

Factors Influencing Purchase Intention Towards Private Label Brand Among Undergraduate Students

Nor Syaida Yan¹, Nurazwa Ahmad^{2*}, Noor Aslinda Abu Seman³

¹ Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia, Parit Raja, Batu Pahat, Johor, 86400, MALAYSIA.

² Department of Production and Operations Management, Faculty of Technology Management and Business, Universiti Tun Hussein Onn Malaysia, Parit Raja, Batu Pahat, Johor, 86400, MALAYSIA.

³ Johor Business School, Universiti Tun Hussein Onn Malaysia, Batu Pahat, Johor, 86400, MALAYSIA.

*Corresponding Author: nurazwa@uthm.edu.my

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Abstract

Numerous brands have recently entered the market with the potential to persuade customers to purchase the chosen goods. Nonetheless, before making a purchase, customers constantly take into account a particular factor. Finding the most important element influencing purchase intention towards private label brands (PLBs) is the main goal of this study. The second goal is to ascertain how perceived price, quality, risk, and packaging relate to private brands. A self-administered questionnaire was given to UTHM students in order to evaluate the hypothesis, and 220 of them completed it, yielding a 58.7% response rate. Multiple linear regression analysis, Pearson correlation, and descriptive analysis were then performed on the data using the Statistical Package for the Social Sciences (SPSS). The findings indicate that the primary determinant of purchase intention for private label brands is perceived price. Every element demonstrates a strong positive correlation with the intention to buy. Price, quality, risk, and packaging characteristics account for 42.3% of the variance in private label brand purchase intention, according to the R-squared value of 0.423. With a significant value of $p < 0.001$, quality and packaging were the only factors that significantly influenced consumers' intentions to buy private label brands. By concentrating on the quality and packaging aspects, retailers will be able to take the necessary steps to raise brand awareness and draw in more customers to buy the Private Label Brand.

1. Introduction

These days, businesses are more interested in the behavior of individual customers in order to learn more about how they think, feel, and choose their products in their daily lives. According to Nguyen (2014), consumer behavior refers to the actions taken by the person or group that was chosen to buy, utilize, or discard a product, concept, service, or experience in order to fulfil wants and desires. A few decades ago, private label brands also referred to as distributor brands or shop brands were thought to be low-quality, inexpensive products. Today, they are a definite alternative to manufacturer brands (Abril & Rodriguez-Cánovas, 2016). Private label brands are typically only offered in the retailer's or distributor's own outlets (Abril and Rodriguez-Cánovas, 2016). However, according to the other researchers, a private brand is one that is exclusive to a retailer and is manufactured by a different firm but is merchandised, owned, and sold by the retailer themselves (Chopra, Dasgupta, and Gupta, 2017). In-house brand is another name for private brand. But, as the book notes, retailers

are growing larger and more international, and they are gradually beginning to offer their own private brand label at the expense of national labels (Chopra, Dasgupta, and Gupta, 2017). Private brands are becoming more popular among merchants as a national brand. Because it might be more profitable than selling nationally publicized brands, they work to change the brand's image, operational procedures, and consumers' perceptions of it through pricing or brand launches. Retailers, meantime, have discovered that expanding their product offerings under a private label brand is one strategy to meet the diverse needs of their clientele, foster client loyalty, and set themselves apart from the competitors. Zhang (2015) asserts that ensuring the highest level of customer satisfaction with the product is the greatest approach to lessen market rivalry because a company's loyalty and trust are crucial. The primary driver of brand equity, however, is brand image, which relates to consumer perception and provides consumers with an easy way to make decisions based on their preferences. Customers who have a positive relationship with a brand are likely to do so because they trust it, and they may even become devoted brand users. According to Zhang (2015), consumers' trust in a brand is the source of brand equity. They are more likely to be willing to pay a premium for a brand if they have a higher level of trust in it. Nonetheless, a variety of psychological, societal, and individual aspects impact how customers view a brand. In actuality, every product brand is crucial to the market, and marketers need to be focused on getting more people to purchase specific goods. Private brand products are very popular these days, particularly in the US and Europe. The issue raised by the research is that customers are always perplexed by the products offered, as each type of product, branded or private label, has unique benefits and qualities. The second problem is that consumers are unable to determine which of the three private label brands' price, quality, risk, and packaging factors will entice them to purchase the product. The consumer's selection of the product is then dependent on their understanding of the product. People typically purchase particular brands in an effort to boost their social standing as well as for design and functionality (Alamgir, Shamsuddoha & Nedelea, 2010). Thus, this study aims to identify the most important element influencing consumers' intentions to purchase private label brands and to determine how perceived quality, risk, price, and packaging relate to and influence consumers' intentions to buy private brands.

