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"Green Threads: Analysing Generation Z's Preferences for Sustainable Apparel "

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ABSTRACT

Purpose – The aim of this study is to examine the sustainable apparel purchase behaviour of Generation Z from the lens of the theory of planned behavior.

Design/methodology/approach – Construct were identified on the basis of TPB and additional construct were added on the basis of literature review. Construct examined were Generation Z Attitude, Subjective Norm (SN), Perceived Behavioral Control (PBC), Environmental Concern (EC), Sustainability Knowledge (SK), Purchase Intention (PI) and Sustainable Purchase Behaviour (SPB). Data was collected by online survey amongst 254 respondents from selected districts of Gujarat. In order to determine the measurement and structural model, Structural Equation Modelling was employed.

Findings – The results indicated that for Generation Z, purchase intention is significantly influenced by their concern towards environment and purchase behaviour for eco-apparels is also significantly influenced by their purchase intention.

Research limitations/implications –

The study highlights the vital role of environmental concern to be kept in focus while designing strategies for purchase behaviour and purchase intention for Generation Z in developing countries. It is imperative as Generation Z will be the global largest consumer cohort in coming years and they do possess the capability to reap in sustainable and optimistic changes for mother earth and societies. The findings were limited to Generation Z cohort and restricted to specific location.

Originality/Value-

Policy makers must provide financial, infrastructural and technological assistance to apparel manufacturing firms to manufacture high quality affordable eco-apparels with its easy availability.

Keywords-

Theory of Planned Behaviour, Eco-friendly apparel, Sustainability Knowledge, Sustainable Purchase Behaviour, Generation Z

1. Introduction

The fashion industry is purportedly the world's third largest manufacturing industry by producing over 150 billion apparels each year, globally (Zhang et al., 2021). Revenue generated by the global apparel market was approximately 1.55 trillion U.S. dollars in the year 2021 and is expected to reach 2 trillion U.S. dollars by 2026 (Statista, 2021). In 2021, apparel market revenue in India amounted to approximately 73.1 billion U.S. dollars (Statista, 2021).

In contrast to the same, the apparel industry is slated because of bad working conditions and issues pertaining to pollution. It makes considerable contribution to climate change. Sustainable fashion arose in 1960s as the devastation caused on mother earth by the ill impact of fashion industry grew and in return consumers started addressing the issue by demanding eco-friendly apparel manufacturing practices (Jung and Jin 2014).

Apparel industry requires sustainable business models for the longer run, predominantly for labour practices and environmental issues. In comparison with other models, the "fast fashion" business model is deemed as a successful one because of lower price bands and swifter rotations of product which in turn drives over-

consumption (Zhang et al., 2021). The notation "fast fashion" at first was used in 1990s by New York Times while mentioning Zara, the Spanish clothing chain because of its capability to project a garment in their outlet's collection within fifteen days after designing stage is cleared (Mizrachi and Tal, 2022). Fast fashion indicates the clothing produced at mass level by organizations in the similar, uniform and globally as fast food chains (ThredUp, 2020; Hines and Bruce, 2001). Number of fashion brands started replicating catwalk styles by mid 1970s, manufacturing garments at lesser cost and supplying inexpensive fashion products in retail markets in a shorter time frame preferably months (Siege, 2019; Tokatli N, 2008). Fast fashion business model gained momentum in 1980s, and few expounded it as the "democratisation of fashion", as once-exclusive fancies were available to all.

This resulted in creation of enormous waste and pressures on the environment. Approximately 500 billion U.S. dollars is lost globally owing to underutilisation of clothing and absence of recycling activities (MacArthur Foundation,2017). The projected consumption value of global apparels by 2030 is 102 million tons (Mizrachi and Tal, 2022). Environment related damages can be witnessed because of the waste made after manufacturing fashion products and enhanced carbon footprint as nearly all fashion products are outsourced and transported globally. In case the entire lifecycle of clothing as one of the category in the fashion industry is taken than the industry is accountable for 10 per cent of global CO2 emissions and 20 per cent of global waste streams.

This study focused on Generation Z and as the fashion industry attracts and favors younger buyers, the researchers found them as viable population in assessing the factors affecting their sustainable apparel purchase behaviour. Generation Z is recognized as "post-millennials" and comprises of individuals born between 1995 and 2010 (Chaturvedi et al., 2020; Seemiller and Grace, 2016). Underpinnings related with this generation are diverse (Nielsen, 2018; Priporas et al., 2017), but the unanimity out of the different beliefs is that people belonging to Generation Z have progressed to college and are acknowledged as young adults (Chaturvedi et al., 2020; Nguyen et al., 2018). This generation is more alert, active, engaging and intrinsically motivated to adopt green products and act in responsible ways (Financial Times, 2018). Individuals of this cohort will be approaching to celebrate their 30th birthday in 2025. It is believed that the current and succeeding years of fashion consciousness with higher disposable incomes and eco- consciousness mark Generation Z as one of the most engaging and attractive demographic for sustainable apparels.

2. Theoretical Background and Hypothesis Development

2.1 Sustainable Apparel Consumption

Sustainable apparel consumption can be seen as one of the socially responsible behaviours, including the purchasing, wearing, and discarding of clothing. These environmentally conscious and socially concerned consumers believe that their sustainable purchasing practises can contribute to the reduction of pollution and the resolution of environmental issues (Dean and McMullen, 2007). Current environmental concerns and interests have sparked discussion about how environmental awareness affects apparel consumption (Lee, 2011). Consumers frequently lack a clear knowledge of sustainable clothing (Cervellon and Carey, 2011). They may conclude that sustainable clothing is only that which is created from pricey organic and natural fibres. This misperception might lead to poor customer involvement in the purchase of sustainable clothing (Chang & Watchravesringkan, 2018).

According to Kim and Damhorst (1998), Sustainable clothes can be categorised under a number of headings. First, environmentally friendly handling practises can be promoted by producing sustainable clothing from recycled materials, naturally grown organic fibres, and special fabrics that ask for lower washing temperatures or less ironing. Additionally, sustainable clothing is defined as having undergone little to no dye processing, eco-friendly labelling or packaging, a long lifespan, and a connection to resource preservation, such as second-hand or used clothing.

