

JGB 1714**Consumers' Purchase Intentions toward Recycled Polyester (rPET) Apparel of Fast Fashion Brands in the National Capital Region (NCR)**

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Abstract

As it grows exponentially, the fast fashion industry has created negative environmental impacts through pollution and waste. One of its sustainable development goals is to produce fabric made from recycled materials. According to the Preferred Fiber & Materials Market Report 2021, polyester makes up 52% of global fiber production. H&M, Zara, Uniqlo, and Forever21 are just some brands that have turned plastic waste into everyday fashion by switching to recycled polyester (rPET). It is obtained by melting down 100% recyclable plastic like polyethylene terephthalate (PET) bottles and converting it to polyester fibers. It works as an alternative to reduce fast fashion's harmful effects. This study aims to understand the factors influencing consumers' intentions to purchase rPET apparel from fast fashion brands, which may benefit marketers' and product developers' businesses. Three hundred sixty-nine answers were analyzed from respondents aged 15-44 residing in the National Capital Region (NCR) through an online questionnaire. Findings reveal that perceived quality, product image, and safety are significant predictors of purchase intention. This research creates new knowledge on recycled fashion and draws deep insights into consumers' purchase intentions, particularly in the Philippine context.

Keywords: *purchase intention, fast fashion, recycled polyester, rPET apparel*

Introduction

Fashion is no longer just a status symbol of wealth. Merriam-Webster defines fast fashion as wherein trendy clothing is designed, manufactured, and marketed to customers quickly and affordably. These apparel designs are swiftly moved from runways to retail locations to capitalize on trends. Fast fashion makes it possible for regular people to have easy access to and afford stylish clothing. Innovations in supply chain management play a catalytic role in making fast fashion possible (Eichler, 2022).

However, fast fashion seconded oil as the largest polluter in the world. It significantly negatively influences the environment and society (Shukla & Kumar, 2019). Fast fashion is sometimes referred to as throwaway fashion. Many fashionistas, young adults in their teens and early twenties acknowledge they only wear their purchases once or twice (Kwai, 2019).

The demand for “fresh from the runway” fashion speeds up production, consumption, and eventually discard. It triggers the alteration of the environment by depleting natural resources in making fabrics and generating waste. Solvents and dyes used in clothing production are responsible for 20% of industrial water contamination of water bodies and soil (Khadir & Muthu, 2022). Only 11% of brands have started using recycling techniques, and 60% of fast fashion clothing is discarded in landfills (*Fast Fashion & Sustainability: Will the Two Ever Get Along?* n.d.).

These unfavorable circumstances have already begun to raise consumer awareness of environmental issues, particularly among consumers who care about the environment. Brands in the ready-to-wear industry and other industries emphasize sustainability in manufacturing and

consumption more due to conscious customers' interest in the environment (Öndoğan et al., 2022).

The global issue of plastic pollution has grown significantly alarming. Plastic garbage is one of the main pollutants in the marine environment because of its toxic and non-biodegradable properties (Muthu, 2019). In the textile industry, polyethylene terephthalate (PET) is a thermoplastic and the most common polyester form (Forrest, 2019). It is the most extensively used fiber in the garment industry. It accounts for around 52% of the total volume of fibers produced globally (Bell, n.d.). Unfortunately, according to the Preferred Fiber & Materials Market Report 2021 of Textile Exchange, only 14.8% is recycled since fossil-based polyester is competitively cheaper. Textile reuse and recycling were found to potentially reduce the production of virgin textile fiber, thereby eliminating activities later in the life cycle of a textile product (Juanga-Labayen et al., 2022).

The increasing environmental consciousness among consumers, particularly on PET bottle reuse, impacts purchasing behavior. With this trend, many textile manufacturers utilize rPET-based fibers (Luu & Baker, 2021).

Buyer behavior is described as a complex process that involves obtaining an item that satisfies an individual's needs and wants and disposing of it after it serves its purpose (Dudovskiy, n.d.) Although marketers have various definitions, it comes down to their needs and wants. Moreover, it is important to understand that consumers hold the decision to purchase from certain products and service providers, as they may choose one over the other due to competitive advantages such as pricing, accessibility, quality, and alike. As argued by Egen (Egan, 2015), the awareness of consumer buying behavior of companies makes a better contribution to a country's

economic state. The understanding of buying behavior greatly affects the quality of goods and services, which impacts its competitive advantage in the international market.

On the contrary, Kotler et al. also inform that regardless of this research, it is still difficult to identify the exact factors as to why a consumer purchases from a particular brand due to accumulated beliefs and attitudes (Kotler & Keller, 2012). All consumers develop beliefs and attitudes in their lifetime, and these evaluations, emotions, and actions point toward an idea that consumers may not even be aware of when purchasing. As a standard, companies are made to work their product or service around specific ideas rather than vice versa. For instance, a brand's sustainability initiative may be preferred over brands not promoting the movement.

Recycled fashion is under the category of sustainable fashion. It is creating a new product from waste as its raw material, which is the same process as using rPET in apparel. Recycled polyester (rPET) uses polyethylene terephthalate (PET) to turn water bottles into fabric by sterilization. The water bottles eventually become a string and blend into the fabric to make new apparel (Nguyen, 2020). The use of rPET has its advantages and disadvantages. It has lessened carbon emissions by 54% and energy by 70% (Serban, 2019). Various fast fashion brands such as H&M, Zara, Uniqlo, and Forever21 have used this alternative fabric. However, environmentalists' concern is that it normalizes the excessive production of clothes that may contribute to waste landfill unless properly disposed of.

Environmental awareness has grown in the 20th century, especially due to the COVID-19 pandemic (Rodzko et al., 2020). A survey revealed that sustainable initiatives are most distinct in the younger generation. Furthermore, however much loss there is in the economy due to the pandemic, more than half of the survey participants viewed the recovery of the economy and the action on environmental issues as equally important to be addressed (Rodzko et al., 2020). The

fashion industry is a significant contributor to the economy. The industry has gone through significant changes over the years. One environmental contribution is the slow integration of recycling strategies, offering fabric choices such as organic cotton, linen, recycled polyester (rPET), and others. According to Google Trends, this may be due to a significant rise in interest in sustainable fashion.

