An Empirical Study
on
Bridging Intention-Behaviour Gap in Sustainable Fashion Consumption: A Circular Economy Perspective

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Thesis submitted in partial fulfilment
for the Award of Degree

Doctor of Philosophy

by

SHER SINGH YADAV

RAJIV GANDHI INSTITUTE OF PETROLEUM TECHNOLOGY
Jais, India - 229304

20MS0007 **2024**

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CERTIFICATE

It is certified that the work contained in the thesis titled "***An Empirical Study on Bridging Intention-Behaviour Gap in Sustainable Fashion Consumption: A Circular Economy Perspective***" by "***Sher Singh Yadav***" has been carried out under my supervision and that this work has not been submitted elsewhere for a degree.

It further certified that the student has fulfilled all the requirements of Comprehensive, Candidacy, and SOTA.

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Supervisor

Professor Sanjay Kumar Kar

DECLARATION OF THE CANDIDATE

I, "**Sher Singh Yadav**", certify that the work embodied in this thesis is my own bona fide work and carried out by me under the supervision of Prof. Sanjay Kumar Kar from August 2020 to February 2024, at the Rajiv Gandhi Institute of Petroleum Technology, Jais.

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Sher Singh Yadav

Roll No: 20MS0007

CERTIFICATE BY THE SUPERVISOR

It is certified that the above statement made by the student is correct to the best of my/our knowledge.

Prof. Sanjay Kumar Kar
(Supervisor)

Dr. Jaya Srivastava
Head of the Department
DoMS, RGIPT

CERTIFICATE

CERTIFIED that the work contained in the thesis titled "**An Empirical Study on Bridging Intention-Behaviour Gap in Sustainable Fashion Consumption: A Circular Economy Perspective"** by Mr. **Sher Singh Yadav** has been carried out under my supervision. It is also certified that he fulfilled the mandatory requirement of TWO quality publications that arose out of his thesis work.

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ABSTRACT

The fashion industry initially embraced a linear growth strategy, characterized by the "take-make-use-throwaway" approach, aiming for boundless expansion. This strategy, fostering fast fashion adoption, contributed to the exacerbation of the climate crisis. However, this model has surpassed its sustainable trajectory, resulting in increased waste generation and environmental unsustainability. The lack of end-of-life cycle recycling further poses risks of contamination and the dissemination of hazardous particle waste.

The fashion industry is widely acknowledged as one of the most environmentally taxing sectors. This harsh reality is underscored by the astonishing fact that the production of a single t-shirt requires a staggering 2,700 litres of water—equivalent to the quantity of drinking water needed for one person over 2.5 years. The intricate process of apparel production, encompassing the cultivation of raw materials, spinning fibres, weaving, and dyeing, is inherently resource-intensive, consuming substantial amounts of energy. Compounded by chemical emissions and the use of pesticides in the cultivation of raw materials like cotton, the industry grapples with a myriad of environmental challenges.

To address the adverse consequences of this linear approach, a revised system has emerged, advocating for a "take-make-use-reuse" paradigm. This updated strategy is currently endorsed by business leaders, climate activists, scholars, and notably, governments in policy formulation and dialogues. At the heart of this transformation are consumers who express an intention to purchase, yet the corresponding behaviour is lacking.

The circular economy (CE) serves as a fundamental solution to challenges in implementing Sustainable Development Goals (SDGs). It introduces an economic model designed to exclude waste and pollution, emphasizing the continuous use and regeneration of materials and products within natural systems. This concept holds promise for accelerating progress toward the 2030 Agenda and contributes to achieving multiple SDGs, including SDG 6 (energy), SDG 8 (economic growth), SDG 11 (sustainable cities), SDG 12 (sustainable consumption and production), SDG 13 (climate change), SDG 14 (oceans), and SDG 15 (life on land). The implementation of CE begins with SDG 12, focusing on sustainable consumption and production.

Circular fashion, a subset of the circular economy, significantly helps SDG 12. It plays a crucial role in addressing the root causes of unsustainable practices within the fashion industry. Particularly in emerging markets, the adoption of a circular economy model is pivotal. These markets exhibit increasing per capita income, human development index, and disposable income. As consumers in these markets aspire to attain living standards akin to developed nations, countries like India hold particular significance due to their substantial population and the potential for a surge in consumption with rising purchasing power.

The prevailing objective of companies today is centred on selling clothing in large quantities at affordable prices. Unfortunately, this pursuit not only plays a role in environmental degradation but also perpetuates a cycle of excessive consumption. In our examination of the intricate relationship between fashion and sustainability, our focus is on identifying new stimuli and mechanisms for transformative change, particularly in increasing purchase intention for sustainable apparel, using the theory of reasoned action (TRA) and the theory of planned behaviour (TPB), behavioural reasoning theory (BRT) and stimulus organism response (S-O-R) framework.

Within the realm of fashion and sustainability, the manufacturing processes of clothing are notably non-eco-friendly, primarily due to the fast fashion cycle and the overwhelming demand from consumers. The incessant desire for new designs and trends in fast fashion leads to extensive production and subsequent waste. The unsustainable production practices in the fashion industry can be traced back to the fast fashion cycle and the substantial demand from consumers.

Consumer behaviour emerges as a pivotal factor driving the fast fashion phenomenon, influenced by various elements such as global population growth, higher incomes, and improved living standards. The intricate interplay of multiple factors contributing to consumers' wasteful behaviour is aptly termed as the 'spaghetti soup'. The proclivity towards fast fashion within consumer behaviour is undeniably the primary catalyst for increased production and the subsequent formation of waste. Consequently, it can be inferred that consumer behaviour stands as the central driving force behind the fast fashion cycle.

In line with the Sustainable Development Goals aimed at fostering a circular economy in the fashion industry, we examine the disparity between consumers' intentions and behaviours. Despite the crucial role of this intention-behaviour connection, the matter has been less explored in the broader literature. Until there is alignment between consumers' intent to purchase and their actual buying behaviour for environmentally friendly products, the effective positioning and branding of such products in the market may incur significant costs. This study establishes a connection between consumers' intentions and behaviours regarding sustainability, utilizing a hybrid approach that incorporates elements from both the theory of reasoned action and the theory of planned behaviour under the broader umbrella of stimulus organism response theory and BRT.

The following are research objective of the study:

- To find factors influencing purchase intention of sustainable apparels in India.
- To assess the existing literature in sustainable fashion and consumption and find strategies and challenges in implementing circular economy concept.
- To bridge intention behaviour gap in sustainable fashion literature.

A sample of 357 respondents was collected using purposive sampling technique from young consumers belonging to Generation Y (millennials) and Generation Z. Data was analysed using partial least square- structural equation modelling technique using Smart PLS 4 software. Subsequently, measurement model and structural model were tested to generate results.

The sustainable fashion choice motive of consumer is important specially in the context of sustainable fashion. Eco anxiety sometimes leads to more favourable sustainable consumption behaviour especially among young consumers. This is also true for environmentally conscious consumers. A new construct of circular economy sustainable development goals awareness was included in the study to evaluate the recent awareness of SDG goals and circular economy on young consumers. Further the constructs like behavioural control, attitude, purchase intention and purchase behaviour were adopted from theory of planned behaviour. Minimalism has been incorporated in the study to see if minimalistic values influence the consumption behaviour of consumers especially among the younger consumers. Greenwashing is believed to be an unethical practice by companies to increase their sustainability perception. The consumers sometimes exhibit loyalty to brands aligning with their sustainable values; therefore, we included the construct of green brand loyalty. Consumers identify the sustainability of the apparels using the labels presented at the display and becomes an important characteristic in

buying behaviour. Therefore, we included the construct of sustainable label awareness to better the explain the sustainable fashion purchase intention.

Results of our study found that attitude, behavioural control, environmental consciousness, minimalism, green brand loyalty, and greenwashing influence purchase intention. They also help to bridge the intention behaviour gap with purchase intention significantly influencing purchase behaviour. Circular economy sustainable development goal awareness did not influence purchase intention, along with eco anxiety, sustainable label awareness and sustainable fashion choice motive. Further, minimalism negatively influenced the purchase intention significantly. Results of the study imply that management should focus on increasing green brand loyalty, greenwashing, attitude, behavioural control and environmental consciousness of consumers. Intention behaviour gap is bridged in this study. Therefore, all constructs present in the study must be explored in future studies to develop a new theory for sustainable fashion consumption. A collaborative action from all stakeholders including companies, government and international organisation is needed to increase the consumption of sustainable apparels.

Keywords: Sustainable Consumption, Circular Economy, Theory of Planned Behaviour, Purchase Intention, Purchase Behaviour.

Dedicated To

My Parents, family and Teachers

For their never-ending blessings

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(Sher Singh Yadav)

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ABBREVIATIONS

S. No.	Abbreviation	Description
1	AVE	Average Variance Extracted
2	BC	Behavioural Control
3	BRT	Behavioural Reasoning Theory
4	CB-SEM	Covariance Based Structural Equation Modelling
5	CE	Circular Economy
6	CE-FDH	Ceiling Envelopment with Free Disposal Hull
7	CESDG	Circular Economy Sustainable Development Goals
8	CFA	Confirmatory Factor Analysis
9	CR	Composite Reliability
10	CR-FDH	Ceiling Regression with Free Disposal Hull
11	d	Effect Size
12	EA	Eco Anxiety
13	EC	Environmental Consciousness
14	GBL	Green Brand Loyalty
15	GDP	Gross Domestic Product
16	GW	Greenwashing
17	HTMT	Heterotrait- Monotrait Ratio
18	Kg	Kilogram
19	L	Litres
20	MIN	Minimalism
21	NCA	Necessary Condition Analysis
22	NN	Not Necessary
23	OLS	Ordinary Least Square
24	PB	Purchase Behaviour
25	PET	Polyethylene Terephthalate
26	PI	Purchase Intention
27	PLS	Partial Least Square
28	PLS-SEM	Partial Least Square Structural Equation Modelling
29	SAPB	Sustainable Apparel Purchase Behaviour
30	SAPI	Sustainable Apparel Purchase Intention

31	SDG	Sustainable Development Goals
32	SFCM	Sustainable Fashion Choice Motive
33	SLA	Sustainable Label Awareness
34	SOR	Stimulus-Organism-Response
35	SSR	Sum of Square due to Regression
36	SST	Total Sum of Squares
37	TC	Total Citation
38	TC	Total citation count
39	TPB	Theory of Planned Behaviour
40	TRA	Theory of Reasoned Action
41	VABH	Value Attitude Behaviour Hierarchy
42	VIF	Variance Inflation Factor
43	β_{ij}	Path Coefficients
44	ε_1	Error value

CHAPTER 1
INTRODUCTION

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INTRODUCTION

1.1 Background and context to the research

Green buyers often face a genuine purchase related dilemma summarized in this 'anonymised anecdote':

"I am usually a determined eco-friendly buyer, but my behaviour at the retail apparel store confused me. Marketing efforts were luring me into buying the conventional non-sustainable substitute. Despite my determination to buy greener sustainable options, I settled on purchasing conventional ones. Not sure what failed my intentions!"

This describes a situation illustrating that despite intentions to buy greener products consumers end up buying the conventional products (Vehmas et al., 2018). The green products are the products having comparatively lesser impact on environment. In this study we focus on sustainable apparels defined broadly as the apparels made from recycled fabrics, having biodegradable properties or recyclable. In the broader green marketing consumer behaviour literature, a hierarchical progression is present suggesting attitude-intention-behaviour linkage (Tawde et al., 2023). In other words, attitude forms intentions and intentions leads to behaviour. Ongoing research is focused on intention behaviour dissonance. The intention behaviour linkage is also referred as intention-behaviour consistency (Sun et al., 2023). On this backdrop, the study aims to bridge this intention behaviour gap and provide relevant factors for the same.

1.2 Pollution and fashion industry

The fashion industry is considered one of the most polluting industries (Fraccascia & Giannoccaro, 2019). This stark reality becomes evident from the fact that for production of single t-shirt demands a staggering 2,700 litre of water a quantity sufficient for 2.5 years of drinking water for one person (Dangelico et al., 2022). The intricate process of apparel production, from cultivating raw materials to spinning fibres, weaving, and dyeing, proves to be resource-intensive, consuming vast amounts of energy. Compounded by chemical emissions and the use of pesticides in raw material cultivation, such as cotton, the industry faces multifaceted environmental challenges. Amidst these complexities, the adoption of "fast fashion retailing" by brands and consumers exacerbates the issue, fostering a culture of wastefulness and promoting a disposable thinking. The primary objective of company now is to sell clothing in large volumes at affordable prices (Vehmas et al., 2018). This not only contributes to environmental degradation but also perpetuates a cycle of excessive consumption. As we delve more into the intricacies of this relationship between fashion and sustainability, our research aims to find new stimulus and organisms for transformative change towards increasing purchase intention and behaviour of sustainable apparels.

In the intersection of fashion and sustainability, once perceived as incompatible due to the short life cycles of garments and the emphasis on durability within sustainability, a critical paradox unfolded (Lundblad & Davies, 2016). In the world of fashion and sustainability, the way clothes are made isn't eco-friendly, mainly because of the fast fashion cycle and huge consumer demand. People wanting more fast fashion stuff leads to a ton of production and waste. Consumer behaviour is the big reason behind fast fashion, influenced by a bunch of things like more people, higher incomes globally, and better living standard. The unsustainable production techniques in fashion industry were

the result of fast fashion cycle and huge consumer demand. The pro-fast fashion consumer behaviour led to higher production and waste formation. It can be inferred that consumer behaviour is the main catalyst of fast fashion and influenced by multiple factors. Population growth, higher global incomes and better living standard also drive production and consumption (Shirvanimoghaddam et al., 2020). The studies till now have focused more on purchase intention using theory of planned (TPB) and theory of reasoned action (TRA). The consumer behaviour in fashion is influenced by personal lifestyles, values, emotions, family routines and shopping habits (Filimonau et al., 2022). The complexity of multiple factors contributing to consumers wasteful behaviour is termed as 'spaghetti soup' (Quested et al., 2013). In this research, our focus is on several new relationships including minimalism, religious values, SDG awareness, and sustainable label awareness among others under the umbrella of several theories filling a void in existing literature.

1.3 Circular economy and fashion industry

Extensive research has explored the effectiveness of the business sector in sustainable practices, yet the literature has largely overlooked the role of consumers in fostering sustainable consumption practices and circular economy (Santos -Corrada et al., 2023). The significant environmental impact of the fashion industry, coupled with increasing consumer concern for sustainability, is propelling the sector towards enhanced ecological responsibility by fostering the creation of sustainable clothing. A circular economy (CE) model is pivotal for the fashion industry, serving as an alternative to the conventional linear economy characterized by production, use, and disposal. There is a pressing need to incorporate circular economy model in fashion industry. In a circular economy, the aim is to extend the lifespan of resources by keeping them in a continuous loop, preserving their value during use, and repurposing them to generate new products once

their initial utility is fulfilled. This principle is highly useful in fashion industry to stop further waste generation. It is essential to implement circular economy principles in fashion industry as (i) it is consumer facing, (ii) will positively influence consumption in other sectors, (iii) it accounts for 2% of world's GDP (Shirvanimoghaddam et al., 2020) and (iv) the annual consumption of textile has doubled from 7kg to 13 kg in past two decades. The throwaway culture results in two third of textile going to landfill post usage.

1.4 Goal and Motivation of Study

The goal of this study is to fill the intention-behaviour gap and establish attitude-intention-behaviour linkage in green marketing and sustainable fashion research. This is not yet established in the green marketing literature (Rausch & Kopplin, 2021). As the attitude-intention-behaviour link is missing, meeting United Nations Sustainable Development Goals (UN SDGs) and circular economy model targets looks far-fetched. This linkage is prominently discussed and diversified attempts in terms of different methodologies, theories, geographies and samples have been made by various researchers (ElHaffar et al., 2020; Tawde et al., 2023). Our review of the attitude-intention-behaviour link suggested that the use of additional variables that influence consumers may fill this. The motivation for this study came from observing people showing concern about the environment, and interest to buy, but almost always buying regular products. This was contradictory; therefore, we explored this phenomenon further, and aimed to solve this puzzling issue.

The research contributes extensively to broader green marketing, sustainable consumption, circular economy and SDGs literature. Especially SDG12: responsible consumption and production. It fills the intention-behaviour gap which is vital to preserving the interests of future generations. Also, to the best of our knowledge, there

are no studies which integrate SDG awareness and sustainable consumption in the fashion industry. Therefore, we have included this construct, increasing the novelty of this research.

We consider sustainable apparel inclusive of organic and recycled apparel. Many studies have focused on the intention to purchase but leave its subsequent resultant behaviour of actual purchase, which becomes a limitation of such studies (L. Wang et al., 2020). As intention may or may not lead to actual purchase behaviour, we have included purchase behaviour to see if the intention is successfully transmitting into its subsequent purchase behaviour. We also explore the chain link between attitude, actual purchase behaviour (PB) and purchase intention (PI) (Rausch & Kopplin, 2021). Upon considering the various factors in sustainable fashion and circular economy, we design this study to fill the intention-behaviour gap.

Sustainable fashion literature has been gaining interest among researchers due to its social importance. Past studies have also focused on refurbished apparel, social media and sustainability including social media platforms like Instagram (Halibas et al., 2023; McKeown & Shearer, 2019; Sharma, 2022; Skinner et al., 2023). The transition towards green apparel manufacturing has been found to elicit positive responses from consumers and create an environment-friendly image (Tewari et al., 2022). Footwear soles are made of microplastics of 57-229 μm (micrometre) size and harm the growth of plants impacting SDG 14 (T.-Y. Lee et al., 2022). The concept of fast fashion leads to more waste. Waste redressal studies focus on recycled, organic and used apparel. The urgent remedy for fast fashion waste generation is using sustainable clothes.

The circular economy is now being included in various policy frameworks in national as well as international organisations. Recently the European Commission pledged to integrate SDGs with the European Union policy framework and priorities, after evaluating its status and finding sustainability concerns (Corrado et al., 2020). It has been found that the concept of circular economy has immense potential to contribute to UN SDGs, especially in the fashion and food industry (Centobelli et al., 2020; Durán-Romero et al., 2020; Provin et al., 2021). The companies are concerned with their current business and therefore they are reinventing themselves.