Therefore, the fundamental characteristics of sustainable clothing are clothes that adhere to fair trade principles, don't harm the environment or workers, are made to last for a longer time, were produced with an ethical production system in mind, have the least possible negative impact on the environment, and use eco-labelled or recycled materials. (Joergens, 2006; Shen et al., 2013, Zhang et al. 2019).

2.2 Theory of Planned Behaviour

Theory of Planned Behavior (TPB) a social cognitive model has been used to successfully anticipate a varied range of behaviours and intentions. The theory of planned behaviour (Ajzen, 1991), which may explain the

relationship between barriers and cognitions about sustainable apparel consumption behaviour, is frequently cited in the literature when it comes to understanding behaviours such as sustainable consumption. TPB suggests that a mix of attitudes, subjective norms, and the person's perceptions of behavioural controls can be used to anticipate individual's intention to engage in a behaviour. (Ajzen, 1991)

The first cognition, attitudes toward having a Sustainable Apparel Consumption (SAC) behaviour, refers to the person's views and evaluation of the outcomes that the behaviour can produce, or the degree to which a person has a favourable or unfavourable evaluation of a certain behaviour (Ajzen, 1991; Fishbein and Ajzen, 1975). Subjective norm refers to an individual's impression of societal pressure to exhibit a SAC behaviour (e.g., from family, friends, or co-workers) and their drive to give in to such pressure (Ajzen, 1991). Lastly, perceived behavioural control (PBC) refers to how easy or difficult a SAC behaviour is seen to be by the individual. (Ajzen, 1991; Lam and Hsu, 2006; Zhang et al. 2019)

An individual's **attitude** has a significant impact on their purchasing intention for sustainable goods and is positively correlated with purchase intention (Shukla 2019; Wei et al. 2017). An emotional response to engaging in a particular conduct is called an attitude (Arvola et al. 2008). Only if a person has a favourable attitude about a conduct can they create positive intentions toward it (Taylor and Todd 1997; Mostafa 2006).

Subjective norms define the elements that influence people's behaviour (Hsu et al. 2017). It denotes the social pressures that some consumers experience to act in a particular way. This norm reveals the degree to which a person feels ethically accountable to others and how significant consumers' attachment to a positive social image is. Therefore, subjective norms are positively correlated with a consumer's attitude toward particular forms of conduct in addition to playing a significant impact in the consumer's decision to make a purchase (Smith and Paladino 2010; Paul, Modi and Patel 2016).Family, friends, and colleagues are among the other factors that influence consumer behaviour (Biswas and Roy 2015), and each person's intention to purchase sustainable apparel is strongly influenced by them (Arvola et al. 2008; Chen and Peng 2012; Paul et al. 2016).

A person's perception of how easy or difficult it is to regulate a specific action is referred to as **perceived behavioural control** (PBC) (Ajzen 2002). It shows a sense of the availability of the resources and opportunities, i.e., the availability of money, time, psychological barriers, other relevant resources, and the focus person's self-confidence in their capacity to engage in the specific behaviour (Ajzen 1991). Increased self-efficacy and controllability are two aspects that combine to create increased perceived behavioural control. Self-efficacy is the idea that someone believes they can accomplish this behaviour successfully on their own. It displays the perceived level of difficulty needed to carry out the behaviour. Controllability refers to external variables. It is the conviction that one has over one's own performance of the behaviour or if one believes that it is governed by other, uncontrollable circumstances, such as the cost and availability of a product. A high PBC increases a person's confidence in their ability to carry out the desired activity successfully. (Bandura 1977).

2.3 Environmental Concern

The activity a person prefers to engage in reveals his intentions. They are inspired to take particular voluntary actions based on their awareness of the environment. Additionally, (Yadav and Pathak, 2016) promoted the notion that there is a strong correlation between purchase intentions and sustainable purchasing behaviour, which is crucial for this study. In reality, a study has indicated that people who intend to buy sustainable products are willing to pay more for them, but only up to a point where the price does not become unaffordable for consumers (Leung and Morris 2014). Through TPB dimensions such as attitude, subjective norms, and perceived behaviour control, environmental concern validates a positive influence on purchasing intention (Prakash and Pathak 2017).

2.4 Sustainability Knowledge

The knowledge about sustainability and the environment is an important because people are not likely to adopt sustainable behaviours if they are unaware of environmental problems. Early work on factors influencing individual behaviour assumed if individuals had perfect information, they would make better decisions. This information was typically delivered via a top-down, one-way process wherein scientists and other experts imparted the “right” information to fill a deficit of knowledge in the hopes of spurring behaviour change. By this rationale, the solution to a problem is simply communicating better information to the

appropriate audience to change behaviour (Miller, 2001; Heeren, at al., 2016)

2.5 Hypotheses Development

After reviewing and understanding the literature, association amongst the finalized constructs namely, Environmental Concern (EC), Sustainability Knowledge (SK), Attitude (ATT), Subjective Norms (SN), Perceived Behavioural Control (PBC), Purchase Intention (PI) and Purchase Behaviour (PB) towards sustainable apparels are proposed for the current study.

H1. Attitude (ATT) has a positive and significant influence on Generation Z Consumer's Purchase Intention towards sustainable apparel.

H2. Subjective Norms (SN) has a positive and significant influence on Generation Z Consumer's Purchase Intention towards sustainable apparel.

H3. Perceived Behavioural Control (PBC) has a positive and significant influence on Generation Z Consumer's Purchase Intention towards sustainable apparel.

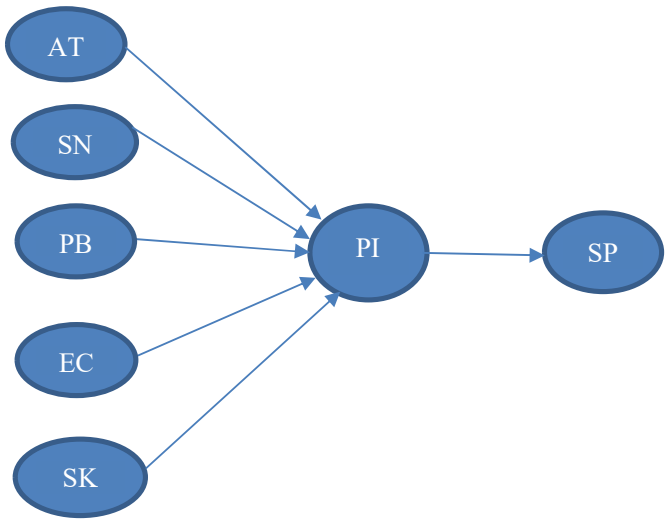
H4. Environmental Concern (EC) has a positive and significant influence on Generation Z Consumer's Purchase Intention towards sustainable apparel.