Significance of the Study

In Euromonitor's Voice of the Industry: Sustainability survey, it is raised that companies are challenged to communicate their sustainability messages, which should be custom to different stakeholders (Euromonitor, 2022). The research will identify the factors that drive consumers' purchase intentions of recycled polyester apparel in the Philippines, wherein marketers can focus on how recycled polyester apparel should be communicated to Filipino consumers, what influences their purchase intention, whether a specific factor should be highlighted or otherwise, to keep Filipino consumers interested in recycled polyester apparel in fast fashion. Moreover, product developers will benefit from the study as it will determine the factor that can help create apparel fit for the preference of Filipino consumers.

Problem Statement

In response to a challenge posed by the Textile Exchange, more brands have committed to increasing the percentage of recycled polyester to 45% by 2025 (Bryce, 2021). However, consumption and demand for clothing made from recycled polyester are still showing a noticeable difference. Therefore, this research addresses the question: What factors influence consumers' purchase intention toward recycled polyester apparel of fast fashion brands?

Objectives

To achieve the goal of this research, below are the following objectives:

- (1) To analyze the factors that significantly affect consumers' purchase intention of recycled polyester apparel and
- (2) To give further recommendations to clothing marketers and product developers in the apparel industry made from recycled polyester as a viable alternative.

Research Questions

This research sought to answer the following questions:

1. How are the consumers of fast fashion brands in NCR described in terms of:
 - A. Socio-demographic Profile
 - i. Age
 - ii. Gender
 - iii. Educational Attainment
 - iv. Employment Status
 - v. Location
 - vi. Monthly Income
2. What is the level of importance to the purchasing intention for recycled polyester of fast fashion brands in terms of:
 - a. Perceived Quality
 - b. Product Image
 - c. Sustainability
 - d. Safety
3. Is there a significant relationship between Perceived Quality, Product Image, Sustainability, Safety, and Consumers' Purchase Intention?

4. Do Perceived Quality, Product Image, Sustainability, and Safety of recycled polyester Affect Consumers' Purchase Intention?
5. What is the implication of this research on the current and future fast fashion brands that produce clothes made from sustainably sourced materials like recycled polyester?

Review of Related Literature

Recycled polyethylene terephthalate (rPET) is used in packaging, strapping products, fibers, nonwoven fabrics, and carpets (Forrest, 2019), and this is due to its excellent properties (Thomas et al., 2018). PET is recycled, in some cases, into fabrics for its non-biodegradable properties (Pandit et al., 2020). The discarded bottle is broken down into PET flakes and melted to form a string, which can be reused for making containers or clothing. This is good for the environment because, compared to virgin polyester, rPET has a lower carbon footprint (IBWA, 2021).

Recycled polyester (rPET) and sustainability

Polyester accounts for roughly 64% of the worldwide fiber market. Some companies have started using recycled polyester and eliminated the need for virgin polyester, which would take more resources (Tonti, 2021).

Over 48 million mt of clothing is thrown away each year. Recycled polyester helps to cut down on this staggering amount of waste. It fosters good recycling habits and is an intuitive approach to finding value in the garbage. Additionally, it introduces consumers to the untapped possibilities of sustainable fabrics (*A New Textiles Economy: Redesigning Fashion's Future*, 2017).

According to a 2017 study, manufacturing recycled PET produces 79% fewer carbon emissions than virgin polyester. Therefore, recycling polyester could help companies achieve

their environmental goals by supporting the 2015 Paris Agreement, essential to meet Sustainable Development Goals in the coming years (Alpla, 2017).

Consumer Acceptance of Apparel Made from rPET

The Theory of Planned Behavior states that people are more likely to take action by buying a product in the future if the motivational intention is strong. For this reason, understanding consumer acceptance of clothing produced from recycled materials in terms of quality, image, sustainability, and safety is essential.

Quality

In a study on recycled clothing, Koreans' perceived quality of these products was predominantly favorable (Park & Lin, 2020). On the contrary, other studies found quality expectations to be low. For instance, a study in Brazil revealed that consumers are often wary of recycled apparel because they perceive it to be of low quality compared to new products (Queiroz et al., 2019). This is similar to another study in Asia that found that users were highly concerned about the perceived dependability and quality of gadgets made from recycled materials (Kuah & Wang, 2020). Lower evaluations of the product's value for money raise performance risk, resulting in financial risk (Essoussi & Linton, 2010).

Image

In a study of human perceptions of recycled textiles, participants perceived fast fashion brands' use of recycled plastic bottles as appealing due to their novelty (Wagner & Heinzl, 2020). Kamleitner et al. have also done a study of making an upcycled product seem appealing through the use of storytelling. The study found that consumers had more positive feedback on an item with a backstory that it was made out of waste compared to an item conventionally made from a factory. The study found that appealing to a product's "past identity" can create consumer

demand (Kamleitner et al., 2019). The image of a product can be a factor in purchase intention. The apparel design determines whether or not the clothing is worth buying (Jalil & Shaharuddin, 2019). Customers demand products that meet their expectations for price, brand, or design (Wagner et al., 2018).

According to a study focused on the purchase of green fashion, consumers who care about the environment are more inclined to buy eco-friendly goods (Thongpila, 2019) because they understand the benefits. They believe their eco-social approach can protect and positively affect the environment (Park, 2019). This belief also contributes to their image as responsible green consumers, affecting their psychometric self-identity (Yu et al., 2019).

Sustainability

The sustainable development concept was first introduced (WCED) in 1987. It developed the principles of sustainable development that we are now more aware of today. Sustainability can be defined as "the practice of using natural resources responsibly today so they are available for future generations tomorrow" (National Geographic Society, 2022). The fast fashion industry's effort toward sustainability with recycled polyester and other environmentally better materials can positively affect our future with enough effort.

In sustainability consciousness research, participants begin to be cautious of their unsustainable actions once they are more aware of sustainability. There is also a sense of retribution spread through information which has increased due to internet access and peer advice. However, it is said that labels significantly contribute to why consumers choose products. Labels with "eco-friendly," "organic," "recyclable," and similar tags on items are chosen by consumers regardless of their quality (de Carvalho et al., n.d.).

