain - lessons from H&M. *Sustainability*, 6: 6236-6249.

Shen, B., Choi, T.-M. & Lo, C.K.-Y. (2016). Enhancing economic sustainability by markdown money supply contracts in the fashion industry: China vs U.S.A. *Sustainability*, 8(31): 1-14.

Shephard, A., Pookulangara, S., Kinley, T.R. & Josiam, B.M. (2016). Media influence, fashion, and shopping: A gender perspective. *Journal of Fashion Marketing and Management*, 20(1): 4-18.

Shih, W.Y.C. & Agrafiotis, K. (2020). Sustainable competitiveness in the relational production network of London's Savile Row tailors. *Journal of the Textile Institute*, 111(3): 370-380.

Shirvanimoghaddam, K., Motamed, B., Ramakrishna, S. & Naebe, M. (2020). Death by waste: Fashion and textile circular economy case. *Science of the Total Environment*, 718(137317): 1-10.

Shrivastava, A., Jain, G., Kamble, S.S. & Belhadi, A. (2021). Sustainability through online renting clothing - Circular fashion fueled by instagram micro-celebrities. *Journal of Cleaner Production*, 278(123772).

Shukia, C. K., & Ali, S. (2006). *Child labour and the Law*. New Delhi, India: Sarup & Sons.

Sinha, D. (2012). Renewing India's relationship with luxury. In G. Atwal, & S. Jain (Eds.), *The Luxury Market in India: Maharajas to Masses* (pp. 7–13). NY: New York: Palgrave Macmillan.

Sirilertsuwan, P., Ekwall, D. & Hjelmgren, D. (2018). Proximity manufacturing for enhancing clothing supply chain sustainability. *The International Journal of Logistics Management.* 29(4): 1346-1378-510.

Small, H. (1973). Co-citation in the scientific literature: a new measure of the relationship between two documents. *Journal of the American Society for Information Science*, 24(4): 265-269.

Sobuj, Md., Khan, A.M., Habib, Md. A. & Islam, Md. M. (2021). Factors influencing eco-friendly apparel purchase behavior of Bangladeshi young consumers: case study. *Research Journal of Textile and Apparel*, 25(2): 139-157.

Sohn, J., Nielsen, K.S., Birkved, M., Joanes, T. & Gwozdz (2021). The environmental impacts of clothing: Evidence from United States and three European countries. *Sustainable Production and Consumption*, 27: 2153-2164.

Solér, C., Baeza, J. & Svärd, C. (2015). Construction of silence on issues of sustainability through branding in the fashion market. *Journal of Marketing Management*, 3(1-2): 219-246.

Speranskaya, O., Caterbow, A., Buonsante, V. A., Adan, H., Mutsaers, M., Karkee, R., … Malhotra, D. D. (2018). The sustainability of fashion what role can consumers play? *Health and Environment Justice Support International*. Available at: https://hej-support.org/wp content/uploads/2018/06/HEJ_Sustainable-textiles.pdf

Spiggle, S. (1994). Analysis and interpretation of qualitative data in consumer research, *Journal of Consumer Research*, 21(3): 491-503.

Sproles, G.B. (1981). The role of aesthetics in fashion-oriented consumer behavior. In *Perspectives of Fashion*, pp. 120-127. Minneapolis, MN: Burgess.

Sproles, G.B. & Geistfeld, L.V. (1978). Issues in analyzing consumer satisfaction/dissatisfaction with clothing and textiles, in Hunt, H.K., eds., *Advances in Consumer Research,* Vol. 5, Ann Arbor, MI: Association for Consumer Research, pp. 383-391.

Sreen, N., Purbey, S., & Sadarangani, P. (2018). Impact of culture, behaviour and gender on green purchase intention. *Journal of Retailing and Consumer Services*, 41: 177–189.

Stål, H.I. & Jansson, J. (2017). Sustainable consumption and value propositions: Exploring product–service system practices among Swedish fashion firms. *Sustainable Development*, 25: 546-558.

Stamper, A.A., Sharp, S.H. & Donnel, L.B. (1991). *Evaluating Apparel Quality*, 2nd ed., Fairchild, New York.

Statista (2021). Retail e-commerce sales worldwide from 2014 to 2024. *Statista*. Available at: • Global retail e-commerce market size 2014-2023 | Statista

Statistics Canada. (2020). Supply and disposition of mink and fox on fur farms. Statistics Canada. Available at: https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3210011601

Statistics Times (2020). India vs China by population. Statistics Times, June 23. Available at: Comparing China and India by population - StatisticsTimes.com

Stention, M., Kapsali, V., Blackburn, R.S. and Houghton, J.A. (2021). From clothing rations to fast fashion: Utilising regenerated protein fibres to alleviate pressures on mass production. *Energies*, 14(5654): 1-18.

Sternquist, B. & Davis, B. (1986). Store status and country of origin as information cues: Consumer's perception of sweater price and quality, *Home Economics Research Journal*, 15(2): 124-131.

Su, J. (2016). Examining the relationships among the brand equity dimensions - Empirical evidence from fast fashion. *Asia Pacific Journal of Marketing and Logistics*, 28(3): 464-480.

Su, J., Watchravesringkan, K., Zhou, J. and Gil, M. (2019). Sustainable clothing - perspectives from US and Chinese young Millennials. *International Journal of Retail & Distribution Management*, 47(11): 1141-1162.

Sun, J.J., Bellezza, S. & Paharia, N. (2021). Buy less, buy luxury: Understanding and overcoming product durability neglect for sustainable consumption. *Journal of Marketing*, 85(3): 28-43.

Swan, J.E. & Combs, L.J. (1976). Product performance and consumer satisfaction: a new concept. *Journal of Marketing*, 40: 25-33.

Swami, V., Chamorro-Premuzic, T., Sneglgar, R. & Furnharm, A. (2010). Egoistic, altruistic, and biospheric environmental concerns: A path analytic investigation of their determinants. *Scandinavian Journal of Psychology*, 51(2): 139-145.

Sweeney, J.C. & Soutar, G.N. (1993). Quality and value: An exploratory study, *International Journal of Business Studies*, 3(2): 51-66.

Swinker, M.E. & Hines, J.D. (2006). Understanding consumers' perception of clothing quality: A multidimensional approach, *International Journal of Consumer Studies*, 30(2): 218-223.

Szybillo, G.B. & Jacoby, J. (1974). Intrinsic versus extrinsic cues as determinants of perceived product quality, *Journal of Applied Psychology*, 59(1): 74-78.

Targosz-Wrona, E. (2009). Ecolabelling as a confirmation of the application of sustainable materials in textiles. *Fibres & Textiles*, 17(4): 21-25.

Tate, S.L. (2004). *Inside Fashion Design*, 5th ed. Upper Saddle River, New Jersey, Prentice Hall.

Taylor, S.I. & Cosenza, R.M. (2002). Profiling later aged female teens: mall shopping behavior and clothing choice. *Journal of Consumer Marketing*, 19(5): 393-409.

Tey, Y.S., Brindal, M. & Dibba, H. (2018). Factors influencing willingness to pay for sustainable apparel: A literature review. *Journal of Global Fashion Marketing*, 8(2): 129-147.

Thatta, S. & Polisetty, A. (2020). The future is circular: A case study on MUD jeans. *FIIB Business Review*, 1-10.

The World Bank. (2019). GDP per capita (currency US$). *The World Bank*. Available at: GDP per capita (current US$) | Data (worldbank.org)

The World Bank. (2021). GDP per capita (currency US$). *The World Bank*. Available at: GDP per capita (current US$) | Data (worldbank.org)

The World Bank (2022). Population, total – India. *The World Bank*. Available at: https://data.worldbank.org/indicator/SP.POP.TOTL?locations=IN

The World Bank (2023). Small and medium enterprises (SMEs) finance. *The World Bank*. Available at: World Bank SME Finance: Development news, research, data | World Bank

Thøgersen, J., Haugaard, P. & Olesen, A. (2010). Consumer responses to ecolabels. *European Journal Marketing*, 44(11/12): 1787–1810.

