

PARASOCIAL RELATIONSHIP INFLUENCE ON THE UPCYCLED FASHION PURCHASE INTENTION AMONG IGENERATION IN MALAYSIA POST-COVID-19: AN EMPIRICAL STUDY

**NORNAJIHAH NADIA HASBULLAH¹, AG KAIFAH RIYARD KIFLEE², MASTURA RONF³,
NUR HAFIDZAH IDRIS⁴, IRFAH NAJIHAH BASIR MALAN⁵, OLAKUNLE JAYEOLA⁶,
MUHAMMAD FAIRUZ JAMIL⁷, AHMAD FADHLY ARHAM⁸**

^{1,3,4,5,7,8} Senior Lecturer, Universiti Teknologi Mara (UiTM), Cawangan Melaka,

Kampus Bandaraya Melaka, Melaka 75350, Malaysia, Faculty of Business and Management, Malaysia

² Senior Lecturer, Universiti Malaysia Sabah (UMS), Jalan UMS 88400 Kota Kinabalu Sabah, Malaysia,

Faculty of Business Economics and Accountancy

⁶Adekunle Ajasin University, Akungba Akoko, Nigeria

Department of Business Administration

E-mail: ¹najihahnadia@uitm.edu.my

ABSTRACT

The coronavirus disease (COVID-19) pandemic has impacted the pursuit of sustainable development in various ways. Current consumer trends suggest an increased awareness of sustainable consumption or fashion consumption. Past studies have focused more on general concepts of sustainable fashion consumption (SFC), including environmental, ethical, second-hand, and recycling while neglecting upcycling fashion. Therefore, the study investigated the Malaysian iGeneration purchase intention of upcycled fashion products post-COVID-19. The study extended the moderating role of parasocial relationship based on the Theory Planned Behaviour (TPB). A quantitative online survey was conducted among 230 respondents from iGeneration between 10 to 25 years old in Malaysia. The hypotheses were tested using Partial Least Squares Structural Equation Modelling (PLS-SEM). The study outcomes exhibited empirical support for the proposed research model. Two out of six hypothesized relationships were accepted. Specifically, subjective norm was positively linked to the purchase intention of upcycled fashion products. Meanwhile, parasocial relationship moderated subjective norm and purchase intention. The study provided insights into the application of TPB-based framework and enhanced knowledge of fashion industry players, educators and communities.

Keywords: *Post Covid-19; Upcycling Fashion; Sustainable Fashion; Theory Planned Behaviour; Parasocial Relationship; iGeneration*

1. INTRODUCTION

In a global context, the fashion industry is one of the most polluting, with global textile consumption expected to exceed 102 million tonnes per year by 2030, resulting in serious environmental and social consequence (1). Despite the challenges and post-COVID-19, the fashion industry experienced a slow transformation by embracing a new paradigm of conscious consumerism in other areas (2). The pandemic has also shifted consumer values towards anti-waste business productions, hence emphasising sustainable and ethical fashion (3). One of the

emerging sustainable fashion constructs includes upcycling fashion, which is a relatively new concept. Upcycling fashion involves a creative method to convert a valueless item into something valuable. For instance, upcycling discarded denim is a physical and chemical process of reusing discarded denim by renovating, re-strengthening, and re-designing the unfashionable denim into a material with greater value to follow the latest fashion trend with various construction, designing, and embellishment techniques to extend the denim lifespan. Therefore, utilising denim waste to its fullest capacity is vital for environmental and economic purposes. Pre- and

post-consumer denim waste provides a tremendous opportunity to produce a broad range of denim articles.

Upcycling fashion can overcome multiple issues: saving natural resources, environmental pollutants and consumers' demand for trendy clothes (4). The strategies to reduce the 1.2 billion tonnes of greenhouse gas emissions and 92 million tonnes of waste associated with the fashion sector in 2017 include substituting virgin materials with bio-derived alternatives, extending the lifecycle of garments through resale and rental services, and garment recycling or upcycling [5]. [6] stated that upcycling businesses used to encounter many economic challenges where demand-based redesign activities can profit the organisation.

With a growth of Industry 4.0, it provides potential solutions to address low consumer engagement (CE), which revolutionises traditional manufacturing and industrial practices through modern smart technology. Digitisation also catalyses innovation in various sectors with digital technologies paving new ways to exchange and share goods and services, thus enabling companies to match the supply and demand for under-used assets and products. Specifically, online platforms have played a crucial role in the development of used goods and resale in other consumer goods markets, such as consumer technology [5]. Moreover, the rise of social media and influencers has become an integral part of marketing agency strategies. Advertisers seek to leverage influencers' large community of followers who trust influencer recommendations, hence rendering them a powerful marketing tool for advertisers. The increasing consumer interest has expanded the sustainable fashion industry and social media influencers are being leveraged to transform consumer perspectives and purchasing behaviour [7].

1.1 The Landscape of Upcycling Fashion in Malaysia

In Malaysia, two million kilogrammes of textile waste were produced daily in 2013 and the number continues to grow [9]. [1] say that when brand retailers use the fast fashion business model, consumers are more likely to throw away clothes that are still in good shape and buy the newest fashion trends on the market. Fast fashion companies release new clothing weekly, or in some cases daily, instead of seasonally [10]. Fast fashion focuses on speed to satisfy ever-changing trends [11]. This business

approach is unsustainable due to its short product lifecycle and negative environmental impacts. A piece of clothing goes through a long, complex, and geographically complex supply chain, resulting in cost- and time-consuming process factors [10]. It entails a wide range of supply chain activities such as raw material acquisition, production, processing, manufacturing, shipping, selling, and clothing use and disposal. These activities frequently have an impact on the environment and social issues, such as the use of chemical products, pesticides, excessive water consumption, textile waste, exploitation of human rights, which includes unequal pay, hazardous working conditions, and a lack of education and training support for workers [11]. This cultural phenomenon is ultimately defined by consumers purchasing large quantities of cheap and trendy clothing, wearing it only a few times before it falls apart or becomes out of style, and then purchasing more new items [9].

To solve this problem, a upcycle movement has been introduced in order to preserve the environment. It is possible to create brand-new items from previously used materials through the upcycling and recycling processes. Since businesses typically spend a lot of money developing new products' designs, the upcycle and recycle approach has the potential to lower R&D costs as well. As a result, they can save money on manufacturing by incorporating recycled materials into the design of new products [12]. This notion grows well with the involvement of significant players and professionals in the Malaysia fashion industry. They have begun promoting the upcycling fashion trend and introduce their sustainable brands. Consequently, the brands are raising sustainability awareness and providing eco-friendlier and cruelty-free alternative clothing to the market. Various vintage shops have emerged on Instagram, including Upsygals, Revive, Uncledanaunty, Finders Keepers, Uglypretty, Mittens750, and Hanya Upcycle. For example, Hatta Dolmat is a prestige designer who collaborated with Malaysia Green Technology and Climate Change Centre (MGTC) to create an upcycling collection called MGTC X Hatta Dolmat [13].

Therefore, numerous additional studies could be conducted to study about the society's perceptions and acceptance towards the product's design from recycled products. Multiple studies have explored the consumer behaviour intention towards sustainable fashion concepts in Malaysia, such as sustainable fashion [14], sustainable apparel [15;16;17;18], second-hand apparel [19;20], environmental fashion [21], ethical fashion [22], and

clothing disposal behaviour [23]. Nevertheless, few studies examined the influential factors affecting the purchase intention of upcycling fashion in a developing economy.