When one purchases sustainable fashion, it is also about being mindful of labor conditions. A study in the United Kingdom on attitudes toward sustainability has shown that females pay attention to child labor and environmental issues in the fast fashion industry. Meanwhile, the male counterparts are more aware of social equality issues (Zhang et al., 2021).

Regarding age and income, there is a rising trend for the younger generation to consider sustainability a factor. In addition, employed consumers are seen to be more aware of the movement and initiative. Arguably, income makes a difference in purchasing fast fashion; those who earn and with a higher income behave differently and feel strongly about non-sustainable products, and show greater interest in brands that promote sustainability. Although consumers purchase sustainable products, they may overestimate their sustainability knowledge due to overconfidence. Researchers have suggested keeping current on actual knowledge to avoid falling for fake advertisements (Zhang et al., 2021).

Safety

Consumers perceive recycled-material products are inferior to new conventional products, not just in terms of (environmental) benefits but also in terms of safety (Polyportis et al., 2022). Uncertainty, which may be a barrier to the purchasing choice, is one element that relates to (lack of) perceived product safety. For example, uncertainty may arise from a lack of prior experience or knowledge about product safety (Calvo-Porrall & Lévy Mangin, 2020).

Most of the available research points to the safety of wearing recycled plastic garments; however, there are worries that harmful pollutants might get mixed in during recycling (*Is Recycled Plastic Clothing Safe?* n.d.). Chemical compounds such as detergents, protective, flame retardants, plastic coatings, insecticides, dyes, volatile organic compounds, and nanomaterials

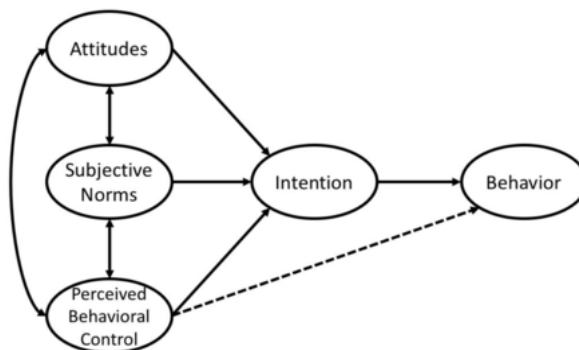
are only a few contaminants connected to textile recycling. There needs to be more information on pollutants in textiles during recycling and recycled final goods (Undas et al., 2022).

Consumers may also negatively perceive recycled polyester apparel due to the nature of its production. In a German study by Hein, perceived risk negatively affected purchase intention. However, the study further states that perceived risk positively moderated the relationship between personal norms and purchase intention. One of the study's conclusions is that German consumers felt obligated to the environment above their self-interest (Hein, 2022).

Theoretical Framework

Figure 1

The Theory of Planned Behavior



This study uses the Theory of Planned Behavior (TPB) as a theoretical framework to predict consumers' purchase intentions and behaviors. TPB further claims that intention is the primary cause of a person's behavior. Adding perceived behavioral control asserts that people have control over the behavior they want to carry out.

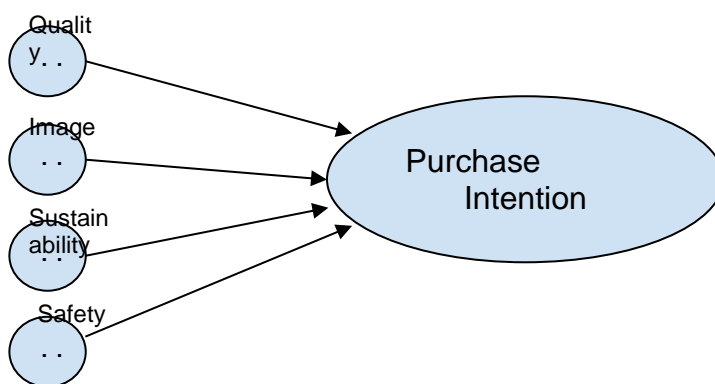
Three constructs fall under it: first, consumers' general attitude toward the behavior; second, their subjective norms that include social pressure to engage in the behavior; and third, perceived behavioral control that relates to their perception when it comes to the difficulty of

executing the behavior or the degree to which they perceive they have the self-efficacy to engage in the behavior (Ajzen, 1991).

Attitudes toward recycled polyester are relevant in this context, especially when determining whether or not purchasing it makes sense to an individual. On the other hand, subjective norms include how others perceive recycled polyester and how much the individual values such perception. Lastly, perceived behavioral control is how able an individual feels when handling apparel made from recycled polyester.

Figure 2

Conceptual Framework



Methodology

Respondents of the Study

In NCR, the study's respondents are consumers of fast fashion brands such as Forever21, H&M, Uniqlo, Zara, etc. The criteria for selecting respondents are limited to those consumers who have purchased the aforementioned brands at least once before the survey.

The population of the Study and Sampling Design

The study population is individuals residing in NCR aged 15 to 44. According to Martin and Bush (2000), most fast fashion consumers are between 15 and 29. These individuals have disposable income, which makes them spend more time and money on fast fashion frequently. Another reason why this group was chosen along with the middle age group is that, according to a report by global professional services firm Alvarez & Marsal's Consumer Retail Group, most fast fashion consumers also fall under the ages of 18-44, and immediacy drives them to purchase (Prendergast, 2022).

The researchers performed the Convenience Sampling method and distributed an online questionnaire with (2) categories: Socio-Demographic Profile and Purchase Intention Questions.

Statistical Treatment

To understand the factors influencing consumers' intentions to purchase rPET apparel from fast fashion brands, the following statistical tools were measured;

- a. Frequency and Relative Frequency were computed for the distribution of the respondents using the socio-demographic factors.
- b. The measure of Central Tendency through Mean Average and Measure of Dispersion through Standard Deviation were analyzed to know the level of responses of the respondents towards the purchase intention questions.
- c. Multivariate Linear Regression Analysis was used to determine the correlation between two or more variables with cause-effect relations and to make predictions for the topic (Uyanik & Guler, 2013). It includes more than one (1) independent variable toward a single dependent variable.)