2 Literature Review

2.1 Private Label Brand

According to Vo and Nguyen (2015), private brands are those that are only available on the packaging of products from a certain retailer at a low cost. However, private label brands or shop brands were the researchers' favorite subject, and several research studies were conducted on this topic. As the researchers work to uncover the reasons for private brand growth and adoption, they consider a variety of elements that can influence the purchasing decision of a private brand buyer. It is directly tied to the product, which is the factor that influences perceptions of pricing, quality, risk, and packaging of a private brand. Consumers' purchase intentions towards private label brands are influenced by a variety of factors. When studying consumers' buying intentions, the study concluded that external elements are more relevant than intrinsic factors (Tochanakarn, 2011). However, many researchers believe that intrinsic variables play a larger role in motivating consumers' purchase intentions towards private brands (Bilal & Ali, 2013). These conflicts arise primarily as a result of regional limits, product categories, and disparities between industrial and domestic users. Brands reflect customers' views and opinions about a product's performance. The brand that is in the consumer consciousness is powerful and well-known (Alamgir, 2010). Consumers accept and do not reject acquiring brands with high awareness because they value the brand's performance (Cela and Cazaku, 2016). In brief, a great brand allows a company to raise customer awareness of its product, boost demand and sales, expand market share, and increase shareholder value.

2.2 Purchase Intention

Abril and Rodriguez-Cánovas (2016) define purchase intention as a consumer's likelihood of purchasing a product in the near future. It is frequently related with the consumer's buying patterns, beliefs, and attitudes. The buying intention that will be observed is an important factor in their decision to purchase any product. This is why purchase intention is always considered when studying consumer purchasing behaviour. However, research have used purchase intention as a dependent variable to explore the factors that influence customers' purchasing behaviour. Gogoi (2013) employed a model similar to Bilal and Ali's (2013a) to study consumer purchase behaviour in the clothing category. The category was divided into four sections: perceived quality, perceived value, perceived risk, and store image, with the implications on purchase intention explored. The study discovered that perceived value, perceived quality, and perceived risk all have a negative effect on purchase intention. The store's image has an indirect impact on purchasing intention because of perceived quality and danger.

2.3 Perceived Price

Gogoi (2013) suggests the private brand can be considered as a substitute of manufacturer brands because the private brands is cheaper than the manufacturer brands. Generally, price sensitive buyers are more likely to buy the private brand as the price has been considered as a main reason for consumers' inclination towards the private brand. However, consumer is less likely to purchase private brands who prefer quality over price because the price is usually used as an indicator of quality. Besides that, it will have a negative impact on perceived quality if the price is low (Bilal and Ali, 2013). Earlier, consumer have to think that the private brand offers good value for their money and have started to like the private brand. Abril and Rodriguez-Cánovas (2016) discovered that most consumers cannot recall how much they paid for a product they purchased, and pricing is only evaluated when they make a purchase choice, which is then purged. This indicates that consumers lack up-to-date and correct product knowledge. They feel that lower-priced products have a lesser degree of quality and will typically use price to assess product quality. This is also reinforced by (Veale, 2007), who claims that people buy a product based on a pricing scale, with lower-quality products being cheaper and higher-quality ones costing more. Nguyen (2014) further reveals that buyers may make quality decisions based on pricing rather than actual product attributes. In other words, consumers may estimate the quality of a product depending on its price. For example, low-cost items are created from lower-quality raw materials in order to maintain profit margins (Abril and Rodriguez-Cánovas, 2016). Based on these insights, the following hypotheses are proposed:

H1a: Perceived price is significantly related to private label brand's purchase intention

H1b: Perceived price significantly influences private label brand's purchase intention.