H5. Sustainability Knowledge (SK) has a positive and significant influence on Generation Z Consumer's Purchase Intention towards sustainable apparel.

H6. Purchase Intention (PI) has a positive and significant influence on Generation Z Consumer's Sustainable Purchase Behaviour towards sustainable apparel.

The basic conceptual framework is displayed in Figure 1:

Figure 1: Proposed Framework



3. Research Methodology

3.1 Sample and Sampling Method

Generation Z of selected districts of Gujarat was the target sample cohort for the current study. The explorations and understandings obtained from this cohort will be noticeable at the time it matures. Online survey was used as the method for collecting the responses of the respondents. Questionnaire was designed by adapting and modifying the literature pieces as per the requirement and context of the current study. Convenience sampling was used for data collection, it being economical, effectual and easy to execute (Jager et al., 2017). Data was collected from both metropolitan and non-metropolitan districts of Gujarat. The districts were Kheda, Ahmedabad, Vadodara and data was collected in the time span of two months from August-October 2022. Sample constituted respondents studying in Class XI and Class XII of varied public and private schools, public and private universities, individuals employed in different public and private sector organizations, self-employed and housewives. The e-forms were sent to different e-platforms of various schools, colleges, universities, organizations and household through Email and WhatsApp. Reliability, validity and quality related aspects of the questionnaire were ascertained with the help of pilot

survey which was executed on 33 respondents.

Finally, e-forms were sent to 437 Generation Z sampling cohort and out of the same 389 respondents completed the survey with an output rate of 89.01%. Incomplete forms and outliers were filtered and 254 responses were used for analysis. Table 1 displays the demographic profile of the respondents

Table 1. Descriptive Statistics of Demographic Profile of Respondents

Demographic Characteristics	n	%
Generation Z	254	100
Gender		
Male	130	51.2
Female	124	48.8
Age		
15-18	14	5.5
19-22	162	63.8
23-27	78	30.7
Education		
XII/HSC	14	5.5
Graduation	98	38.6
Post Graduation	136	53.5
Others	6	2.4
Occupation		
Student	216	85.0
Government Employee/Public Sector	2	.8
Private Employee	26	10.2
Entrepreneur	8	3.1
Professional	2	.8
Income		
Below 5 lakh	208	81.9
5-10 lakh	38	15.0
11-15 lakh	2	.8
Above 15 lakh	6	2.4

3.2 Measurements

For the/ current study, constructs were identified as per the Theory of Planned Behaviour, were finalized in line with the proposed framework after extensive literature review. Seven point Likert type differential scale was employed to measure and quantify the constructs where 1 indicated “strongly disagree” and 7 indicated “strongly agree”. A four-item scale was adopted for ATT from (Kim and Han, 2010). Four items were drawn from (Yadav and Pathak, 2016b) for SN and four items for PBC were adopted from (Kim and Han, 2010). For EC, validated five-item scale was taken from (Mostafa, 2009; Kilbourne and Pickett, 2008) and for SK five-item scale was adopted from (Mostafa, 2007). Purchase Intention was measured using four item scale adopted from (Kim et al., 2013) and five item scale was accepted for SPB from (Ramany et al, 2022).

4. Data Analysis and Statistical Significance

SPSS 25 and AMOS 23 were employed to investigate the response data obtained from Generation Z cohort. AMOS which is an additional SPSS module was employed for Structural Equation Modelling. The hypothesized relationship amongst variables was examined with the help of AMOS 23. Responses which were incomplete were removed by employing z-score value outliers and hence were cleaned (Clark-Carter, 2014). Further analysis on the filtered data was executed by using Structural Equation Modelling. Initially, Confirmatory Factor Analysis (CFA) was used, subsequently followed by testing model fitness. Significant association between the dependent and independent variables was identified through Hypothesis Testing (Anderson and Gerbing, 1988).

4.1 Exploratory Factor Analysis

Exploratory factor analysis was performed on the data followed by CFA. Sample adequacy for executing EFA was ascertained by Kaiser–Meyer–Olkin (KMO) measure (0.868) and Bartlett's Sphericity test (1746.830; significant value is 0.000) was used to identify that there is no correlation among variables. Functionality of KMO and Bartlett's test of Sphericity is presented in Table 2, with KMO value which is deliberated acceptable (Ikediashi et al., 2014). Bartlett's test of Sphericity specifies value .000 which is significant and reflects sphericity of the data. Underlying structure was identified with the help of EFA, it reduced the data and aided in exploring the concealed structure out of a large data set. Table 3, depicts the variables in which the factor loading values were 0.60 or more. After Orthogonal Varimax Rotation, seven uncovered constructs were identified which is in line with the seven constructs undertaken into consideration for the study, as presented in Table 4. The obtained seven items accounted for 71.056% of the total variance, which lays a strong foundation for the final study as demonstrated in Table 4 (Hair et al., 2013). Questionnaire comprised of seven constructs with 27 items. After EFA, (SN2, PBC, SK1, SPB1) four items were removed because of their low factor loading. Further analysis was carried on 23 items.

Table 2. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.868
Bartlett's Test of Sphericity	Approx. Chi-Square	1746.830
	df	351
	Sig.	.000

Table 3. Communalities

	Initial	Extraction
ATT1	1.000	.754
ATT2	1.000	.705
ATT3	1.000	.759
ATT4	1.000	.772
SN1	1.000	.648
SN2	1.000	.433
SN3	1.000	.526
PBC1	1.000	.421
PBC2	1.000	.741
PBC3	1.000	.724
EC1	1.000	.737
EC2	1.000	.712
EC3	1.000	.713
EC4	1.000	.791
EC5	1.000	.739
SK1	1.000	.442
SK2	1.000	.773
SK3	1.000	.521
SK4	1.000	.643
PI1	1.000	.768
PI2	1.000	.699

PI3	1.000	.651
PI4	1.000	.795
SPB1	1.000	.403
SPB2	1.000	.772
SPB3	1.000	.723
SPB4	1.000	.678

Extraction Method: Principal Component Analysis.