To validate the internal consistency of the items placed to measure the factors, Cronbach's alpha (CA) and Composite Reliability (CR) results from Luu and Baker (2021) were applied in the study. Results for the constructs show that CR and CA were both over 0.70, indicating a sufficient level of internal consistency.

Table 1

Internal Consistency and Reliability Factor Loadings and Indicators

Construct	Items	Cronbach Alpha	Standardized loadings	CR	Ave
Perceived Quality	Qual 1	0.813	0.914	0.914	0.842
	Qual 2		0.922		
Image	IMG 1	0.750	0.753	0.854	0.663
	IMG 2		0.797		
	IMG 3		0.887		
Sustainability	SUST1	0.773	0.879	0.897	0.814
	SUST2		0.924		
Safety	SAF1	0.860	0.870	0.914	0.781
	SAF2		0.885		
	SAF3		0.895		
Purchase Intention	INT1	0.873	0.912	0.922	0.797
	INT2		0.848		
	INT3		0.916		

Results and Analysis

Description of Respondents

Most respondents are aged 20 – 24, comprising 53.39% of the total respondents. This is followed by respondents under the age group 25 – 29 years old, with 15.18% percent of the total respondents, and 30 – 34 years old, with 14.09% percent of the total respondents, respectively.

On observation, most respondents came from the middle section of the entire age group, while the lowest age group comprised the total respondents are 40 – 44 years old (2.98%).

Regarding Sex, most respondents are Female, garnering 72.09% or 266 responses out of the 369 total respondents. On the other hand, 27.91% of the total respondents are Male.

Regarding Educational Attainment, most respondents have achieved an undergraduate degree, with 72.63% or 268 out of the total respondents. Only 80, or 21.68% of the total respondents, have attained a postgraduate degree, while only 21, or 5.69%, have surpassed the High School level.

The group that garnered the highest distribution came from the respondents with a monthly income of less than P12,082, comprising more than half of the total respondents (50.68%). On the other hand, respondents with monthly income between P24,164 – P48,328 included 21.14% of the total respondents, while respondents with monthly income between P48,328 – P84,574 comprised 11.92% of the total respondents.

Regarding the geographical distribution of the participating respondents, most came from Makati City (25.47% of the total respondents). This is followed by Taguig City, Quezon City, and Manila City respondents, with a relative frequency of 20.87%, 12.47%, and 10.03%, respectively.

Surprisingly, most respondents are Unemployed since they comprised most of the respondents with 55.01% relative frequency. Only 141, or 38.21% of the total respondents, are Employed, while only 25, or 6.78%, are Self-Employed.

Level of Importance on Purchasing Intention Factors

This section of the analysis measures the level of importance of different factors toward purchase intentions.

*Perceived Quality***Table 2***Mean Average of Perceived Quality Measures*

Perceived Quality Measures	Mean Average	Standard Deviation	Verbal Interpretation
Recycled products have good quality.	4.14	0.7660	Agree
Recycled products give me the quality I expect.	4.04	0.8476	Agree
Recycled products have a quality similar to that of products that are not sustainable.	3.67	1.0067	Agree
Overall Perceived Quality	3.95	0.7041	Important

The resulting mean average of the respondents' perceived quality is 3.95, equating to an **Important** (SD=0.7660). Among the Perceived Quality measures, the statement “*Recycled products have good quality*” contributed the highest to the overall perceived quality and garnered the highest mean average (\bar{x} =4.14; SD=0.7660). The statement “*Recycled products give me the quality I expect*” obtained the next highest mean average (\bar{x} =4.04; SD=0.8476), followed by the statement “*Recycled products have a quality similar to that of products that are not sustainable*” (\bar{x} =3.67; SD=1.0076).

*Product Image***Table 3***Mean Average of Product Image Measures*

Product Image Measures	Mean Average	Standard Deviation	Verbal Interpretation
I have a positive image of recycled products.	4.50	0.8147	Strongly Agree
Consumers of recycled products know how to buy (buy intelligently).	3.99	0.9848	Agree
Recycled products have a positive/favorable image in the market.	4.15	0.9443	Agree
Overall Product Image	4.21	0.7207	Important

Regarding Product Image, a mean average of 4.21 (SD=0.7207) signified that the respondents deemed Product Image **Important**. The greatest contributing indicator for this result is "*I have a positive image of recycled products,*" whose mean average is 4.50 (SD=0.8147). On average, respondents also agreed with the statements "*Consumers of recycled products know how to buy (buy intelligently)*" (\bar{x} =3.99; SD=0.9848) and "*Recycled products have a positive/favorable image in the market*" (\bar{x} =4.15; SD=0.9443).

*Sustainability***Table 4***Mean Average of Sustainability Measures*

Sustainability Measures	Mean Average	Standard Deviation	Verbal Interpretation
Recycled products respect the environment and are good for the environment.	4.59	0.7017	Strongly Agree
Recycled products offer significant environmental benefits.	4.59	0.7252	Strongly Agree
Overall Sustainability	4.59	0.6794	Very Important

Regarding sustainability, respondents considered recycled products good for the environment ($\bar{x}=4.59$; $SD=0.7017$) and offered significant environmental benefits ($\bar{x}=4.59$; $SD=0.7257$). Overall, the Sustainability variable resulted in a **Very Important** answer by respondents ($\bar{x}=4.59$; $SD=0.6794$).

*Safety***Table 5***Mean Average of Safety Measures*

Safety Measures	Mean Average	Standard Deviation	Verbal Interpretation
Recycled products are safe for consumers.	4.28	0.8180	Agree
The production process of recycled products is safe and reliable.	4.08	0.8716	Agree
Recycled products are benign and not harmful.	4.06	0.8888	Agree
Overall Safety	4.14	0.7728	Important

Lastly, the Safety factor obtained a score of **Important** ($\bar{x}=4.14$; $SD=0.7728$). This is due to the three (3) indicators where the highest contributing indicator is “*Recycled products are safe for consumers*” ($\bar{x}=4.28$; $SD=0.8180$).