Although consumers demonstrated increasing interest in making sustainable choices when purchasing clothes, few customers reflect an actual interest in its practice [8]. The gap between consumers' concerns and intentions on sustainability and their purchasing behaviour has highlighted studies on sustainable fashion that outline an attitude-behaviour gap due to several barriers constraining the adoption of sustainable fashion [7].

In the light of consideration, the current study addressed the literature gap by examining three main predictors of the purchase intention of upcycled fashion products among iGeneration using the proposed framework based on the TPB model. Furthermore, the study extended the model by adding one moderator, which is parasocial relationship, hence enhancing the existing literature on the subject. The study provided insights into professionals and policymakers to formulate sustainable marketing strategies and policies to overcome indigenous market conditions.

The remainder of the study is structured as follows: Section 2 reviews relevant SFC literature, discusses the constructs from prior findings, and corresponding hypotheses. Section 3 discusses data collection and items utilised in the questionnaire. Section 4 outlines the measurement and structural model evaluation, while Section 5 discusses the contributions to current literature, managerial implications, limitations, and guidance for future research.

2. LITERATURE REVIEW

2.1 The Theory of Planned Behaviour

Studies usually refer to the TPB to explain behaviours, such as sustainable consumption [24]. The theory explains the relationship between barriers and cognitions regarding upcycling fashion consumption. The TPB is popular as an extension or modification of the theory of reasoned action [25], which analysed voluntary behaviours. The TPB is a social-psychological model of customer behaviour, which outlines several cognitions: attitude towards behaviour, subjective norm, and perceived behavioural control (PBC) as the main predictors of an individual's behavioural intentions and behaviour [26].

The first cognition is the attitude towards SFC behaviour, which refers to the individual's beliefs and evaluation of behavioural outcomes or the extent to which a person provides a favourable or unfavourable evaluation of the behaviour [24;26]. Subjective norm denotes the individual's perception of social pressure (family, friends, or colleagues) to conduct SFC behaviour and the motivation to comply with such pressure [24]. Finally, PBC refers to the individual's perception of ease or difficulty in holding SFC behaviour [24; 27]. The TPB is a relevant theory for environmental behaviour [28;29] and has been used and extended in several studies, specifically in sustainable clothing consumption [30; 31; 32] Various research has demonstrated the three TPB cognitions as the best predictors for sustainable consumption behavioural intention [24;27].

2.2 Sustainable Fashion

Although valuable research contributions provide an understanding of consumer demands and behaviour, the term sustainable clothing is unclear: denominations involving green [33], organic [34] and eco-conscious [35] are often treated as synonyms [36]. The fundamental quality of sustainable clothing includes pro-ecological activities across all phases of the product lifespan [37;38]. Given the mixed interpretations of sustainable clothing in existing literature, [39;40] defined sustainable fashion as incorporating fairness aspects, such as social fairness and the fair and ethical use of materials, including sustainable consumption and design and production techniques [41]. Consumers' purchase intention of sustainable clothing involves the selection of garments made from ecologically favourable materials, such as recycled, upcycled, or biodegradable fibre used in a production process for fair working conditions [42; 43].

2.3 Upcycling Fashion

Upcycling fashion is a sustainable fashion concept. The strategy minimises environmental impacts by combining circular product and material flows with slower consumption cycles [44]. Upcycling is also known as 're-manufacturing' [44] distinguished through context and size [44;45]. Most studies compare fashion brands upcycling initiatives [46;47] or use them as design briefs in fashion education. A study examined the differences between normal and upcycled design and production processes in the industry [44] and related upcycling

to creating higher value or 'conceptual fashion products' [47].

2.4 Sustainable Influencer

Spending on digital marketing (online videos and influencer marketing) have increased sharply in recent years, which is predicted to be higher than other marketing types by 2022 [48]. The type of digital advertising relies on popular social media users who have gained many engaged followers by consistently posting texts, pictures, or videos. The users promote products and brands by providing web links on their pages. Many followers regard a sponsored post as a genuine recommendation from an influencer, thus boosting the credibility of a message and positively influencing followers' attitudes towards the brand endorsed in the post [48;49].

Followers of social media influencers receive regular updates and can communicate with them online and offline. The communication platform suggests a personal bond with the influencer despite the relationship being imbalanced and more unidirectional than bidirectional, thus indicating a parasocial relationship instead of true friendship [49]. [48] who examined the role of popularity (in terms of the number of followers) and product fit on message efficacy discovered that a high number of followers increased the efficacy of a sponsored post endorsed by a health and fitness influencer provided that the product fits the influencer's self-image. Influencers with a high number of followers promoting a product that fits their image are considered more credible and inspiring.

2.5 Attitude

Attitude refers to an individual view and assessment of a particular behaviour. Attitude is a subjective response to a certain positive or negative situation [45]. Specifically, the attitude towards the purchase intention of eco-friendly products differs from conventional products to benefit environmental sustainability [46]. A positive attitude towards a behaviour can impact the purchase intention towards purchasing environmentally-sustainable products [47; 48]. Furthermore, consumers could be further influenced by the level of beliefs about the possible outcome. Based on the mixed findings, the study proposed that sustainability positively affects consumers' purchase intentions as follows:

Hypothesis 1 (H1): There is a positive relationship between attitude and upcycled fashion product purchase intention.

2.6 Subjective Norm

The concept reflects a person's feelings of social pressure on whether to conduct a specific behaviour or otherwise [18]. Subjective norm involves an individual's views, opinions, emotions, and judgments are affected by the prospects of a reference group or system, such as relatives, peers, friends, and community in general. [49] highlighted individuals' willingness to meet the expectations of a reference group in adopting a new system as a powerful predictor of their intention to adopt the system.

In terms of social pressure, the people in your life, such as your family and friends can influence your behaviour. People tend to behave in a way that is favoured by close ones. Following past research, subjective norm significantly affects pro-environmental intention [22; 50; 51] Chinese consumers on their purchasing intention of sustainable clothing.

[52;53] discovered similar outcomes in developing nations. Social influence plays a role in decision-making across different cultural settings, thus confirming its universally-applicable role ascribed in TPB. Studies demonstrated mixed findings with insignificant effects [54; 30]. The current study included the concept to provide more insights into its role in upcycled fashion apparel purchase intention, thus proposing the following hypothesis:

Hypothesis 2 (H2): There is a positive relationship between subjective norm and upcycled fashion product purchase intention.

2.7 Perceived Behavioural Control

The PBC is defined as "people's perceptions of their ability to perform a particular behaviour" [18]. The PBC measures an individual's conviction and control over a specific activity, which reinforces their commitment to adopt the behaviour. Numerous studies have investigated PBC as a predictor of behavioural intention [55; 56]. The PBC occurs when consumers own sufficient money, time, knowledge, and ability to purchase eco-friendly products. Consumers who can control these factors tend to display positive behavioural intention [57;58].

Numerous studies demonstrated that PBC is a significant human predictor with a positive connection to the intention to purchase organic products or foods [59; 60] and visit green hotels [61;62]. The PBC is used to assess consumer purchasing intentions and behaviour towards green products and services [63;64]. Therefore, the study proposed the following hypothesis:

Hypothesis 3 (H3): There is a positive relationship between perceived behavioural control and upcycled fashion product purchase intention.

2.8 The Moderating Role of Parasocial Relationship

The social platform enables companies to establish a parasocial relationship with customers. Parasocial interaction is a one-way and non-reciprocal relationship formed between publicly-renowned persons or brands. Maintaining parasocial interaction is suitable for consumer emotional connection. Many brands have attempted to form excellent parasocial relationships and even establish brand love by maintaining long-term parasocial interactions [65]. Participating in social issues is a way to construct customer-brand and parasocial relationships on the Internet.