Thorisdottir, T.S. & Johannsdottir, L. (2019). Sustainability within fashion business models - A systematic literature review. *Sustainability*, 11: 2233.

Tian, M., Deng, P., Zhang, Y. & Salmador, M.P. (2018). How does culture influence innovation? A systematic literature review. *Management Decision*, 56(5): 1088-1107.

Tkach, D. (1998). Text mining technology: Turning information into knowledge – A white paper from IBM. *IBM Corporation*, IBM Software Solutions, February 17, pp. 1-20.

Tokatli, N., Wrigley, N. & Kizilgün, Ö (2021). Shifting global supply networks and fast fashion: made in Turkey for Marks & Spencer. *Global Networks*, 8(3): 261-280.

Tomaselli, M.F., Sheppard, S.R.J., Kozak, R. & Gifford, R. (2019). What do Canadians think about economic growth, prosperity and the environment? *Ecological Economics*, 161: 41-49.

Trading Economics (2019). India GDP Per Capita. *Trading Economics*. Available at: https://tradingeconomics.com/india/gdp-per-capita

Trueman, M. (1998). Managing innovation by design – how a new design typology may facilitate the product development process in industrial companies and provide a competitive advantage. *European Journal of Innovation Management*, 1(1): 44 – 56.

Tselepis, T. & De Klerk, H.M. (2004). Early adolescent girls' expectations about the fit of clothes: A conceptual framework. *Journal of Family Ecology and Consumer Sciences*, 32: 83-93.

Tu, J.-C. & Hu, C.-L. (2018). A study on the factors affecting consumers' willingness to accept clothing rentals. *Sustainability*, 10(4139): 1-30.

Udall, A.M., de Groot, J.I.M., de Jong, S.B. & Shankar, A. (2020). How do I see myself - A systematic review of identities in pro-environmental behaviour research. *Journal of Consumer Behaviour*, 19: 108-141.

United Nations (2022). World population prospects 2022. *United Nations*, Department of Economic and Social Affairs – Population Division. Available at: https://population.un.org/wpp/Download/Standard/Population/

Valdez, P. & Mehrabian, A. (1994). Effects of color on emotions. *Journal of Experimental Psychology*, 123(4): 394-409.

van Rensburg, M.L., Nkomo, S.L. & Mkhize,N.M. (2020). Life cycle and End-of-Life management options in the footwear industry: A review. *Waste Management & Research*, 38(6): 599-613.

Varshneya, G., Pandey, S.K. & Das, G. (2017). Impact of social influence and green consumption values on purchase intention or organic clothing: a study on collectivist developing economy. *Global Business Review*, 18(2): 478-492.

Viciunaite, V. & Alfnes, F. (2020). Informing sustainable business models with a consumer preference perspective. *Journal of Cleaner Production*, 242: 1–9.

Vu, K. (2022). Vietnam 2022 GDP growth quickens to 8.02%, fastest since 1997. December 28, *Reuters*. Available at: Vietnam 2022 GDP growth quickens to 8.02%, fastest since 1997 | Reuters

Wagner, M., Curteza, A., Hong, Y., Thomassey, S. & Zeng, X. (2019). A design analysis for eco-fashion style using sensory evaluation tools: Consumer perceptions of product appearance. *Journal of Retailing and Consumer Services*, 51: 253-262.

Wagner, M.M. & Heinzel, T. (2020). Human perceptions of recycled textiles and circular fashion: A systematic literature review. *Sustainability*, 12(599): 1-28.

Walters, A., Santillo, D. and Johnston, P. (2005). An overview of textiles processing and related environmental concerns. *Technical Note Greenpeace Research Laboratories, Department of Biological Sciences*, University of Exeter. Available at: http://www.greenpeace.to/publications/textiles_2005.pdf

Wang, H., Liu, H., Kim, S.J. & Kim, K.H. (2019). Sustainable fashion index model and its implication. *Journal of Business Research*, 99: 430-437.

Wang, L. & Shen, B. (2017). A product line analysis for eco-designed fashion products: Evidence from an outdoor sportswear brand. *Sustainability*, 9(1136): 1-12.

Wang, Y. & Heitmeyer, J. (2006). Consumer attitude toward US versus domestic apparel in Taiwan, *International Journal of Consumer Studies*, 30(1): 64-74.

Wang, Y., Ramachandran, V. & Sheng, O.R.L. (2021) Do fit opinions matter? The impact of fit context on online product returns. *Information Systems Research,* 32(1): 268-289.

Warasthe, R., Schulz, F., Enneking, R. & Brandenburg, M. (2020). Sustainability prerequisites and practices in textile and apparel supply chains. *Sustainability*, 12(9960): 1-18.

Wazir Advisors (2018). Apparel consumption trends in India. Wazir Advisors. Available t: Apparel Consumption Trends In India.pdf (wazir.in)

Wedel, M. & Kamakura,W.A. (1999). *Market Segmentation: Conceptual and Methodological Foundations*. Kluwer Academic Publishers: Boston, MA, USA.

Wei, X. & Jung, S. (2017). Understanding Chinese Consumers' Intention to Purchase Sustainable Fashion Products: The Moderating Role of Face-Saving Orientation. *Sustainability*, 9(1570): 1-15.

Weiss, C., Trevenen, A. & White, T. (2014). The branding of sustainable fashion. *Fashion, Style & Popular Culture*, 1(2): 231-258.

White, C.L., Nielsen, A.E. & Valentini, C. (2017). CSR research in the apparel industry: A quantitative and qualitative review of existing literature. *Corporate Social-responsibility and Environmental Management*, 24: 382-394.

Wiederhold, M. & Martinez, L.F. (2018). Ethical consumer behaviour in Germany - The attitude-behaviour gap in the green apparel industry. *International Journal of Consumer Studies*, 42: 419-429.

Wiedemann, S.G., Biggs, L., Nguyen, Q.V., Clarke, S.J., Laitala, K. & Klepp, I.G. (2021). Reducing environmental impacts from garments through best practice garment use and care, using the example of a Merino wool sweater. *International Journal of Life Cycle Assess*, 26, 1188-1197.

Woo, H. & Jin, B. (2016). Apparel firms' corporate social responsibility communications: Cases of six firms from an institutional theory perspective. *Asia Pacific Journal of Marketing and Logistics*, 28(1): 37-55.

Workman, J.E. & Cho, S. (2012). Gender, fashion consumer groups, and shopping orientation. *Family & Consumer Sciences Research Journal*, 40(3): 267-283.

Workman, J., Lee, S.-H. & Jung, K. (2017). Fashion trendsetting, creative traits and behaviors, and pro-environmental behaviors: Comparing Korean and U.S. college students. *Sustainability*, 9(1979): 1-16.

Workman, J.E. & Lentz, E.S. (2000). Measurement specifications for manufacturers' prototype bodies. *Clothing and Textiles Research Journal*, 18(4): 251-259.

Workman, J.E. & Studak, C.M. (2006), fashion consumers and fashion problem recognition style. *International Journal of Consumer Studies,* 30: 75-84.

Wu, F., Li, R., Huang, L., Miao, H. & Li, X. (2017). Theme evolution analysis of electrochemical energy storage research based on CitNetExplorer, *Scientometrics*, 110: 113-139.

Wu, J. & Delong M. (2006), Chinese perceptions of Western-branded denim jeans: A Shanghai case study, *Journal of Fashion Marketing and Management*, 10(2): 238-250.