Purchase Intention

Table 6 shows the Purchase Intention measures that gauge the likelihood of the respondents purchasing recycled products.

Table 6*Mean Average of Purchase Intention Measures*

Purchase Intention Measures	Mean Average	Standard Deviation	Verbal Interpretation
I will buy recycled products in the future.	4.44	0.7610	Agree
I am likely to buy recycled products.	4.33	0.8517	Agree
I will continue buying recycled products.	4.33	0.8302	Agree
Overall Purchase Intention	4.37	0.7597	Likely

The three (3) indicators indicate that respondents are Likely to purchase recycled products ($\bar{x}=4.37$; $SD=0.7597$). The indicator with the highest mean average and greatest contribution is the "*I will buy recycled products in the future*" ($\bar{x}=4.44$; $SD=0.7610$).

Pearson Test of Correlation

Before analyzing, the data was cleansed by checking the outlier present in the dataset. Records considered an outlier in the dataset were removed since they would affect the result of the model. To detect outliers, the researchers used the Box Plot.

Table 7*Pearson's Bivariate Test of Correlation*

Purchase Intention	Perceived Quality	Product Image	Sustainability	Safety
Correlation Coefficient, r	0.3841	0.5594	0.2534	0.4635
p-value	0.0000	0.0000	0.0000	0.0000

Table 7 depicts the pairwise test of the significant relationship between the purchase intention factor and the four (4) factors. The pairwise correlation results showed that each pair has a positive statistical bidirectional relationship with one other. All pairs are statistically significant at a 0.05 level of significance.

Of all pairs, Product Image and Purchase Intention had the highest strength of the relationship ($r=0.5594$), indicating a strong relationship. Correlations between Perceived Quality and Purchase Intention and Safety and Purchase Intention both have a medium/moderate level of relationship with one another. In addition, the strength of the relationship between Sustainability and Purchase Intention showed a slight correlation since the resulting coefficient is only 0.2534.

Multivariate Linear Regression Model

A multivariate linear regression model was fitted to identify which among the variables affects the consumers' purchase intention. Table 8 shows the overall multivariate linear regression model inserting all hypothesized factors toward consumers' purchase intentions.

Table 8*Multivariate Linear Regression Model 1 for Purchase Intention*

Model	Coefficient	Standard Error	t-value	p-value
<i>Perceived Quality</i>	1341.385	530.6819	2.53	0.012
<i>Product Image</i>	4024.65	596.8809	6.74	0.000
<i>Sustainability</i>	459.9894	735.4079	0.63	0.532
<i>Safety</i>	1582.244	528.7332	2.99	0.003
<i>Constant</i>	-21830.88	3379.324	-6.46	0.000
R-squared	0.3448			
Adjusted R-squared	0.3367			
F	42.24			
p-value	0.0000			

**Dependent Variable: (Purchase Intention)⁶*

Based on the initial run of the model, the variable **sustainability** resulted in a p-value of 0.532 which means that the variable is not a significant predictor or does not have a significant effect on the dependent variable, Purchase Intention

To arrive at a final model, the variable which exhibits no statistically significant result was dropped from the regression model when a parsimonious model was achieved.

Table 9*Final Multivariate Linear Regression Model for Purchase Intention*

Model	Coefficient	Standard Error	t-value	p-value
<i>Perceived Quality</i>	1345.325	530.1426	2.54	0.012
<i>Product Image</i>	4071.811	591.5395	6.88	0.000
<i>Safety</i>	1694.976	496.5975	3.41	0.001
<i>Constant</i>	-20352.7	2413.285	-8.43	0.000
R-squared	0.3440			
Adjusted R-Squared	0.3379			
F	56.29			
p-value	0.0000			

**Dependent Variable: (Purchase Intention)⁶*

Table 9 shows the final multivariate linear regression model for purchase intention using the purchase intention factors. The resulting independent variables with significant results are **Perceived Quality** (t=2.54; p-value=0.012), **Product Image** (t=6.88; p-value=0.000), and **safety** (t=3.41; p-value=0.001).

Following the regression equation, the resulting equivalent regression model would be:

$$(Purchase\ Intention)^6 = -20352.7 + 1345.325 * (Perceived\ Quality) + 4071.811 * (Product\ Image) + 1694.976 * (Safety)$$

The regression model explains that for every unit increase in the consumers' Perceived Quality, there is a corresponding 1345.325 unit increase in the purchase intention (t-value = 2.54; p-value = 0.012). For every unit increase in the Product Image, there is a corresponding increase of 4071.811 units in purchase intention (t-value=6.88; p-value=0.000). Lastly, for every

unit increase in safety, there is a 1694.976 unit increase in the consumers' purchase intention⁶ (t-value = 3.41; p-value = 0.001).

Discussion of Results

Compared with the results of Luu and Baker (2021), the study also showed three (3) significant predictors of purchase intention. However, contrary to this research's result, the significant factors are almost identical. Perceived Quality showed similar results wherein their and this study's coefficient yielded a positive loading (t-value=3.134; p-value=0.002, t-value=1345.325; p-value=0.012). Contrary to the results of this study, where the Product Image was found to have a statistically significant result (t-value=4071.811; p-value=0.000), their study showed that Product Image has no significant effect on Purchase Intention (t-value=1.020; p-value=0.308).

Furthermore, in contrast also to the results of Luu and Baker (2021), the Sustainability factor showed a statistically significant effect on purchase intention (t-value=7.585; p-value=0.000), whereas this study found no sufficient evidence to believe so (t-value=0.63; p-value=0.532).

Lastly, the Safety factor resulted in a significant effect in both studies.

Conclusion

Therefore, this research confirmed the three research hypotheses: H1: The consumers' perceived quality of recycled polyester significantly affects consumers' purchase intentions. H2: The consumers' positive/favorable image of recycled polyester significantly affects consumers' purchase intentions; H4: The perceived safety of recycled polyester significantly affects consumers' purchase intentions.