1.5 Gap identification

A recent research study which systemically reviewed sustainable fashion consumption drivers from 1995 to 2020 including 213 studies found that fashion orientation, normative influence, consumer knowledge and values are the four major themes of sustainable fashion consumption behaviour (Dabas & Whang, 2022). A recent scoping review has also recommended investigating the intention-behaviour gap in green behaviour studies (Polyportis et al., 2022).

There is a contrasting pattern among studies on sustainable fashion and fast fashion. Consumers of fast fashion apparel have a strong intention-behaviour link (Mehta et al., 2022). But researchers have struggled to establish the same link in the case of sustainable apparel. This gap is also being studied in other areas like ethical consumption, green consumption, waste recycling, organic products and single ethical issues (Casais & Faria, 2022). To fill this gap, researchers have adopted different strategies. These include using psychic analysis and cognitive behaviour study (Tawde et al., 2023). Intrapsychic traits, green nudge, consumption values and personal values have been identified as elements to bridge the value action and intention behaviour gap (ElHaffar et al., 2020; Wyss et al.,

2022). In a recent study using a dual theory approach and employing self-efficacy and implementation intention, the direct intention-behaviour link could not be established (Tawde et al., 2023). Therefore, establishing an intention-behaviour link in sustainable apparel is a prominent gap in the literature.

1.6 Research questions, aims and objectives

The objective of the thesis was to answer the following research questions:

Question 1: What factors influence purchase intention of sustainable apparel?

Question 2: What are the strategies and challenges in sustainable fashion consumption?

Question 3: What are the strategies to promote circular economy in fashion industry?

The aim of the thesis is to help companies, policymakers, government to reduce apparel waste and promote sustainable apparel consumption by encouraging consumers towards sustainable consumption. The suggestions will help in policy formulation, consumer acquisition strategy, and branding and awareness campaigns. The strategies are analysed through a combination of literature and empirical analysis. New factors like circular economy SDG awareness, sustainable label awareness, minimalism, green brand loyalty, sustainable fashion choice motive and greenwashing are examined to see their impact on purchase behaviour. The current issues led us to multiple research objectives:

- To assess the existing literature in sustainable fashion and consumption and find strategies and challenges in implementing circular economy concept.
- To assess the relation among circular economy SDG awareness, and purchase intention.
- To bridge intention-behaviour linkage in sustainable apparel buying behaviour.

- To assess the attitude-intention linkage in sustainable apparel buying behaviour.
- To provide recommendations to various stakeholders to improve sustainable apparel consumption.

1.7 Thesis overview

In this chapter-1, the topic of thesis is introduced. The research objectives and scope of the study is defined. It discusses the present situation and research on circular economy and fashion industry. The pollution and fashion industry is also discussed. It presents the gap in literature, discusses existing research, defines the terms and scope, outlines current situation with evaluation. It further presents the general characteristics of the study. The chapter ends with thesis overview of all chapters included in the thesis.

Chapter 2

The chapter 2 describes the theoretical background of the research. It discusses four main theories applied in the research namely: behavioural reasoning theory, stimulus organism response (S-O-R), theory of reasoned action (TRA) and theory of planned behaviour (TPB).

Chapter 3

The chapter three presents a literature review of sustainable apparel research. It delves deeper into to published studies using the scoping review of bibliometrics providing an overview of existing studies using various sources like Scopus and Google Scholar. Further an extensive synthesis of literature is presented.

Chapter 4

The Chapter 4 described the research methodology of the study. It presents the questionnaire items, constructs, sampling procedure, and methodological approach. The chapter first introduces the research methodology used. Thereafter, it discusses the development of questionnaire, pretesting, sampling, and data collection. Thereafter, the usage of partial least square structural equation modelling is discussed. Then measurement model and structural model are presented.

Chapter 5

It presents the complementing method of necessary condition analysis used in the study and explains why it has been used. It is detailed further with effect sizes of the relations, bottleneck analysis and scatter plot of relations. Further, a discussion on each relation is presented with accuracy, ceiling zone, scope, fit, effect size and p-values. A comparison of PLS-SEM findings and NCA results is also presented. It further discusses the coefficient of determination analysis. The chapter also discusses the demographic details of the respondents.

Chapter 6

The chapter 6 forms the discussion section. It revolves around the discussion of findings of the study. The bridging of intention-behaviour gap is first discussed. Thereafter, the linkage of minimalism with purchase intention analysed. Further, greenwashing and its influence on purchase intention is highlighted. Further, the relation between green brand loyalty with purchase intention of sustainable apparels is discussed. Finally, the role of attitude, behavioural control and environmental consciousness.

Chapter 7

The chapter 7 discusses theoretical, practical implications and policy implication. They are primarily directed towards the government, international organisations, non-government organisations, civil societies, corporates, regulatory bodies and marketing managers. The theoretical implications are divided into the implications of behavioural reasoning theory, stimulus organism response theory, theory of reasoned action and theory of planned behaviour. The policy implications are suggested for stakeholders like government, international organizations, fashion retailers and regulators. Contributions of the study are highlighted in this chapter.

Chapter 8

The chapter 8 presents the conclusion of the study. It first presents a concise conclusion of the study. Thereafter a few future research directions are presented. Finally, the limitations of the study are lucidly explained.

CHAPTER 2

THEORETICAL BACKGROUND

CHAPTER 2
THEORETICAL BACKGROUND

2.1 Theories

We use a combination of theories to delve deeper into the sustainable fashion consumption research. An amalgamation of stimulus-organism-response theory, behavioural reasoning theory, theory of reasoned action, and theory of planned behaviour are employed. Each theory adds its unique flavour in the study. The SOR model helps in giving a structure to the model along with TRA and TPB while the behavioural reasoning theory provides room to include contextual constructs making it a comprehensive model.

2.2 Behavioural Reasoning Theory

Westaby (2005) developed the behavioural reasoning theory (BRT). It postulates that reasons and global motive (like attitude, behavioural control) are important linkage to behavioural outcomes (purchase intention and behaviour). In our study the reasons for sustainable fashion purchase intention and purchase behaviour includes minimalism, green brand loyalty and circular economy SDG awareness. This theory works with a basic underlying assumption that reasons help in decision of every individual to justify and defend their actions. The BRT has been implemented in many disciplines including marketing, health psychology (Norman et al., 2012), manufacturing (Sahu et al., 2022), news sharing (A. Kumar et al., 2023), virtual reality (Raj et al., 2023) and green purchase behaviour as well (Sreen et al., 2023). It allows inclusion of context specific factors resulting in comprehensive explanation of behaviour compared to other theories (Westaby, 2005). Due to this reasons the empirical studies with BRT theory explain higher percentage of variance compared to other theories and models (Claudy et al., 2015; Westaby et al., 2010). Also, BRT allows to use both kind of negative and positive factors.

2.3 Stimulus- Organism- Response Theory

The SOR theory, rooted in environmental psychology, derives its framework from the relationship between stimuli (S), organismic (O) states, and responses (R) (Mehrabian & Russell, 1974). Stimulus is the external environment factor. In this theory, stimuli encompass external environmental factors. For our study, stimuli include eco anxiety, CE SDG awareness, attitude, greenwashing, sustainable label awareness, behavioural control, minimalism, green brand loyalty and environmental consciousness. The organism is viewed as the psychological mechanism facilitating the transformation of stimuli (S) into responses (R), encompassing cognitive and affective reactions. In our context, purchase intention is considered organisms, with purchase behaviour as the response construct.

SOR has found application in diverse fields, extending beyond its origins in environmental psychology. In the area of social networking services, it has been employed to investigate information avoidance as a response (Kumalasari & Priharsari, 2023). In the social ecommerce of fashion products continuous purchase intention has been taken as a response (Hewei & Youngsook, 2022), and in the trending research of metaverse and brand engagement (C. T. Lee et al., 2023).

2.4 Theory of Reasoned Action and Theory of Planned Behaviour

Theory of Reasoned Action (TRA) and the Theory of Planned Behaviour (TPB) were used theoretical blocks for this study. At the earliest state TRA was used for volitional behaviour and states that behaviour is caused due to intentions (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). Since we are investigating the intention behaviour gap, use of this theory is appropriate. The theory evolved from the attitude-behaviour model, addressing inconsistencies within the existing model by introducing several

modifications to it. For resolving bivariate inconsistencies, subjective norm was incorporated alongside behavioural intention. In our study, we adopt variables from the theory of reasoned action, encompassing attitude, purchase intention, and purchase behaviour.

TPB argues that attitude helps in evaluation of positive or negative behaviour and given by (Ajzen, 1991). TPB is incorporated by adding behavioural control construct in our study which has been found to influence intention-behaviour linkage. Also, TRA and TPB have been extensively used in previous studies in sustainability context including fashion sustainability (Aktas et al., 2018; Judge et al., 2019; Rausch & Kopplin, 2021; Sheoran & Kumar, 2022; J. Wang et al., 2018). Therefore, their involvement in this study to solve the research question is highly justified. Further, applying a single theory in several contexts is futile rather multi theory implement is beneficial. Further, integration of multiple theories helps in providing better insights (N. Kumar & Mohan, 2021). Therefore, we make this effort in this study by converging TRA and TPB with S-O-R and BRT.

We include additional constructs like sustainable fashion choice motive (SFCM), eco anxiety, circular economy SDG awareness, greenwashing, sustainable label awareness, minimalism, green brand loyalty and environmental consciousness.

In our investigation, we consider sustainable fashion choice motives and materialism to gauge consumers' morality. To assess environmental concern, we employ constructs like eco-anxiety and environmental consciousness. In examining brand behaviour influence, we incorporate green brand loyalty and sustainable label awareness. Notably, the green marketing literature, to the best of our knowledge, lacks the establishment of circular economy SDG awareness and intention-behaviour linkage, adding a layer of novelty to our study while simultaneously addressing the intention-behaviour gap.

CHAPTER 3

SYNTHESIS OF LITERATURE

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3.1 Literature Synthesis

Previous studies in sustainable apparel consumption focused on aspects like green communication, openness to change and altruism (Tewari et al., 2022). Using theories like value attitude behaviour cognitive hierarchy (VABH) and TPB. Various dimension of sustainable fashion have been explored including sports in a study on German consumers studying the willing to pay more (Spindler et al., 2023), recycled shoes in Indian consumers (Yadav et al., 2022), and apparel disposal by South African consumers intent to donate (Sonnenberg et al., 2022). The behavioural intention of Italian consumers with environmental concern, perceived value, purchase intention and willingness to pay premium was also studied (Dangelico et al., 2022). These studies were focused more towards the intention to purchase than the behavioural part.

The fashion industry adopted a linear growth strategy of "take-make-use-throwaway" initially to grow without any bounds. This led to fast fashion adoption and promoted a climate crisis. The existing system has outrun its trajectory, promotes waste generation and is unsustainable in the longer term. The absence of end-of-life cycle recycling may lead to contamination and the spreading of hazardous particle waste. Now, to address the adverse consequence of the earlier version; an updated system "take-make-use-reuse" has been formulated. This is presently advocated by business leaders, climate activists, scholars and most importantly by the government in policy formulation and dialogues. At the centre of this issue are the consumers. They show an intention to purchase but resultant actual purchase behaviour is missing (Yadav et al., 2022).

Circular economy addresses the root cause of Sustainable Development Goals implementation challenges. It provides a concept of an economy where waste and pollution are excluded by design while materials and products are kept in use, regenerating natural systems. It is a promising concept to accelerate the 2030 Agenda. It can help in achieving multiple SDGs like SDG 6 (clean water and sanitation), SDG 8 (economic growth), SDG 11 (sustainable cities), SDG 12 (sustainable consumption and production), SDG 13 (climate action), SDG 14 (oceans) and SDG 15 (life on land). CE initiates its action through SDG 12 focusing on sustainable consumption and production. Circular fashion is a subset of CE and its usage significantly influences SDG12. The adoption of a CE model in emerging markets is important. Their per capita income, human development index, and disposable income are on an increasing trend. Consumers in these markets aspire to have living standards like developed nations. Among them, India has greater importance due to its higher population share. It is believed to be on the cusp of a consumption outburst with increasing purchasing power.

Most of the prior studies on circular fashion focused on manufacturing, logistics and retailers' issues (Ki et al., 2020). Emphasis has recently shifted to sustainable consumption, a psychological and behavioural phenomenon. Although studies on circular economy and sustainable fashion is on an increasing trend in the past 5 years. There is a need for more studies investigating circular economy models and consumers' sustainable consumption behaviour. It also presents the need for empirical studies connecting existing behavioural theories and extracting key takeaways to nudge consumers towards sustainable goods. Therefore, we designed this empirical study on sustainable fashion buying behaviour. Fashion is a daily choice and consumers wearing sustainable apparel present themselves as environment-friendly individual and thus

create a social bandwagon effect promoting SDG 12. Therefore, studying this concept is vital from policy perspective as well.

The concept of circular economy is inclusive of the life cycle of a product and includes all stakeholders. This system tends to be regenerative by design and intent, and is also commercial promoting business. Circular fashion can be seen as a subset of a circular economy. The fashion industry is highly driven by consumer preference and is more pull-based than push-based. Consumer behaviour is relatively important in the case of behavioural resistance to buy eco-friendly products and therefore the need for such studies is paramount.

3.2 Bibliometric Review

We also conducted the literature review using bibliometric approach. A hybrid literature review is highly insightful as it is robust and comprehensive. It provides better insights, helps in understanding the depth of a field. This was done to first, to see the broader parameters of sustainable fashion i.e. to find if the number of publications are increasing or decreasing, who are the prominent authors, what are the major publication sources, major countries involved in the research among others.

First bibliometric approach was used to see the trend of research in the sustainable fashion domain. It comes under the broader umbrella of systematic literature review itself. They provide unique insights compared to the traditional method of literature reviews. Quantitative software tools like Vosviewer and Bibliometrix are used for analysing bibliographic data. This data is associated with the published articles like journals source names, citations, country of authors, author details and publication years. This data is extracted from repositories like Scopus and Web of Science. It is highly useful to find sources of published documents, rate of growth, publication trend over the

years, citation trend, country wise scientific production, country collaboration and word cloud. Though this is not a recent innovation, availability of open-source software and tools like R, R Studio, Gephi, Bibliometrix has led to higher adoption among scholars of all domains.

We first analysed all the literature reviews conducted in the past related to sustainable fashion and presented them in Table 3.1. Analysing these literature reviews, we observe that most of the studies have used systematic literature review approach or a simple review approach. These studies were focused on various aspects of sustainable fashion consumption. These include challenges of implementing the principles of circular economy in the fashion industry, condensing the drivers of sustainable fashion consumption, listing the sustainable environmental practices in the fashion industry, circular economy and textile industry, antecedents of sustainable practices in apparel industry, evaluation methods of environmental sustainability in textile industry and environmental impact of textile in usage. These relevant studies are presented in Table 3.1.

Table 3.1 Literature reviews conducted on sustainable fashion consumption. (Source- Designed by the author)

S No.	Paper title	Focus area and method	Studies included & period	Reference
1	"Investigating the challenges of applying the principles of the circular economy in the fashion industry: A systematic review".	Challenges of implementing circular economy in fashion. PRISMA.	55 studies and 7 other sources. 2007 to 2022.	(Abdelmeguid et al., 2022)
2	"A systematic review of drivers of sustainable fashion consumption: 25 years of research evolution"	Drivers of sustainable fashion. Systematic review.	213 studies from 1995 to 2020.	(Dabas & Whang, 2022)
3	"Mapping environmentally sustainable practices in textiles, apparel and fashion industries: a systematic literature review".	Sustainability practices. Systematic review.	91 studies from 2010 to 2020.	(Islam et al., 2021)
4	"The circular economy in the textile and apparel industry: A systematic literature review".	Circular economy in textile. Systematic review.	109 from 2002 to 2019.	(Jia et al., 2020)
5	"Sustainable practices and their antecedents in the apparel industry: A review"	Antecedents of sustainability in the apparel industry. Review.	91 articles from 2019 to 2022.	(Chowdhury et al., 2022)
6	"Collaborative fashion consumption – A synthesis and future research agenda"	Collaborative fashion consumption. Systematic review.	154 articles from 2004 to 2020.	(Henninger et al., 2021)
7	"Collaborative fashion consumption – drivers, barriers and future pathways".	Collaborative fashion consumption. Content analysis.	33 papers from 2001 to 2016.	(Becker-Leifhold & Iran, 2018)
8	"Environmental sustainability of textiles and apparel: A review of evaluation methods".	Evaluation method in textile sustainability. Systematic review.	56 articles from 2016 to 2020.	(Luo et al., 2021)
9	"Environmental impacts of textiles in the use stage: A systematic review".	Environment impact of textiles. Systematic review.	74 articles.	(Luo et al., 2023)

3.3 Bibliometric Method

Fashion industry is one of the world's most polluting industries, contributing significantly to environmental degradation and climate change. Sustainable fashion consumption has become an important research area in recent years. This bibliographic review aims to provide an overview of the current research on sustainable fashion consumption. The purpose of this study is to map the landscape of sustainable fashion consumption research by performing a bibliographic review of relevant literature. Specifically, we aim to identify the most influential authors, institutions, and journals in this field, as well as the most important themes and trends in research.

We conducted a review of academic literature using the Scopus database, focusing on articles published between 1995 and 2023. The characteristics of search and output are presented in Table 3.2. We used bibliometric techniques, including co-citation analysis and bibliographic coupling, to analyse the data. Our analysis revealed that research on sustainable fashion consumption has increased significantly in the past decade, with a focus on themes such as consumer behaviour, sustainable supply chains, and circular economy. A rapid increase was seen post 2015. Citation also increased dramatically post 2015. There is a significant global network of collaboration in this area. The paper outlines the current state of research in the areas of sustainable fashion consumption and draws attention to its key findings. We also offer a research agenda for the future.

The search criteria entered in Scopus database was “TITLE-ABS-KEY (sustainable OR circular OR recycle OR green AND fashion OR apparel OR clothing) AND (LIMIT-TO (PUBSTAGE , "final"))”.