When customers establish parasocial interactions online, the public status of a brand will impact the customer-brand relationship [65]. The accumulated positive word-of-mouth may raise brand equity. Conversely, the accumulated negative word-of-mouth online gradually builds consumers' aversion to the company or brand [66]. [67] described parasocial relationships as the virtual online relationship formed between online digital celebrities and followers. Such relationships can make virtual reality more realistic while enabling the

formation of pseudo-friendships [68]. To date, the emergence of social network sites (SNS) has led organisations to use social media as an advertising platform [69].

Social influencer and celebrity involvement in Malaysia enable the spread of the sustainable fashion movement. Meanwhile, sustainable fashion players need to prepare a special platform to allow consumers to participate in sharing sessions and discussions to provide real feedback from previous product usage. Collaboration from all parties will enhance future sustainable fashion [70]. Thus, the following hypotheses are presented:

Hypothesis 1a (H1a): Parasocial relationship moderates the relationship between attitude and upcycled fashion product purchase intention.

Hypothesis 2a (H2a): Parasocial relationship moderates the relationship between subjective norm and upcycled fashion product purchase intention.

Hypothesis 3a (H3a): Parasocial relationship moderates the relationship between perceived behavioural control and upcycled fashion product purchase intention.

3. EXTENDED FRAMEWORK

Figure 1 illustrates the conceptual framework that extends the research model based on the literature review to investigate sustainable apparel purchase intention. The framework incorporated the extended TPB ([18] with parasocial relationship as a moderator.

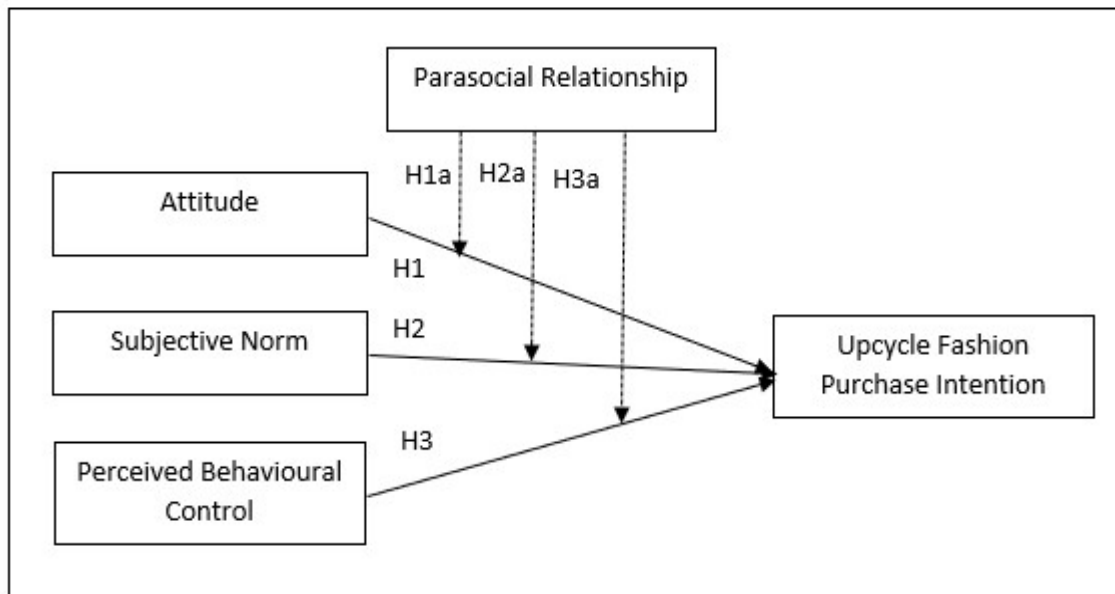


Figure 1: Theoretical Framework for this Study

4. SAMPLE CHARACTERISTICS AND PROCEDURES

The study used a multiple-item latent construct-based questionnaire as a survey instrument. The respondents were iGeneration or Generation Z ranging from 10 to 25 years old. The primary reason for selecting iGeneration was their greater awareness of the United Nations Sustainable Development Goals (UNSDG) [72]. Approximately 50% of the 513 respondents stated their willingness to pay a premium price for sustainable products or services [73]. The Malaysian iGeneration is an electronically engaged generation and that depends heavily on their smartphones and social media. The habit influences the decision-making of Malaysian iGeneration, thus suitable for the study as it involves the convergence of upcycled fashion product purchase intention and parasocial relationship. Data were distributed by implementing purposive sampling and spreading the self-administered questionnaire online across multiple social media channels. The participants were exposed to several information and question filters to test their understanding of upcycling fashion.

The data were collected from 300 responses with only 230 usable responses. Table 1 displays the respondents' demographic information. Observably, most respondents were females (60.86%) and of

Malay ethnicity (58.7%). The percentage of Malay respondents reflects the data on the Malaysian population, which is dominated by the iGeneration Malay ethnic group. Most respondents were in the age group of 10 to 25 years (44.78%). Meanwhile, 38.26% of the respondents were students with no income.

Table 1: Demographic Profile

Demographic Variables		Frequency	Percentage (%)
Gender	Male	90	39.13
	Female	140	60.86
Ethnicity	Malay	135	58.70
	Chinese	59	25.65
	India	30	13.04
	Others	6	2.61
Age	10-15 years old	88	38.26
	16-20 years old	39	16.96
	21-25 years old	103	44.78
Educational Level	No certificate	72	31.3
	Certificate	9	3.91

relationship [75], and the intention to purchase upcycled fashion goods [76].

Table 1: Demographic Profile (Continued)

Demographic Variables	Frequency	Percentage (%)
SPM	30	13.04
Diploma	29	12.61
Bachelor's Degree	88	38.26
Master's Degree	2	0.88
PhD	0	0
Occupation		
Government Sector Employee	31	13.48
Private Sector Employee	39	16.96
Self-Employed	18	7.83
Student	127	55.21
Unemployed	15	6.52

5. QUESTION DESIGN AND PRE-TESTING

A cross-sectional quantitative study was used to examine Malaysian iGeneration upcycled fashion product purchase intention. The survey instrument was constructed in English and pre-tested. Content validity and scale validation were established through expert reviews of two academicians in consumer behaviour and two industry experts experienced in selling sustainable fashion. Several changes were made to the instrument based on experts' suggestions. Respondents were interviewed in mid-March 2022 and assured that their data would be utilised for academic research, not commercial purposes.

First, the respondents were briefed on the upcycling fashion concept. Second, the respondents were presented with a questionnaire measuring the intention to purchase upcycled fashion products, which includes demographic profile details (gender, age, race, income, education level, and employment status). The respondents answered several items measuring the constructs: subjective norm (SN) which adapted the items from [58; 59], attitude towards upcycling fashion (ATT) [74], Perceived Behavioural Control (PBC) [58; 59], parasocial

6. DATA ANALYSIS AND RESULTS

The study employed model assessment using Smart Partial Least Squares (SmartPLS) Version 3.2.8. Moreover, the study applied component-based structural equation modelling (SEM) to investigate the predictive capacity of the moderating variable (parasocial relationship) and other TPB antecedents (attitude, subjective norm, and PBC) using prediction-oriented PLS-SEM [77].