While fast fashion brands are on a mission to incorporate sustainability efforts into every step of the manufacturing process and even in the consumer journey, countries like the Philippines need to determine the factors that drive consumers to purchase recycled polyester apparel for it to be successful. Herewith, clothing marketers and product developers can gear towards formulating their marketing efforts on the perceived quality, product image, and safety of recycled polyester apparel for Filipinos. Businesses may also improve their apparel in these aspects.

Limitations and Recommendations

This study offers managerial insights into consumer acceptance of recycled goods. Brands can only build better strategies to meet market demand when they thoroughly comprehend consumer acceptance of recycled goods. Generally speaking, brands that use sustainable business practices should engage consumers through communication efforts that raise awareness of the consumption of recycled products and educate consumers on these items' features. Similarly, brands should promote product safety by offering unbiased evidence of recycled goods' safety and perceived good environmental impact.

The impact of brands may be further investigated, and it may be tested whether using recycled materials could affect how positively or negatively consumers perceive different brands. For instance, it would be interesting to investigate whether the use of recycled materials would be perceived as a form of ethical corporate responsibility or as a form of greenwashing that can have a negative impact on purchase intentions if a brand is not known for its sustainability focus.

There are limitations to the study, such that it cannot represent the whole population of the Philippines. Broadly, the female respondents accounted for 72.09% of the participants; almost half are in the age range of 20-24 and are unemployed or students. The survey was

conducted virtually and may have contributed to the unequal weights of the respondents. The researchers suggest that future studies consider these factors and cross-examine the demographic factors with the purchase intention of recycled polyester apparel. Furthermore, the majority of the respondents are students with lower incomes. While it is valuable to understand the purchasing behavior of students, it would be beneficial to include more participants from various income groups. This would allow for a more nuanced analysis of how income can mediate fast fashion consumption. Further study can include respondents with higher incomes to explore potential behavior differences between income brackets. In addition, it would be interesting if the study could be conducted on a larger scale as several areas of the Philippines have access to fast fashion brands, and such areas may contain a more diverse socio-economic population.

Appendix

Given the recommendation, the researchers have conducted a Focus Group Discussion on Uniqlo consumers to propose a sample Integrated Marketing Campaign (IMC) plan. The IMC revolves around the importance of digital marketing in the ad to spread product information. The campaign will invest if it reflects the persona of the initiative. The plan will run for six months and is subject to evaluation.

Research Finding	Action Plan	IMC Tool	Platform	Q2		Q3	
All participants in the FGD has mentioned that they spend a significant amount of time in digital browsing in multiple social media platforms	Develop digital-native contents for Uniqlo’s sustainability project to optimize reach and conversion	Digital Marketing	Meta, Tiktok, Twitter				
Aside from quality, 50% of the participants have mentioned that they are willing to pay an extra premium if the product has both the quality and sustainability efforts especially if made by a reputable brand like Uniqlo	Incorporate sustainability angle in the copy of the new IMC material to highlight the three main value propositions: the brand, quality and sustainability efforts	Digital Marketing	Uniqlo’s Social Media Pages				
		In Store Communication	Counter LED displays, product highlights				

80% of the participants shop both offline and online especially those in the provinces that have no Uniqlo branches	Drive conversion strategy on online platforms like CPAS ads, Shoppable contents in order to lessen path to purchase	Digital Marketing	Uniqlo Mobile App, Lazada, Shopee, Zalora						
70% believe that on ground activations and events help amplify the message or campaign for fashion brands	Leverage store and mall activations to drive word of mouth and talkability of the new campaign. Also in order for the campaign to resonate with target audience: those who are sustainability advocates	Event Marketing	Flagship Stores						
		Public Relations	Online Community Groups						
		Public Relations	News outlets						
80% of the respondents have mentioned that testimonials are an effective way in communicating product quality, image and sustainability	Tap influencers who are both daily wear designers and sustainability advocates to create buzz and raise awareness on the new cause	Influencer Marketing	Meta, Tiktok						

References

(n.d.). 1987: Brundtland Report. Retrieved November 27, 2022, from <https://www.are.admin.ch/are/en/home/media/publications/sustainable-development/brundtland-report.html>

(n.d.). Determining Sample Size. Retrieved November 29, 2022, from <https://uncw.edu/irp/ie/resources/documents/qualtrics/determining-sample-size-2.pdf>

(n.d.). Assumptions in Multiple Linear Regression Paul F. Tremblay January 2019 The first important point is that most of the as. Retrieved November 29, 2022, from https://publish.uwo.ca/~ptrembla/resources/Assumptions%20in%20Multiple%20Linear%20Regression_2019.pdf

Aji, H. M., & Sutikno, B. (2015, December). *The Extended Consequence of Greenwashing: Perceived Consumer Skepticism*, 10(4).

Ajzen, I. (1991, December). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211. ScienceDirect. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)

- Ajzen, I. (2012). From Intentions to Actions: A Theory of Planned Behavior. In J. Beckmann & J. Kuhl (Eds.), *Action Control: From Cognition to Behavior* (pp. 11–39). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-69746-3_2
- A.T. Kuah, P. Wang. (2019). *Circular economy and consumer acceptance: an exploratory study in East and Southeast Asia*. J. Cleaner Prod., 247 (2020), Article 119097
- Becker-Olsen, K., & Potucek, S. (n.d.). *Greenwashing*. Springer Link. Retrieved December 8, 2022, from https://link.springer.com/referenceworkentry/10.1007/978-3-642-28036-8_104 (Becker-Olsen & Potucek, n.d.)
- Bell, J. (n.d.). *Recycled Polyester Fabric: Have These 10 Brands Found a Solution to Plastic Pollution?* - *goodmakertales.com*. Good Maker Tales. Retrieved November 17, 2022, from <https://goodmakertales.com/recycled-polyester-fabric-10-brands/>
- Bryce, E. (2021, November 6). *Are clothes made from recycled materials more sustainable?* The Guardian. Retrieved November 29, 2022, from <https://www.theguardian.com/environment/2021/nov/06/clothes-made-from-recycled-materials-sustainable-plastic-climate>
- Calvo-Porrá, C., & Lévy Mangin, J.-P. (2020, May 2). The Circular Economy Business Model: Examining Consumers' Acceptance of Recycled Goods. *Administrative Sciences*, 10(28). Researchgate. 10.3390/admsci10020028
- Christian, J. (2022, March 3). *Ucycle: Upcycling used uniforms and rethinking polyester - NOLISOLI*. Nolisoli. Retrieved November 17, 2022, from <https://nolisoli.ph/101528/ucycle-recycled-polyester-upcycling-old-uniforms/>