Table 4. Total Variance Explained

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.056	39.372	39.372	9.056	39.372	39.372	3.953	17.187	17.187
2	1.561	6.787	46.159	1.561	6.787	46.159	2.715	11.806	28.993
3	1.513	6.578	52.737	1.513	6.578	52.737	2.461	10.699	39.692
4	1.224	5.322	58.058	1.224	5.322	58.058	2.185	9.499	49.191
5	1.185	5.152	63.210	1.185	5.152	63.210	1.999	8.690	57.880
6	.973	4.229	67.440	.973	4.229	67.440	1.662	7.227	65.107
7	.832	3.616	71.056	.832	3.616	71.056	1.368	5.949	71.056
8	.794	3.451	74.507						
9	.739	3.212	77.719						
10	.646	2.809	80.528						
11	.585	2.542	83.070						
12	.513	2.232	85.303						
13	.477	2.073	87.375						
14	.436	1.896	89.271						
15	.405	1.759	91.030						
16	.360	1.567	92.597						
17	.333	1.446	94.043						
18	.290	1.263	95.306						
19	.288	1.251	96.557						
20	.232	1.007	97.564						
21	.223	.971	98.535						
22	.177	.770	99.305						
23	.160	.695	100.000						

Extraction Method: Principal Component Analysis.

4.2 Measurement Model

In order to ensure measurement model fitness, convergent validity, discriminant validity, Confirmatory Factor Analysis was employed. Fitness of the measurement model was assessed using (1) Normed Chi-square (x2/df), (2) Goodness of Fit Index (GFI), (3) Comparative Fit Index (CFI), (4) Tucker–Lewis index (TLI), (5) Incremental Fit Index (IFI) and (6) Root Mean Square Error of Approximation (RMSEA).

The fit indices indicated a good fit with statistical parameters as (x2/df = 3.123, GFI =0.923, CFI = 0.936, TLI = 0.912, IFI = 0.917 and RMSEA = 0.087)

Factor loading of each of the items was noted which was atleast 0.60 and this reflected Convergent Validity. Inorder to ensure the reliability of the scale items, Cronbach's alpha was measured. As per rule of thumb, the alpha value of 0.70 or more is considered as a sufficient measure of internal consistency of an instrument (Taber, 2017; Hair et al., 2013**;** Mostafa, 2009). Convergent Validity was ensured by observing the value of Average Variance Extracted (AVE) which was 0.50 or more and Composite Reliability (CR) was ascertained as the values were 0.70 or more for each construct (Aggelidis and Chatzoglou, 2012**;** Fornell & Larcker, 1981).

Factor Loading, Cronbach's Alpha, Composite Relaibility and Average Variance Extracted values are presented in Table 5 which are acceptable as per the standard cut-off points.

Table 5. Standardized factor loadings, Cronbach's Alpha, Composite Reliability and Average Variance Extracted

Constructs	Factor Loading	Cronbach's Alpha	CR	AVE
Attitude				
ATT1	0.795			
ATT2	0.643			
ATT3	0.735	0.847	0.855	0.60
ATT4	0.895			
Subjective Norms				
SN1	0.766	0.728	0.667	0.502
SN3	0.677			
Perceived Behavioural Control				
PBC2	0.785	0.637	0.660	0.495
PBC3	0.620			
Environmental Concern				
EC1	0.730			
EC2	0.711			
EC3	0.662	0.832	0.830	0.515
EC4	0.743			
EC5	0.693			
Sustainability Knowledge				
SK2	0.677			
SK3	0.657	0.738	0.833	0.58
SK4	0.653			
Purchase Intention				
PI1	0.647			
PI2	0.780	0.781	0.7113	0.67
PI3	0.687			
PI4	0.642			
Sustainable Purchase Behaviour				
SPB2	0.732			
SPB3	0.706	0.744	0.7847	0.55
SPB4	0.647			

Discriminant Validity was assessed by comparing the amount of variance captured by the construct and the shared variance with other constructs. As per the standard notion, levels of AVE for each of the constructs should be greater than the squared correlation values of the constructs (Nunnally and Bernstein, 1994). Table 6, depicts the confirmation of discriminant validity.

Table 6. Correlation among Constructs

	ATT	SN	PBC	EC	SK	PI	SPB
ATT	**0.774**						
SN	0.729	**0.708**					
PBC	0.493	0.497	**0.707**				
EC	0.579	0.496	0.486	**0.717**			
SK	0.531	0.483	0.495	0.542	**0.761**		
PI	0.579	0.474	0.476	0.606	0.455	**0.818**	
SPB	0.514	0.490	0.398	0.459	0.448	0.609	**0.741**

4.3 Structural Model

Structural Equation Modelling was employed to ensure model fitness of CFA model. This ensured the

model's ability to generate existing linkages with varied data examined under similar conditions (Hair et al., 2013). The acceptable criterion for ascertaining model fit were attained (x2/df = 3.109, GFI=0.902, CFI = 0.917, TLI = 0.894, IFI = 0.891, RMSEA = 0.093) as shown in Table 7. As represented in Table 8, the hypothesized model was calculated by p-values to identify the outcome of independent variables on the dependent variable.