WWF (2013). The impact of a cotton t-shirt. *World Wildlife Fund (WWF)*. Available at: https://www.worldwildlife.org/stories/the-impact-of-a-cotton-t-shirt

Xie, X., Hong, Y., Zeng, X., Dai, X. & Wagner, M. (2021). A systematic literature review for the recycling and reuse of wasted clothing. *Sustainability*, 13(13732): 1-20.

Xu, Y., Chen, Y., Burman, R. & Zhao, H. (2014). Second-hand clothing consumption - a cross-cultural comparison between American and Chinese young consumers. *International Journal of Consumer Studies*, 38: 670-677.

Yang, S., Song, Y. & Tong, S. (2017b). Sustainable retailing in the fashion industry: A systematic literature review. *Sustainability*, 9(1266): 1-19.

Yang, Y., Han, H. & Lee, P.K.C. (2017a). An exploratory study of the mechanism of sustainable value creation in the luxury fashion industry. *Sustainability*, 9(483): 1-16.

Yasin, S., Behary, N., Rovero, G. & Kumar, V. (2016). Statistical analysis of use-phase energy consumption of textile products. *International Journal of Life Cycle Assess*, 21: 1776-1788.

Yeonshin, K. & Sejung, M.C. (2005). Antecedents of green purchase behaviour: an examination of collectivism, environmental Concern, and PCE. *Advances in Consumer Research*, 32(1): 592-599.

Yining, D. (2014). China's online shopping up 42%, drop from 66% growth rate, *Shanghai Daily*, January 17. Available at: http://www.shanghaidaily.com/Business/consumer/Chinas-online-shopping-up-42-drop-from-66-growth-rate/

Yoo, S. (2003). Design elements and consumer characteristics relating to design preferences of working females. *Clothing and Textiles Research Journal*, 21(2): 49-62

Yoon, N., Lee, H.K. & Choo, H.J. (2020). Fast fashion avoidance beliefs and anti-consumption behaviors: The cases of Korea and Spain. *Sustainability*, 12(6907): 1-20.

Zamani, B., Sandin, G. & Peters, G.M. (2017). Life cycle assessment of clothing libraries - can collaborative consumption reduce the environmental impact of fast fashion. *Journal of Cleaner Production*, 162: 1368-1375.

Zamani, B., Sandin, G., Svanström, M. (2018). Hotspot identification in the clothing industry using social life cycle assessment—opportunities and challenges of input-output modelling. *International Journal of Life Cycle Assess*, 23: 536-546.

Zelezny, L.C., Chua, P.-P. & Aldrich, C. (2000). Elaborating on gender differences in environmentalism. *Journal of Social Issues*, 56(3): 443–458.

Zhang, L., Wu, T., Liu, S., Jiang, S., Wu, H. & Yang, J. (2020). Consumers' clothing disposal behaviors in Nanjing, China. *Journal of Cleaner Production*, 276: 1-10.

Zhang, Y., Liu, X., Xiao, R. & Yuan, Z. (2015). Life cycle assessment of cotton T-shirts in China. *International Journal of Life Cycle Assess*, 20: 994-1004.

Zhang, Z., Li, Y., Gong, C. & Wu, H. (2002). Casual Wear Product Attributes: A Chinese Consumers' Perspective. *Journal of Fashion Marketing and Management* 6 (1): 53-62.

Zhao, L., Lee, S.H., Copeland, L.R. (2019). Social media and Chinese consumers' environmentally sustainable apparel purchase intentions. *Asia Pacific Journal of Marketing and Logistics*, 31(4): 855-874.

Zhao, M., Zhou, Y., Meng, J., Zheng, H., Cai, Y., Shan, Y., Guan, D. & Yang, Z. (2021). Virtual carbon and water flows embodied in global fashion trade - a case study of denim products. *Journal of Cleaner Production*, 303: 1-12.

Zheng, Y. & Chi, T. (2015). Factors influencing purchase intention towards environmentally friendly apparel: an empirical study of US consumers. *International Journal of Fashion Design, Technology and Education*, 8(2): 68-77.

Zhou, K.Z., Su, C. & Bao, Y. (2002). A paradox of price-quality and market efficiency: a comparative study of the US and China markets. *International Journal of Research in Marketing*, 19(4): 349-365.

Zupic I & Cater T (2015). Bibliometric methods in management and organization. *Organizational Research Methods*, 18(3):429–472.

Žurga, Z. & Tavčer, P.F. (2014). Apparel purchasing with consideration of eco-labels among Slovenian consumers. *Fibers & Textiles in Eastern Europe*, 22 (5): 20-27.

APPENDICES

THE FINAL SCORES

0–5%		6–10%		11–20%		21–30%		31–40%		41–50%		51–60%		61–70%		71–80%		81–90%		91–100%	
Eddie Bauer	5	Costco	10	HEMA	20	ALDI SOUTH	30	New Look	40	GU	49	C&A	59	H&M	66	OVS	78				
ANTA	5	LL Bean	10	Muji	20	Chloé	30	Superdry	40	Levi Strauss & Co	49	Gucci	59	The North Face	66	Kmart Australia	78				
Buckle	5	Tod's	10	Paris	20	Dr. Martens	30	Burberry	40	Tesco	49	Puma	58	Timberland	66	Target Australia	78				
Gerry Weber	5	United Arrows	9	Kiabi	20	GUESS	30	Big W	38	Uniqlo	49	Dressmann	57	Vans	65						
Marni	5	Carhartt	9	Aritzia	20	Fjällräven	30	Lacoste	38	Hugo Boss	49	Zeeman	57	United Colors of Benetton	63						
Merrell	5	Li-Ning	9	Mizuno	20	Lidl	30	Fruit of the Loom	38	Ralph Lauren	49	Calvin Klein	56	Gildan	62						
Valentino	5	The Children's Place	9	Abercrombie & Fitch	19	Louis Vuitton	29	Russell Athletic	38	Reebok	48	Esprit	56								
Express	5	Canada Goose	9	Armani	19	CELINE	29	Next	37	Balenciaga	46	Tommy Hilfiger	56								
Cole Haan	5	Takko	9	Hollister Co.	19	Dior	29	Columbia Sportswear	37	SAINT LAURENT	46	UGG	56								
Triumph	5	Saks Fifth Avenue	8	Monoprix	19	Helly Hansen	28	Ermenegildo Zegna	37	Bottega Veneta	46	Calzedonia	54								
Dillard's	4	Famous Footwear	8	Jack Wolfskin	18	boohoo	28	Jack & Jones	36	Speedo	45	Intimissimi	54								
Truworths	4	Carolina Herrera	8	American Eagle	18	Marc Jacobs	28	Target	36	Tchibo	45	Tezenis	54								
Tommy Bahama	4	Sandro	8	Foschini	18	PrettyLittleThing	28	Bonprix	36	Sainsbury's	45	Converse	53								
Shimamura	4	Foot Locker	8	Carter's	18	Asda	27	Vero Moda	36	Wrangler	45	Jordan	53								
LC Waikiki	4	Hudson's Bay	8	Otto	18	Hanes	27	Primark	35	ASICS	44	Nike	53								
Max	4	Beanpole	7	Victoria's Secret	18	Brooks Sport	27	John Lewis	34	G-Star RAW	44	Fendi	53								
Longchamp	3	AJIO	7	Joe Fresh	18	Champion	27	ALDI Nord	31	Zalando	44	Lululemon	52								
REVOLVE	3	CAROLL	7	Miu Miu	18	Morrisons	27	Amazon	31	Banana Republic	44	adidas	51								
Aeropostale	3	Reliance Trends	7	Prada	18	Prisma	27	Hermès	31	Gap	44	ASOS	51								
Deichmann	3	DSW	7	Moncler	17	River Island	27			Old Navy	44										
Pepe Jeans	2	Billabong	7	Nordstrom	17	s.Oliver	27			Patagonia	44										
Jockey	2	Quiksilver	7	TOPVALU COLLECTION	17	COACH	27			Mango	44										
SHEIN	2	Roxy	7	Desigual	17	Clarks	26			Marks & Spencer	44										
Romwe	2	Chico's	7	Disney	17	Woolworths South Africa	26			Bershka	43										
Dolce & Gabbana	2	Diesel	7	REI	17	Mammut	26			Massimo Dutti	43										
BCBGMAXAZRIA	1	Ross Dress for Less	7	Cortefiel	17	El Corte Inglés	26			Pull&Bear	43										
DKNY	1	Kmart	7	Kaufland	16	The Warehouse	25			Stradivarius	43										
Van Heusen	1	Skechers	6	Reserved	16	Bally	25			Zara	43										
Nine West	1	Bosideng	6	Chanel	15	Kate Spade	25			Lindex	42										
celio	1	Furla	6	Brunello Cucinelli	14	Carrefour	25			Tom Tailor	42										
Tory Burch	1	Sports Direct	6	Kohl's	14	Matalan	25			New Balance	41										
Jil Sander	0	Bloomingdale's	6	Fanatics	14	Dick's Sporting Goods	24														
Fashion Nova	0	Macy's	6	Steve Madden	14	Walmart	24														
New Yorker	0			ALDO	14	Salvatore Ferragamo	24														
Max Mara	0			Anthropologie	14																