- Christian, J. (2022, March 3). *Ucycle: Upcycling used uniforms and rethinking polyester - NOLISOLI*. Nolisoli. Retrieved November 27, 2022, from <https://nolisoli.ph/101528/ucycle-recycled-polyester-upcycling-old-uniforms/>
- de Carvalho, B. L., Salgueiro, M. d. F., & Rita, P. (n.d.). Consumer Sustainability Consciousness: A five-dimensional construct. *58*, 402-410. <https://doi.org/10.1016/j.ecolind.2015.05.053>.
- Dudovskiy, J. (n.d.). *Consumer Buyer Behaviour Definition - Research Methodology*. research-methodology.net. Retrieved November 14, 2022, from <https://research-methodology.net/consumer-buyer-behaviour-definition/>
- Egan, J. (2015). *Marketing Communications*. SAGE Publications.
- Eichler, R. (2022, September 16). *Fast Fashion Explained and How It Impacts Retail Manufacturing*. Investopedia. Retrieved November 26, 2022, from <https://www.investopedia.com/terms/f/fast-fashion.asp>
- Fast Fashion & Sustainability: Will the Two Ever Get Along?* (n.d.). Wearable. Retrieved November 17, 2022, from <https://www.weavabel.com/blog/fast-fashion-and-sustainability-will-the-two-ever-get-along>
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading: Addison-Wesley
- Forrest, M. J. (2019). *Recycling of Polyethylene Terephthalate*. De Gruyter.
- Hamzaoui-Essoussi, Leila & Linton, Jonathan. (2010). New or recycled products: How much are consumers willing to pay? *Journal of Consumer Marketing*. *27*. 458-468. [10.1108/07363761011063358](https://doi.org/10.1108/07363761011063358).

- Hazen, B. T., Mollenkopf, D. A., & Wang, Y. (2016, August 31). Remanufacturing for the Circular Economy: An Examination of Consumer Switching Behavior. *Business Strategy and the Environment*, 26(4), 451-464. Wiley. <https://doi.org/10.1002/bse.1929>
- Hein, N. (2022, March 25). Factors Influencing the Purchase Intention for Recycled Products: Integrating Perceived Risk into Value-Belief-Norm Theory. *14*(7). <https://doi.org/10.3390/su14073877>
- Home. (n.d.). YouTube. Retrieved November 27, 2022, from <https://www.alpla.com/en/pressrelease/2017/08/study-confirms-excellent-carbon-footprint-recycled-pet>
- Is Recycled Plastic Clothing Safe?* (n.d.). Eco Consensus. Retrieved November 18, 2022, from <https://www.ecoconsensus.com/is-recycled-plastic-clothing-safe/>
- Jalil, M. H., & Shaharuddin, S. S. (2019, October). Consumer Purchase Behavior of Eco-Fashion Clothes As a Trend to Reduce Clothing Waste. *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, 8(12), 4224-4233. [10.35940/ijitee.L2693.1081219](https://doi.org/10.35940/ijitee.L2693.1081219)
- Juanga-Labayen, J. P., Labayen, I. V., & Yuan, Q. (2022). A Review on Textile Recycling Practices and Challenges. (2(1)), 174. <https://doi-org.dlsu.idm.oclc.org/10.3390/textiles2010010>
- Kamleitner, B., Thürridl, C., & Martin, B. A.S. (2019, September 4). A Cinderella Story: How Past Identity Salience Boosts Demand for Repurposed Products. *83*(6). <https://doi.org/10.1177/0022242919872156>
- Khadir, A., & Muthu, S. S. (Eds.). (2022). *Biological Approaches in Dye-Containing Wastewater: Volume 2*. Springer Singapore.

- Kotler, P., & Keller, K. L. (2012). *Marketing Management*. Prentice Hall.
- Kwai, I. (2019, December 26). *What Do Gen Z Shoppers Want? A Cute, Cheap Outfit That Looks Great on Instagram (Published 2019)*. The New York Times. Retrieved November 26, 2022, from <https://www.nytimes.com/2019/12/17/style/fast-fashion-gen-z.html>
- Lacsamana, B. H., & Mirasol, P. B. (2021, December 21). *Turning trash into textiles and plastic into planks*. BusinessWorld Online. Retrieved November 27, 2022, from <https://www.bworldonline.com/sparkup/2021/12/21/418986/turning-trash-into-textile-plastic-into-planks/>
- Luu, T. T. A., & Baker, J. (2021, January). Exploring Consumers' Purchase Intention of rPET Bottle-Based Apparel in an Emerging Economy. *Journal of Open Innovation Technology Market and Complexity*, 7(1), 22. 10.3390/joitmc7010022
- Martin, C. A., & Bush, A. J. (2000, September 1). Do role models influence teenagers' purchase intentions and behavior? *Journal of Consumer Marketing*, 17(5), 441–453. Emerald Insight. <https://doi.org/10.1108/07363760010341081>
- Muthu, S. S. (Ed.). (2015). *Handbook of Life Cycle Assessment (LCA) of Textiles and Clothing*. Elsevier Science.
- Muthu, S. S. (Ed.). (2019). *Recycled Polyester: Manufacturing, Properties, Test Methods, and Identification*. Springer Singapore.
- National Geographic Society. (2022, May 19). *Sustainability*. National Geographic Society. Retrieved November 17, 2022, from <https://education.nationalgeographic.org/resource/sustainability>