Table 7. Structural Model

Measurements	Result	Outcome
CMIN/df	3.109	"Acceptable"
Comparative Fit Index (CFI)	0.917	"Acceptable"
Goodness of Fit Index (GFI)	0.902	"Acceptable"
Adjusted Goodness of Fit Index (AGFI)	0.857	"Acceptable"
Tucker–Lewis index (TLI)	0.894	"Acceptable"
Incremental Fit Index (IFI)	0.891	"Acceptable"
Root Mean Square Error of Approximation (RMSEA)	0.093	"Acceptable"

Table 8. Standardized Regression Weights and *p*-values

Hypothesis	Path	Estimate	p-Value	Result
H1	ATT → PI	0.310	0.207	Not Supported
H2	SN → PI	-0.241	0.509	Not Supported
H3	PBC → PI	0.145	0.126	Not Supported
H4	EC → PI	0.315	0.001	Supported
H5	SK → PI	0.078	0.546	Not Supported
H6	PI → SPB	0.381	***	Supported

4.4 Multicollinearity

Multicollinearity has been tested so that there is no correlation amongst independent variables and the estimated values are free from any impact of correlation (Alin, 2010). Multicollinearity is said to arise among the independent variables if the variance inflation factor (VIF) is more than five (Sarstedt et al., 2014**,** Menard 1995)

Table 9. Variance Inflation Factor

Variables	Collinearity Tolerance	VIF
ATT	0.387	2.582
SN	0.448	2.234
PBC	0.674	1.484
EC	0.557	1.796
SK	0.609	1.642

5. Discussion and Implications

This study measures the direct impact of attitude, subjective norms, perceived behavioural control, environmental concern and sustainability knowledge (ATT, SN, PBC, EC, SK) on purchase intention(PI) followed by influence on sustainable purchase behaviour(SPB). As depicted in Table 8, hypotheses H4 and H6 were accepted based on their p-value scores. The outcomes of the study depict that environmental concern has a positive significant influence on purchase intention and thus supports H4 ($p<.001$). The study reflects that attitude, subjective norms and perceived behavioural control have no impact on the purchase intention

and buying behaviour. There are various studies which depicted weak or no correlation between attitude and buying behaviour for green products (Joshi and Rahman, 2015) and same is identified from this study for eco-apparels. Lesser availability of green apparels leading to inconveniences in purchase. Firms communication campaigns can use celebrities who are considered to be the idols of younger cohort of consumers that might have positive impact on consumers' attitude, social influence followed by intention to buy green apparel products (Nguyen et al., 2019). Firms must design effective strategies for better visibility and affordability of eco-apparels, specifically for the studied cohort. Providing an ease of purchase for green apparels to this generational cohort might result in enhanced intention to buy these apparels.

According to TPB, subjective norms are considered vital indicators of purchase intention to buy green products (Liu et al. 2018), the attained results revealed that there is no significant impact on Generation Z purchase intention towards eco-apparels, inferring that this generational cohort might not be considerate to social influence while purchasing eco-apparels. It is also reflected from the results that purchase intention positively impacts sustainable purchase behaviour of Generation Z towards eco-apparels. Environmental concern had significant influence on Gen Z consumers' purchase intention and this reveals that Indian Generation Z cohort members are concerned about the environmental issues and give a thought to environmental concern while buying apparels. Customers with concern towards environment have higher possibility of selecting apparels with least environmental impact (Esmaeilpour, M. and Bahmiary, E, 2017). More explicitly, environmental concern is one of the strongest determinant in motivating purchase intention towards green apparels (Paul et al., 2016; Hutchins and Greenhalgh, 1997).

The study reveals that Generation Z Cohort are probable to buy eco-friendly apparels when they are driven with positive purchase intention. This provides stringent insights that the individual has a great concern for the environment, which contributes to their purchasing intention and purchase behaviour towards eco-friendly apparels as it can be considered as their contribution to sustainability.

This study has identified additional relationships which are not present in the original TPB model and depicted insights for Generation Z sustainable apparel purchase intention and behaviors. Researchers and policy makers should emphasize on disseminating environmental education as consumers typically consider the identification of green apparels as being problematic (Z. Zaremohzzabieh et al., 2020). Environmental education and education marketing should be enhanced by eco-apparel firms, so that sustainability knowledge is enhanced and customers are able to recognize eco-apparels (K. Cowan and T. Kinley, 2014)

Designers and marketers should be considerate to consumers' environmental concerns while developing apparel designing strategies and plans. Consumers with higher purchase intention reaction can be targeted more effectively by segmenting the market based on environmental concern. There could be a contrast and opposite impact on growing consumers demand and interest, if eco-friendly apparels are made more readily available (Dikdik Harjadi & Ardi Gunardi, 2022; Lavuri et al., 2022).

Policymakers, marketers must encourage the positive public views of green apparels. Environmental concern can be enhanced via advertisements and marketing campaigns that portray worsening environmental situations. Apparel organizations have to undertake the triple bottom line concept positively and have to sincerely avoid greenwashing which could modify the trustworthiness of ethical and sustainable messages. The phrase "Green is the new black" is quite common which echoes that how ecology is becoming a predominant facet in fashion-related concerns. Positive EWOM (electronic word of the mouth) on social media should be stimulated to create and strengthen a positive reputation and organizations could accordingly design apt marketing strategies for green apparels business growth. We propose, emphasizing these apparels by placing them on distinctive shelves within retail outlets, projecting the eco-friendly apparels in public spaces, media, fashion shows, events etc. (Ghali-Zinoubi, Z.,2022)

6. Conclusions, Limitations and Recommendation for Future Research

As per Greendex survey 2014 (Rahman and Kharb, 2022; GlobeScan 2014), India was placed at the top position with Greendex score of 61.4, amongst 18 nations. The findings of the Greendex survey highlighted that in India 72% of consumers are highly concerned towards environmental issues and problems.

This study indicates that Generation Z develop an intention to buy sustainable apparels if they are seriously concerned and alarmed about environmental issues. Concern towards alarming environmental problems and detrimental impact on mother earth is one of the major factor behind purchase likelihood explicitly for green

apparels. The environmental concern also plays an important role while identifying green apparels. Purchase likelihood backed by concern triggers the sustainable purchase behaviour of Generation Z towards eco-apparels.

Various shortcomings are applicable to the study and outlay the path for future research. Efforts were made to fully execute this study in order to offer a framework that would aid in value addition in the existing literature but there are still a number of constraints that future studies should take into consideration. Ingress to customers, who really buy eco-friendly apparels was one of the shortcomings. Consumers who had witnessed buying eco-friendly apparels at least once and were concerned, aware about environmental issues were required in order to carry on the study. Furthermore, questionnaire which was employed as a tool for data collection had its own drawbacks that could influence the study's findings.