The data were analysed in two stages based on [78] which include measurement model assessment and structural model assessment. Essentially, the measurement model was evaluated to satisfy the condition of a linear relationship between an explicit variable and the latent construct. Subsequently, the structural model of the construct was assessed for constructing path relationships. The PLS-SEM is a statistical technique that permits simultaneous equation modelling with a large number of paths in a conceptual model comprising more than one dependent variable. According to [79], covariance-based structural equation modelling (CB-SEM) is the dominant method for analysing complex interrelationships between observed variables and latent variables. The PLS-SEM has long been employed successfully in social science research and is currently widely applied in social science and business [79].

5.1 Fitness of the Measurement Model

The measurement model describes the relationships between observed (measurable) and unobserved (latent) variables [77]. Convergent and discriminant validity were primarily evaluated at the analysis stage. The convergent validity, factor loadings, composite reliability (CR), and average variance extracted (AVE) of each construct were examined. The CR and AVE values were extracted and presented in Table 2, which confirmed that the reliability and convergent validity are valid following [79] criteria. The significant cut-off value for composite reliability is 0.708 [77] and items with factor loadings under 0.5 were considered for removal [77], whereas AVE is adequate at 0.5 and above [77]. The current findings revealed that the AVE value for the parasocial relationship construct was under 0.5 (0.383), hence several items (Para_5;

Para_6; Para_7; Para_8; Para_9; Para_10) were removed.

The AVE value of 0.585 for parasocial relationship was achieved after removing the items, thus exceeding the cut-off point of 0.50. In the current model estimation, CR is a more suitable

measure of internal consistency compared to Cronbach's alpha reliability as it considers the actual loadings while measuring indicators. Observably, all the factor loadings ranged from 0.595 to 0.843, which were satisfactory.

Table 2: Fitness of Measurement Model

Constructs	Items	Factor Loadings	Number of Items Deleted	Number of Items after Deleted	AVE	CR
Attitude	Att_1	0.797		0.797	0.538	0.873
	Att_2	0.767		0.767		
	Att_3	0.547		0.547		
	Att_4	0.797		0.797		
	Att_5	0.719		0.719		
	Att_6	0.741		0.742		
Subjective Norm	Sn_1	0.793		0.793	0.629	0.871
	Sn_2	0.718		0.719		
	Sn_3	0.843		0.843		
	Sn_4	0.812		0.812		
Perceived Behavioural Control	Pbc_1	0.736		0.736	0.567	0.901
	Pbc_2	0.752		0.752		
	Pbc_3	0.677		0.677		
	Pbc_4	0.741		0.742		
	Pbc_5	0.816		0.816		
	Pbc_6	0.768		0.768		
	Pbc_7	0.774		0.774		
Parasocial Relationship	Para_1	0.682		0.835	0.585	0.875
	Para_2	0.690		0.780		
	Para_3	0.735		0.819		
	Para_4	0.595		0.512		
	Para_5	0.661	Para_5			
	Para_6	0.570	Para_6			
	Para_7	0.573	Para_7			
	Para_8	0.572	Para_8			
	Para_9	0.577	Para_9			
	Para_10	0.494	Para_10			
Upcycled Fashion Product Purchase Intention	PI_1	0.764		0.761	0.560	0.831
	PI_2	0.811		0.811		
	PI_3	0.837		0.834		
	PI_4	0.763		0.765		
	PI_5	0.635		0.639		

The Fornell-Larcker criterion and HTMT ratio of the constructs were tested to assess the discriminant validity [77]. This criterion method compares the square root of the AVE with the correlation of latent constructs [79]. A latent construct should explain its variance indicator better than the variance of other latent constructs [77]. Thus, the square root of the AVE value of each construct in the study demonstrates a greater value than the correlations with other latent constructs (see Table 3).

The Heterotrait-monotrait (HTMT) ratio of correlation is another approach to measure discriminant validity. The HTMT value close to 1 indicates a lack of discriminant validity. Using the

HTMT as a criterion involves comparison against a predefined threshold. The HTMT value higher than the threshold indicates a lack of discriminant validity.

In Table 4, all confidence intervals were under 1. Furthermore, the bias associated with the bootstrapping estimates was unlikely as the confidence intervals for the HTMT values provided additional evidence of discriminant validity. Thus, all the constructs were distinctive, which also confirmed the discriminant validity [77].

Table 3: The Fornell-Larcker of Each Variable

Construct	Attitude	Subjective Norm	Perceived Behavioural Control	Parasocial Relationship	Purchase Intention
Attitude	0.733				
Subjective Norm	0.645	0.793			
Perceived Behavioural Control	0.621	0.719	0.753		
Parasocial relationship	0.473	0.548	0.739	0.765	
Purchase Intention	0.328	0.376	0.465	0.650	0.748

Table 4: The HTMT Value of Each Variable

Construct	Attitude	Subjective Norm	Perceived Behavioural Control	Parasocial Relationship	Purchase Intention
Attitude					
Subjective Norm	0.770				
Perceived Behavioural Control	0.696	0.839			
Parasocial relationship	0.529	0.649	0.851		
Purchase Intention	0.388	0.465	0.564	0.832	

5.2 Fitness of the Structural Model

The structural model coefficients test the relationship between constructs by estimating a series of regression equations [77]. A bootstrapping process with re-sampling techniques was executed before examining the hypothesised relationships and their relevance [77]. A 5,000 re-sampling tests were conducted to estimate standard errors and the significance of parameter estimates in the study based on [77;82].

Collinearity should be assessed to ensure unbiased regression in the results [79]. The process is similar to assessing the formative measurement model but the latent variable score of the predictor constructs in partial regression is used to calculate the VIF value. The VIF values above 5 indicate possible collinearity issues in predictor constructs [81; 82]. Significantly, all the VIF values of the study were close and under 5 (1.881, 2.395, 2.464, 1.283). The absence of collinearity problems allows for the subsequent step to examine the R2 value of the endogenous construct [77].

The R2 is defined as the sum of variance [79]. The R2 is demonstrated by explaining independent variables in the dependent variable. Thus, a better R2 value increases the predictive capability of the structural model. The R2 values in the current study were calculated by the PLS algorithm as demonstrated in Table 7. The R2 value for the dependent variable (the intention to purchase upcycled fashion products) was 0.659, hence indicating that the latent exogenous variable (attitude, subjective norm, PBC, and parasocial relationship) explained 65.9% of the dependent variable. According to Chin (1998) the R2 value of 65.9% signifies the substantial influence of (attitude, subjective norm, PBC, and parasocial relationship).

Table 5 displays the endogenous construct tested for the standardised path coefficients (β), p-values, t-values, effect size (f^2), coefficient of determinants (R2), and predictive relevance (Q2). Notably, only subjective norm statistically and significantly affected upcycled fashion product purchase intention. The subjective norm value exceeded the recommended threshold ($\beta = 0.557$, $p < 0.000$, t-value > 7.599) with a moderate effect size.

Hypothesis	Direct Effect	β	Std. Error	t-Value	p-Value	R2	f^2	Effect size
H1	Attitude → Purchase Intention	-0.003	0.059	0.052	0.958		0.000	No effect
H2	Subjective Norm → Purchase Intention	0.557	0.073	7.599	0.000	0.659	0.378	Moderate
H3	Perceived Behavioural Control → Purchase Intention	0.002	0.073	0.030	0.976		0.000	No effect

Table 5: Fitness of the Structural Model

5.3 The Moderating Effects of Parasocial Relationship

The product indicator approaches were applied in the analysis. The product indicator approach refers to the standard approach for creating analyses and features prominently in PLS-SEM [77]. The findings portrayed that parasocial relationship moderated the relationship between subjective norm and the intention to purchase upcycled fashion products as depicted in Table 6 (p-value < 0.023, t-value > 2.270) with a small effect size of 0.026, respectively.