The search was limited to paper published between 1995 to 2023. Only article document type were selected in the English language and final publication stage. The search

keywords were selected on the basis of studies in the fashion sustainability context. Bibliometric approach allows us to answer the following research questions:

RQ1: What are major journals publishing research on sustainable fashion?

RQ2: What are the most cited journals and authors?

RQ3: What are leading countries in sustainable fashion research?

RQ4: Identifying key discussion in the field using word cloud?

Table 3.2: Main information about bibliometric data. (Source- Designed by the author)

Description	Results
Timespan of documents	1995:2023
Sources (Journals, Books, etc)	590
Documents	1785
Annual Growth Rate %	10.49
Document Average Age (years)	6.09
Average citations per doc	22.93
References	89,363
Document Contents	
Keywords Plus (ID)	3,902
Author's Keywords (DE)	5,196
Authors	3,995
Authors of single-authored docs	341
Authors Collaboration	
Single-authored docs	383
Co-Authors per doc	2.78
International co-authorships %	21.68
Document Types	
article	1,785

Table 3.3: Bibliographic coupling of sources. (Source- Designed by the author)

Source	Documents	Citations	Link Strength
Sustainability (Switzerland)	270	3,338	31,853
Journal Of Cleaner Production	128	5,972	18,543
Journal of Fashion Marketing and Management	64	2,105	17,429
Fashion Practice	38	279	6,166
International Journal of Consumer Studies	38	2,088	10,446

Source	Documents	Citations	Link Strength
International Journal of Fashion Design, Technology and Education	36	355	6,075
Journal Of Global Fashion Marketing	31	562	7,208
Research Journal of Textile and Apparel	29	297	2,706
Industria Textila	26	103	1,140
International Journal of Production Economics	22	2,991	3,363

In terms of top journals publishing research on sustainable fashion, Sustainability (Switzerland), Journal of Cleaner Production and Journal of Fashion Marketing and Management are leading journals as presented in Table 3.3. The link strength signifying the links of journals with each other's. In terms of research impact, Journal of Cleaner Production was leading with around 5,972 citations, Sustainability was second, International Journal of Production Economics was third while Journal of Fashion Marketing and Management was fourth. Overall, Journal of Cleaner Production and Journal of Fashion Marketing and Management are the top sources for publishing marketing and fashion sustainability literature.

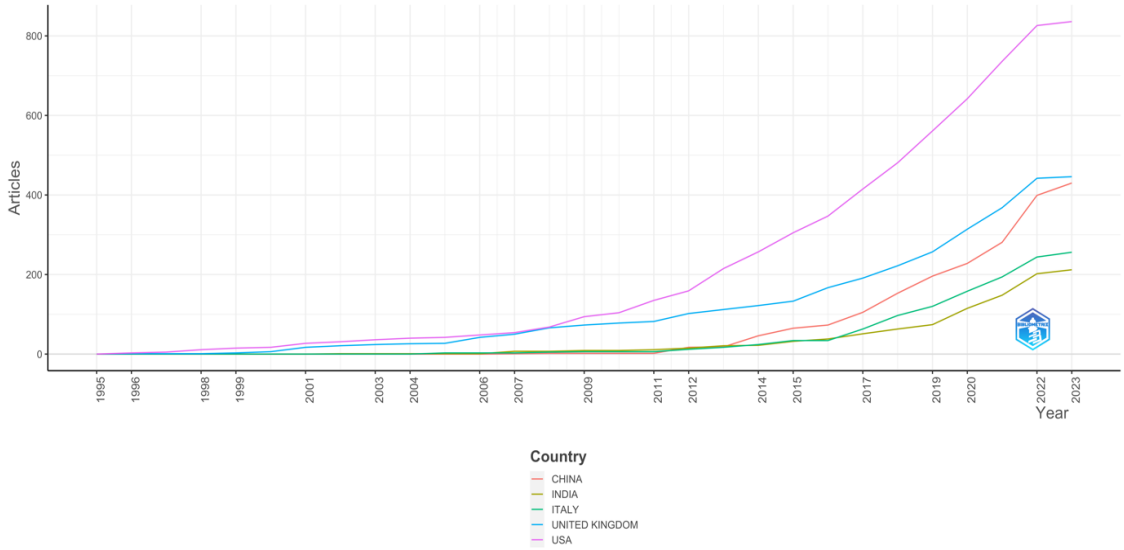

Figure 3.1: Country wise publication over time. (Source- Designed by the author using Bibliometrix)

The country wise production over time chart helps us answer the fundamental research question that what are the top 5 countries publishing in the domain of sustainable fashion. This is evident from the Figure 3.1. US is top country with highest published papers of more than 400 in the fashion sustainability domain, UK is distant second. China was closer to UK with around 400 publications. High number of publications suggests that these countries are worried about solving the fast fashion led waste issue. Especially with developed countries leading the charge. Italy and India are catching up with around 200 publications each. The country wise scientific production is presented in Figure 3.2 and the growth in scientific publication in the field is presented in Figure 3.3.

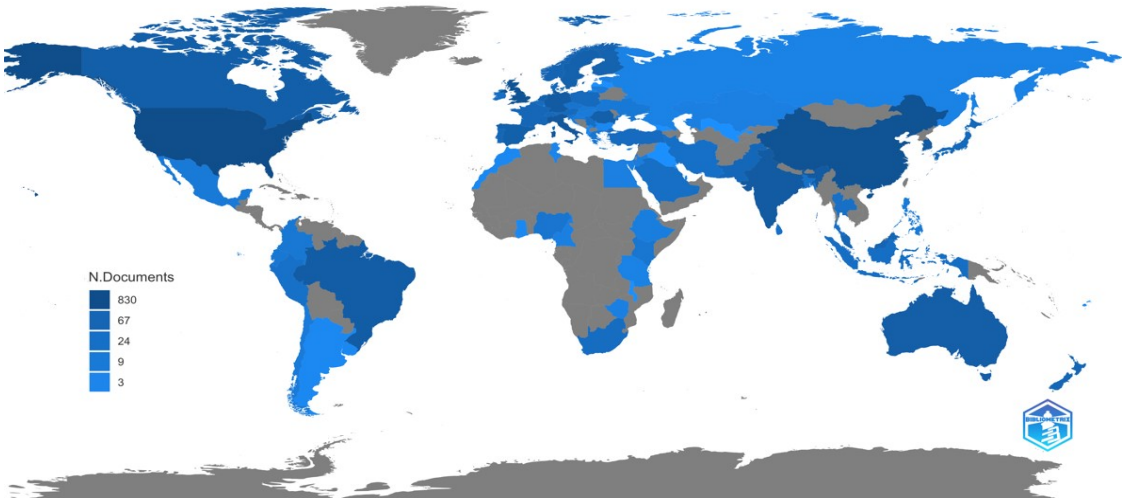

Figure 3.2: Country wise scientific production. (Source: Designed by author using bibliometrix)

Country wise production map highlights the top countries publishing the most in sustainable fashion context as shown earlier in the country production Figure 3.2 with top 5 countries. The country collaboration map provides further insights. It suggests that the fashion sustainability work is spread across the global. USA and South Korea were the top collaborators with 28 publications, USA-China published 21 articles together, China-Hong Kong and USA-UK collaboration published 13 each while UK-China and UK-Italy collaboration published 11 each as shown in Figure 3.4.

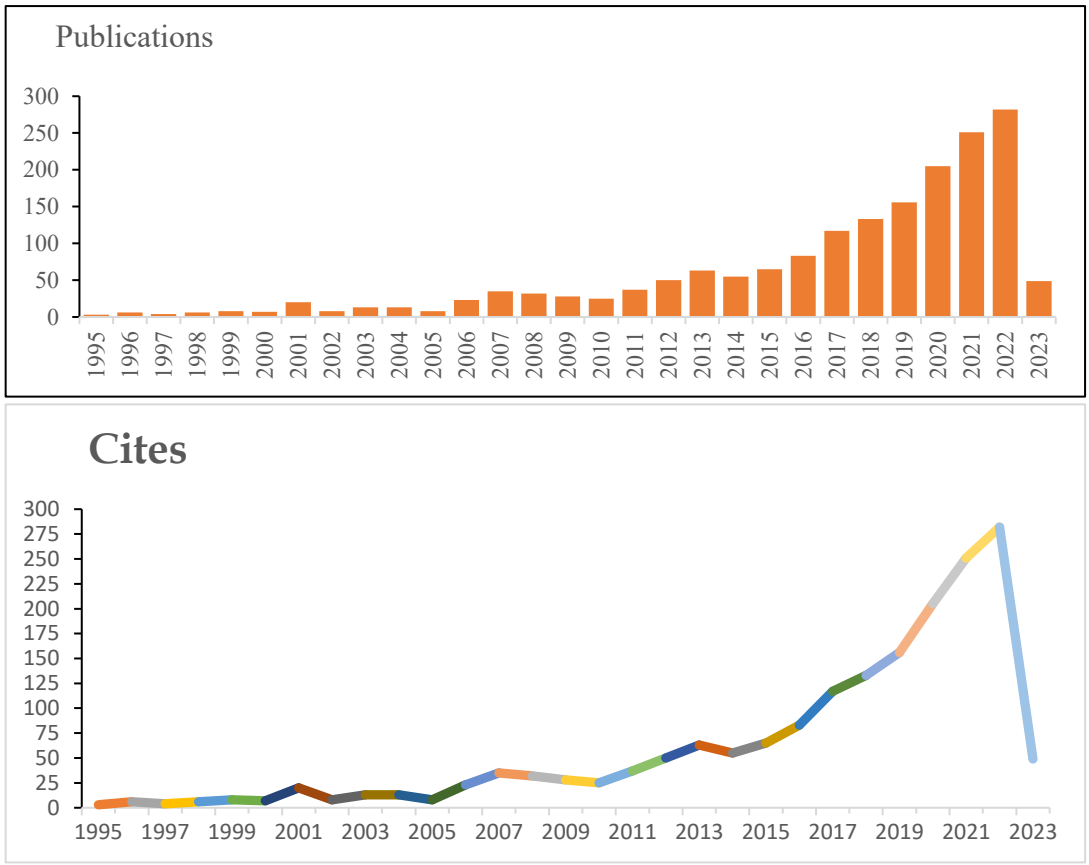

Figure 3.3: Publication and citation growth. (Source- Designed by author)

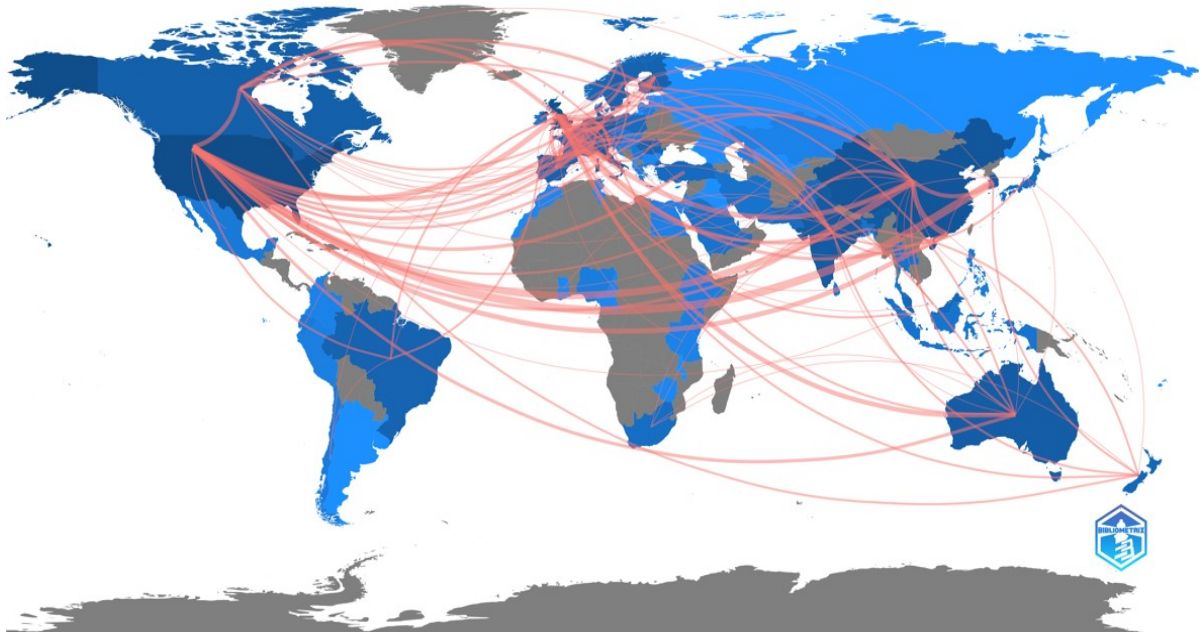

Figure 3.4: Country collaboration map. (Source: Designed by author using bibliometrix)

The international co-authorship of all published documents was around 21.7% with annual growth rate of 10.5%. The average citations per documents was around 22.9. Interestingly, the average age of all published documents was just around 6.1 years. This suggests that the field is comparatively new. Also, presents an opportunity for future researchers to contribute more to this important field to help design policies on improving sustainable consumption and reduce wastage. In terms of institution or affiliation, The Hong Kong Polytechnic University has published highest number of publication on sustainable fashion as presented in Table 3.4 and the most cited countries are shown in Figure 3.5.

Table 3.4: Most relevant affiliations (Source- Designed by the author).

Affiliation	**Articles**
The Hong Kong Polytechnic University	52
Donghua University	45
Yonsei University	42
University Of Delaware	40
Seoul National University	31
North Carolina State University	30
University Of Otago	28
Not reported	27
Oklahoma State University	25
University Of Minnesota	25
University Of Missouri	25

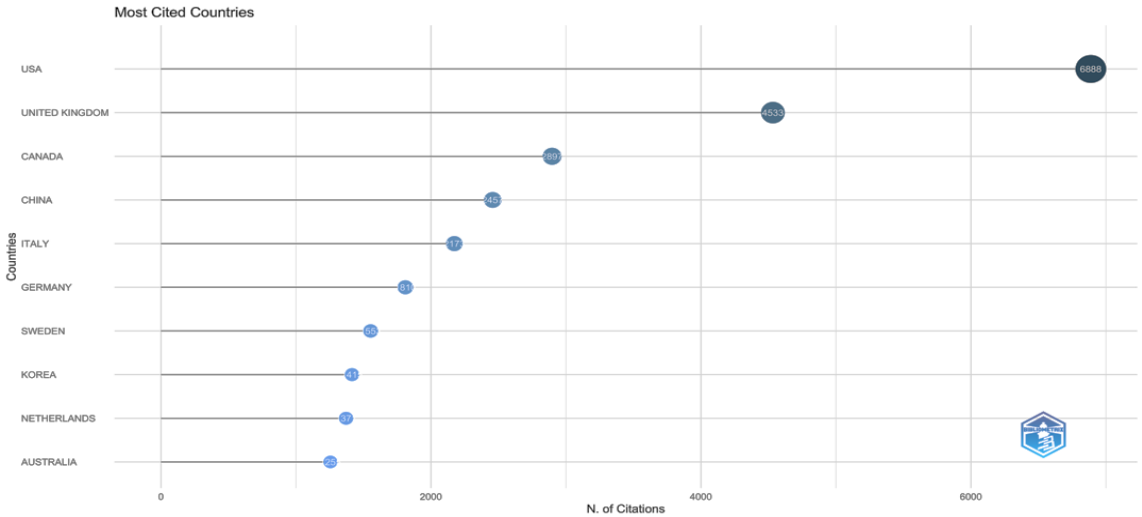

Figure 3.5 Most cited countries. (Source- Bibliometrix)

Figure 3.6: Word cloud (Source- Bibliometrix)

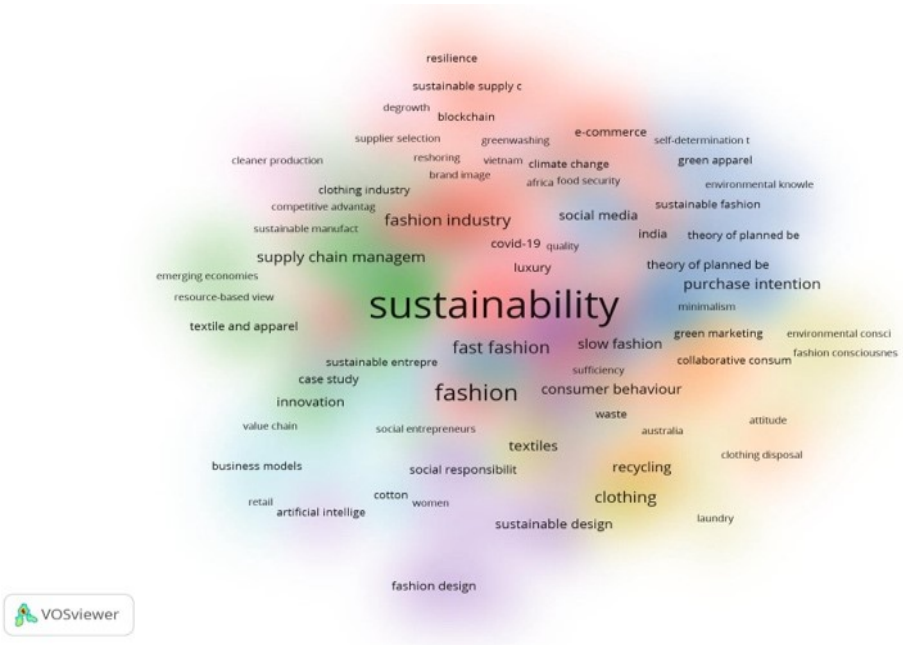

Figure 3.7 Density visualisation of keywords. (Source- VOS Viewer).