- A New Textiles Economy: Redesigning Fashion's Future*. (2017, November 28). Ellen MacArthur Foundation. Retrieved November 7, 2022, from <https://ellenmacarthurfoundation.org/a-new-textiles-economy>
- Nguyen, A. (2020, November 24). *How Is Sustainable Recycled Polyester? Compare Ethics*. Retrieved November 7, 2022, from <https://compareethics.com/how-sustainable-is-recycled-polyester>
- Öndoğan, E. N., Öndoğan, Z., & Topuzoğlu, B. (2022). A Study on the Investigation of Sustainability Practices of Global Brands in the Fashion Market. *Ege Akademik Bakis*, 24(4), 393-411. <https://doi.org/10.21121/eab.1104962>
- Paddison, L. (2016, September 26). *Single clothes wash may release 700000 microplastic fibers, study finds*. The Guardian. Retrieved November 7, 2022, from <https://www.theguardian.com/science/2016/sep/27/washing-clothes-releases-water-polluting-fibres-study-finds>
- Pandit, P., Shrivastava, S., Singha, K., & Ahmed, S. (Eds.). (2020). *Recycling from Waste in Fashion and Textiles: A Sustainable and Circular Economic Approach*. Wiley.
- Park, H.J., & Lin, L. (2020). *Exploring the attitude-behavior gap in sustainable consumption: Comparison of recycled and upcycled fashion products*. *Journal of Business Research*, 117, 623-628.
- Paulins, V. A., & Hillery, J. L. (2009). Ethics in the fashion industry.
- Polyportis, A., Mugge, R., & Magnier, L. (2022). Consumer acceptance of products made from recycled materials: A scoping review. *Resources, Conservation, and Recycling, Volume 186*(106533). <https://doi.org/10.1016/j.resconrec.2022.106533>

- Preferred Fiber and Materials*. (2022, October 1). Textile Exchange. Retrieved November 17, 2022, from <https://textileexchange.org/knowledge-center/reports/preferred-fiber-and-materials/>
- Preferred Fiber & Materials Market Report 2021*. (2021). Textile Exchange. Retrieved November 7, 2022, from https://textileexchange.org/wp-content/uploads/2021/08/Textile-Exchange_PREFERRED-Fiber-and-Materials-Market-Report_2021.pdf
- Prendergast, M. (2022, July 20). *New A&M Fast Fashion Report Finds Retailers Up Against a “Gotta Have It Now” Culture*. Yahoo Finance. Retrieved November 17, 2022, from <https://finance.yahoo.com/news/m-fast-fashion-report-finds-144500979.html>
- Recycled PET Industry Share | Recycled Polyethylene Terephthalate Market Forecast by 2030*. (2022, May 9). Emergen Research. Retrieved November 7, 2022, from <https://www.emergenresearch.com/industry-report/recycled-polyethylene-terephthalate-market>
- Recycled RPET FACTS. (2021, February 3). International Bottled Water Association <https://bottledwater.org/rpet-facts/>
- The Republic of the Philippines*. (n.d.). Philippine Statistics Authority | the Republic of the Philippines. Retrieved November 29, 2022, from <https://psa.gov.ph/population-and-housing/statistical-tables>
- Robinson, D. (2022, November 13). *What is Greenwashing and How to Avoid It?* Earth.Org. Retrieved December 8, 2022, from <https://earth.org/what-is-greenwashing/>
- Rodzko, F., Kachaner, N., Nielsen, J., & Portafaix, A. (2020, July 14). *The Pandemic Is Heightening Environmental Awareness | BCG*. Boston Consulting Group. Retrieved

- November 14, 2022, from <https://www.bcg.com/publications/2020/pandemic-is-heightening-environmental-awareness>
- Serban, R. (2019, January 17). *Consumer Attitude Towards Recycled Fashion Garments. Which factors make recycled fashion more appealing to consumers?* Grin. Retrieved November 14, 2022, from <https://www.grin.com/document/1170113>
- Shukla, V., & Kumar, N. (Eds.). (2019). *Environmental Concerns and Sustainable Development: Volume 2: Biodiversity, Soil, and Waste Management*. Springer Nature Singapore.
- Thomas, S., Rane, A. V., Kanny, K., Thomas, M. G., & VK, A. (Eds.). (2018). *Recycling of Polyethylene Terephthalate Bottles*. Elsevier Science.
- Tonti, L. (2021, March 22). *How green are your leggings? Recycled polyester is not a silver bullet (yet)*. The Guardian. Retrieved November 7, 2022, from <https://www.theguardian.com/fashion/2021/mar/22/how-green-are-your-leggings-recycled-polyester-is-not-a-silver-bullet-yet>
- Tulangow, G. D., & Kusumawardani, K. (2020, 12 15). Green is the New Black: The Role of Green Marketing Awareness and Perceived Innovation in the Fast Fashion Industry. *J. 10.33021/icfbe.v1i1.1373*
- Undas, A. K., Groenen, M., Peters, R. J.B., & van Leeuwen, S. P.J. (2022, November 9). Safety of recycled plastics and textiles: Review the detection, identification, and safety assessment of contaminants. *Chemosphere*, 312(Part 1, 2022), 137175. <https://doi.org/10.1016/j.chemosphere.2022.137175>
- Wagner, M., Curteza, A., Thomassey, S., & Zeng, X. (2018, February). The Appearance of Sustainable Fashion Products. *Current Trends in Fashion Technology & Textile Engineering*, 2(5), 95–96. 10.19080/CTFTTE.2018.02.555599

Wagner, M. M., & Heinzl, T. (2020, December 18). Human Perceptions of Recycled Textiles and Circular Fashion: A Systematic Literature Review.

<https://doi.org/10.3390/su122410599>

Wang, L., & Hsu, C. (2022, October 24). *Textile production sees a boost in recycled plastic.*

Taipei Times. Retrieved November 7, 2022, from

<https://www.taipeitimes.com/News/biz/archives/2022/10/25/2003787651>

Yu, S.; Lee, J. (2019). The Effects of Consumers' Perceived Values on Intention to Purchase Upcycled Products. *Sustainability 11*, 1034. <https://doi.org/10.3390/su11041034>

Zhang, B., Zhang, Y., & Zhou, P. (2021, February 4). Consumer Attitude towards Sustainability of Fast Fashion Products in the UK. *13*(4). <https://doi.org/10.3390/su13041646>