Additionally, other limitation is collection of data by online surveys and convenience sampling which excludes the essence of randomness. The study used a cross-sectional design, while a longitudinal design could offer a firm and stable acuity into causal relationships. Future researchers could employ a cross-cultural comparative study in developed and developing countries to distinguish and contrast generation Z for green apparels.

References

- Aggelidis, V.P. and Chatzoglou, P.D. (2012), "Hospital information systems: measuring end user computing satisfaction (EUCS)", Journal of Biomedical Informatics, Vol. 45 No. 3, pp. 566-579.
- Ajzen, I. (1991), "The theory of planned behavior", Organizational Behavior and Human Decision Processes, Vol. 50 No. 2, pp. 179-211.
- Ajzen, I. (2002). Perceived Behavioral Control, Self-Efficacy, Locus of Control, and the Theory of Planned Behavior. Journal of Applied Social Psychology, 32(4), pp.665-683.
- Ajzen, I. and Fishbein, M. (1980), Understanding Attitudes and Predicting Social Behavior, No. 3, Prentice-Hall, Englewood Cliffs, NJ.
- Alexander John Heeren, Ajay S. Singh, Adam Zwickle, Tomas M. Koontz, Kristina M. Slagle, Anna C. McCreery, (2016) "Is sustainability knowledge half the battle? An examination of sustainability knowledge, attitudes, norms, and efficacy to understand sustainable behaviours", International Journal of Sustainability in Higher Education, Vol. 17 Issue: 5, pp.613-632, https://doi.org/10.1108/ IJSHE-02-2015-0014
- Alin, A. (2010), "Multicollinearity", Wiley Interdisciplinary Reviews: Computational Statistics, Vol. 2 No. 3, pp. 370-374.
- Anderson, J.C. and Gerbing, D.W. (1988), "Structural equation modeling in practice: a review and recommended two-step approach", Psychological Bulletin, Vol. 103 No. 3, pp. 411-423.
- Arvola, A., Vassallo, M., Dean, M., Lampila, P., Saba, A., Lähteenmäki, L., & Shepherd, R. (2008). Predicting intentions to purchase organic food: The role of affective and moral attitudes in the Theory of Planned Behaviour. Appetite, 50(2-3), 443-454.
- Arvola, Anne, Marco Vassallo, Moira Dean, Piritta Lampila, Anna Saba, Liisa Lähteenmäki, and Richard Shepherd. 2008. Predicting intentions to purchase organic food: The role of afective and moral attitudes in the Theory of Planned Behaviour. Appetite 50 (2–3): 443–45
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84(2), pp.191-215.
- Biswas, Aindrila, and Mousumi Roy. 2015. Green products: An exploratory study on the consumer behaviour in emerging economies of the East. Journal of Cleaner Production 87: 463–468
- Cervellon, M. C., & Carey, L. (2011). Consumers' perceptions of 'green': Why and how consumers use eco-fashion and green beauty products. Critical Studies in Fashion & Beauty, 2(1-2), 117-138.
- Cervellon, M.C. and Carey, L. (2011), "Consumers' perceptions of 'green': why and how consumers use eco-fashion and green beauty products", Critical Studies in Fashion & Beauty, Vol. 2 Nos 1/2, pp. 117-138.
- Chang, H. and Watchravesringkan, K. (2018), "Who are sustainably minded apparel shoppers? An investigation to the influencing factors of sustainable apparel consumption", International Journal of Retail & Distribution Management, Vol. 46 No. 2, pp. 148-162

- Chang, H. J., & Watchravesringkan, K. T. (2018). Who are sustainably minded apparel shoppers? An investigation to the influencing factors of sustainable apparel consumption. *International Journal of Retail & Distribution Management*.
- Chaturvedi, P., Kulshreshtha, K. and Tripathi, V. (2020), "Investigating the determinants of behavioral intentions of generation Z for recycled clothing: an evidence from a developing economy", Young Consumers, Vol. 21 No. 4, pp. 403-417. https://doi.org/10.1108/YC-03-2020-1110
- Chen, Annie, and Norman Peng. 2012. Green hotel knowledge and tourists' staying behavior. Annals of Tourism Research 39 (4): 2211–2219
- Chen, M. and Tung, P. (2014). Developing an extended Theory of Planned Behavior model to predict consumers' intention to visit green hotels. International Journal of Hospitality Management, 36, pp.221-230.
- Clark-Carter, D. (2014), "z scores", Wiley StatsRef: Statistics Reference Online, Wiley Online Library
- Cowan, K. and Kinley, T. (2014), "Green spirit: consumer empathies for green apparel", International Journal of Consumer Studies, Vol. 38 No. 5, pp. 493-499
- Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. Journal of business venturing, 22(1), 50-76.
- Dean, T.J. and McMullen, J.S. (2007), "Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action", Journal of Business Venturing, Vol. 22 No. 1, pp. 50-76
- Dikdik Harjadi & Ardi Gunardi (2022) Factors affecting eco-friendly purchase intention: subjective norms and ecological consciousness as moderators, Cogent Business & Management, 9:1, 2148334, DOI: 10.1080/23311975.2022.2148334
- Ellen MacArthur Foundation. A New Textiles Economy: Redesigning Fashion's Future; Ellen MacArthur Foundation: Cowes, UK, 2017
- Esmaeilpour, M. and Bahmiary, E. (2017), "Investigating the impact of environmental attitude on the decision to purchase a green product with the mediating role of environmental concern and care for green products", Management & Marketing. Challenges for the Knowledge Society, Vol. 12, No. 2, pp. 297-315. DOI: 10.1515/mmcks-2017-0018.
- Esmaeilpour, M. and Bahmiary, E. (2017), "Investigating the impact of environmental attitude on the decision to purchase a green product with the mediating role of environmental concern and care for green products", Management & Marketing. Challenges for the Knowledge Society, Vol. 12, No. 2, pp. 297-315. DOI: 10.1515/mmcks-2017-0018.
- Financial Times (2018), "Younger consumers drive shift to ethical products", available at: www.ft.com/content/8b08bf4c-e5a0-11e7-8b99-0191e45377ec (accessed 24 September 2022)
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. JMR, Journal of Marketing Research, 18(1), 39-50. https://doi.org/10.1177/002224378101800104
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. Journal of Marketing Research, 18(1), 39-50. https://doi.org/10.1177/002224378101800104
- Ghali-Zinoubi, Z. (2022). Examining Drivers of Environmentally Conscious Consumer Behavior: Theory of Planned Behavior Extended with Cultural Factors. Sustainability, 14(13), 8072. MDPI AG. Retrieved from http://dx.doi.org/10.3390/su14138072
- Global Fashion Agenda; Boston Consulting Group. Pulse of the Fashion Industry; Global Fashion Agenda: Copenhagen, Denmark, 2017
- Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2013), Multivariate Data Analysis, 7th ed., Pearson Education Limited, Edinburgh Gate, Harlow.
- Hines, T., & Bruce, M. (2007). Fashion marketing: contemporary issues. Routledge.
- Hsu, Chia-Lin, Chi-Ya. Chang, and Chutinart Yansritakul. 2017. Exploring purchase intention of green skincare products using the theory of planned behavior: Testing the moderating efects of country of origin and price sensitivity. Journal of Retailing and Consumer Services 34: 145–152