The word cloud analysis presents us with the most used keywords in the domain as shown in Figure 3.6 and Figure 3.7. The size of words determines their frequency or importance. As per the given Figure 3.6 the clothing industry is the industry in focus with various domains getting more attention like supply chain management, decision sciences, marketing, recycling, manufacturing, environmental management, environmental economics among others. Further, some of the methods are also highlighted like environmental impact analysis, life cycle analysis, survey, questionnaire, and strategic approach. The research also focused on circular economy aspect, recycling, retailing, design, public attitude, business development and innovation. The presence of word like United States and China highlights that these are major countries publishing more in the sustainable fashion domain. Further, density visualisation provides deeper insights. Its analysis shows that sustainability is the central theme around all the studies revolve. Further, fashion industry's consumer behaviour is also a big theme within green marketing domain. It is filled mostly using TRA and TPB with other constructs like, environmental consciousness, environmental knowledge, attitude, fashion consciousness, greenwashing, minimalism among others. Some recent topics with new technologies have also been explored in the domain of sustainable fashion like artificial intelligence, blockchain, and social media. This maybe an indication of where the field is moving with advancement of technology. Also, collaborative consumption and recycling have found attention of scholars in the sustainability domain.

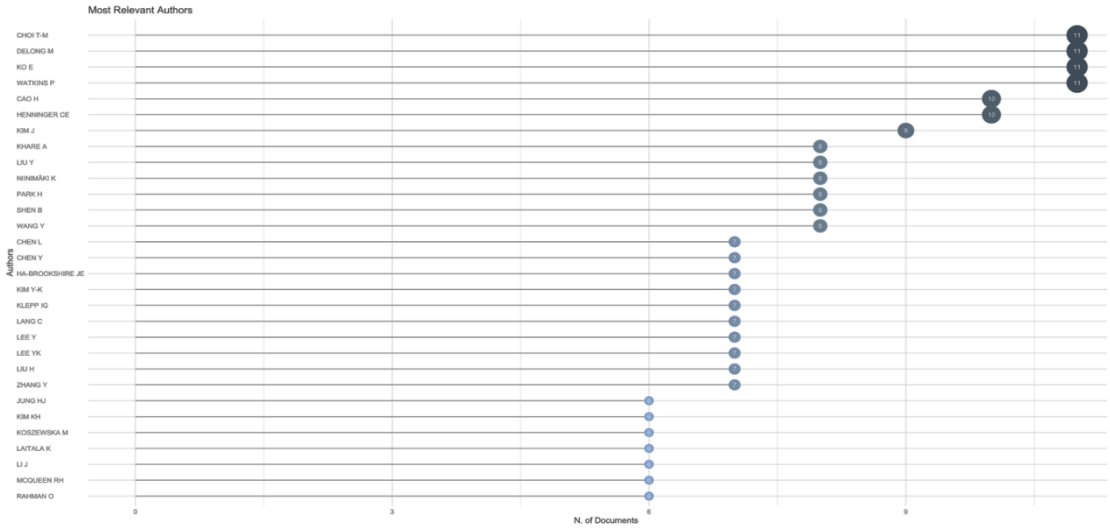

Figure 3.8 Most relevant authors. (Source: Bibliometrix)

The top authors in the field have published around 11 papers till 2023 which is shared by four authors as shown in the Figure 3.8. They are closely followed by two authors with 10 publications each. In terms of most global cited documents, (Laroche et al., 2001), has highest citation with 1,643 total citations and 71.4 annualised citation as shown in Table 3.5.

Table 3.5: Most global cited documents (Source- Designed by the author)

Title and reference	Total citations (TC); TC per year; Normalized TC
"Targeting consumers who are willing to pay more for environmentally friendly products" (Laroche et al., 2001).	1643; 71.43; 15.07
"Open Innovation: Past Research, Current Debates, and Future Directions" (Lichtenthaler, 2011).	476; 36.62; 8.5
"A comparative analysis of greening policies across supply chain structures" (Ghosh & Shah, 2012).	459; 38.25; 6.44
"Towards a new taxonomy of circular economy business models" (Urbinati et al., 2017).	393; 56.14; 13.01
"Towards a sustainable fashion retail supply chain in Europe: Organisation and performance" (Bai et al., 2020; de Brito et al., 2008).	380; 23.75; 8.43

Title and reference	Total citations (TC); TC per year; Normalized TC
"Environmental sustainability in fashion supply chains: An exploratory case based research" (Caniato et al., 2012).	336; 28; 4.71
"Industry 4.0 technologies assessment: A sustainability perspective" (Hjorth & Bagheri, 2006).	329; 82.25; 20.5
"Navigating towards sustainable development: A system dynamics approach" (Hjorth & Bagheri, 2006).	297; 16.5; 10.53
"Reflections on implementing industrial ecology through eco-industrial park development" (Gibbs & Deutz, 2007).	279; 16.41; 6.49
"The effects of GSCM drivers and institutional pressures on GSCM practices in Taiwan's textile and apparel industry" (Wu et al., 2012).	274; 22.83; 3.84

3.4 Hypothesis Formulation

3.4.1 Sustainable fashion choice motive, eco-anxiety, CESDG awareness, attitude

1. Sustainable fashion choice motive (SFCM)

Motivations for choosing sustainable fashion and individual fashion preferences are connected to the ethical considerations in personal shopping decisions, influencing the choices made during the purchasing process (Yadav et al., 2022). We borrowed this construct sustainability literature under food waste behaviour and has been used in recycled shoe PB (de Boer et al., 2007). In the form of shoe choice motive, it was found to directly influence attitude of consumers purchase intention in recycled shoe consumption literature (Yadav et al., 2022). To the best of our knowledge it has not been tested with purchase intention of sustainable apparels but has been extensively used in sustainable food consumption (O. Wang & Scrimgeour, 2021). Food choice motives been found to influence food intention and behaviour (Pennanen et al., 2023).

Motive of consumers regarding their sustainable choice may play a major role in sustainable consumption. Fashion consumption is driven by many motives including the

need to look and feel good. But here we look at fashion consumption through the lens of sustainable consumption. Therefore, we have grounded this construct in the context of sustainable fashion.

Thus, the hypothesis suggests:

H1: There is a significant relationship between consumers sustainable fashion choice motive and purchase intention of sustainable apparels.

2. Eco anxiety (EA)

Eco-anxiety is defined as "the generalised sense that the ecological foundation of existence are in the process of collapse" (Albrecht, 2012; Pihkala, 2020). In general, eco-anxiety is found to be concerned with fear, uncertainty and uncontrollability and it also includes functional impairment and rumination. There remains a division among researchers regarding whether eco-anxiety is a natural, inherent phenomenon or a pathological condition (Ágoston et al., 2022). Our assumption aligns with the traditional perspective in India, considering eco-anxiety as a natural phenomenon in the younger consumers, further supported by its positive correlation with pro-environmental behaviour and religious values. However, some studies have indicated a potential association between eco-anxiety and general anxiety (Wullenkord et al., 2021). It has recently studied as a moderator in the tourism sustainability literature (Joshua et al., 2023). Consumer anxiety has been found to influence attitude towards food supplement (Najib et al., 2022).

The anxiety may play a major role in decision making process of consumers. It is particularly important in younger consumers, Generation Y and Generation Z which are the focus of this study. Eco-anxiety arises due to overthinking about the extreme negative outcomes of environmental degradation and climate change. This a recently trending construct and therefore we included this to test its relation with purchase intention in the

context of sustainable fashion. The construct is important from generation of sustainable buying ideas to actual environment friendly actions. Therefore, broadening horizon of the study. Thus, the hypothesis implies:

H2: There is a strong relationship between eco-anxiety of consumers and purchase intention of sustainable apparels.

3. Circular economy sustainable development goals awareness (CESDG)

Circular economy and Sustainable Development Goals (SDGs) awareness has emerged as a crucial factor in fostering a more sustainable and responsible consumption among general consumers. The concept of a circular economy emphasizes minimizing waste and maximizing the longevity of resources through recycling, reusing, and reducing. As societies worldwide grapple with environmental challenges, raising awareness about the Circular economy in the context of SDGs becomes imperative. By aligning circular practices with specific SDGs, such as responsible consumption, climate action, and life on land and below water, individuals and businesses can contribute significantly to achieving a more sustainable future. This awareness not only promotes environmental stewardship but also encourages informed decision-making, inspiring a collective commitment to the SDGs and the principles of circularity for a resilient and harmonious planet.

While numerous studies have delved into the significance of the fashion industry in realizing the SDGs outlined in the 2030 agenda, it is essential to underscore the multifaceted role that this industry plays. Acknowledging the interconnectedness between fashion and various SDGs, such as responsible consumption, decent work and economic growth, and climate action, becomes pivotal (Aramendia-Muneta et al., 2022; Hasbullah et al., 2022). Empirical studies lack focus on this particular front. A systematic literature review study concluded that food waste may be used in production of bio textile

resulting in achieving SDG-12 (Provin et al., 2021). The circular economy is intricately connected to SDG 12 (responsible consumption and production), Sustainable Development Goal 6 (clean water and sanitation), SDG 13 (climate action), and SDG (life on land). Our conceptualization of circular economy Sustainable Development Goals (CESDG) positions it as a factor influencing apparel purchasing behaviour, contributing to the originality of our study.

Thus, the hypothesis suggests:

H3: Awareness of circular economy sustainable development goals has a significant influence on the intention to purchase sustainable apparels.

4. Attitude (ATT)

Earlier studies focusing on purchase intention have found positive relationship between attitude and purchase intention. Attitude is considered to exert high influence on behaviour (Joshua et al., 2023). It is found to be more influenced by hedonic motivation than utilitarian (Pop et al., 2023). Consumer attitude is also found to vary from country to country and depends on development status (Pop et al., 2023). Attitude has been found to have significant positive relationship with purchase intention in case of green products (Sreen et al., 2023).

Attitude of consumers is an important criteria in evaluating behaviour and is one of the important construct in TPB model. It has been established in past literature that attitude plays an important role in determining intention to purchase (Ahmed et al., 2022). In this study we try to replicate this finding to establish a robust model.

Thus, the hypothesis states that:

H4: Attitude of consumers has significant impact on purchase intention of sustainable apparels.

3.4.2 Greenwashing, sustainable label awareness,

1. Greenwashing (GW)

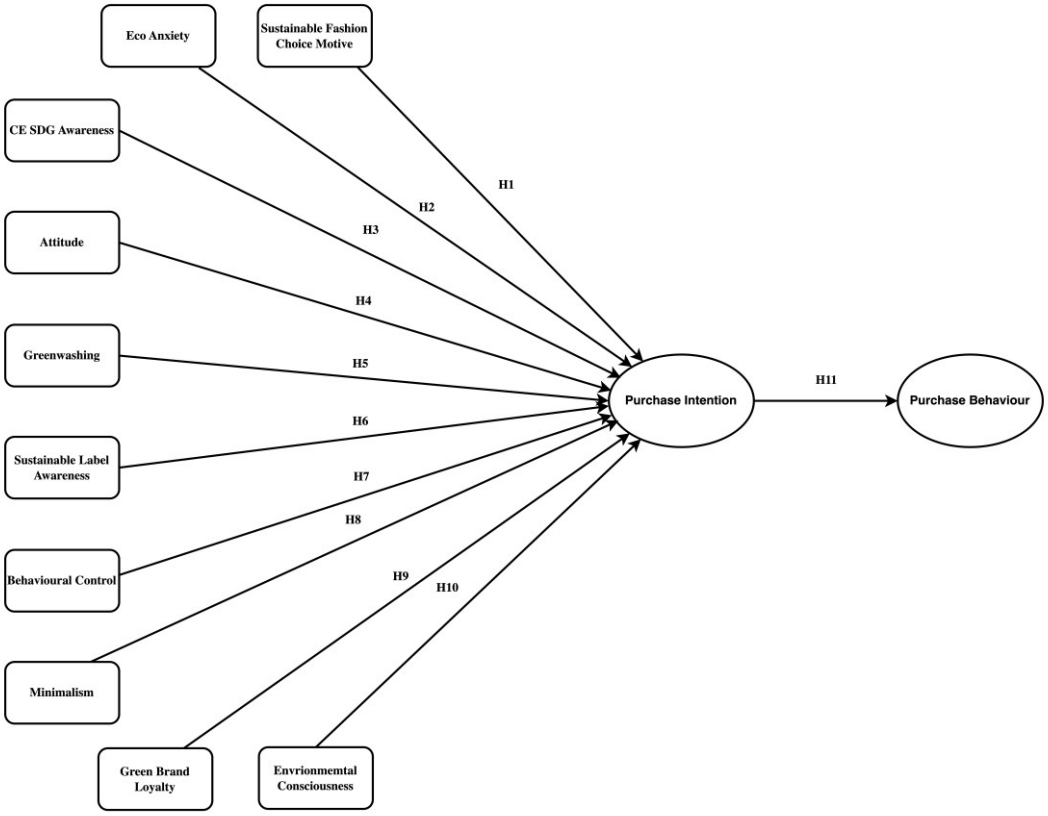

Figure 3.9: Conceptual model. (Source- Designed by the author)

(CE SDG: circular economy sustainable development goals).

The fashion industry is moving towards a sustainable tomorrow and rapid transition is expected. To take off this pressure companies engage in greenwashing activities. Greenwashing is defined as "practice of falsely promoting an organisation's environmental efforts or spending more resources to promote the organisation as green than are spent to actually engage in environmentally sound practices" (Becker-Olsen & Potucek, 2013). As consumer awareness of environmental issues grows, firms are increasingly using green marketing to stay competitive. However, when green marketing

lacks real environmental commitment, consumers often view it as greenwashing (Zhang et al., 2018). It can also be described as an attention diversion technique wherein the company highlights a small number of environmentally positive activities while obscuring the numerous environmentally negative activities overall presenting themselves as a green brand. Green marketing also risks being labelled as "greenwashing" when consumers perceive that firms are "promising more environmental benefit than they deliver."

In the context of the fashion industry, the greenwashing narrative becomes evident through claims of being more sustainable. However, these claims often only address a negligible portion of the fashion brand's collections. This might involve downcycling materials instead of prioritizing fibre-to-fiber recycling or promoting take-back programs that, rather than encouraging genuine sustainability, merely incentivize guilt-free consumption. Examples of greenwashing actions in the industry include claims about the sustainability of synthetic fibres or the promotion of recycled polyethylene terephthalate (PET) in new textile materials.

It has been found that if consumers believe in the product, then they are willing to take risk of greenwashing (Braga Junior et al., 2019). It has also been found to significantly influence consumers purchase decision (Mandarić et al., 2022).

Thus, the hypothesis proposes that:

H5: Consumers' understanding of greenwashing significantly influences their purchase intention of sustainable apparels.

2. Sustainable label awareness (SLA)

Sustainability related mindset may tend to see product details for a symbol of sustainability. Such symbols in apparel products are generally present in apparel tags.

These are presented by the companies and suggested by the regulatory bodies (Siraj et al., 2022). Also, behavioural control with actionable labelling has been found to influence behavioural intention (Aitken et al., 2020).

Eco-labels have been found to have a significant impact on intention to purchase in a study on green consumption (Nguyen-Viet, 2022). Eco labels influence environmental consciousness and attitude (Gaspar Ferreira & Fernandes, 2022). But sometimes labels can be hideous and poorly presented. In such cases, researchers have found that poor labels act as barrier to positive attitude of consumer in the organic food context (Pham et al., 2019). Therefore, eco labels are important factors while studying green consumption behaviour. We have transformed this construct into sustainable label awareness as the consumer may or may not be aware of sustainability labels in the context of sustainable fashion. Thus, the hypothesis states that:

H6: Consumers awareness of sustainable labels has a significant impact on purchase intention of sustainable apparels.

3.4.3 Behavioural Control

Behavioural control is a part of TPB and indicates ease or difficulty of acting in a certain way (Aktas et al., 2018). Authors (Aitken et al., 2020; Lin & Shi, 2022) in their study on new energy vehicle consumption found that behavioural control impacts the intention behaviour gap. It has been found to influence sustainable consumption behavioural intention in a study with TPB and consumption cycle (Sheoran & Kumar, 2022). It has also been found to directly influence PI in a study on sustainable housing (Judge et al., 2019). Studies have found that behavioural control is an important factor of purchase intention in organic products (Aitken et al., 2020). It has been contended that a fundamental element in bridging the divide between consumers' favourable attitudes

toward sustainability and their tangible purchase behaviour involves empowering consumers by enhancing their perceived behavioural control. Thus, the hypothesis states:

H7: Consumers behavioural control has a significant impact on purchase intention of sustainable apparels.

3.4.4 Minimalism and Green brand loyalty

1. Minimalism (MIN)

"The most environmentally sustainable jacket is the one that's already in your closet"—Lisa Williams (Chief Product Officer, Patagonia). The concept of minimalism mainly revolves reducing number of material possessions. It is an emerging concept has seen recent adoption in marketing research particularly in sustainable consumption research (Chen & Liu, 2023). The research interest in this niche saw jump after great recession (Rodriguez, 2018). The reason for adopting minimalism as a practice varies from identity well decided financial behaviour (Summers, 2022), present as a status (Khamis, 2019), environmental consciousness (Meissner, 2019). It is generally associated with reduction of consumption and possessions and has been found to influence purchase decisions (Chen & Liu, 2023).

Though minimalism as a construct is believed to be included in 1980s. It has found a recent resurgence. This may be due to ongoing discussion on finding sustainable ways of living. Reducing overall carbon consumption by simply being minimalistic. Also, a documentary on minimalism led to social media debates among younger consumers. Minimalistic consumers may have negative relation with buying intention even when the product is sustainable as they are more eager to reduce any kind hoarding behaviour. Therefore we include this construct and hypothesise that:

H8: Consumers minimalism has a negative significant impact on purchase intention of sustainable apparels.

2. Green brand loyalty (GBL)

Numerous renowned fashion brands have embraced sustainable branding, incorporating eco-friendly strategies into their product designs. They place a significant emphasis on using recycled materials to respond to their customers' environmental concerns (Testa et al., 2022).

Research indicates that cause-related marketing has the potential to foster brand loyalty or engagement with a brand (Schamp et al., 2023). Green brand loyalty has been found to be significantly influenced by attitudinal purchase intention (Panda et al., 2020).

Building brand loyalty is goal of companies. This helps them to build a regular customer base and protect their bottom line. Consumers green attitude and alignment towards sustainable values may lead to loyalty towards brand they perceive as green. Therefore, consumer role in green brand royalty is highly important and thus, we hypothesize that:

H9: Green brand royalty has a significant impact on purchase intention of sustainable apparels.