Appendix 1: Fashion Transparency Index 2022.

Author(s)	Colour	Style (design)	Durability	Comfort	Garment fit	Fabric (materials)	Quality (workmanship)	Brand	Country of origin	Price	Garment life (recycle)	Certified labels	Less water usage (water quality)	Air quality (pollution)	Less energy usage	Worker safety (working condition)	Fair wages	No child labour	No animal skin usage (animal welfare)	Other
Kumagai (2021)						√		√												
Liu (2021)							√	√	√											
Khajavi (2021)													√		√	√				
Colucci & Vecchi (2021)		√	√								√									
Dhir et al. (2021)												√								
Saha et al. (2021)											√				√					
Li & Zhao (2021)						√							√		√	√			√	human rights, diversity of workforce
Heinze (2021)		√				√				√										
Jiménez-Marin et al. (2021)		√					√			√										
Ramkumar et al. (2021)								√												
Liu et al. (2021)						√					√			√						
Brandão & da Costa (2021)		√			√		√													
Gonçalves & Silva (2021)						√					√		√		√		√	√		chemicals
Byrd & Su (2021)												√								
Cairns et al. (2021)		√								√										
Rahman et al. (2021)	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
Wiedemann et al. (2021)													√		√					
Wiedemann et al. (2021)															√					
Fung et al. (2021)		√				√									√					
Silva et al. (2021)		√						√		√										
Brand & Rausch (2021)		√				√			√	√		√								packaging
Bubicz et al. (2021)							√					√						√	√	human rights
Zhao et al. (2021)													√							carbon footprint
Vătămănescu et al. (2021)						√			√					√		√				
Colasante & D'Adamo (2021)		√				√		√		√		√		√				√		end of life
Bhadure & Copeland (2021)								√												
Li & Leonas (2021)													√			√			√	carbon footprint, waste management
Testa et al. (2021)		√						√											√	
Wells et al. (2021)						√							√		√	√		√		
Neupane et al. (2021)	√	√								√	√	√								
Davis & Dabas (2021)		√					√													
Cotal San Martin & Machin (2021)																√	√			
Jung et al. (2021)	√	√	√				√	√											√	
Yoo et al. (2021)			√					√		√										
Zhang et al. (2021)										√										
Popowska & Sinkiewicz (2021)		√			√	√	√	√	√	√			√	√	√					chemicals
Gheorghe & Matefi (2021)						√							√							
Esbeih et al. (2021)													√		√					
Lee et al. (2021)					√					√										
Mellick et al. (2021)			√				√						√		√				√	

de Aguiar Hugo et al. (2021)		√								√										
Chen et al. (2021)		√		√		√														
Kopplin & Rösch (2021)										√										
Chen et al. (2021)													√	√						
Mishra et al. (2021)		√				√					√	√	√		√	√				chemicals
Sohn et al. (2021)						√							√		√					
Javed et al. (2020)								√			√		√			√	√		√	
Back et al. (2020)							√			√										
Malgorzata et al. (2020)			√								√	√	√	√	√					
Sung et al. (2020)							√			√										
Munir (2020)		√		√				√		√										
Amritha & Suresh (2020)		√		√			√	√												versatility, ease of care, protection
Lee & DeLong (2020)							√	√												
Almanza & Corona (2020)															√	√				
Blasi et al. (2020)		√						√												
Hur (2020)		√					√	√		√										
Zhang et al. (2020)		√			√						√									
Achabou et al. (2020)												√							√	
Mukendi & Henninger (2020)							√			√										variety
Rahman & Koszewska (2020)	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
Stringer et al. (2020)																√			√	environmental
Lee et al. (2020)												√								
Park et al. (2020)		√						√												
Sharma (2020)							√	√												
Nguyen et al. (2020)							√	√		√										versatility
Bockholdt et al. (2020)										√										
Bishnoi & Kapoor (2020)																√	√	√		
Gazzola et al. (2020)																	√		√	environmental
Karell & Niinimäki (2020)			√				√				√	√				√				Repairable, reusable, human rights, recyclable
Kim & Oh (2020)	√	√				√	√				√	√			√					
Klein et al. (2020)						√			√	√		√								
Rahman et al. (2020)	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
Heinze (2020)						√		√												
van Rensburg et al. (2020)						√							√		√					
Şener etal. (2019)							√			√										
Fu & Kim (2019)	√	√				√														fair trade
Luque & Herrero-Garcia (2019)													√	√	√					
Connor-Crabb & Rigby (2019)							√				√									
Lee & Skorski (2019)		√				√	√						√		√					
Akbar & Ahsan (2019)																√				
Clarke-Sather & Cobb (2019)																√	√			
de Oliveira Neto et al. (2019)															√					
Hvass, K.K. & Pedersen, E.R.G. (2019)		√				√						√								
Machado et al. (2019)			√				√													
Paras et al. (2019)	√	√				√	√	√												
Sirilertsuwan et al. (2019)		√					√		√											
Noh & Johnson (2019)								√												
Zaman et al. (2019)		√																		
Sung & Woo (2019)		√					√	√		√										
Wagner et al. (2019)		√	√																	versatility
Jacometti (2019)													√	√	√					chemicals
Kozlowski et al. (2019)							√													uniqueness
Diddi et al. (2019)						√	√			√		√								