- Hutchins, R. K., & Greenhalgh, L. A. (1995). Organic confusion: sustaining competitive advantage. Nutrition & Food Science, 95(6), 11-14.
- Ikediashi, D.I., Ogunlana, S.O. and Alotaibi, A. (2014), "Analysis of project failure factors for infrastructure projects in Saudi Arabia: a multivariate approach", Journal of Construction in Developing Countries, Vol. 19 No. 1, p. 35.
- Jager, J., Putnick, D. and Bornstein, M. (2017), "II. More than just convenient: the scientific merits of homogeneous convenience samples", Monographs of the Society for Research in Child Development, Vol. 82 No. 2, pp. 13-30
- Joergens, C. (2006), "Ethical fashion: myth or future trend? Journal of fashion marketing and management", Journal of Fashion Marketing and Management: An International Journal, Vol. 10 No. 3, pp. 360-371
- Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. International Strategic Management Review, 3(1-2), 128–143.
- Jung, Sojin, and Byoungho Jin. 2014. A theoretical investigation of slow fashion: Sustainable future of the apparel industry. International Journal of Consumer Studies 38: 510–19.
- Kang, J., Liu, C. and Kim, S.H. (2013), "Environmentally sustainable textile and apparel consumption: the role of consumer knowledge, perceived consumer effectiveness and perceived personal relevance", International Journal of Consumer Studies, Vol. 37 No. 4, pp. 442-452.
- Kilbourne, W. and Pickett, G. (2008), "How materialism affects environmental beliefs, concern, and environmentally responsible behavior", Journal of Business Research, Vol. 61 No. 9, pp. 885-893.
- Kilbourne, W. and Pickett, G. (2008), "How materialism affects environmental beliefs, concern, and environmentally responsible behavior", Journal of Business Research, Vol. 61 No. 9, pp. 885-893.
- Kim, H. S., & Damhorst, M. L. (1998). Environmental concern and apparel consumption. Clothing and Textiles Research Journal, 16(3), 126-133.
- Kim, H.-S. and Damhorst, M.L. (1998), "Environmental concern and apparel consumption", Clothing and Textiles Research Journal, Vol. 16 No. 3, pp. 126-133
- Kim, Y. and Han, H. (2010), "Intention to pay conventional-hotel prices at a green hotel – a modification of the theory of planned behavior", Journal of Sustainable Tourism, Vol. 18 No. 8, pp. 997-1014.
- Lam, T., & Hsu, C. H. (2006). Predicting behavioral intention of choosing a travel destination. Tourism management, 27(4), 589-599.
- Lavuri, R. (2022). Organic green purchasing: Moderation of environmental protection emotion and price sensitivity. Journal of Cleaner Production, 368, 133113. https://doi.org/10.1016/j.jclepro.2022. 133113
- Lee, S. (2011), "Consumers' value, environmental consciousness, and willingness to pay more toward green-apparel products", Journal of Global Fashion Marketing, Vol. 2 No. 3, pp. 161-169
- Leung, K., and M.W. Morris. 2014. Values, schemas, and norms in the culture–behavior nexus: A situated dynamics framework. Journal of International Business Studies 46 (9): 1028–1050.
- Mandari´c, Doroteja, Anica Hunjet, and Dijana Vukovi´c. 2022. The Impact of Fashion Brand Sustainability on Consumer Purchasing Decisions. Journal of Risk and Financial Management 15: 176. https://doi.org/10.3390/jrfm15040176
- McKinsey & Company. The State of Fashion 2019. 2019. Available online: https://media.business-humanrights.org/media/ documents/files/documents/FashionReport_2019_9-April-19-FINAL.pdf (accessed on 3 October 2022).
- Menard, S. (1995) "Applied Logistic Regression Analsis: Sage University Series on Quantitative Applications in the Social Sciences", Thousand Oaks, CA: Sage.
- Miller, S. (2001), "Public understanding of science at the crossroads", Public Understanding of Science, Vol. 10, pp. 115-120.
- Mostafa, M.M. (2007), "A hierarchical analysis of the green consciousness of the Egyptian consumer",Psychology and Marketing, Vol. 24 No. 5, pp. 445-473
- Mostafa, M.M. (2009), "Shades of green: a psychographic segmentation of the green consumer in Kuwait using self-organizing maps", Expert Systems with Applications, Vol. 36 No. 8, pp. 11030-11038.