3.4.5 Environmental consciousness, purchase intention and behaviour

Environmental consciousness (EC), also referred to as ecological impact or environmental concern, represents an individual's emotional attachment to the environment, demonstrating a heightened awareness of current and future environmental issues. Earlier research has revealed that environmental consciousness not only affects the purchase intention of consumers concerning general sustainable products but also concurrently influences their attitudes towards sustainable products (Chaturvedi et al., 2020).

However, there is also evidence suggesting that environmental consciousness may not necessarily result in favourable environmental behaviour (Tam & Chan, 2017). Environmental concern has been found to influence purchase intention of sustainable fashion products (Dangelico et al., 2022). So, the concern about the environment, its issues may influence the decisions as a consumer.

Thus, the hypothesis suggests:

H10: Environmental consciousness of consumers has a significant impact on purchase intention of sustainable apparels.

1. Purchase intention and behaviour

Aligned with existing literature on sustainable fashion, the intention to make a purchase was assessed as a component of the TRA to elucidate the causal behaviour of individuals (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). As per the TPB (Ajzen, 1991), purchase intention impact purchase behaviour. Previous research has concluded that purchase intention can be a predictor of purchase behaviour for environmentally conscious consumers (Jaiswal & Kant, 2018). In the green product literature intention of purchase has been found to influence purchase behaviour (Lai & Cheng, 2016; J. Wang et al., 2017). Green purchase intention has been found to positively influence purchase behaviour (Sreen et al., 2023). In ethical and sustainable consumption intention behaviour gap is a big issue (Casais & Faria, 2022; Park & Lin, 2020).

Also, intention-behaviour gap is an emerging issue in the sustainable fashion literature as well as broader green consumption literature. In the context of sustainable fashion, researchers, (Kopplin & Rösch, 2021; Rausch & Kopplin, 2021) found intention-behaviour gap and suggested to bridge it. This was further verified by (Yadav et al., 2022) in a study on recycled shoes employing TRA and TPB, wherein PI did not successfully

transition into PB. Intention behaviour gap has become an interesting problem for sustainable consumption researcher as to why consumers intention to purchase is not translating into actual purchase behaviour. To address this concern, Kopplin and Rösch (2021) used an alternative approach to bridge this gap but they found that environmental concern was a necessary condition for purchase intention. We intend to bridge this intention behaviour gap in the sustainable consumption domain (Hasbullah et al., 2020; Hassan et al., 2022; Minton et al., 2018).

Thus, the hypothesis suggests:

H11: The intention to purchase sustainable apparel directly influences the actual purchase behaviour of consumers towards sustainable apparels.

CHAPTER 4

RESEARCH METHODOLOGY

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RESEARCH METHODOLOGY

4.1 Introduction

The study employs quantitative research methodology to study the dynamics of intention-behaviour in sustainable fashion consumption research. We used a survey-based approach to examine the behaviour using several constructs. A combination of partial least square- structural equation modelling (PLS-SEM) and necessary condition analysis (NCA) was used to analyse the results. We formulated research hypothesis using the findings of previous study and our own observations and behavioural inference. This led to several new hypothesis. Model fitness was also considered while designing the study. Online questionnaire was floated as it allows for a wider reach among all parts of the country, is easily accessible to the target population, is inclusive can be distributed through various online mediums like email, social media platforms etc.

4.2 Development of survey and sampling method

In total 357 responses were collected using online circulated google forms from all over India. People who had previously purchased sustainable apparels were included in the study. All questions were mandatory to be submitted and therefore no missing values were found. Data was collected from 357 respondents from October 2022 to February 2023. Demographic profile of respondents is shown in Table 4.1. The survey questionnaire had two sections. Section A collected information about the demographic characteristics like age group, gender, education and frequency of purchase. It was used to assess the background of respondents. Section B comprised of scale items which were modified and adapted in the context of sustainable fashion. There were 12 constructs as shown in the conceptual model in Figure 3.9. The scale items are presented in Table 4.2.

We employed purposive sampling technique for data collection from Indian consumers falling in the two generation groups of Generation Y and generation Z. Purposive sampling allows researchers to reach and recruit participants they wish to examine as per their own assessment (Akram et al., 2024). It is also known as selective, subjective and judgemental sampling. It was selected for this study as our aim was to study the behaviour of specific age group and collect representative sampling across India. For this study, purposive sampling is adequate to meet the research objective of gaining specific information about age groups (Fauzi & Sheng, 2021). A younger consumer sample was selected because of their unique characteristics and important. Due to advent of new technologies and their regular upgradation. There is a huge shift in how each generation perceives different consumption activities. This is particularly important in the case of environment friendly consumption practices coming under the broader umbrella of sustainable development and consumption and SDG-12.

The generation Y category consumers were the consumers born between 1981 to 1996. Further, the generation Z category was born between 1998 to 2005 (Akram et al., 2024). General Y are also primarily considered as digital natives as technology was a major part of their lives with activities mediated by a screen. But they were not completely born into it, rather they upgraded themselves from analogue to digital with ease. They are also considered ambitious and are called millennials. Generation Z are also called as centennials as they were born at the turn of century i.e., around 2000. They became far more technology friendly as compared to their elder counterparts being born in the generation of smartphone, tablets and most importantly internet. Though internet may have reduced their socializing skills, they are then ones giving voice to social causes on the virtual world of internet. They are also considered demanding and independent consumers (Casalegno et al., 2022).

The questionnaire constructs were mostly adapted from well-established existing scales with suitable modifications in the context of sustainable fashion consumption. Items were measured using 5-point Likert scale ranging from “strongly disagree” to “strongly agree”. It allows participants to choose the option that best described their experience. The survey questionnaire was tested by two academicians for checking the sentence formations and readability. Adjustment in clarity were made to develop the final questionnaire.

Sample Size determination.

Sample size determined using G*Power 3.1 software with effect size, significance level and statistical power set at 0.15, 0.05 and 0.95 respectively. Analysis using the software determined a minimum required sample size of 178 as shown in Figure 4.1. We set the minimum sample collection at 300 to mitigate any issues with small sample size. Finally, a dataset of 357 sample was collected.

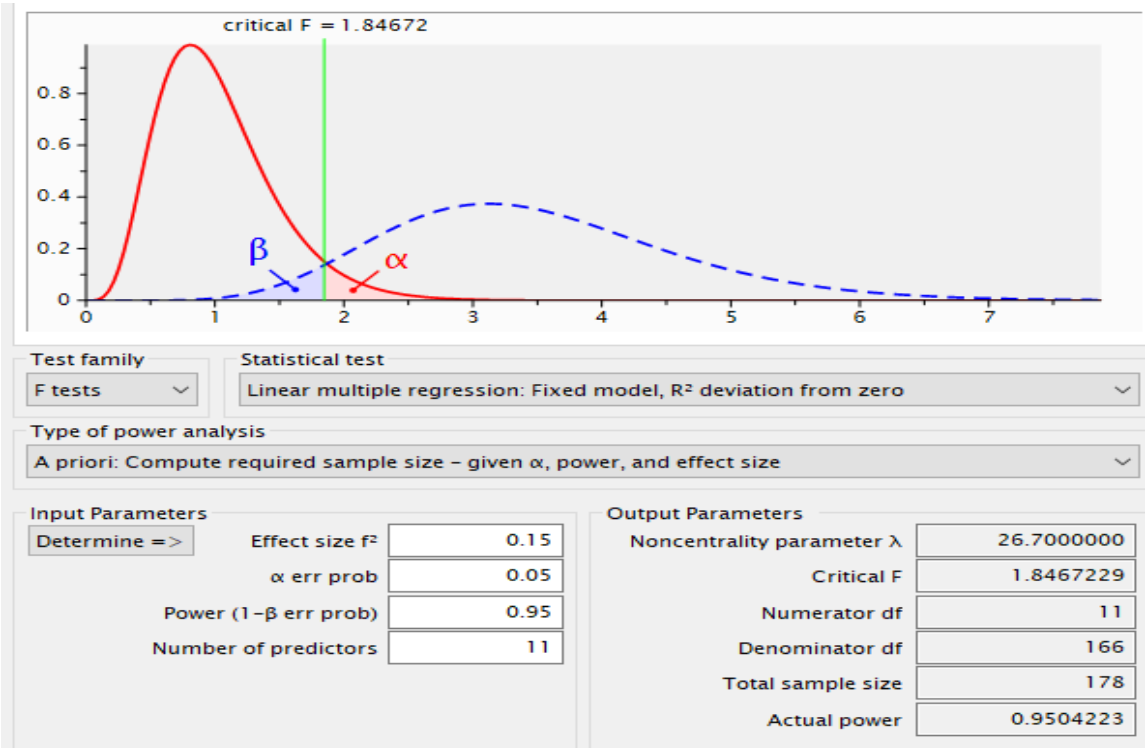

Figure 4.1: G-Power software-based test to decide minimum sample size.
(Source- Author’s analysis using G-Power software)

4.2.1 Demographic characteristics of sample

In the total 357 samples were collected, 65% of them belonged to Generation Z whereas the remaining 35% were from Generation Y as presented Table 4.1. Most of the respondent's annual income was between Rs5 lakh to Rs15 lakh which constituted of 60% of the participants, 35% of the participants income was below Rs5 lakh. In terms of education around 12% were intermediate, 49% graduate and 38% postgraduate. Further in terms of occupation, 32% of the participants worked in private sector, 43% were students, 11% worked in government sector while 1% were home makers. Most of the respondents were from urban area at 70% while the remaining belonged to rural region.

We also measured frequency of apparel purchase to know more about the consumption behaviour in terms of slow fashion consumption or fast fashion consumption. The respondents were given five options of how many apparels they purchase on a monthly basis. This was extrapolated on annual basis to get better insights. Most of the respondents (around 62%) disclosed that they bought 1 to 2 apparels on monthly basis i.e. 12 to 24 apparels. These can be considered the moderate fashion enthusiasts. Around 24% of the respondent purchase around 3 to 4 apparels monthly i.e. around 36 to 48 apparels annually. Further, around 4% participants purchased around 60 to 72 apparels annually, 2% purchased more than 72 apparels annually exhibiting fast fashion adoption. Around 8% of the respondents showed slow fashion characteristics purchasing less than 12 apparels annually.

In terms of work experience around 48% of the respondents had less than 5 years of experiences while 37% had no work experience. Around 12% of the respondents had experience between 5 to 10 years. Most of the participant's religious faith was in Hinduism (92%), while just 4% of the participants were from Muslim religion.

Table 4.1: Demographic details of the sample respondents (N=357). (Source- Designed by author).

Demographic measures	Category	N=357	Percentage
Age	Gen Z (1997 to 2005)	233	65%
	Gen Y (1981 to 1996)	124	35%
Gender	Male	208	58%
	Female	147	41%
	Prefer not to say	2	0.60%
Annual Income	Less than Rs5 lakh	125	35%
	Rs5 lakh to Rs15 lakh	215	60%
	More than Rs15 lakh	17	5%
Education	Intermediate	44	12%
	Graduate	176	49%
	Postgraduate	137	38%
Occupation	Government sector	39	11%
	Home maker	5	1%
	Private sector	115	32%
	Researcher	43	12%
	Student	155	43%
Area of Residence	Rural	108	30%
	Urban	249	70%
Frequency of Apparel Purchase (monthly)	0 to 1	28	8%
	1 to 2	222	62%
	3 to 4	86	24%
	5 to 6	14	4%
	More than 6	7	2%
Religion	Hindu	329	92%
	Muslim	15	4%
	Jain	2	0.60%
	Christian	5	1%
	Sikh	4	1%
	Atheist	1	0.30%
	Others	1	0.30%
Work Experience	0 to 5 years	170	48%
	5 to 10 years	42	12%
	More than 10 years	14	4%
	Nil/ not working	131	37%

4.3 Partial Least Square -Structural Equation Modelling (PLS-SEM)

The conceptual underpinning of PLS-SEM was developed by a Swedish econometrician and is helpful in cases of small sample sizes, numerous constructs and high number of items (Hair et al., 2019). This is possible because of the technical algorithm of PLS-SEM which evaluates measurement model and structural model simultaneously instead of separately. In other words, first partial regression relationships, then structural models are measured by implementing ordinary least square regressions. It is also used to provide solutions in cases where CB-SEM (covariance based structural equation modelling) gives inadmissible output with no convergence with complex models independent if data originates from composite or common population (Sarstedt et al., 2016). While comparing CB-SEM and PLS-SEM, researchers have also concluded that PLS-SEM may be preferred, especially in cases when it is unknown if the data is common factor based or composite based.

PLS-SEM is evaluated using two step method. First, measuring the measurement model and then structural model. After the measurement model is satisfied then structural model is assessed (Hair Jr. et al., 2017; Sarstedt et al., 2017). Similar to other statistical methods, PLS-SEM also has some rule of thumb acting as guidelines to assess models. The conceptual model of study is presented in Figure 3.9.

4.4 Measurement Model

First the indicator loadings are measured which are recommended to be above 0.708 to provide acceptable item reliability (Hair Jr. et al., 2017; Sarstedt et al., 2017). If any item is below the threshold, then its average variance extracted (AVE) is checked after removing the item. Also, loading of more than 0.4 can be retained if the constructs AVE is above 0.5 (Ali et al., 2018). All the item loading alongwith questionnaire items and

Table 4.2: Variables and items used in the research with their references. (Source- Designed by the author)

Items	Item (Outer loading)	VIF	Source
EC1	I am very concerned about the environment. (0.829)	1.648	(Y. Lee et al., 2014; Mostafa, 2007)
EC2	I am willing to reduce or change my consumption to protect the environment. (0.859)	1.722	
EC3	I am willing to adopt sustainable consumption practices to protect the environment. (0.845)	1.758	
CESDG1	I am aware that sustainable fashion choices promote circular economy. (0.811)	1.714	(Taufique et al., 2017a; Yadav et al., 2022)
CESDG2	I know sustainable fashion choice leads to circular economy. (0.823)	1.739	
CESDG3	I am aware that circular economy helps to achieve UN SDG 12 on sustainable consumption. (0.803)	1.795	
CESDG4	I feel connected to products/ services linked to SDGs . (0.709)	1.54	self
EA1	I am worried about the increasing number of natural disasters caused by climate change. (0.865)	2.462	(Ágoston et al., 2022)
EA2	I am terrified by how many things have changed in just a few years because of climate change. (0.858)	2.188	
EA3	It scares me that the weather is becoming more and more unpredictable because of climate change.(0.8)	2.396	
EA4	I worry about the next generation, because they will be drastically affected by climate change. (0.846)	2.095	
SLA1	I know the meaning of the term Sustainable Labelled clothes. (0.821)	1.622	(Taufique et al., 2017b; Yadav et al., 2022)
SLA2	I am aware about recycled clothes labels. (0.875)	1.806	
SLA3	I usually pay attention to information about labels on clothes. (0.745)	1.331	self
SFCM1	I am curious about new sustainable fashion. (0.856)	1.737	(de Boer et al., 2007; Yadav et al., 2022)
SFCM2	I like to try latest sustainable fashion. (0.843)	1.703	
SFCM3	I like to vary my apparels. (0.839)	1.719	
MIN1	I take care of items I buy. (0.737)	1.263	(Wilson & Bellezza, 2022) and self.
MIN2	I consider myself minimalist. (0.775)	1.477	
MIN3	I try to buy as least as possible even during sales to reduce waste. (0.7)	1.553	
MIN4	I use everything I own. (0.868)	1.381	

Table 4.2: Variables and items used in the research with their references. (Source- Designed by the author) *(Cont'd)*

Items	Item (Outer loading)	VIF	Source
ATT1	Generally, I have a favourable attitude towards sustainable version of clothes. (0.856)	1.911	(Mostafa, 2007; Park & Lin, 2020; Yadav et al., 2022)
ATT2	I am interested in the idea of purchasing sustainable apparel. (0.863)	1.777	
ATT3	My feelings towards purchasing sustainable apparel is favourable. (0.854)	1.831	
SAPI1	I am willing to purchase garments made from recycled fabric. (0.855)	1.812	(Sweeney et al., 1999)
SAPI2	I would definitely consider buying sustainable apparel because they are environment friendly.(0.875)	1.976	
SAPI3	I plan to purchase eco labelled apparels in future. (0.853)	1.845	
SAPB1	I chose to buy clothing made of organically grown natural fibres. (0.868)	1.897	(Dhir et al., 2021; Khare & Sadachar, 2017)
SAPB2	I buy sustainable apparels instead of conventional apparels if the quality is comparable. (0.868)	1.871	
SAPB3	I purchase fashion products with environmentally friendly labelling. (0.848)	1.853	
GW1	I think most companies use misleading visuals about environmental features of their apparel. (0.887)	2.246	(Testa et al., 2020)
GW2	Most companies give vague environmental claims. (0.872)	2.016	
GW3	Most companies hide information about real environment features of their apparels. (0.888)	2.22	
BC1	There is no reason for me Not to buy sustainable apparel if I wanted. (0.803)	1.48	(Kang et al., 2013; Shaw et al., 2000)
BC2	It depends only on my decision, if I purchase sustainable apparel or not. (0.802)	1.472	
BC3	If sustainable apparel were available everywhere I would buy them more frequently. (0..836)	1.506	
GBL1	Circular economy Brands influence my purchase decision of apparels. (0.879)	2.183	(Amoako et al., 2020)
GBL2	I consider circular economy brands as top choices for apparels. (0.871)	2.053	
GBL3	I'm ever loyal to Cause-related marketing of apparels. (0.874)	1.933	

sources are presented in Table 4.2. For establishing internal consistency reliability in measurement model the Cronbach's alpha and composite reliability are checked to be above the minimum threshold of 0.7. The convergent validity is verified using the AVE which should be above the threshold of 0.5. The internal consistency reliability and convergent validity was satisfactory as presented in Table 4.3.