Norris (2019)		√				√	√						√		√				
Hammer & Plugor (2019)																	√			labour process
Lin (2018)						√		√		√	√									
McCreesh et al. (2018)															√					
Geiger & Keller (2018)		√		√	√		√		√							√				wardrobe coordination, chemicals, easy to repair
Brach et al. (2018)						√						√							√	
DeLong et al. (2018)		√		√			√	√		√										
Wiederhold & Martinez (2018)										√										
Mair et al. (2018)																	√			
Zamani et al. (2018)																√	√	√		labour laws, gender equity
Holmquist et al. (2018)										√										
Muthukumarana et al. (2018)													√		√					
Pal & Gander (2018)													√	√	√					
Pathirana & Yarime (2018)															√					
Armstrong et al. (2018)		√																		longevity
Becker-Leifhold & Iran (2018)		√	√				√			√										
Evans & Peirson-Smith (2018)											√									recycled
Kim et al. (2018)								√												
Tey et al. (2018)							√	√		√										exclusivity
Fu et al. (2018)													√		√					
Laitala et al. (2018)													√		√			√	√	
Ma et al. (2018)															√					
Paras et al. (2018)		√				√	√	√		√										
Song & Kim (2018)							√													uniqueness
Štefko & Steffek (2018)		√					√			√										
Todeschini et al. (2017)											√									fair trade
DeLong et al. (2017)		√		√		√	√													wardrobe coordination, easy care, versatility, uniqueness
Ma et al. (2017)												√								
Nam et al. (2017)			√								√	√								
Rab & Hoque (2017)													√		√					
Weber et al. (2017)		√								√										
Rothenberg & Matthews (2017)						√			√	√										
Khare & Varshneya (2017)		√				√					√									
di Benedetto (2017)		√								√										
Park et al. (2017)							√			√										
Garcia-Torres et al. (2017)						√	√			√	√	√	√		√				√	
Guo et al. (2017)							√			√										
Hannouf & Assefa (2017)																	√	√		
Wang & Shen (2017)		√				√														
Amindoust & Saghafinia (2017)							√			√				√		√				
Goldsworthy (2017)		√	√																	
Ræbild & Bang (2017)	√	√			√	√			√	√										
Su (2016)							√	√												
Ki & Kim (2016)		√																		
Park & Kim (2016)								√												
Jung & Jin (2016)		√						√		√										
Yasin et al. (2016)															√					
Mair et al. (2016)																√	√			
Winter & Lasch (2016)													√	√		√	√	√		no discrimination, no forced labour, employment compensation
Lundblad & Davies (2016)						√	√			√	√									no sweatshops
Lang & Armstrong (2016)										√										fashion trend sensitivity
Perry & Chung (2016)		√			√					√										

Reimers et al. (2016)																		√	
Ma & Koo (2016)	√	√	√	√	√	√		√		√									versatility, ease of use, ease of care, ease of matching
Hakan et al. (2016)						√						√							labour practices
Žurga et al. (2015)						√			√			√							
Lee et al. (2015)												√							fair trade
Hwang et al. (2015)						√					√	√							
Zhang et al. (2015)												√		√					
Perry et al. (2015)																√			labour laws
Armstrong et al. (2015)		√								√									ease of use
Clancy et al. (2015)												√							
Macchion et al. (2015)		√					√			√									
Schuitema & de Groot (2015)								√		√								√	
Henninger, C.E. (2015)							√			√			√		√				
Gam et al. (2014)												√							
Weiss et al. (2014)								√				√							
Gaskill-Fox et al. (2014)													√		√				
Cao et al. (2014)		√		√		√	√												versatility
Koo et al. (2014)	√	√	√	√	√														
Joung (2014)		√	√				√				√								
Mann et al. (2014)															√	√	√	√	
Sneddon et al. (2014)		√				√		√	√	√		√						√	fair trade, workers' rights
Kim & Ma (2014)								√					√						
Ekström & Salomonson (2014)		√	√								√	√							longevity
Battaglia et al. (2014)						√						√							
Hu et al. (2014)		√				√					√				√				chemicals
Hansen & Schaltegger (2013)												√							
Koszewska (2013)												√							
Niinimäki & Armstrong (2013)		√	√	√	√	√	√			√									
Moon et al. (2013)															√				
Fulton & Lee (2013)						√					√		√		√				fair trade, human rights
Gabrielli et al. (2013)		√								√									
Stall-Meadows & Davey (2013)						√				√									fair trade, labour practices
Carrigan et al. (2013)						√										√		√	
Pookulangara & Shephard (2013)							√												
Aakko & Koskennurmi-Sivonen (2013)												√			√				laundering, repair
Collett et al. (2013		√			√		√												trend
Eifler & Diekamp (2013)		√				√				√		√							fair trade
Hur et al. (2013)			√			√									√				
Ritch & Schröder (2012)		√					√			√									
Peterson et al. (2012)									√			√						√	
Hyllegard et al. (2012)								√				√							fair labour
Fletcher (2012)			√																
Goworek et al. (2012)		√	√				√			√					√				fair trade
Chan & Wong (2012)		√					√			√									
Ellis et al. (2012)								√		√									
Hill & Lee (2012)						√					√		√		√				
Jones & Williams (2012)												√							fair trade practices, labour standards, workers rights
Perry (2012)																√	√	√	No forced labour, no discrimination, no sweatshop practices
Jägel et al. (2012)		√				√	√	√		√	√						√		
Desai et al. (2012)													√		√				material waste

Cervellon & Carey (2011)												√								
Ha-Brookshire & Norum (2011)	√				√			√		√										laundering requirements
Connell (2010)												√								
Gam et al. (2010)		√				√	√			√										
Farrant et al. (2010)													√	√						
Bitzer & Glasbergen (2010)						√														fair trade
Laudal (2010)																√				human rights, labour standards, environmental standards, corruption
Sneddon et al. (2010)												√								
Niinimäki (2010)	√	√	√		√	√	√	√	√				√							Easy care, reparability
	13	71	23	13	16	56	58	44	16	63	29	41	41	15	47	26	19	15	21	

Appendix 2. The most frequently investigated apparel cues (2010-2021).

Note: The articles cited in Appendix 2 are not included in the "Reference" section. However, they can be made available upon request.

Researchers	*Year*	*Country*	*Population/Subjects*	*Products/Services*	**Product cues (ranking)**
Martin	1971/ 1972	U.S.A.	n = 243 purchases	Dress and coat	Price, colour, material content, brand name, store identification, garment care, department of store where sold, salesgirl's evaluation of quality, salesgirl's evaluation of style
Szybillo and Jacoby	1974	U.S.A.	n = 90 (female undergraduate students)	Nylon hosiery (method: 2X3X3 factorial analysis)	Price, store image, product composition
Sproles and Geistfeld	1978	U.S.A.	n = 989 (adult female)	Women's outerwear (method: mail survey)	Style, colour, fabric pattern/design, conservative styling, current fashion, comfort, ease of care, construction, cost, durability, fibre content, store, opinion of my shopping companion, brand name, store's salesperson
McCullough and Morris	1980	U.S.A.	n = 98 (parents)	Children's clothing	Durability, colourfastness, appearance, comfort, safety, ease of care
Etgar and Malhotra	1981	U.S.A.	n = 133 (undergraduate students)	Sneakers	Price, comfort, durability, style
Dickerson	1982	U.S.A.	n = 277 women n = 119 men, and n = 12 could not be identified	Apparel: imported vs. U.S. - produced (method: structured telephone interview)	Country-of-origin
Davis	1985	U.S.A.	n = 78 (female undergraduate students)	Skirts (method: experimental research; 3X2 factorial analysis)	Brand label, physical quality: construction quality, fabric quality, quality of the notions, quality of design, over-all quality, fashionability, status, uniqueness
Hatch and Roberts	1985	U.S.A.	n = 40 (female teachers and county agents)	Socks, sweaters, blouses/shirts, men's suits	Fabric weight, fibre content, care instruction, price, seals of approval, warranty, country-of-origin, brand name, colour, construction, style, appearance
May and Koester	1985	U.S.A.	n = 490 (276 Juniors: 9-12; 145 Intermediates: 13-15; 69 Seniors: 16-19)	Clothing	Fit, style, quality construction, price, care, colour, brand, coordinate with other clothes, latest fashion
McLean *et al.*	1986	U.S.A.	n = 114 (students) n = 112 (club women)	Imported blouses and domestic blouses (method: questionnaire survey with 2 Groups)	Wardrobe coordination (1), colour (2), price, trim, construction quality, fabric quality, fit, durability, brand
Sternquist and Davis	1986	U.S.A.	n = 49 female students	Sweaters (method: experimental research)	Store status, country-of-origin
Cassill and Drake	1987	U.S.A.	n = 842 (female consumers)	Social apparel and employment apparel	Brand name, store name, pleasing to others, quality of construction, fibre content, suitability to individual, price, good buy, appropriateness for occasion, good fit, durability, fabric type and quality, ease-of-care, comfort, beautiful or attractive, fashionable, colour, sexy, prestige
Davis	1987	U.S.A.	n = 65 Study 1: about quality, n = 55 Study 2: about fashionability (undergraduate female students)	Blouses (method: experimental research – behavioural process techniques)	Style (S1:1, S2:2), price (S1:2, S2:2), fabric (S1:3, S2:4), store (S1:4, S2:7), fit (S1:5, S2:3), care label (S1:6, S2:5), general construction (S1:9, S2:6), manufacturer neck label (S1:7, S2:8), department in the store (S1:8. S2:9), salesperson's opinion (S1:10, S2:10)
Bergeron and Carver	1988	U.S.A.	n = 190 (college students, 91% female)	Clothing	Country-of-manufacture: domestic-made or imported apparel Fit (1), quality (2), style (3), COO (least)
Ettenson *et al.*	1988	U.S.A.	n = 105 (61 female and 44 male undergraduate students)	Blouses/dress shirts (method: survey-based attitude research and the conjoint analysis – pre-test/PR and post-test/PO)	Females: Fibre content (PR: 1, PO:1), price (PR:2, PO:2), Style/cut (PR:3, PO:3), country-of-origin (PR:4, PO:4), quality (PR:5, PO:5), brand (PR:6, PO:6) Males: Fibre content (PR: 1, PO:1), price (PR:2, PO:2), Style/cut (PR:3, PO:3), country-of-origin (PR:6, PO:4), quality (PR:4, PO:5), brand (PR:5, PO:6)
Davis *et al.*	1990	U.S.A.	n = 395 (female shoppers)	Men's shirts and women's sweaters	Country-of-origin, store prestige, "Buy American" information
Heisey	1990	U.S.A.	N = 40 (female undergraduate students)	Sweater (method: experimental design)	Price, vendor, country-of-origin, fiber content, care procedure