6. DISCUSSION

The study is an extension of the TPB. Measurement validity and reliability were tested using the PLS approach by investigating 230 respondents comprising iGeneration. The study assessed the hypotheses using PLS and path coefficients and tested the significance based on all the valid and reliable measurements.

Table 7 demonstrates that two of the six hypotheses were significantly supported. In terms of direct effects, subjective norm displayed the most significant impact on the intention to purchase upcycled fashion products. Meanwhile, parasocial relationship significantly affected the relationship between subjective norm and the intention to purchase upcycled fashion products.

Table 6: Hypotheses of Indirect Effects

Hypothesis	Direct Effect	β	Std. error	t-Value	p-Value	f2	Effect size
H1a	Attitude → Parasocial Relationship → Purchase Intention	-0.056	0.031	1.847	0.065	0.021	Small
H2a	Subjective Norm → Parasocial Relationship → Purchase Intention	-0.053	0.023	2.270	0.023	0.026	Small
H3a	Perceived Behavioural Control → Parasocial Relationship → Purchase Intention	-0.028	0.026	1.103	0.270	0.007	No effect

Meanwhile, parasocial relationship significantly affected the relationship between subjective norm and the intention to purchase upcycled fashion products. Interestingly, customers' PBC is not influenced by positive clothing attributes, such as style, fashionable, good quality, fit, and various options. The results align with [50; 51] who discovered that subjective norm is a significant factor in influencing an individual's decision to adopt and consume sustainable products based on the recommendations of significant people.

Malaysians' sustainable consumption has always been motivated by the psychological need for connectedness. Consumers perceive their sustainable consumption practices as a means of

meaningfully caring for and connecting with other community members. This finding is consistent with the findings of [86] who proposed that key barriers to consumer purchase intentions for sustainable apparel were social, financial, and performance risks. Nonetheless, the findings of [87] [88] contradict the present study. They excluded social risk (anxiety about being judged by others about the design and appearance of recycled clothing) because it overlapped with the explanation of aesthetic risk and because several studies have shown that it is not associated with WOM intention or purchase intention.

Table 7: Hypotheses Testing Results

Hypothesis	Path	β	p-Value	Hypothesis Result
H1	Attitude → Purchase Intention	-0.003	0.958	Unsupported
H2	Subjective Norm → Purchase Intention	0.557	0.000	Supported
H3	Perceived Behavioural Control → Purchase Intention	0.002	0.976	Unsupported
H1a	Attitude → Parasocial Relationship → Purchase Intention	-0.056	0.065	Unsupported
H2a	Subjective Norm → Parasocial Relationship → Purchase Intention	-0.053	0.023	Supported
H3a	Perceived Behavioural Control → Parasocial Relationship → Purchase Intention	-0.028	0.270	Unsupported

Consumers who satisfy their need to communicate with others may experience an increased sense of well-being in the form of personal growth and self-improvement that aligns with external motivation. The effects of social norms are highly context-dependent [84]. Additionally, subjective norms contribute to learning as external opinions raise the amount of information for consumers when making decisions, hence influencing their attitude towards a specific object and their consumption intention [85].

8. IMPLICATIONS AND RESEARCH CONTRIBUTIONS

The findings provided several practical and theoretical contributions to the literature. Theoretically, the present study adopted the TPB [24] to provide a more holistic picture of explaining the intention to purchase upcycled apparel among iGeneration. Meanwhile, parasocial relationship is the moderating variable that addresses past inconsistent results.

The recent emergence of upcycled fashion and its scarce exploration of the topic in Malaysian academia has inspired the current study. Past studies have only focused on emerging market products and not specifically on sustainable fashion through upcycling. Thus, the study addressed the literature gap and is the first to investigate the determinants of the purchase intention of upcycled products among iGeneration in Malaysia.

It is noteworthy to highlight that this unexpected outcome may be due to lack of motivation and understanding among individuals

regarding upcycled products and their benefits portrayed [89]. For practitioner's perspective, this is true as companies seem to face challenges when communicating their sustainability-related actions due to several factors, including consumer scepticism, inattention to company messages, and lack of concern [90]. Pointing to the fact that many fashion companies are still heeding consumer demands for sustainability [91].

Ultimately, it is anticipated that this upcycled theme will give a brand a positive corporate image as an ethical business able to increase profits. Through upcycling, material efficiency is improved, and both solid waste and industrial energy consumption are reduced [92]. With the upcycle and recycle method, used materials can be repurposed into new products. The upcycle and recycle method could also reduce the amount of money spent on research and development, as the industry would otherwise need to invest a great deal in the creation of a new product. Therefore, when they utilise used products in the design of new products, production costs will be reduced [93].

Result from this study hope to give an inputs to upcycled fashion brands to modify their positioning strategies for the high actual behavioural control among target consumers in terms of rejecting upcycled fashion brands. The strategy could form a positive attitude towards upcycled fashion brands to improve customers' interest in positive fashion

practices. Therefore, the consumers can make informed decisions. The brands can utilise the study findings to build their retailing strategy for in-store sales. Store managers and salespersons should comprehensively explain the relevance of upcycling fashion to the consumers. The practice could aid upcycle fashion companies in building a strong competitive strategy against unsustainable brands in the Malaysian market. In terms of marketing, sales promotions and digital media campaigns such as consumer blogs can advertise the advantages of purchasing green apparel. Concurrently, endorsements by famous personalities would instill confidence in sustainable clothing while focusing on conformity, respect, and self-esteem through pro-environment behaviour.

Government actions encourage consumption from small local companies that display superior social and environmental responsibility in their production processes. Furthermore, public awareness policies can push local upcycling producers to improve their production practices to meet the growing demand from increasingly conscious consumers. Summarily, sustainable fashion practices generate higher added value, more intensive knowledge, and newer product innovation, thus increasing sustainability that all companies should practice in the near future.

9. LIMITATIONS AND FUTURE RESEARCH

The limitations in the study pave avenues for future research. First, the study used non-probability sampling, which is a purposive sampling technique. Future studies should adopt stratified and probability sampling techniques by collaborating with upcycling fashion practitioners and acquiring a list of real customers from the brands. The approach reflects more positive and strong relationships due to results from real customers. Secondly, studies demonstrate an intention-behaviour gap where purchase intention is a proven precursor to actual purchase behaviour. Future research should emphasise actual purchase behaviour using a longitudinal research design to identify influential determinants of ethical purchase. As the current study investigated iGeneration, future studies should examine other generations, such as Babyboomers or generation Y, which could project different knowledge levels and interests in sustainability. Moreover, future studies should examine how the model works differently or similarly for theorists' and practitioners' benefit.

ACKNOWLEDGEMENT

This research was funded by the TEJA Research Grant GDT2022/1-7. The author is grateful to UiTM Melaka for supporting this project. The author would also like to express her appreciation for the constructive comments given by an anonymous reviewer.