Table 4.3: Table for analysing the internal consistency among variables. (Source-Designed by the author)

Constructs	Cronbach's alpha	Composite reliability (CR)	Average variance extracted (AVE)
Attitude	0.821	0.824	0.735
Behavioural Control	0.745	0.750	0.662
CE SDG Awareness	0.797	0.809	0.620
Eco Anxiety	0.880	0.881	0.736
Environmental Consciousness	0.799	0.802	0.713
Green Brand Loyalty	0.847	0.849	0.765
Greenwashing	0.857	0.858	0.778
Minimalism	0.738	0.746	0.558
Purchase Behaviour	0.826	0.829	0.742
Purchase Intention	0.826	0.826	0.741
Sustainable Fashion Choice Motive	0.802	0.803	0.716
Sustainable Label Awareness	0.746	0.756	0.665

The discriminant validity was measured using the Fornell-Larcker criterion (Fornell & Larcker, 1981). It is defined as "the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct" (Hair et al., 2019). A threshold of 0.90 is considered for constructs having conceptual similarity. If the constructs conceptually different then 0.85 is suitable. All the HTMT values and Fornell-Larcker values were satisfactory except for one which was further measured using bootstrap procedure and found to be satisfactory as presented in Table 4.4.

Table 4.4 Discriminant validity testing using HTMT and Fornell-Larcker (Source- Designed by the author)

HTMT	ATT	BC	CESDG	EA	EC	GBL	GW	MIN	SAPB	SAPI	SFCM	SLA
Attitude												
Behavioural Control	0.662											
CE SDG Awareness	0.601	0.591										
Eco Anxiety	0.643	0.591	0.755									
Environmental Consciousness	0.726	0.732	0.801	0.853								
Green Brand Loyalty	0.621	0.726	0.51	0.39	0.541							
Greenwashing	0.542	0.668	0.456	0.539	0.568	0.514						
Minimalism	0.8	0.59	0.572	0.557	0.649	0.628	0.486					
Purchase Behaviour	0.683	0.849	0.631	0.593	0.713	0.736	0.632	0.629				
Purchase Intention	0.771	0.801	0.589	0.662	0.817	0.67	0.668	0.569	0.94			
Sustainable Fashion Choice Motive	0.778	0.574	0.664	0.611	0.619	0.516	0.451	0.858	0.593	0.609		
Sustainable Label Awareness	0.788	0.513	0.581	0.489	0.58	0.54	0.445	0.816	0.56	0.564	0.886	

Fornell-Larcker	ATT	BC	CESDG	EA	EC	GBL	GW	MIN	SAPB	SAPI	SFCM	SLA
ATT	**0.858**											
BC	0.524	**0.814**										
CESDG	0.492	0.457	**0.788**									
EA	0.546	0.482	0.644	**0.858**								
EC	0.589	0.569	0.647	0.714	**0.844**							
GBL	0.52	0.575	0.412	0.338	0.446	**0.875**						
GW	0.456	0.536	0.382	0.469	0.472	0.439	**0.882**					
MIN	0.626	0.44	0.442	0.458	0.51	0.498	0.391	**0.747**				
SAPB	0.564	0.668	0.512	0.507	0.584	0.615	0.532	0.493	**0.861**			
SAPI	0.638	0.631	0.483	0.565	0.666	0.561	0.563	0.454	0.778	**0.861**		
SFCM	0.633	0.446	0.532	0.513	0.497	0.425	0.374	0.665	0.482	0.497	**0.846**	
SLA	0.618	0.382	0.451	0.398	0.45	0.424	0.359	0.611	0.439	0.444	0.684	**0.815**

4.5 Structural Model Assessment

After the measurement model is found satisfactory, we move to evaluating structural model in PLS-SEM. It includes evaluating coefficient of determination, predictive relevance, statistical significance with path coefficients. The coefficients in structural models are calculated from series of regression equations. Collinearity is examined using VIF (variance inflation factor) values before assessing the relationships in structural model to check for bias issues in the regression results. If values are above 5, then it indicates issue of probable collinearity among the predictor constructs (Becker et al., 2015; Mason & Perreault, 1991). If the values are in the range of 3 to 5, then also collinearity issue may occur. The ideal values for collinearity is close or below the value of 3. As all the VIF values were below 3, therefore, collinearity does not exist.

After satisfying collinearity condition, coefficient of determination (R^2) is checked for endogenous constructs. It is a measure of variance explained in each of the dependent variable and therefore representing models explanatory power (Shmueli & Koppius, 2011). It is also known as in-sample predictive power (Rigdon, 2012). The R^2 values ranges from 0 to 1. Values above 0.9 suggest overfit (Hair et al., 2019). It acceptable value is dependent on disciple of research. For instance a R^2 of 0.10 is acceptable and satisfactory in case of predicting stock returns (Raithel et al., 2012). Also, it is dependent on number of predictor as well. Therefore, the R^2 values are should assessed in the context of study. For statistical significance testing the p-values of each relation is checked to be below 0.05 of 0.10 for 5% and 10% range.

In structural model assessment, off the 11 hypothesis, 7 were found to be significant while four were not significant (H1, H2, H3 and H6). Among the supported hypothesis, the relation between purchase intention and purchase behaviour was the strongest (t=28)

suggesting the fulfilment of research question and objective of study. Further, the link between environmental consciousness and purchase intention and attitude and purchase intention was also strong as shown in Table 4.5. Further the analysis of coefficient of determination is presented.

Table 4.5 Path analysis of hypothesis with p-values and t-scores. (Source: Designed by the author)

	Hypothesis	**Original sample (O)**	**Sample mean (M)**	**Standard deviation (STDEV)**	**T statistics (|O/STDEV|)**	**P values**
H1	SFCM -> SAPI	0.07	0.068	0.054	1.308	0.191
H2	EA -> SAPI	0.067	0.064	0.056	1.192	0.233
H3	CESDG -> SAPI	-0.062	-0.057	0.057	1.084	0.278
H4	ATT -> SAPI	0.238	0.241	0.063	3.769	0.000*
H5	GW -> SAPI	0.162	0.158	0.054	2.988	0.003*
H6	SLA -> SAPI	-0.009	-0.005	0.056	0.156	0.876
H7	BC -> SAPI	0.172	0.168	0.066	2.613	0.009*
H8	MIN -> SAPI	-0.114	-0.105	0.059	1.934	0.053**
H9	GBL -> SAPI	0.169	0.165	0.054	3.13	0.002*
H10	EC -> SAPI	0.295	0.293	0.065	4.514	0.000*
H11	SAPI -> SAPB	0.778	0.778	0.027	28.328	0.000*

(*Supported at 5% and ** supported at 10%.)

4.6 Test for coefficient of determination (R^2)

The coefficient of determination also known as R^2 is the numerical term given for variance explained by each endogenous construct in the model. It is also known as criterion for evaluating predictive accuracy. The R^2 values are considered substantial, moderate and weak at 0.75, 0.50 and 0.25 respectively for research focusing on

marketing issues (Hair et al., 2011, 2014; Hair Jr. et al., 2017). R^2 values above 0.10 are also considered adequate (Falk & Miller, 1992). Higher the R^2 higher the explanatory power. Bootstrap procedure with 5,000 resamples to find results of R^2 values. The findings signify that purchase intention accounted for 60.5% of the variance in purchase behaviour as shown in Figure 4.2. Further, exogenous constructs including sustainable fashion choice motive, eco anxiety, circular economy sustainable development goals awareness, attitude, greenwashing, sustainable label awareness, behavioural control, minimalism, green brand loyalty and environmental consciousness explained 63% of the variance in purchase intention.

Purchase Intention = β_{17}Sustainable fashion choice motive + β_{27}Eco anxiety + β_{37}Circular Economy Sustainable Development Goal Awareness + β_{47}Attitude + β_{57}Greenwashing + β_{67}SSustainable Label Awareness +β_{77}Behavioural Control+β_{87}Minimalism+ β_{97}Green Brand Loyalty + β_{107}Environmental Consciousness +ε_1

Purchase Behaviour = β_{117}Purchase Intention + ε_2.

Here, β_{ij} indicates "the path coefficients between the ith exogenous variable latent variable and jth endogenous latent variable", and ε depicts "the error value associated with every endogenous latent variable". Prediction analysis was carried after the research model was successfully evaluated using Smart PLS 4 employing partial least square. This variance based PLS prediction method of SEM assists in explaining variation by calculating R^2 as depicted below:

$$Coefficient\ of\ determination(R^2) = \frac{sum\ of\ square\ due\ to\ regression\ (SSR)}{Total\ Sum\ of\ Squares\ (SST)}$$

Here, SSR "measures how much the values of the estimated regression line deviate from the sample mean". SST is a "measure of the error involved in the estimation using the sample mean. For a perfect fit, the ratio must be equal to one". In general, PLS predict is mostly suited for theory development and expansion in technological and sustainability research and not as a confirming method. Therefore, PLS is used.

The predictive relevance (Q^2) of the model was also checked to assess if the model has predictive relevance or not. PLS predict was used in Smart PLS 4 software using path weighting scheme. The Q^2 values of 0.0, 0.25 and 0.50 are considered small, medium, and large respectively (Hair Jr. et al., 2017; Sarstedt et al., 2017). The Q^2 of endogenous constructs purchase intention and purchase behaviour were 0.512 and 0.592 respectively suggesting significantly large predictive relevance of the model.

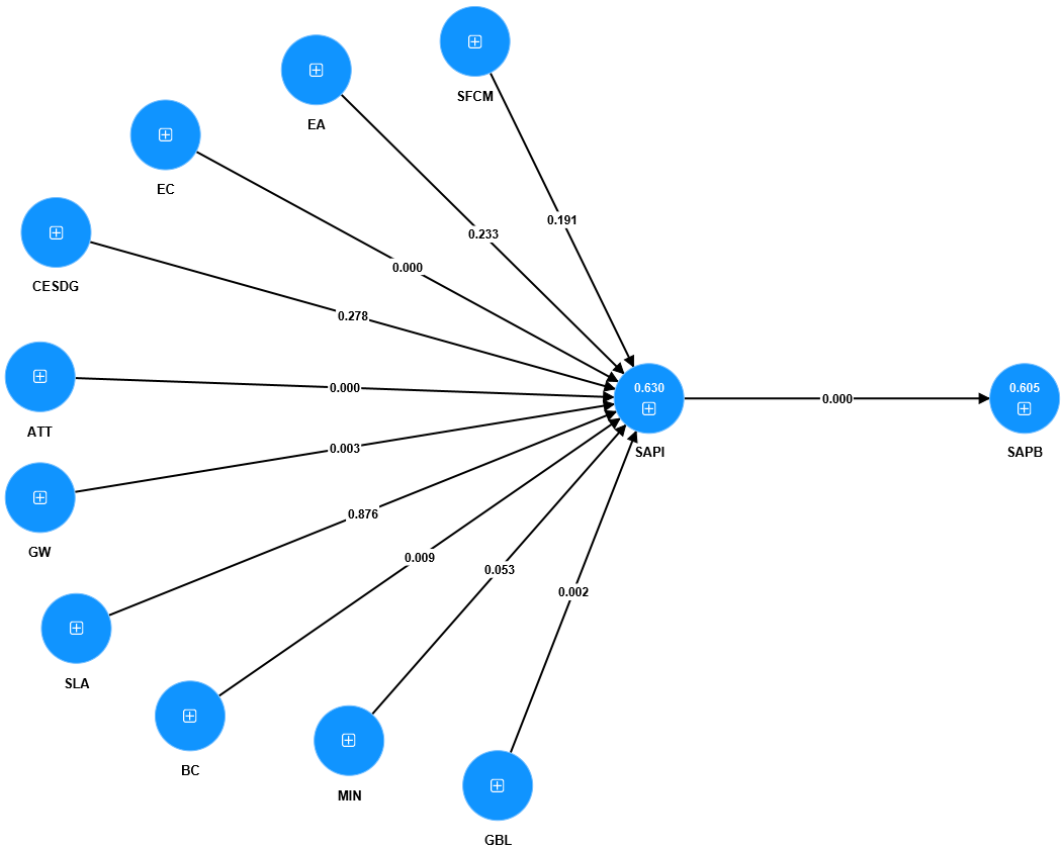

Figure 4.2 Research model (Source: Self created using Smart PLS 4)

4.7 Necessary condition analysis

Necessary condition analysis (NCA) is a comparatively new method that helps to identify the necessary condition for outcomes but also provides effect sizes of the same conditions (Richter et al., 2020). Identifying necessary conditions of outcome is important as it is a constraint, a bottleneck or a critical factor required to be satisfied to achieve outcome. If a necessary condition is not satisfied, other factors of outcome cannot compensate, that is, if A is a necessary to achieve B, then B will not be achieved if A is not in place or satisfied. NCA has been tested for its robustness in various domains including social media behaviour analyses (Cheung et al., 2022) and sustainable buying behaviour (Frommeyer et al., 2022). It is also recommended for theory building and complements PLS-SEM which relies on sufficiency logic for hypothesis testing (Cheung et al., 2022; Dul et al., 2020; Vis & Dul, 2018).

Accuracy is a function of a number of observations above the ceiling line. It is defined as "the number of observations at or below the ceiling line, divided by the total number of observations, multiplied by 100%" (Dul, 2016). Higher the number of observations above ceiling line lower the accuracy of criticality of x to y. There is no set benchmark of accuracy but 95% value can be used to assess the quality of results (Richter et al., 2020). In general, CE-FDH results are at 100% but CR-FDH can be less than 100% as well. Due to this reason, we have preferred the use CE-FDH in cases of different results like in effect size or p-value. Also, observations around ceiling line do not follow linear pattern (Ding & Kuvaas, 2023). CE being a piecewise linear line results in an accuracy of 100%. Also, NCA analysis is bivariate, that is, independent of absence or presence of other factors in a model. Thus, NCA is parsimonious and does not require control variables (Dul et al., 2020).

CHAPTER 5

NECESSARY CONDITION ANALYSIS

CHAPTER 5
NECESSARY CONDITION ANALYSIS

5.1 Introduction to NCA

The data analysis was carried out using PLS-SEM and NCA analysis. These methods complement each other and give better practical insight about the results. The measurement model, structural model assessment was carried to find results of hypothesis testing. Thereafter NCA analysis was conducted.

NCA is a recently developed technique to complement traditional techniques like multiple-regression and SEM (Dul, 2016; Richter et al., 2020). The value that NCA contributes to data analysis lies in its capacity for a deeper understanding of assessing necessary conditions, which can vary in both kind and degree (Dul, 2016; Dul et al., 2023; Vis & Dul, 2018). NCA assists in finding specific bottlenecks, such as the level of satisfaction with a particular product quality attribute required to attain a specific level of overall purchase satisfaction. In simpler terms, when the studied predictors and outcomes are presented as variable scores, NCA is adept at revealing which predictors are necessary and to what extent those predictors are essential in achieving a particular outcome degree.

NCA provides valuable assistance to researchers in two keyways. Firstly, it enables the determination of ceiling lines and the creation of bottleneck tables, offering a visual and interpretative tool for understanding the relationships between predictor and outcome variables. Secondly, NCA calculates essential parameters like the accuracy of the ceiling line and effect sizes of necessary conditions. Moreover, it conducts significance testing to prevent calculation errors. It uses cartesian coordinate system for x-axis (predictor) and y-axis (outcomes). Though there are multiple ways to draw ceiling line the ceiling envelopment with free disposal hull (CE-FDH) in plot is considered more robust. It

results in piecewise linear function in the upper left part, size of this corner helps in deciding the necessity of predictor X for outcome Y. The bottleneck table helps in visualisation of ceiling line and provide its degree.

The magnitude of hypothesis is measured by effect size (d) in NCA. It is the ratio between area containing the observation and area with no observations. Consequently, its value lies between 0 to 1. (Dul, 2016) provided reference values of d to interpret the findings. The value of d between 0 and 0.1 is considered “small effect size”, value between 0.1 to 0.3 is considered “medium”, 0.3 to 0.5 is considered “large” and 0.5 to 1 is considered “very large”.

NCA allows statistical significance testing as well. To claim a condition to necessity its hould satisfy three criteria: (i) theoretical justification, (ii) d should be larger than zero and (iii) p-value should be small in significance testing (Dul et al., 2020). We applied NCA with PLS-SEM to identify the factors of purchase intentions and its sufficient and necessary conditions. This is a complimentary approach. While choosing between CB-SEM and PLS-SEM, recommendation of researchers were followed to choose composite based method like PLS-SEM (Rigdon et al., 2017).

In PLS-SEM, the estimation process involves determining individual indicator weights, which includes measurement errors. These estimated weights are subsequently employed to calculate composite scores for the specified latent variables (Hair Jr. et al., 2017; Sarstedt et al., 2017). These are then used in the NCA analysis (Richter et al., 2020).

5.2 NCA analysis results

5.2.1 Effect size and significance testing

First the effect size (d) of the relations were checked using a random sample size of 10,000 as recommended (Dul, 2016; Dul et al., 2020, 2023; Karwowski et al., 2016). As shown in Table 5.1, the effect size for most of relations is in medium range. Though all the values of 'd' are above 0, the p-value of CESDG-PI, Green Brand Loyalty-PI, Minimalism-PI and SLA-PI are below 0.05. Therefore, these relations are not necessary for purchase intention of sustainable apparels.

The NCA scatter plots are presented in Figure 5.1 showing the ceiling lines of CE-FDH (ceiling envelopment with free disposal hull), CR-FDH (ceiling regression with free disposal hull) and OLS (ordinary least square) lines. The CE-FDH is more flexible and does not require ceiling line assumptions. This helps us to visually identify relationships with zero effect size represented by empty area in the upper left corner of the graph. In other words, empty upper left area is an indication of effect size being greater than zero.

5.2.2 Bottleneck analysis

For getting deeper insights, a bottleneck analysis is performed as shown in Table 5.2. The table shows the minimum values needed for independent constructs column wise. As per the output presented in Table 5.2, to reach a medium level (30% to 90%) of purchase intention, the necessary level of attitude needs to be at least 1.2% and for high level of purchase intention (100%), the attitude needs to be at least 52.7%. It implies that if 52.7% of attitude is not achieved, then high level of purchase intention towards sustainable apparel will not be possible.

Similarly, five necessary conditions behavioural control (43.5%), eco anxiety (78.2%), environmental consciousness (67.9%), greenwashing (52.1%), sustainable fashion choice motive (66.7%) needs to achieve highest level of purchase intention. Moreover,

66.1% of purchase intention is needed to achieve 100% purchase behaviour. In order to reach 80% level of purchase behaviour, purchase intention should be no less than 51%.