Gipson and Francis	1991	U.S.A.	n = 181 (adult female sweater purchasers)	Women's sweater (method: an intercept study)	Fit (1), colour (2), co-ordinates with existing wardrobe (3), quality of workmanship (4), style/design (5), expected durability (6), feel of garment (7), ease of care (8), price (9), fibre content (10), fashion (11), warmth/coolness properties (12), store (13), designer label/brand name (14), country-of-origin (15)
Fiore and Damhorst	1992	U.S.A.	n = 90 (female college students)	Women's sportswear pants	Layout: styling, silhouette and shape, fashionability, compatibility Fabric: tactile quality, weight, fiber content, use of fabric, care, well constructed, feel of hand, overall pleasingness Newness: novelty of style
Lang and Crown	1993	Canada	n = 106 (female consumers)	Sweatshirt (method: intercept interviews, conjoint analysis)	Country-of-origin, quality, price, style, fit
Lee and Burns	1993	U.S.A. & Korea	n = 82 U.S. college students n = 92 Korean college students	Jacket and dress (study: self-consciousness; method: questionnaire survey)	Fashionability, durability, attractiveness, brand name, style/design, construction, fabric design, fabric, care, colour, fastener, price, comfort
Lennon and Fairhurst	1994	U.S.A.	n = 205 (150 students and 55 nonstudent adults)	Apparel and a blouse	Aesthetic (e.g., stylish), usefulness (e.g., versatile), performance (e.g., does not shrink), and extrinsic criteria (e.g., brand name)
Labhard and Morris	1994	U.S.A.	n = 114 (female college students)	Sleepwear	Comfort (1), style/design (2), fit (3), colour (4), durability (5), fibre (6), care (7), cost (8), sexiness (9), brand name (10)
Lin and Sternquist	1994	Taiwan	n = 265 (shoppers)	Women's sweater	Country-of-origin, store prestige
Hsiao and Dickerson	1995	Taiwan & U.S.A.	n = (105 Taiwanese and 126 U.S. college students)	Leisurewear (method: hand-in questionnaire survey) Taiwan: (T) U.S.A.: (US)	Price (T:1, US:1), style (T:2, US:3), size/fit (T:4, US:2), quality (T:3, US:4), colour (T:5, US:5), brand (T:6, US:7), fabrication (T:7, US:6), country-of-origin (T:8, US:8), media exposure (T:9, US:9)
Forsythe *et al.*	1996	U.S.A.	n = 122 (shoppers)	Men's dress shirts	Sturdiness/durability, style/aesthetics, lasting/care
Miller	1998	U.S.A.	n = 313 (161 women and 152 men undergraduate students)	Apparel	Colour
Kawabata and Rabolt	1999	U.S.A. & Japan	n = 186 (U.S. female college students) n = 278 (Japanese female college students)	Clothing U.S.A.: (US) Japan: (J)	Fit (US:1; J: 2), style/design (US: 2; J: 1), quality (US: 3; J: 5), price (US: 4; J: 4), colour (US: 5; J: 3), fashion (US: 6; J: 9), durability (US: 7; J: 6), care/maintenance (US: 8; J: 7), fibre content (US: 9; J: 8), brand name (US: 10, J: 10), country-of-origin (US: 11, J: 11)
Fowler	1999	U.S.A.	n = 97 college students (56% female and 44% male)	Sports apparel Women: (W) Men: (M)	Comfort (W: 1, M: 1), fit (W: 2, M: 2), style (W: 3, M: 3), colour (W: 4, M: 5), good value (W: 5, M: 7), durability (W: 6, M: 6), brand (W: 7, M: 4), ease of care (W: 8, M: 8)
Chan *et al.*	2001	Hong Kong	n = 80 (women)	Bra	Comfort (1), fitting (2), functions: pushing, uplifting (3), aesthetic (4), fashionable (5), seamless (6), brand image (7)
Chen-Yu and Kincade	2001	U.S.A.	n = 120 (college students)	Sweatshirt (method: experimental research)	Store name, price, country-of-origin, performance information: shrinkage, pilling
Hines and Swinker	2001	U.S.A.	n = 71 students (pre-test) n = 65 students (post-test)	Clothing	Brand, care instruction, closures, colour, country-of-origin, fashionable, fibre content, fit, garment will hold shape, how long it will last, how fabric feels, interfacings, length of stitch, lining, plaids/stripes matched, price, seam width, store, style details, style good for my figure, thread matches, type of fabric, type of seam, width of hem
May-Plumlee and Little	2001	U.S.A.	Point-of-sale (POS) data: 272 bra purchased by 170 female consumers	Bra (method: point of sale purchase data)	Colour, fabrication, design