REFERENCES:

- [1] Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T., and Gwilt A. The environmental price of fast fashion. *Nat Rev Earth Environ.* 2020;1(4):189–200.
- [2] Fashion Revolution, “Fashion Transparency Index,” 2021. Accessed: Jul. 21, 2022. [Online]. Available: https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Fashion+Transparency+Index%2C+2020&oq=
- [3] MIDA, “Smart homes for smart living,” 2020.
- [4] S. Tomer, V. Singh, N. Arya, and K. Singh, “Existing Upcycling Practices for Discarded Denim in Haryana,” *TECHNOFAME- A J. Multidiscip. Adv. Res.*, vol. 10, no. 2, pp. 1–9, 2021.
- [5] F. Charnley et al., “Can Digital Technologies Increase Consumer Acceptance of Circular Business Models? The Case of Second Hand Fashion,” *Sustain.*, vol. 14, no. 8, p. 4589, 2022.
- [6] M. K. Paras and A. Curteza, “Revisiting upcycling phenomena: a concept in clothing industry,” *Res. J. Text. Appar.*, vol. 22, no. 1, pp. 46–58, 2018.
- [7] K. Y. Hiller Connell and J. M. Kozar, “Social Normative Influence: An Exploratory Study Investigating its Effectiveness in Increasing Engagement in Sustainable Apparel-Purchasing Behaviors,” *J. Glob. Fashion Mark.*, vol. 3, no. 4, pp. 172–179, Nov. 2012.
- [8] B. Jacobson, J., & Harrison, “Sustainable fashion social media influencers and content creation calibration.” *Int. J. Advert.*, vol. 4, no. 1, pp. 150–177, 2022.
- [9] Kaur J, Azmi A, Majid RA. Strategic Direction of Information Technology on Sustainable Supply Chain Practices: Exploratory Case Study on Fashion Industry in Malaysia. *International Journal of Business and Society.* 2022 Mar 31;23(1):518-41.
- [10] Božić D, “From Haute Couture to Fast-Fashion: Evaluating Social Transparency in Global Apparel Supply Chains,” (Doctoral

- Dissertation, Massachusetts Institute of Technology).
- [11] Moretto A, Macchion L, Lion A, Caniato F, Danese P, Vinelli A. Designing a roadmap towards a sustainable supply chain: A focus on the fashion industry. *Journal of cleaner production*. 2018 Aug 20;193:169-84.
- [12] Shafie S, Kamis A, Ramli MF. Sustainability of Fashion Apparel Toward Environmental Well-Being and Sustainable Development. *Journal of Vocational Education Studies*. 2021 May 31;4(1):60-78.
- [13] Syazil. A. Interview: Hatta Dolmat on his breakthrough eco-conscious ready-to-wear collection. [cited 2020 Nov 25]. Available from: <https://www.mensfolio.com.my/72023/interview-hatta-dolmat-on-his-breakthrough-eco-conscious-ready-to-wear-collection/>
- [14] A. A. Augustine, A. S. Rindita, and S. L. Muniandy, "Factors influencing the purchase behaviour of sustainable fashion among millennial consumers in Kuala Lumpur," in *ACM International Conference Proceeding Series*, Aug. 2019, pp. 330–334. doi: 10.1145/3358528.3358533.
- [15] A. Kamis and R. S. Farah Najwa Ahmad Puad, Nornazira Suhairom, Rahimah Jamaluddin, "Environmentally Sustainable Apparel: Recycle, Repairing and Reuse Apparel," *Int. J. Soc. Sci. Humanit. Invent.*, vol. 5, no. 1, 2018.
- [16] S. S. Shaharuddin and M. H. Jalil, "Parents' determinants buying intent on environmentally friendly children's clothing," *Int. J. Bus. Soc.*, vol. 22, no. 3, pp. 1623–1638, 2021.
- [17] N. Arora and P. Manchanda, "Green perceived value and intention to purchase sustainable apparel among Gen Z: The moderated mediation of attitudes," *J. Glob. Fash. Mark.*, vol. 13, no. 2, pp. 168–185, 2022.
- [18] N. N. Hasbullah, Z. Sulaiman, A. Mas'od, and H. S. Ahmad Sugiran, "Drivers of Sustainable Apparel Purchase Intention: An Empirical Study of Malaysian Millennial Consumers," *Sustainability.*, vol. 14, no. 4, 2022.
- [19] J. Mohammad, F. Quoquab, and N. Z. Mohamed Sadom, "Mindful consumption of second-hand clothing: the role of eWOM, attitude and consumer engagement," *J. Fash. Mark. Manag.*, vol. 25, no. 3, pp. 482–510, 2020.
- [20] K. Y. Koay, C. W. Cheah, and H. S. Lom, "An integrated model of consumers' intention to buy second-hand clothing," *Int. J. Retail Distrib. Manag.*, 2022, doi: 10.1108/IJRDM-10-2021-0470.
- [21] M. H. Jalil and S. S. Shaharuddin, "Consumer purchase behavior of eco-fashion clothes as a trend to reduce clothing waste," *Int. J. Innov. Technol. Explor. Eng.*, vol. 8, no. 12, pp. 4224–4233, 2019.
- [22] N. A. Aziz and R. A. Bakar, "Ethical Apparel Consumption : A Study on Muslim Consumers in Malaysia," *Asian J. Res. Bus. Manag.*, vol. 2, no. 2, pp. 86–95, 2020.
- [23] S. M. Hassan, Z. Rahman, and J. Paul, "Consumer ethics: A review and research agenda," *Psychology and Marketing*, vol. 39, no. 1. John Wiley and Sons Inc, pp. 111–130, Jan. 01, 2022. doi: 10.1002/mar.21580.
- [24] I. Ajzen, "The theory of planned behavior," *Organ. Behav. Hum. Decis. Process.*, vol. 50, no. 2, pp. 179–211, 1991.
- [25] M. Dewi, V., Febrian, E., Effendi, N., & Anwar, "Financial literacy among the millennial generation: Relationships between knowledge, skills, attitude, and behavior," *Australas. Accounting, Bus. Financ. J.*, vol. 14, no. 4, pp. 24–37, 2020.
- [26] M. Ajzen, I., & Fishbein, "Attitude-behaviour relations: a theoretical analysis and review of empirical research," *Psychol. Bull.*, vol. 84, pp. 888–918, 1977.
- [27] T. Lam and C. H. C. Hsu, "Predicting behavioral intention of choosing a travel destination," *Tour. Manag.*, vol. 27, no. 4, pp. 589–599, 2006.
- [28] M. Yazdanpanah and M. Forouzani, "Application of the Theory of Planned Behaviour to predict Iranian students' intention to purchase organic food," *J. Clean. Prod.*, vol. 107, pp. 342–352, 2015.
- [29] S. Zhang et al., "Determinants affecting residents' waste classification intention and behavior: A study based on TPB and A-B-C methodology," *J. Environ. Manage.*, vol. 290, p. 112591, 2021.
- [30] S. Bong Ko and B. Jin, "Predictors of purchase intention toward green apparel products: A cross-cultural investigation in the USA and China," *J. Fash. Mark. Manag.*, vol. 21, no. 1, pp. 70–87, 2017.
- [31] G. Varshneya, S. K. Pandey, and G. Das, "Impact of Social Influence and Green Consumption Values on Purchase Intention of Organic Clothing: A Study on Collectivist Developing Economy," *Glob. Bus. Rev.*, vol. 18, no. 2, pp. 478–492, Apr. 2017.