Further in order to achieve 80% level of purchase intention, six conditions need to be fulfilled: attitude at no less than 35.5%, behavioural control at 32.4%, eco anxiety (46.8%), environmental consciousness (46.9%), greenwashing (37.1%) and sustainable fashion choice motive (9.9%).

As per the Table 5.2, CESDG-PI, Green Brand Loyalty-PI, Minimalism-PI and SLA-PI are also showing necessary conditions for purchase intention. However, these constructs have shown small effect size of large p-values during the significance testing, they don't meet criteria for necessary conditions. These relations may be due to randomness or false positive. Therefore, they may be disregarded as relevant necessary conditions.

Overall, attitude, behavioural control, eco anxiety, environmental consciousness, greenwashing, sustainable fashion choice motive are the only significant necessary conditions. The bottleneck output is presented in Table 5.2. It presents the precise data required for the necessary conditions. The Table 5.3 provides a summary of PLS-SEM and NCA results.

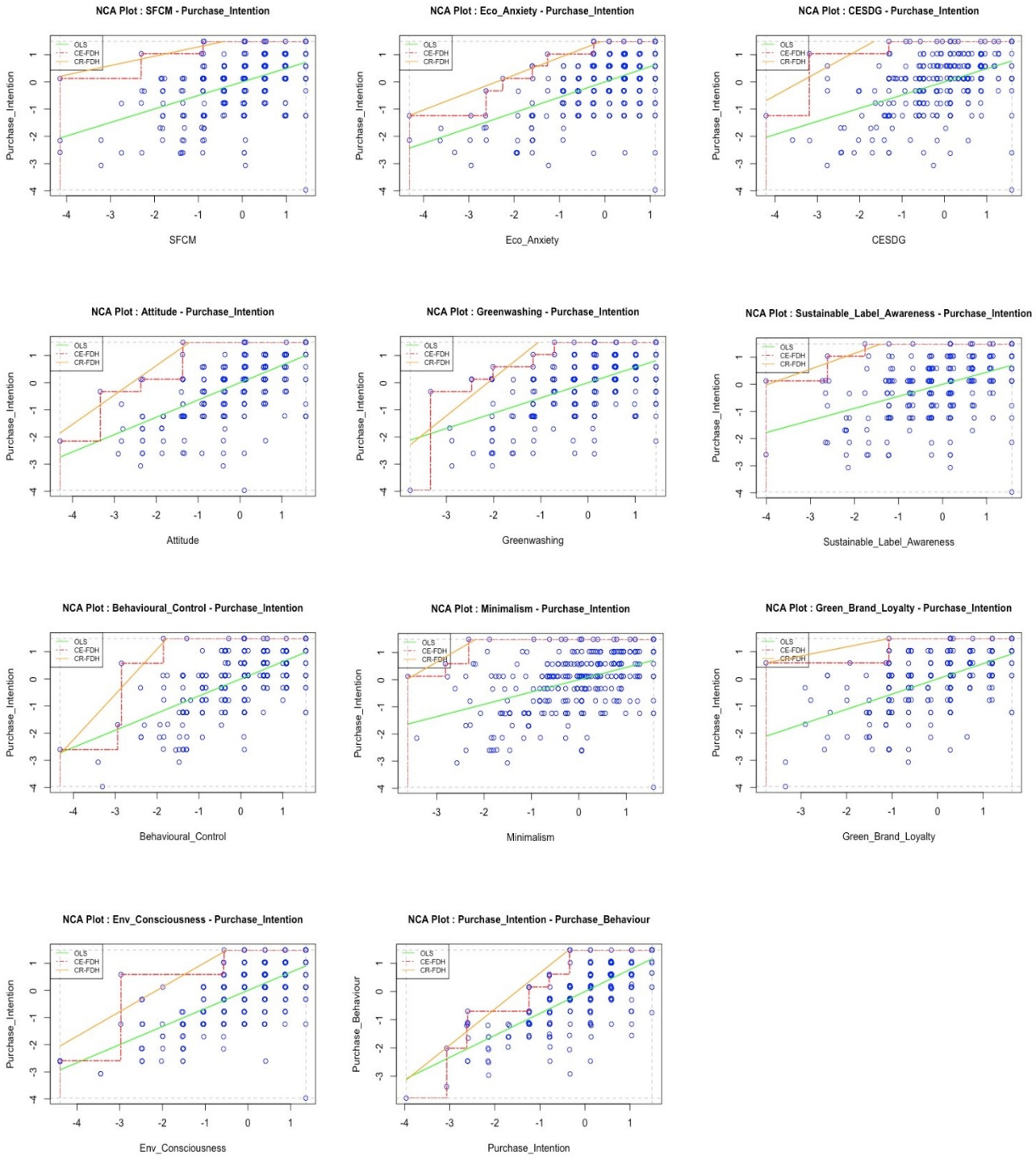

Figure 5.1: NCA scatter plots of relations. (Source: Designed by author using R software)

Table 5.1 NCA effect sizes. (Source- Designed by the author)

Predictor	CR/CE	ceiling zone	Accuracy (%)	Fit (%)	Scope	Effect Size (d)	p-value	p-accuracy
Attitude-PI	CR	5.179	99	78.2	32.014	0.162 (medium)	0.00	0.00
	CE	6.621	100	100		0.207 (medium)	0.00	0.00
Behavioural Control-PI	CR	5.44	99.20	79.6	32.009	0.17 (medium)	0.00	0.00
	CE	6.832	100	100		0.213 (medium)	0.00	0.00
CESDG-PI	CR	2.771	99.4	76.3	31.633	0.088 (small)	0.061	0.005
	CE	3.634	100	100		0.115 (medium)	0.047	1.00
Eco Anxiety-PI	CR	5.754	97.5	82.9	29.55	0.195 (medium)	0.00	0.00
	CE	6.94	100	100		0.235 (medium)	0.00	0.00
Environmental Consciousness-PI	CR	6.897	99.4	86.5	31.354	0.22 (medium)	0.00	0.00
	CE	7.971	100	100		0.254 (medium)	0.00	0.00
Green Brand Loyalty-PI	CR	1.211	100	50	29.441	0.041 (small)	0.338	0.009
	CE	2.422	100	100		0.082 (small)	0.085	0.005
Greenwashing-PI	CR	5.123	97.5	92.8	28.383	0.181 (medium)	0.00	0.00
	CE	5.518	100	100		0.194 (medium)	0.00	0.00
Minimalism-PI	CR	1.047	99.4	68.7	28.28	0.037 (small)	0.371	0.009
	CE	1.525	100	100		0.054 (small)	0.301	0.009
SFCM-PI	CR	2.389	99.2	75.7	30.493	0.078 (small)	0.019	0.003
	CE	3.155	100	100		0.103 (medium)	0.016	0.002
SLA-PI	CR	1.978	99.2	86.6	30.428	0.065 (small)	0.082	0.005
	CE	2.285	100	100		0.075 (small)	0.169	0.007
Purchase Intention-PB	CR	8.289	98.6	81	28.579	0.29 (medium)	0.00	0.00
	CE	10.238	100	100		0.358 (large)	0.00	0.00

Table 5.2 Bottleneck table for purchase intention and purchase behaviour. (Source-Designed by the author).

Purchase Intention											**PB**
Y	ATT	BC	CESDG	EA	EC	GBL	GW	MIN	SFCM	SLA	SFCM
0	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN
10	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN
20	NN	NN	NN	NN	NN	NN	NN	NN	NN	NN	5.9
30	NN	4.5	NN	NN	NN	NN	NN	NN	NN	NN	13.4
40	1.2	10.1	NN	NN	5.1	NN	7	NN	NN	NN	20.9
50	9.8	15.7	NN	NN	15.5	NN	14.5	NN	NN	NN	28.4
60	18.4	21.2	NN	15.4	26	NN	22	NN	NN	NN	36
70	26.9	26.8	10.9	31.1	36.5	NN	29.5	NN	NN	NN	43.5
80	35.5	32.4	21.9	46.8	46.9	NN	37.1	7	9.9	13.1	51
90	44.1	37.9	32.9	62.5	57.4	19.6	44.6	17.3	38.3	30	58.6
100	52.7	43.5	43.9	78.2	67.9	50	52.1	27.7	66.7	46.9	66.1

(NN is not necessary)

Table 5.3: Summary of PLS-SEM and NCA findings. (Source: Designed by the author)

	Relation	PLS-SEM result	NCA result
H1	SFCM -> SAPI	Not a significant direct determinant (but a significant indirect effect through attitude).	Significant and relevant necessary condition.
H2	EA -> SAPI	Not a significant direct determinant (but a significant indirect effect through attitude).	Significant but not relevant necessary condition.
H3	CESDG -> SAPI	Not a significant direct determinant (but a significant indirect effect through attitude).	Significant and relevant necessary condition.
H4	ATT -> SAPI	Significant determinant.	Significant and relevant necessary condition.
H5	GW -> SAPI	Significant determinant.	Significant and relevant necessary condition.
H6	SLA -> SAPI	Not a significant direct determinant (but a significant indirect effect through attitude).	Significant but not relevant necessary condition.
H7	BC -> SAPI	Significant determinant.	Significant and relevant necessary condition.
H8	MIN -> SAPI	Significant determinant*.	Significant but not relevant necessary condition.
H9	GBL -> SAPI	Significant determinant.	Significant but not relevant necessary condition.
H10	EC -> SAPI	Significant determinant.	Significant and relevant necessary condition.
H11	SAPI -> SAPB	Significant determinant.	Significant and relevant necessary condition.
Supported at 10%.			

CHAPTER 6

DISCUSSION

CHAPTER 6
DISCUSSION

6.1 Hypothesis findings

The data analysis revealed that out of the eleven proposed hypothesis (Figure 3.9), seven were supported while four were not supported. The results of hypothesis are presented in Table 6.1. The results of the hypotheses testing reveal mixed results regarding the impact of various factors on purchase intention and purchase behaviour within the realm of sustainable fashion. Several hypotheses garnered support, indicating their substantial influence on consumers' decision-making processes.

Supported Hypotheses:

Among the supported hypotheses, attitude (H4), greenwashing (H5), behavioural control (H7), minimalism (H8), green brand loyalty (H9), environmental consciousness (H10), and purchase intention's impact on purchase behaviour (H11) were found to significantly shape consumers' choices in favour of sustainable fashion. The supported hypotheses collectively emphasize the pivotal role of consumer attitudes and perceptions in shaping sustainable fashion choices. The findings highlight the significance of perceived authenticity, with consumers responding positively to brands that demonstrate genuine commitment to sustainability (greenwashing - H5). Additionally, the support for the impact of minimalism (H8) suggests that consumers are inclined towards streamlined and purposeful living, aligning with the principles of minimalist design in their purchase decisions. Furthermore, the validation of green brand loyalty (H9) underscores the enduring influence of consumers' loyalty to environmentally conscious brands, indicating that trust and commitment play key roles in sustainable fashion preferences.

Not Supported Hypotheses:

However, sustainable fashion choice motive (H1), eco anxiety (H2), circular economy SDG awareness (H3), and sustainable label awareness (H6) did not show significant impacts on purchase intention. The findings of H1 were against the previous findings in the context of food (Pennanen et al., 2023). This suggests that though consumers choice is an important constituent of their purchase decision in the context of food. But the same is not true in the context of sustainable fashion consumption. Further, eco-anxiety has not been found to directly influence purchase intention of sustainable apparels. Also, H3 and H6 were not in corroboration with previous findings (Nguyen-Viet, 2022). Overall, these findings suggest that factors such as motive for sustainable choices, eco anxiety levels, awareness of circular economy and SDGs, and knowledge of sustainable labels may not be the primary drivers influencing consumers' intentions in the context of sustainable fashion. Or they may not yet be influencing the behavioural thinking of younger consumers. The results highlight the complexity of consumer decision-making in this domain and underscore the need for a nuanced understanding of the factors that truly drive sustainable fashion choices.

Table 6.1 Hypothesis and their result. (Source- Designed by the author)

	Hypothesis	**Supported/ Not Supported**
H1	There is a significant relationship between consumers sustainable fashion choice motive and purchase intention of sustainable apparels.	Not Supported
H2	There is a strong relationship between eco-anxiety of consumers and purchase intention of sustainable apparels.	Not Supported
H3	Awareness of circular economy sustainable development goals has a significant influence on the intention to purchase sustainable apparels.	Not Supported

	Hypothesis	Supported/ Not Supported
H4	Attitude of consumers have a significant impact on purchase intention of sustainable apparels.	Supported*
H5	Consumers' understanding of greenwashing significantly influences their purchase intention of sustainable apparels.	Supported*
H6	Consumers awareness of sustainable labels has significant impact on purchase intention of sustainable apparels.	Not Supported
H7	Consumers behavioural control has significant impact on purchase intention of sustainable apparels.	Supported*
H8	Consumers minimalism has a negative significant impact on purchase intention of sustainable apparels.	Supported**
H9	Green brand royalty has a significant impact on purchase intention of sustainable apparels.	Supported*
H10	Environmental consciousness of consumers has a significant impact on purchase intention of sustainable apparels.	Supported*
H11	The intention to purchase sustainable apparel directly influences the actual purchase behaviour of consumers towards sustainable apparels.	Supported*

*Supported at 5% and ** supported at 10%.

6.2 Bridging purchase intention and behaviour gap

Addressing this hypothesis is crucial for several reasons. Firstly, understanding the magnitude of the intention-behaviour gap provides insights into the efficacy of current sustainability-focused marketing strategies and initiatives. Secondly, identifying factors contributing to this gap can inform targeted interventions to align consumer intentions more closely with sustainable apparel purchasing behaviour. Lastly, closing the intention-behaviour gap is essential for businesses, policymakers, and sustainability

advocates, as it directly influences the success of sustainable practices in the fashion industry, contributing to the overall impact on environmental and social goals.

The study successfully bridges the Intention-Behaviour gap, demonstrating a significant impact of Purchase Intention on Purchase Behaviour in the context of sustainable apparel. It addresses the concerns of previous researchers and bridges the gap (Kopplin & Rösch, 2021; Rausch & Kopplin, 2021). This gap was in line with intention behaviour gap in ethical consumption (Casais & Faria, 2022). Researchers have used various methods and ideas to bridge the gap including using dual theory approach (Tawde et al., 2023). This conclusive evidence not only validates previous research highlighting the existence of the gap but also signifies a crucial advancement in understanding and aligning consumer behaviour with their environmentally conscious intentions.

With the Intention-Behaviour gap effectively bridged, practical implications are paramount for businesses seeking to enhance sustainable consumption. Companies can now focus on refining strategies that build on this alignment, ensuring that consumer intentions are seamlessly translated into actual sustainable apparel purchases. Transparent communication, trust-building practices, and incentive structures become even more potent tools in this evolved landscape, offering practical pathways for businesses to drive meaningful change.

The study's success in bridging the Intention-Behaviour gap holds profound theoretical implications. It contributes not only to the validation and refinement of existing theories but also opens avenues for exploring the nuanced dynamics of consumer decision-making in sustainable contexts. This empirical support strengthens the foundation of theoretical frameworks, potentially sparking new avenues of research that delve deeper into the psychological intricacies of sustainable consumer behaviour.

The study's successful bridging of the Intention-Behaviour gap marks a significant contribution to the field. Beyond filling a crucial gap in knowledge, it provides a solid foundation for future research endeavours and interventions. This breakthrough has the potential to reshape industry practices, fostering a more sustainable and consumer-aligned future. The study's impact extends beyond academic realms, offering practical insights that can lead to meaningful changes in the fashion industry, aligning it more closely with societal and environmental goals.

6.3 Minimalism

The findings indicate that the minimalism is negatively associated with purchase intention of consumers against previous finding (Chen & Liu, 2023; Mandarić et al., 2022). In recent years, the growing preference for sustainability using simplicity, functionality, and a clutter-free may be the reason for popularity of minimalist aesthetics. Consumers are increasingly drawn to products and experiences that embody sustainable minimalistic principles, reflecting a desire for purposeful living. Several factors may contribute to the strong negative link between minimalism and purchase intention. Firstly, minimalistic designs often evoke a sense of sustainability and timelessness, appealing to consumers who seek enduring products. Secondly, the emphasis on functionality and essentialism resonates with individuals looking to simplify their lives and make mindful purchasing decisions. The decluttered aesthetic aligns with a broader cultural shift towards sustainability, as consumers prioritize quality over quantity.

Practical implications of these findings extend to businesses and marketers seeking to cater to the evolving preferences of consumers. Incorporating minimalist design principles into product development and marketing strategies can enhance brand appeal

and resonate with a target audience seeking simplicity. Furthermore, emphasizing the durability and eco-friendliness of products can align with the values associated with minimalism, fostering brand loyalty. In conclusion, the strong negative correlation between minimalism and purchase intention underscores the importance of understanding and incorporating minimalist principles in product design and marketing. As consumer preferences continue to evolve, embracing minimalism differently can position businesses at the forefront of a cultural shift towards intentional sustainable consumption.

6.4 Greenwashing

Greenwashing was found to influence the purchase intention of sustainable apparels. The deceptive practice of greenwashing, where companies exaggerate or falsely claim their environmental efforts, can erode consumer trust and impact their decision-making regarding sustainable fashion. Consumers increasingly seek authenticity in businesses' sustainability claims, emphasizing the need for genuine commitment rather than mere marketing tactics. In conclusion, the significant impact of greenwashing on consumer behaviour underscores the importance of transparent and authentic sustainability practices in the fashion industry. To build trust and foster positive purchase intentions, companies must prioritize genuine environmental efforts, ensuring that their actions align with the values they promote in their marketing messages. In this way, a truly sustainable and responsible approach can contribute to long-term success and positive consumer perceptions in the competitive landscape of sustainable apparel. The results are in line with broader previous studies (Mandarić et al., 2022).