Moore and McGowan	2001	Poland	n = 356 (male and female college students)	Apparel	Price
DeLong *et al.*	2002	South Korea & U.S.A.	n = 34 (Korean university students0 n = 32 (US university students)	Jeans Korea: (K) U.S.A.: (US)	Colour (K:1, US:1), style/design (K:2, US:4), brand name (K:3, US:4), fit of rise (K:4, US:6), tactile quality (K:5, US:3), details (K:6, US:4), price (K:7, US:3), fabric quality (K:8, US:5), comfort (K:9, US:5), fit (K:10, US:2)
Herbst and Burger	2002	South Africa	n = 213 (81 male and 132 female high school students)	Jeans (method: conjoint analysis)	Brand (1), style (cut/fit) (2), place of purchase (store) (3), price (4)
Hsu and Burns	2002	Taiwan & U.S.A.	n = 119 Taiwanese and 84 U.S. college women)	Clothing	Size/fit (1), comfort (2), style (3), coordination with other clothing (4), colour (5), appropriateness for campus wear (6), quality (7), fabric (8), price (9), pleasing to others (10), brand name (11), and location of manufacturer (12)
Zhang *et al.*	2002	China	n = 3,534 respondents	Casual wear (method: questionnaire survey)	Fit (1), comfort (2), style (3), colour (4), workmanship (5), price (6), permeability (7), fabric softness (8), trendiness (9), durability (10), easy care (11), brand (12), fibre content (13), warmness (14), fabric thickness (15)
Bye and Reiley	2003	U.S.A.	n = 85 (95% female & 5% male college students)	Clothing: jeans, T-shirt, lingerie, dresses	Fibre content, care instruction, garment dimensions, fabric: hand & weight, fit, country-of-origin, colour accuracy, size charts, customer service
North *et al.*	2003	South Africa	n = 227 (female)	Shirt (method: conjoint analysis)	Brand, style, retail store, price
Chowdhary & Ryan	2003	USA	n = 22 mastectomy (breast cancer) survivors	Apparel (mastectomy bras, sew-in pockets, camisoles, swimsuits, intimate apparel, formal dresses, informal dresses, running or logging clothes, walking clothes	Pre-test: body comfort (1), appearance (2), price (3), fit (4), size (5), care & maintenance (6), fashionability (7), fabric texture (8), appropriateness (8), occasion (9), aesthetic (10), fibre content (10), special need (11) Post-test: Body comfort (1), appearance (1), fit (1), price (2), care & maintenance (3), fabric texture (4), fashionability (4), fibre content (5), appropriateness (6), occasion (7), size (7), aesthetics (8), special need (9)
Ahmed and d' Astous	2004	China	n = 209 (male adults)	T-shirt	Country-of-design, country-of-assembly, store type, price, and satisfaction assurance
Chen *et al.*	2004	China	n = 167 surveys n = 18 females (focus group interview)	Children's clothing	Quality (1), style (2), personal preferences (3), trends (4), price (5), conformity (6), easy care (7), and brand (8)
Chae *et al.*	2006	U.S.A.	n = 124 women	Tennis Wear	Comfort (1), fit (2), construction quality (3), size assortment (4), price (5), fabric quality (6), fibre content (7), style (8), attractiveness (9), colour (10), fashionability (11), alteration (12), brand name (13), pleasing to others (14)
Swinker and Hines	2006	U.S.A.	n = 146 (93% female & 7% male college students)	Clothing	Style/fit (1), price (2), fashionability (3), colour (4), fabric feels (5), design features (6), brand name (7), wrinkle properties (8), durability (9), dimensional stability of fabric (10), pilling (11)
Wang and Heitmeyer	2006	Taiwan	N = 485 (344 female and 141 male consumers)	Apparel	Care instruction, brand name, quality, fibre content, comfort, colour, attractiveness, fashionableness, good fit, good price, ease of care, suitability, appropriate for occasion, overall attitude
Wu and Delong	2006	China	n = 219 (shoppers wearing jeans)	Denim Jeans	Comfort (1), fit/shape (2), design/cut (3), fashion (4), quality (5), durability (6), casualness (7), good (8), price (9), fabric (10), care (11), style (12), workmanship (13), brand (14), character (15), versatility (16), country-of-brand-origin (17), authenticity/classic (18), various feelings (19)
de Klerk and Tselepis	2007	South Africa	n = 128 early-adolescent female consumers	Clothing	Intrinsic dimension: ease, style, fabric, size
Rahman *et al.*	2008	China	n = 203 (female students)	Pyjamas	Comfort, quality, fabric, price, style, brand, country-of-origin

Rahman *et al.*	2009	China	n = 256 (male students)	Sleepwear	Comfort, quality, fabric, price, style, brand, country-of-origin
Rahman *et al.*	2010	Canada /China	N = 247 (Chinese female students) n=380 (Canadian female students)	Women's denim jeans (method: questionnaire survey with visual stimuli) Canada: (CA) China: (CH)	Fit (CA:1; CH:2), style (CA:2; CH:4), quality (CA:3; CH:3), comfort (CA4; CH:1), price (CA:5; CH:7), colour (CA:6; CH:5), fabric (CA:7: CH:6), brand (CA:8; CH:8), country-of-origin (CA:9; CH:9) Design elements: silhouette, rise, leg opening, back pocket embellishment, fabric, colour
Jin *et al.*	2010	China/ India	n = 152 (Chinese: 54.6% females & 43.4% male) n = 150 (Indian: 34.7% female & 65.3% Male)	Denim jeans China: (CH) India: (IN)	Price (CH:1; IN:4), Fitting (CH:2; IN:1), country-of-origin (CH:3; IN:2), Quality (CH:4; IN:5), design (CH:5; IN:3)
Rahman	2011	Canada	n = 380 females undergraduate students	Women's denim jeans (method: questionnaire survey with visual stimuli)	Fit (1), style (2), quality (3), comfort (4), price (5), colour (6), fabric (7), brand (8), country-of-origin (9) Design elements: silhouette, rise, leg opening, back pocket embellishment, fabric, colour
Jegethesan et al.	2012	Australia	n = 206 male and female fashion apparel consumers	Denim Jeans	Price (1), brand (2), ethics (3), COO (4), style (5)
Bennur & Jin	2013	India & USA	USA: n = 335 India: n = 335 College students	Denim Jeans	Fitting, design, fashionability, quality, workmanship, versatility, price, brand
Jin & Bennur	2015	USA, China, Korea & India,	USA: n = 335 China: n = 335 Korea: n = 335 India: n = 335	Denim Jeans U.S.A.: (US) China: (C) Korea: (K) India: (I)	Must-be attributes: workmanship (I, US), price (I), quality (US), fitting (US) Performance attributes: quality (I, C, K), fitting (I, C, K), workmanship (C, K), price (C, K, US), fashionability (C), design (US) Attractive attributes: design (I, C), brand (I, C), fashionability (I, K, US), versatility (C, K. US) Indifferent attributes: versatility (I), design (K), brand (K, US)
Sun et al.	2021	U.S.A.	n = 1,800 Amazon Mechanical Turk respondents 60% female, 40 % male Mean age = 37.4	New and secondhand clothes	Style (1), price (2), durability (3), colour (4), sustainability (5)

Appendix 3. Apparel studies with diverse product cues.

Note: Comfort and colour cues are highlighted in yellow. Please note that this list is not exhaustive or comprehensive.

Keyword	Occurrences	Ranking (Top 10)	Total Link Strength
Cluster 1 in red (46 items)			
adoption	10		56
antecedents	17		114
attitude	29		162
attitudes	61	5	353
behavior	76	2	463
brand	14		111
choice	11		56
communication	20		92
consciousness	10		62
consumer behavior	25		102
consumers	66	3	368
consumption	128	1	691
decision-making	13		64
determinants	20		126
environment	15		84
environmental concern	14		68
fair trade	11		58
fashion consumption	17		76
green	55	6	335
identity	14		73
impact	62	4	323
information	20		111
intention	22		152
intentions	15		90
knowledge	28		178
materialism	12		72
motivations	27		165
organic cotton	10		57
perceived value	14		85
perceptions	49	7	282
planned behavior	40	9	254
price	15		96
products	39	9	249
purchase	15		91
purchase intention	23		132
quality	21		113
satisfaction	19		104

slow fashion	28		97
social media	19		107
sustainable clothing	12		63
sustainable consumption	37	10	178
theory of planned behavior	10		64
trust	14		78
values	37		214
willing-to-pay	24		131
Cluster 2 in green (35 items)			
apparel industry	22		84
business	16		88
chain	11		50
challenges	13		71
china	15		65
clothing industry	16		68
competition	10		47
conceptual-framework	12		80
corporate social responsibility	43	6	188
corporate social-responsibility	39	8	239
corporate sustainability	15		67
csr	22		110
environmental sustainability	23		125
fashion industry	51	5	218
fast fashion	77	1	309
industry	38	9	195
life-cycle assessment	15		75
management	72	2	401
model	51	4	247
performance	42	7	235
product development	12		60
responsibility	17		86
retail	11		59
social sustainability	11		64
social-responsibility	21		103
strategies	23		127
strategy	10		54
supply chain	54	3	283
supply chain management	38	10	194
system	10		32
technology	17		75