- [32] L. McNeill and B. Venter, "Identity, self-concept and young women's engagement with collaborative, sustainable fashion consumption models," *Int. J. Consum. Stud.*, vol. 43, no. 4, pp. 368–378, Jul. 2019.
- [33] C. D'Souza, "Marketing challenges for an eco-fashion brand: A case study," *Fash. Theory - J. Dress Body Cult.*, vol. 19, no. 1, pp. 67–82, 2015.
- [34] G. Hustvedt and M. A. Dickson, "Consumer likelihood of purchasing organic cotton apparel: Influence of attitudes and self-identity," *J. Fash. Mark. Manag.*, vol. 13, no. 1, pp. 49–65, 2009.
- [35] K. Y. H. Connell, "Internal and external barriers to eco-conscious apparel acquisition," *Int. J. Consum. Stud.*, vol. 34, no. 3, pp. 279–286, 2010.
- [36] T. M. Rausch and C. S. Kopplin, "Bridge the gap: Consumers' purchase intention and behavior regarding sustainable clothing," *J. Clean. Prod.*, vol. 278, p. 123882, 2021.
- [37] C. Bianchi and G. Birtwistle, "Consumer clothing disposal behaviour: A comparative study," *Int. J. Consum. Stud.*, vol. 36, no. 3, pp. 335–341, May 2012, doi: 10.1111/j.1470-6431.2011.01011.x.
- [38] L. Lundblad and I. A. Davies, "The values and motivations behind sustainable fashion consumption," *J. Consum. Behav.*, vol. 15, no. 2, pp. 149–162, Mar. 2016.
- [39] C. J. Henninger, C. E., Alevizou, P. J., & Oates, "What is sustainable fashion?," *J. Fash. Mark. Manag. An Int. J.*, vol. 20, no. 4, pp. 400–416, 2016.
- [40] S. Khandual, A., & Pradhan, "Fashion brands and consumers approach towards sustainable fashion," in *Fast fashion, fashion brands and sustainable consumption*, S. Springer, Ed. 2019, pp. 37–54.
- [41] D. Shen, J. Richards, and F. Liu, "Consumers' Awareness of Sustainable Fashion," *Proc. Mark. Manag. Assoc.*, vol. 23, no. 2, pp. 134–147, 2013.
- [42] N. M. P. Allwood, J. M., Laursen, S. E., Russell, S. N., de Rodriguez, C. M., & Bocken, "An approach to scenario analysis of the sustainability of an industrial sector applied to clothing and textiles in the UK," *J. Clean. Prod.*, vol. 16, no. 12, pp. 1234–1246, 2008, doi: 10.1016/j.jclepro.2007.06.014.
- [43] C. M. Armstrong, K. Niinimäki, C. Lang, and S. Kujala, "A Use-Oriented Clothing Economy? Preliminary Affirmation for Sustainable Clothing Consumption Alternatives," *Sustain. Dev.*, vol. 24, no. 1, pp. 18–31, Jan. 2016.
- [44] P. Sinha, S. S. Muthu, and G. Dissanayake, "The remanufacturing industry and fashion," in *Environmental Footprints and Eco-Design of Products and Processes*, Springer, 2016, pp. 1–9. doi: 10.1007/978-981-10-0297-7_1.
- [45] E. Sundin, "Life-cycle perspectives of product/service-systems: In design theory," in *Introduction to Product/Service-System Design*, Springer London, 2009, pp. 31–49. doi: 10.1007/978-1-84882-909-1_2.
- [46] J. Han, Y. Seo, and E. Ko, "Staging luxury experiences for understanding sustainable fashion consumption: A balance theory application," *J. Bus. Res.*, vol. 74, pp. 162–167, 2017.
- [47] J. Marques, "Creativity and morality in business education: Toward a trans-disciplinary approach," *Int. J. Manag. Educ.*, vol. 17, no. 1, pp. 15–25, 2019.
- [48] L. Janssen, A. P. Schouten, and E. A. J. Croes, "Influencer advertising on Instagram: product-influencer fit and number of followers affect advertising outcomes and influencer evaluations via credibility and identification," *Int. J. Advert.*, vol. 41, no. 1, pp. 101–127, 2022, doi: 10.1080/02650487.2021.1994205.
- [49] C. Lou and S. Yuan, "Influencer Marketing: How Message Value and Credibility Affect Consumer Trust of Branded Content on Social Media," *J. Interact. Advert.*, vol. 19, no. 1, pp. 58–73, Jan. 2019.
- [50] M. Yazdanpanah, M., & Forouzani, "Application of the Theory of Planned Behaviour to predict Iranian students' intention to purchase organic food," *J. Clean. Prod.*, vol. 107, pp. 342–352, 2015.
- [51] P. Sreen, N., Purbey, S., & Sadarangani, "Impact of culture, behavior and gender on green purchase intention," *J. Retail. Consum. Serv.*, vol. 41, pp. 177–189, 2018.
- [52] K. W. Jung, H. J., Choi, Y. J., & Oh, "Influencing factors of Chinese consumers' purchase intention to sustainable apparel products: Exploring consumer 'attitude-behavioral intention' gap.," *Sustainability*, vol. 12, no. 5, p. 1770, 2020.
- [53] R. Yadav and G. S. Pathak, "Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior," *J. Clean. Prod.*, vol. 135, pp. 732–739, 2016.
- [54] C. Saricam and N. Okur, "Analysing the Consumer Behavior Regarding Sustainable