6.5 Green brand loyalty

Green brand loyalty was found to have a major impact on purchase intention of sustainable apparels. Consumers who are loyal to environmentally conscious brands are more likely to choose sustainable options when making purchasing decisions. This loyalty stems from a trust in the brand's commitment to environmental values and practices. As companies strive to build and maintain green brand loyalty, they should focus on transparent communication about their sustainability efforts, ensuring that consumers are well-informed and confident in their choices. In the evolving landscape of consumer preferences, fostering green brand loyalty can be a key strategy for businesses committed to sustainability. Also, this establishes a loyal customer base. To achieve lifelong customer value, the fundamental principle of the marketing concept is to cultivate customer loyalty by consistently meeting their needs and expectations. By prioritizing customer satisfaction and delivering value, businesses can establish long-term relationships, encouraging repeat business and positive word-of-mouth. This customer-centric approach is integral to sustaining loyalty, fostering trust, and ultimately maximizing the lifetime value of each customer (Sreen et al., 2023).

6.6 Role of attitude, behavioural control and environmental consciousness

The study establishes a robust linkage between key factors and purchase intention in the context of sustainable apparel, shedding light on critical determinants that significantly influence consumers' decision-making processes.

Firstly, the strong support for the hypothesis that attitude has a significant impact on purchase intention (H4) underscores the pivotal role of consumer attitudes in shaping their inclination towards sustainable apparel. Its direct significant influence on purchase intention is in corroboration with previous studies (Sreen et al., 2023). Positive attitudes

towards environmentally conscious choices emerge as precursors to the formation of purchase intentions, emphasizing the need for businesses and marketers to cultivate favourable perceptions.

Secondly, the validation of the hypothesis that behavioural control significantly influences purchase intention (H7) highlights the importance of consumers' perceived control over their purchasing behaviour. The results were in line with previous findings (Aitken et al., 2020). This finding suggests that individuals who feel empowered to make sustainable choices are more likely to develop purchase intentions aligned with eco-friendly options, reinforcing the significance of empowerment in driving environmentally conscious consumer behaviour.

Thirdly, the confirmed impact of environmental consciousness on purchase intention underscores the role of heightened environmental awareness in shaping consumers' intentions to choose sustainable apparel. The results were in line with previous studies (Chaturvedi et al., 2020). As consumers become increasingly conscious of environmental issues, their propensity to prioritize sustainability in their purchase decisions strengthens, emphasizing the need for businesses to cater to this growing consciousness.

In conclusion, the study establishes a comprehensive network of influences on purchase intention within the sustainable apparel domain. Attitude, behavioural control, and environmental consciousness collectively emerge as significant drivers, offering valuable insights for businesses and policymakers seeking to understand and leverage these factors in fostering a more sustainable consumer landscape.

The hypotheses that were not supported reveal intriguing aspects of consumer behaviour in the context of sustainable fashion. The lack of significant impact for sustainable fashion choice motive (H1) and eco anxiety (H2) suggests that consumers may prioritize

other factors beyond personal motives and environmental consciousness when making sustainable fashion choices. This may also be due to better emotional control and lesser eco anxiety among the new generation of generation y and z. The non-support for circular economy SDG awareness (H3) and sustainable label awareness (H6) indicates that current initiatives to raise awareness about circular economy goals and sustainable labels may not be effectively translating into increased purchase intentions, signalling a potential gap in communication or consumer understanding. These insights underscore the nuanced and multifaceted nature of consumer decision-making in the realm of sustainable fashion, urging businesses and policymakers to delve deeper into understanding the intricacies of these influences.

CHAPTER 7

IMPLICATIONS

CHAPTER 7
IMPLICATIONS

7.1 Introduction to the Chapter

The study highlights the significant impact of green brand loyalty on purchase intention (H9). Therefore, fashion retailers are encouraged to focus on building and nurturing green brand loyalty to establish a dedicated and sustainable customer base.

In line with the study's findings, companies should reduce their reliance on greenwashing claims and prioritize transparency about their sustainability practices. This approach, supported by the impact of greenwashing on purchase intention (H5), fosters consumer trust and strengthens the credibility of businesses in the sustainable fashion market.

Governments are advised to formulate guidelines for advertisements and product labels, addressing the negative impact of greenwashing on purchase intention (H5). By establishing stringent regulations, governments can ensure accurate communication of businesses' sustainability efforts, facilitating a marketplace where consumers can make informed and trustworthy choices.

International organizations are strategically positioned to promote sustainable consumption behaviour globally, supported by the study's findings on the significant impact of environmental consciousness (H10). Investing in awareness campaigns about Sustainable Development Goals and circular economy principles can contribute to shaping consumer attitudes and preferences on a global scale.

While sustainable label awareness did not influence purchase intention in the study, the discrepancy might be attributed to low awareness in the Indian context. Therefore, initiating government-led advertisement campaigns to increase awareness about sustainable labels becomes crucial. By addressing this awareness gap, the government

can create an environment conducive to the positive impact of sustainable labels on purchase intention, aligning with the broader goals of sustainable consumption in the Indian market.

7.2 Theoretical implications

The theoretical foundation of this study integrates multiple well-established theories, presenting a nuanced approach to understanding sustainable fashion consumption. By amalgamating the Stimulus-Organism-Response theory, Behavioural Reasoning Theory, Theory of Reasoned Action, and Theory of Planned Behaviour, the study endeavours to construct a comprehensive model that extends existing theories and addresses the intention-behaviour gap.

7.2.1 Behavioural Reasoning Theory (BRT)

The Behavioural Reasoning Theory serves as a crucial building block, emphasizing the role of reasons and global motives in influencing behavioural outcomes. In the context of sustainable fashion, minimalism (H8), green brand loyalty (H9), and circular economy sustainable development goals awareness (H3) emerge as reasons for both purchase intention and behaviour. The BRT's strength lies in its flexibility to incorporate context-specific factors, providing a more comprehensive explanation of behaviour compared to other theories. This adaptability is particularly relevant in the dynamic and context-specific nature of sustainable fashion consumption. The theoretical outcomes and support for H8 and H9 illustrates that BRT has been suitably used.

7.2.2 Stimulus-Organism-Response (SOR) Theory

Rooted in environmental psychology, the SOR theory forms the structural backbone of the model, delineating the relationship between stimuli, organisms (psychological mechanisms), and responses. The stimuli, ranging from eco-anxiety to green brand

loyalty and environmental consciousness, contribute to the organism's cognitive and affective reactions, ultimately influencing organism: purchase intention and response: purchase behaviour. The SOR theory, traditionally associated with environmental psychology, finds application in diverse fields, showcasing its versatility in explaining various behavioural outcomes. This was suitably expanded as organism to response link (H11) was well established. In terms of stimuli, we established that BC, attitude, greenwashing, minimalism, environmental consciousness and green brand loyalty were established as stimuli under S-O-R theory.

7.2.3 Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB)

TRA and TPB, well-established theoretical blocks, are harnessed to understand the intention-behaviour gap. TRA focuses on volitional behaviour and posits that behaviour is driven by intentions. In this study, variables like attitude, purchase intention, and purchase behaviour are borrowed from TRA. TPB, building on attitude evaluation, introduces the construct of behavioural control. Here, behavioural control is found to influence the intention-behaviour linkage. The extensive usage of TRA and TPB in previous sustainability studies, including fashion sustainability, justifies their inclusion. The convergence of TRA and TPB with SOR and BRT represents an effort to integrate diverse perspectives and provide a more comprehensive understanding of sustainable fashion consumption.

The study introduced novel constructs like sustainable fashion choice motive, eco-anxiety, CESDG awareness, greenwashing, sustainable label awareness, minimalism, green brand loyalty, and environmental consciousness. These constructs cater to exploring consumers' morality, environmental concern, brand behaviour influence, and various psychological and contextual factors influencing sustainable fashion choices.

Notably, minimalism, green brand loyalty and intention behaviour linkage stands out as a novel contribution, offering a unique layer to the understanding of bridging intention-behaviour gap within the context of green marketing and sustainable fashion consumption.

7.3 Practical implications

Businesses should focus on shaping positive attitudes towards sustainable fashion choices. Emphasizing the positive aspects of environmentally conscious products and practices can influence consumers' purchase intentions favourably. Brands need to prioritize transparency in their sustainability efforts to avoid the perception of greenwashing. Authentic communication and verifiable sustainability practices are crucial for building trust and positively impacting purchase intentions. Empowering consumers with a sense of control over their purchasing behaviour is key. Businesses can implement strategies such as clear information, easy access to sustainable options, and personalized choices to enhance consumers' perceived control and, subsequently, their intentions to choose sustainable apparel.

Minimalist design principles significantly influence consumers' purchase intentions. Brands can capitalize on this by emphasizing simplicity, functionality, and quality in their sustainable fashion offerings, aligning with the preferences of environmentally conscious consumers. Building and maintaining green brand loyalty is vital for businesses. Fostering trust through consistent sustainability practices and ethical considerations can enhance consumers' loyalty, positively impacting their intentions to choose sustainable apparel.

Businesses should recognize the role of heightened environmental awareness in shaping purchase intentions. Incorporating eco-friendly messaging and emphasizing the positive

environmental impact of sustainable choices can resonate well with environmentally conscious consumers. Acknowledging the strong link between purchase intention and actual behaviour, businesses should focus on initiatives that not only influence intentions positively but also facilitate the transition from intention to action. Offering incentives, clear pathways for sustainable choices, and reinforcing positive behaviour can enhance the impact on purchase behaviour.

7.4 Policy implications

The study provides several practical implications for various stakeholders including government, international organisations, fashion retailers and regulators.

7.4.1 Government

The supported hypotheses offer valuable policy insights for government bodies aiming to foster sustainable practices in the fashion industry. Recognizing the significant impact of consumer attitudes (H4), greenwashing (H5), behavioural control (H7), minimalism (H8), green brand loyalty (H9), environmental consciousness (H10), and the influence of purchase intention on actual behaviour (H11), policymakers can consider implementing regulations and incentives. This may include promoting transparent communication, enforcing ethical business practices, and providing support for sustainable initiatives to encourage fashion retailers to align their offerings with environmentally conscious consumer preferences. Additionally, government campaigns can focus on raising awareness and educating the public on the positive environmental impact of sustainable fashion choices.

7.4.2 International organizations

International organizations can leverage the study's findings to guide global initiatives aimed at promoting sustainability in the fashion industry. Acknowledging the influence

of greenwashing (H5) and the importance of environmental consciousness (H10), these organizations can work towards establishing standardized guidelines for sustainable practices. Collaboration on cross-cultural and cross-country studies (as suggested by the limitations) may help understand regional nuances, informing global strategies to address the Intention-Behaviour gap. Furthermore, supporting research and development in minimalist design principles (H8) and sustainable label awareness (H6) can contribute to creating a shared global understanding and appreciation for sustainable fashion.

7.4.3 Fashion retailers

Fashion retailers can utilize the supported hypotheses to inform their business strategies and practices. Recognizing the impact of attitude (H4), greenwashing (H5), behavioural control (H7), minimalism (H8), green brand loyalty (H9), and environmental consciousness (H10), retailers can prioritize authenticity, transparency, and sustainable design principles. Implementing consumer empowerment strategies, such as clear information on product labels and accessible sustainable options, can enhance behavioural control and purchase intention alignment. Building and maintaining green brand loyalty can be achieved by consistently integrating sustainable practices into business operations and fostering trust among consumers.

7.4.4 Regulators

Regulatory bodies can draw upon the study's findings to strengthen and tailor regulations within the fashion industry. Recognizing the impact of greenwashing (H5) and the need for behavioural control (H7), regulators can enforce stringent guidelines on transparent marketing practices and ethical business conduct. Collaborating with international organizations, regulators can work towards creating standardized sustainability labels and certifications to aid consumers in making informed choices. Additionally, acknowledging the influence of minimalist design principles (H8) can lead to the

development of regulatory frameworks that encourage sustainable and minimalist approaches within the fashion sector.

In summary, the study's supported hypotheses offer actionable insights for various stakeholders. By aligning policies and practices with these findings, governments, international organizations, fashion retailers, and regulators can collectively contribute to a more sustainable and consumer-aligned fashion industry.

CHAPTER 8

CONCLUSION

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The study bridged intention-behaviour gap discussed in previous studies (Kopplin & Rösch, 2021; Rausch & Kopplin, 2021). This study provides various implications to all stakeholders. The exploration of sustainable fashion consumption presents a complex interplay of psychological, contextual, and behavioural factors. In this comprehensive study, we sought to unravel the intricacies of green consumer behaviour by integrating various theoretical perspectives and testing a set of hypotheses. The findings, as delineated in the supported and non-supported hypotheses, offer valuable insights into the nuanced dynamics influencing sustainable fashion choices.

Contrary to initial expectations, the study did not find support for the hypothesis that Sustainable Fashion Choice Motive has a significant impact on purchase intention (H1). This implies that consumers' motivations for sustainable fashion choices might not be the primary drivers of their purchase intentions of sustainable apparels. Concurrently, the non-support for eco anxiety (H2) suggests that heightened environmental concerns and anxieties may not directly translate into consumers' intentions to engage in sustainable fashion purchasing especially in the younger consumers. These results call for a deeper exploration of the interplay between motives, anxieties, and other influencing factors to comprehend the intricacies of sustainable fashion consumer behaviour.

The study also revealed non-support for the hypothesis that circular economy Sustainable Development Goals awareness significantly impacts purchase intention (H3). This suggests that mere awareness of circular economy goals may not be a direct driver of consumers' intentions to choose sustainable fashion. Further investigation into how CESDG awareness interacts with other factors may unveil indirect influences on

purchase intentions, contributing to a more holistic understanding of the circular economy's role in sustainable fashion consumption.

On a positive note, the study strongly supports the hypothesis that attitude significantly impacts purchase intention (H4). This emphasizes the pivotal role of positive attitudes towards sustainable fashion in shaping consumers' intentions to make eco-friendly purchasing decisions. Theoretical implications suggest that interventions and marketing strategies targeting consumers' perceptions of sustainable fashion can play a crucial role in fostering purchase intentions.

Empirical evidence strongly supports the hypotheses related to greenwashing (H5) and green brand loyalty (H9). This underlines the significance of transparent communication and ethical business practices in influencing consumer choices in the sustainable fashion market. However, the non-support for sustainable label awareness (H6) indicates that consumers' awareness of sustainable labels may not be a direct motivator for their intentions to choose sustainable fashion. Delving deeper into the interplay between label awareness, perceived transparency, and other factors could provide nuanced insights into the role of labels in influencing green consumer behaviour.

The study provides strong empirical support for the hypothesis that behavioural control significantly impacts purchase intention (H7). This suggests that consumers' perceived control over their purchasing behaviour plays a pivotal role in shaping their intentions to choose sustainable apparel. Strategies focusing on enhancing consumers' perceived control could, therefore, be crucial in positively influencing their intentions to engage in sustainable fashion consumption.

One of the notable findings is the strong support for the hypothesis that minimalism has a significant negative impact on purchase intention (H8). This implies that consumers' inclination towards a minimalist lifestyle significantly influences their intentions to choose sustainable fashion. Marketing strategies emphasizing minimalist design principles and purposeful living could, therefore, serve as effective tools in enhancing consumers' intentions to opt for sustainable apparel.

Another strong empirical support is found for the hypothesis that environmental consciousness significantly impacts purchase intention (H10). This implies that consumers' heightened awareness of environmental issues plays a pivotal role in shaping their intentions to choose sustainable apparel. Theoretical implications suggest that promoting environmental consciousness and awareness could be a key strategy in fostering positive intentions towards sustainable fashion.

The study concludes with strong empirical support for the hypothesis that purchase intention has a significant impact on actual purchase behaviour (H11). This underscores the critical role of intentions in translating into tangible actions within the sustainable fashion market. Understanding and influencing consumers' intentions, as revealed through the study, remain pivotal for shaping their actual purchasing behaviour in the realm of sustainable fashion consumption.

In conclusion, this study navigates the intricate landscape of sustainable fashion consumer behaviour, unravelling the motivations, attitudes, and contextual factors that shape eco-conscious choices. The blend of theoretical perspectives and empirical findings contributes to a nuanced understanding of green consumer behaviour. While some hypotheses find support, others challenge preconceived notions, opening avenues for future research and strategic interventions in the sustainable fashion industry. As we

step into the future, armed with insights from this study, the journey towards a more sustainable and eco-conscious fashion landscape beckons—a journey guided by the evolving perceptions, motivations, and intentions of the conscious consumer.

8.1 Future research directions

Future studies may focus on how to complete the cycle of consumption to recycling to fulfil the concept of circular economy. To facilitate a greener tomorrow, well researched policy formulation are also needed. Therefore, more focused research should be executed from the lens of policy inception for end-of-life recycling of apparels. Further constructs like e-word of mouth, religious motives, technological advancements etc should be included. Also, the convergence of technology and sustainability may offer better insights on sustainable consumption behaviour.

8.2 Limitations

While this study contributes valuable insights to the understanding of sustainable consumer behaviour, it is essential to acknowledge and address certain limitations, presenting them as opportunities for improvement in future research endeavours. The use of non-probabilistic sampling may raise concerns about the generalizability of findings to the broader population. Future studies could incorporate probabilistic sampling methods, such as random sampling, to enhance the external validity of results and provide a more representative picture of the target population. The focus on Generations Y and Z might limit the generalizability of findings across diverse age groups. To enhance the study's applicability, future research could adopt a broader age-range approach, encompassing multiple generations, to capture a more comprehensive understanding of sustainable consumer behaviour across different demographic segments. Relying solely on quantitative methods may limit the depth of understanding

and overlook nuanced aspects of consumer behaviour. Complementing quantitative findings with qualitative approaches, such as interviews and focus groups, in future studies could provide richer insights into the motivations and perceptions underlying sustainable purchasing decisions. The study's geographical focus might restrict the applicability of findings to specific cultural and regional contexts. Future research could adopt a cross-cultural and cross-country sampling strategy to explore variations in sustainable consumer behaviour, accounting for cultural nuances and regional differences that might influence attitudes and behaviours towards sustainable apparel.

By acknowledging these limitations positively and suggesting avenues for improvement, the study lays the groundwork for future research endeavours to build upon its findings, fostering a more comprehensive and nuanced understanding of sustainable consumer behaviour.

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