- Mostafa, M.M. (2009), "Shades of green: a psychographic segmentation of the green consumer in Kuwait using self-organizing maps", Expert Systems with Applications, Vol. 36 No. 8, pp. 11030-11038
- Mostafa, Mohamed M. 2006. Antecedents of Egyptian consumers' green purchase intentions: A hierarchical multivariate regression model. Journal of International Consumer Marketing 19 (2): 97–126
- Mukendi, A., Davies, I., Glozer, S. and McDonagh, P. (2019), "Sustainable fashion: current and future research directions", European Journal of Marketing, Vol. 54 No. 11.
- Nguyen, T., Lobo, A. and Nguyen, B. (2018), "Young consumers' green purchase behaviour in an emerging market", Journal of Strategic Marketing, Vol. 26 No. 7, pp. 583-600.
- Nielsen (2016), "The nielsen sustainability imperative", available at: www.utz.org/wp-content/uploads/2016/06/Nielsen_Customer-Expectations-How-to-drive-growth-with-sustainability-UTZ-June-2016-sent.pdf (accessed 16 October 2022).
- Nielsen (2018), "Understanding malasia's gen Z ... and how to reach them", available at: www.nielsen.com/apac/en/insights/article/2019/understanding-malaysias-gen-z/ (accessed 16 October 2022)
- Nunnally, J. and Bernstein, I. (1994), Psychometric Theory, Tata McGraw-Hill education, New York, NY.
- Osmud Rahman & Devender Kharb (2022) Product Choice: Does Eco-Labeling Play an Important Role in Apparel Consumption in India?, Fashion Practice, 14:2, 266-291, DOI: 10.1080/17569370.2021.2015873
- Paul, Justin, Ashwin Modi, and Jayesh Patel. 2016. Predicting green product consumption using theory of planned behavior and reasoned action. Journal of Retailing and Consumer Services 29: 123–134.
- Paul, Justin, Modi, Ashwin, & Patel, Jayesh (2016). Predicting green product consumption using theory of planned behavior and reasoned action. Journal of Retailing and Consumer Services, 29, 123–134.
- Peleg Mizrachi, M.; Tal, A. Sustainable Fashion—Rationale and Policies. Encyclopedia 2022, 2, 1154–1167. https://doi.org/10.3390/encyclopedia2020077
- Prakash, Gyan, and Pramod Pathak. 2017. Intention to buy eco-friendly packaged products among young consumers of India: A study on developing nation. Journal of Cleaner Production 141: 385–393.
- Priporas, C., Stylos, N. and Fotiadis, A. (2017), "Generation Z consumers' expectations of interactions in smart retailing: a future agenda", Computers in Human Behavior, Vol. 77, pp. 374-381.
- Ramany, Rinnitha and Chan, Tak Jie and M. Mohan, Yamunah and Lau, Teck Chai (2022) Purchasing Behaviour of Sustainable Apparels Using Theory of Planned Behaviour: A Predictive Approach. Malaysian Journal of Consumer and Family Economics, 29. pp. 179-215. ISSN 1511-2802
- Sarstedt, M., et al. (2014), "Partial least squares structural equation modeling (PLS-SEM): a useful tool for family business researchers", Journal of Family Business Strategy, Vol. 5 No. 1, pp. 105-115.
- Seemiller, C. and Grace, M. (2016), "Generation Z Goes to College", Jossey-Bass, San Francisco, CA.
- Shen, D., Richards, J. and Liu, F. (2013), "Consumers' awareness of sustainable fashion", Marketing Management Journal, Vol. 23 No. 2, pp. 134-147.
- Shukla, Sadhna. 2019. A study on millennial purchase intention of green products in india: Applying extended theory of planned behavior model. Journal of Asia-Pacifc Business 20 (4): 322–350.
- Shukla, Sadhna. 2019. A study on millennial purchase intention of green products in india: Applying extended theory of planned behavior model. Journal of Asia-Pacific Business 20 (4): 322–350.
- Siege, L. Fast fashion is on the rampage, with the UK at the head of the charge. The Guardian, 21 June 2019. Available online: https://www.theguardian.com/fashion/2019/jun/21/fast-fashion-is-on-the-rampagewith-uk-at-the-head-of-the-charge (accessed on 30 September 2022).
- Smith, S. and Paladino, A. (2010). Eating clean and green? Investigating consumer motivations towards the purchase of organic food. Australasian Marketing Journal (AMJ), 18(2), pp.93-104.
- Statista. (October 15, 2021). Revenue of the apparel market worldwide from 2013 to 2026 (in billion U.S. dollars) [Graph]. In Statista. Retrieved November 02, 2022, from https://www.statista.com/forecasts/821415/value-of-the-global-apparel-market
- Taber, K.S. The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. Res Sci Educ 48, 1273–1296 (2018).

- Taylor, Shirley, and Peter Todd. 1997. Understanding the determinants of consumer composting behavior 1. Journal of Applied Social Psychology 27 (7): 602–628.
- ThredUP. How Dirty Is Your Closet? Introducing Thredup's Fashion Footprint Calculator. Available online: https://www.thredup.com/bg/p/fashion-footprint-quiz?tswc_redir=true (accessed on 20 August 2022)
- Tokatli, N. Global sourcing: Insights from the global clothing industry—The case of Zara, a fast fashion retailer. J. Econ. Geogr.2008, 8, 21–38. [CrossRef]
- Wei-Ta Fang, Eric Ng, Ching-Ming Wang, Ming-Lin Hsu, (2017) Normative Beliefs, Attitudes, and Social Norms: People Reduce Waste as an Index of Social Relationships When Spending Leisure Time. Sustainability 9 (10):1696
- Wei-Ta Fang, Eric Ng, Ching-Ming Wang, Ming-Lin Hsu, (2017) Normative Beliefs, Attitudes, and Social Norms: People Reduce Waste as an Index of Social Relationships When Spending Leisure Time. Sustainability 9 (10):1696
- Yadav, R., & Pathak, G. S. (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. Journal of Cleaner Production, 135, 732-739.
- Zaremohzzabieh, Z., Ismail, N., Ahrari, S., & Samah, A. A. (2020), The effects of consumer attitude on green purchase intention: A meta-analytic path analysis, *Journal of Business Research*. https://doi.org/https://doi.org/10.1016/j.jbusres.2020.10.053
- Zhang, B.; Zhang, Y.; Zhou, P. Consumer Attitude towards Sustainability of Fast Fashion Products in the UK. Sustainability 2021, 13, 1646. https://doi.org/ 10.3390/su13041646

Zhang, L., Fan, Y., Zhang, W., & Zhang, S. (2019). Extending the theory of planned behavior to explain the effects of cognitive factors across different kinds of green products. Sustainabil