- Fashion Using Theory of Planned Behavior,” in *Consumer Behaviour and Sustainable Fashion Consumption*, Springer, Singapore, 2019, pp. 1–37. doi: 10.1007/978-981-13-1265-6_1.
- [55] B. Kumar, A. K. Manrai, and L. A. Manrai, “Purchasing behaviour for environmentally sustainable products: A conceptual framework and empirical study,” *J. Retail. Consum. Serv.*, vol. 34, pp. 1–9, 2017, doi: 10.1016/j.jretconser.2016.09.004.
- [56] F. Khan, W. Ahmed, and A. Najmi, “Understanding consumers’ behavior intentions towards dealing with the plastic waste: Perspective of a developing country,” *Resour. Conserv. Recycl.*, vol. 142, pp. 49–58, 2019.
- [57] T. A. Bhutto, R. Farooq, S. Talwar, U. Awan, and A. Dhir, “Green inclusive leadership and green creativity in the tourism and hospitality sector: serial mediation of green psychological climate and work engagement,” *J. Sustain. Tour.*, vol. 29, no. 10, pp. 1716–1737, 2021.
- [58] J. Paul, J., Modi, A., & Patel, “Predicting green product consumption using theory of planned behavior and reasoned action,” *J. Retail. Consum. Serv.*, vol. 29, pp. 123–134, 2016.
- [59] S. Shukla, “A Study on Millennial Purchase Intention of Green Products in India: Applying Extended Theory of Planned Behavior Model,” *J. Asia-Pacific Bus.*, vol. 20, no. 4, pp. 322–350, Oct. 2019, doi: 10.1080/10599231.2019.1684171.
- [60] A. K. Moser, “Consumers’ purchasing decisions regarding environmentally friendly products: An empirical analysis of German consumers,” *J. Retail. Consum. Serv.*, vol. 31, pp. 389–397, 2016.
- [61] P. Kautish, J. Paul, and R. Sharma, “The moderating influence of environmental consciousness and recycling intentions on green purchase behavior,” *J. Clean. Prod.*, vol. 228, pp. 1425–1436, 2019, doi: 10.1016/j.jclepro.2019.04.389.
- [62] A. Singh and P. Verma, “Factors influencing Indian consumers’ actual buying behaviour towards organic food products,” *J. Clean. Prod.*, vol. 167, pp. 473–483, 2017.
- [63] K. C. Maichum, K., Parichatnon, S., & Peng, “The influence of environmental concern and environmental attitude on purchase intention towards green products: a case study of young consumers in Thailand,” *International J. Bus. Mark. Manag.*, vol. 2, no. 3, pp. 1–8, 2017.
- [64] A. Vafaei-Zadeh, T. K. Wong, H. Hanifah, A. P. Teoh, and K. Nawaser, “Modelling electric vehicle purchase intention among generation Y consumers in Malaysia,” *Res. Transp. Bus. Manag.*, p. 100784, 2022.
- [65] A. K. Patwary, M. Mohamed, M. K. Rabiul, W. Mehmood, M. U. Ashraf, and A. A. Adamu, “Green purchasing behaviour of international tourists in Malaysia using green marketing tools: theory of planned behaviour perspective,” *Nankai Bus. Rev. Int.*, vol. 13, no. 2, pp. 246–265, May 2022, doi: 10.1108/NBRI-06-2021-0044.
- [66] X. Zheng, J. Men, L. Xiang, and F. Yang, “Role of technology attraction and parasocial interaction in social shopping websites,” *Int. J. Inf. Manage.*, vol. 51, 2020.
- [67] S. U. Kucuk, *Consequences of brand hate*. Palgrave Macmillan, Cham, 2019.
- [68] J. Cohen, M. B. Oliver, and H. Bilandzic, “The Differential Effects of Direct Address on Parasocial Experience and Identification: Empirical Evidence for Conceptual Difference,” *Commun. Res. Reports*, vol. 36, no. 1, pp. 78–83, Jan. 2019.
- [69] M. Shin, S. W. Song, S. J. Kim, and F. Biocca, “The effects of 3D sound in a 360-degree live concert video on social presence, parasocial interaction, enjoyment, and intent of financial supportive action,” *Int. J. Hum. Comput. Stud.*, vol. 126, pp. 81–93, 2019.
- [70] Y. Gu, Z. Qian, and F. Chen, “From Twitter to detector: Real-time traffic incident detection using social media data,” *Transp. Res. Part C Emerg. Technol.*, vol. 67, pp. 321–342, 2016.
- [71] N. N. Hasbullah, Z. Sulaiman, and A. Mas’od, “The Effect of Perceived Value on Sustainable Fashion Consumption in the Era of Covid-19: A Proposed Conceptual Framework,” *Int. J. Acad. Res. Bus. Soc. Sci.*, vol. 10, no. 8, 2020.
- [72] S. T. Homer and K. S. Khor, “Exploring the perceptions of Malaysian Gen Z towards the impact of COVID-19 on sustainable development,” *Environ. Sci. Pollut. Res.*, pp. 1–17, 2021.
- [73] F. Tjiptono, G. Khan, E. S. Yeong, and V. Kunchambo, “Generation Z in Malaysia: The Four ‘E’ Generation,” in *The New Generation Z in Asia: Dynamics, Differences, Digitalization*, 2020, pp. 149–163.
- [74] Y. Kim and H. Han, “Intention to pay conventional-hotel prices at a green hotel - a modification of the theory of planned behavior,” *J. Sustain. Tour.*, vol. 18, no. 8, pp.

- 997–1014, 2010, doi: 10.1080/09669582.2010.490300.
- [75] R. Tukachinsky, “Para-romantic love and para-friendships: Development and assessment of a multiple-parasocial relationships scale,” *Am. J. Media Psychol.*, vol. 3, no. 1/2, pp. 73–94, 2010.
- [76] J. Kim, S. Kang, K. L.-J. of B. Research, and U. 2020, “How social capital impacts the purchase intention of sustainable fashion products,” *J. Bus. Res.*, vol. 117, pp. 596–603, 2013, Accessed: Jul. 23, 2022. [Online]. Available: <https://www.sciencedirect.com/science/article/pii/S0148296318304831>
- [77] J. F. Hair, G. T. M. Hult, C. M. Ringle, M. Sarstedt, and K. O. Thiele, “Mirror, mirror on the wall: a comparative evaluation of composite-based structural equation modeling methods,” *J. Acad. Mark. Sci.*, vol. 45, no. 5, pp. 616–632, Sep. 2017.
- [78] J. C. Anderson and D. W. Gerbing, “Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach,” *Psychol. Bull.*, vol. 103, no. 3, pp. 411–423, 1988.
- [79] J. F. Hair, J. J. Risher, M. Sarstedt, and C. M. Ringle, “When to use and how to report the results of PLS-SEM,” *European Business Review*, vol. 31, no. 1. Emerald Group Publishing Ltd., pp. 2–24, Jan. 14, 2019.
- [80] C. M. Ringle, M. Sarstedt, and D. W. Straub, A critical look at the use of PLS-SEM in MIS quarterly, vol. 36, no. 1. 2012. doi: 10.2307/41410402.
- [81] C. H. Mason and W. D. Perreault, “Collinearity, Power, and Interpretation of Multiple Regression Analysis,” *J. Mark. Res.*, vol. 28, no. 3, pp. 268–280, Aug. 1991.
- [82] J. M. Becker, C. M. Ringle, M. Sarstedt, and F. Völckner, “How collinearity affects mixture regression results,” *Mark. Lett.*, vol. 26, no. 4, pp. 643–659, Dec. 2015, doi: 10.1007/s11002-014-9299-9.
- [83] W. W. Chin, “The partial least squares approach to structural equation modeling,” *Mod. methods Bus. Res.*, vol. 295, no. 2, pp. 295–336, 1998.
- [84] J. Grazzini and D. Massaro, “Dispersed information, social networks, and aggregate behavior,” *Econ. Inq.*, vol. 59, no. 3, pp. 1129–1148, Jul. 2021.
- [85] N. Mohd Suki and N. Mohd Suki, “Examination of peer influence as a moderator and predictor in explaining green purchase behaviour in a developing country,” *J. Clean. Prod.*, vol. 228, pp. 833–844, 2019.
- [86] Yoo F, Jung HJ, Oh KW. Motivators and barriers for buying intention of upcycled fashion products in China. *Sustainability*. 2021 Feb 28;13(5):2584.
- [87] Park HH, Choo TG. The influence of perceived risk of upcycling fashion product on trust, purchase intention and recommendation intention. *Fashion & Textile Research Journal*. 2015;17(2):216-26.
- [88] Kim J, Kang S, Lee KH. How social capital impacts the purchase intention of sustainable fashion products. *Journal of Business Research*. 2020 Sep 1;117:596-603.
- [89] Alonso-Almeida MD, Rodríguez-Antón JM, Bagur-Femenías L, Perramon J. Sustainable development and circular economy: The role of institutional promotion on circular consumption and market competitiveness from a multistakeholder engagement approach. *Business Strategy and the Environment*. 2020 Sep;29(6):2803-14.
- [90] Allen C, Metternicht G, Wiedmann T. National pathways to the Sustainable Development Goals (SDGs): A comparative review of scenario modelling tools. *Environmental Science & Policy*. 2016 Dec 1;66:199-207.
- [91] Sun Y, Ko E. Influence of sustainable marketing activities on customer equity. *Journal of Global Scholars of Marketing Science*. 2016 Jul 2;26(3):270-83.
- [92] Sung K, Cooper T, Kettley S. Individual upcycling in the UK: Insights for scaling up towards sustainable development. *In Sustainable development research at universities in the United Kingdom 2017* (pp. 193-227). Springer, Cham.
- [93] Shafie S, binti Kamis A, bin Ramli MF. Fashion sustainability: Benefits of using sustainable practices in producing sustainable fashion designs. *International Business Education Journal*. 2021 Jun 22;14(1):103-11.