textile	22		100
trade	12		59
transparency	10		43
Cluster 3 in blue (23 items)			
apparel	65	3	321
clothing	39	6	169
consumer	52	5	283
consumer behaviour	25	9	121
design	61	4	277
eco-fashion	13		65
ethical fashion	38	7	199
ethics	17		100
fashion	135	2	588
fashion design	11		24
market	13		72
myth	18		107
product	24	10	141
recycling	20		87
reuse	14		61
social responsibility	20		94
sustainability	276	1	1136
sustainable design	17		50
textile waste	14		75
textiles	31	8	123
upcycling	11		31
waste	15		100
Cluster 4 in mustard (19 items)			
barriers	32	3	201
business model	14		76
business models	14		84
circular economy	52	2	246
circular fashion	14		59
clothing consumption	12		43
collaborative consumption	26	8	135
economy	19	9	101
framework	32	4	169
future	28	6	144
innovation	18		106
luxury	26	7	155
models	12		57

opportunities	12		82
perspective	17		114
sharing economy	31	5	155
sustainable	14		62
sustainable business models	13		66
sustainable development	18	10	88
sustainable fashion	81	1	300

Appendix 4. Four clusters of co-occurrences of all keywords.

Online Questionnaire Survey

Understanding the importance of apparel evaluative attributes (sustainable and non-sustainable) through different socioeconomic perspectives

Thank you in advance for taking the time to consider participating in this research study titled "Understanding the importance of apparel evaluative attributes (sustainable and non-sustainable) through different socioeconomic perspectives" conducted by Osmud Rahman (Principal Investigator and PhD candidate) of Concordia University in Canada.

By volunteering, you will be asked to complete a 15-minute online survey that is completely anonymous. Survey questions focus on fashion consumption, sustainable practices and ecolabelling. Participation in this study is voluntary. You may decline to answer any questions that you do not wish to answer and you can withdraw your participation at any time, you may simply close your web browser and no data will be submitted. There are no known or anticipated risks from participating in this study.

It is important for you to know that any information that you provide will be anonymous. All of the data will be coded, summarised and no individual could be identified from the final results. Furthermore, the web site is programmed to collect responses alone and will not collect any information that could potentially identify you (such as machine identifiers).

The data, with no personal identifiers, collected from this study will be maintained on a password protected computer database in a restricted access area of the university. In Addition, the data will be electronically archived after completion of the study and stored for three years and then erased.

Should you have any questions about the study, please contact Osmud Rahman (e-mail: orahman@ryerson.ca or 416-979-5000, extension 6911), or if you have any questions about your rights as a research participant in this study, please contact the Concordia University [or collaborator's university] Research Ethics Unit – GM 900 (Tel: 514-848-2424 ext. 7481; email: oor.ethics@concordia.ca; or www.concordia.ca/offices/oor.html).

We would like to assure you that this study has been reviewed and approved ethics clearance through the Research Ethics Board at Ryerson University. However, the final decision about participation is yours. Thank you for your consideration.

If you like to participate in this study, please read the following information.

Consent of Participant
By clicking on this consent form, you are not waiving your legal rights or releasing the investigator or Concordia University from their legal and professional responsibilities.

*Required
I have read and understood the above information.

I am aware that I may withdraw from the study at any time by just closing the web browser. With full knowledge of all foregoing, I agree, of my own free will, to participate in this study. Please click here to agree and to begin the questionnaire.

* Agree or Disagree

NOTE: The term "Eco-friendly", for use of this survey, is defined as goods and services considered to inflict minimal or no harm on the environment. Please select the best option.

Section 1: Environmental Consciousness, Concern and Behaviour
(5-point Likert scale from "strongly disagree" to "strongly agree")

1. I would be willing to reduce my consumption to help protect the environment

2. Protecting the natural environment increases my quality of life

3. When I have the choice between two equal clothing items, I purchase the one less harmful to others and the environment

4. I would avoid buying clothing items if it had potentially harmful environmental effects

5. Supporting environmental protection makes me more committed to the environment

6. I would rather spend my money on eco-friendly clothes more than anything else

7. I prefer to purchase eco-clothing even if it is somewhat more expensive

8. Supporting environmental protection makes me more socially responsible

Section 2: Sustainable and Non-Sustainable Cues
(5-point Likert scale from "unimportant" to "very important')

9. How important the following (non)-sustainable factors can affect your purchasing decision of clothing?

- Less Water Use
- Air Quality
- Less Energy Use
- Worker Safety
- Fair Wages
- No Child Labor
- No Animal skin use
- Recycling (ability to recycle/reuse/ dispose)
- Certified Eco-friendly Label
- Certified Ethical Label (Sweatshop-free product)
- Garment Fit
- Comfort

- Fiber/Material
- Quality workmanship
- Colour
- Style
- Brand
- Price
- Country of origin
- Durability

Section 3: Importance of Certified Environmental Product and Labelling
(5-point Likert scale from "strongly disagree" to "strongly agree")

10. I believe that environmental information on the product label is important

11. I generally believe in the environmental information on the product label

12. I understand the concept of environmental certification

13. I believe that there is a need for environmental certification of the fashion related products

14. I believe environmental certification can be helpful for buyers

15. If available, I would seek out environmentally certified clothes

Section 4: Recognition of Sustainable Labels including Eco-/Ethical Labels

16. Do you know about any of these popular textile Eco-labels?

Fair Trade

Care & Fair-Siege

Global Organic Textile

Fair Wear

Foundation Clean Clothes Campaign

Oeko-Tex Standard 100

Or "I don't know any of these labels"

Section 5: Sociodemographic & Behavioural Questions

17. How much money do you spend on clothing per year?
Less than 5% of my income
5-10% of my income
10-15% of my income
15-20% of my income
20-25% of my income
25-30% of my income
More than 30% of my income

18. What is your Employment status?
Student
Full-time Employee
Part-time Employee
Self-Employee
Unemployed
Homemaker
Other:

19. Sex
Male
Female
Other

20. To which annual income bracket do you belong to
Less than $10,000
$10,000 – $39,999
$40,000 – $69,999
$70,000 – $99,999
$100,000 – $129,999
$130,000 – $159,999
$160,000 or above

21. What is your age? [type in your age]

22. What is the highest level of education you have completed?
PhD
Master's degree
Bachelor's degree
College Diploma/Higher Diploma High school

23. Which of the following best describes your current relationship status?
Married
Widowed
Divorced

Separated
In a domestic partnership
Single

SUBMIT

Thank You for your Participation!

Appendix 5: Online questionnaire survey.

CERTIFICATION OF ETHICAL ACCEPTABILITY
FOR RESEARCH INVOLVING HUMAN SUBJECTS

Name of Applicant:	Osmud Rahman
Department:	External\External
Agency:	N/A
Title of Project:	Understanding the importance of apparel evaluative attributes (sustainable and non-sustainable) through different socioeconomic perspectives
Certification Number:	30014900

Valid From: March 23, 2021 To: March 22, 2022

The members of the University Human Research Ethics Committee have examined the application for a grant to support the above-named project, and consider the experimental procedures, as outlined by the applicant, to be acceptable on ethical grounds for research involving human subjects.

Richard DeMont

Dr. Richard DeMont, Chair, University Human Research Ethics Committee

Appendix 6: Certificate of ethical acceptability for research involving human subjects.