2.4 Perceived Quality

Perceived quality is a critical factor influencing consumer purchasing behavior, particularly in the case of private label brands (PLBs). While national brands have long been associated with higher quality standards, strong brand equity, and superior packaging, private label brands have historically been perceived as lower-quality alternatives (Bilal & Ali, 2013). This perception stems from the widespread availability, extensive advertising, and established reputation of manufacturer brands, making them the preferred choice for many consumers (Gogoi, 2013). However, as private label brands evolve, quality has become a key area of improvement for retailers looking to compete with manufacturer brands. Research suggests that modern consumers prioritize quality over price, particularly when it comes to product categories where durability, performance, and safety are crucial (Nguyen, 2014; Tochanakarn, 2011). As a result, many retailers have invested in enhancing product quality to match or even surpass national brands while maintaining competitive pricing (Gogoi, 2013). Quality is often used as an indicator of value and product utility (Olshansky, 2002). According to Holbrook (2015), consumers worldwide rely on quality perceptions to assess a product's overall performance and usefulness. This means that a positive perception of quality can lead to higher consumer confidence, increased satisfaction, and stronger purchase intention (Information Resources Management Association, 2015). When consumers believe that private label brands can offer the same quality as national brands, they are more likely to purchase them, reducing their reliance on premium-priced branded products (Sethuraman & Gielens, 2014). Retailers must continue investing in quality improvements to further reduce consumer hesitation and strengthen private label brand loyalty. By enhancing product quality, packaging, and branding, retailers can close the gap between national and private label brands, ultimately driving higher adoption rates among consumers. Based on these findings, the following hypotheses are proposed:

H2a: Perceived quality is significantly related to private label brand purchase intention

H2b: Perceived quality significantly influences private label brand purchase intention.

2.5 Perceived Risk

Perceived risk plays a crucial role in consumer decision-making, particularly when choosing between private label brands (PLBs) and manufacturer brands. Consumers often associate higher risk with PLBs because they perceive these products as less established and less reliable compared to national brands. Since manufacturer brands have strong brand recognition, extensive marketing, and a history of consumer trust, they provide a sense of security, reducing uncertainty in purchase decisions (Bilal & Ali, 2013). Research has shown that when consumers perceive a high level of risk in a particular product category, they tend to prefer national brands over private labels (Bilal & Ali, 2013). This is especially true for high-involvement or experience goods, such as electronics, pharmaceuticals, and skincare products, where product failure can have significant consequences (Semeijn, Van Riel, & Ambrosini, 2004). However, in certain product categories, such as household essentials, food, and beverages, the level of perceived risk is lower, making consumers more willing to purchase private

label alternatives (Erdem, Zhao, & Valenzuela, 2004). Moreover, the extent of perceived risk is influenced by consumer familiarity, previous experiences, and word-of-mouth recommendations. Consumers who have previously purchased high-quality private label products may develop a positive perception of PLBs, thereby reducing their perceived risk over time (Bao, Bao, & Sheng, 2011). Additionally, retailers' efforts to improve private label branding, packaging, and quality standards have contributed to a decline in perceived risk and an increase in consumer confidence (Lymperopoulos, Chaniotakis, & Krystallis, 2010). Understanding the role of perceived risk in PLB purchase decisions is essential for retailers aiming to increase consumer adoption of private label brands. By implementing strategies such as improved product quality, effective marketing campaigns, and strong return policies, retailers can reduce perceived risk and build consumer trust in their private label offerings (Agarwal & Teas, 2001). Based on this, the following hypotheses are proposed:

H3a: Perceived risk is significantly related to private label brand purchase intention.

H3b: Perceived risk significantly influences private label brand purchase intention.

2.6 Packaging

Packaging plays a crucial role in influencing consumer perceptions and purchase decisions, particularly for private label brands (PLBs). Unlike national brands, which benefit from extensive marketing, strong brand recognition, and premium packaging, store brands have historically been associated with simplistic designs, limited advertising, and lower perceived quality (Bilal & Ali, 2013). However, as competition intensifies, retailers have recognized the need for improved packaging strategies to enhance the appeal and credibility of their private label products. According to Olawepo and Ibojo (2015), packaging is a key determinant in consumer purchasing decisions, as buyers often evaluate products based on packaging details such as design, labeling, and information clarity. Consumers tend to associate well-packaged products with higher quality, whereas poorly packaged items may raise concerns about product safety and reliability (Silayoi & Speece, 2007). This is particularly significant for private label brands, which must work harder to overcome consumer skepticism and establish trust and brand loyalty. Furthermore, attractive and informative packaging not only helps differentiate private label brands from competitors but also enhances perceived brand value (Orth & Malkewitz, 2008). Research suggests that modern consumers increasingly rely on visual cues such as color, typography, and imagery when making purchase decisions, making packaging an essential element of branding strategy (Underwood & Klein, 2002). Additionally, packaging can evoke emotional responses, influencing consumer preferences and increasing the likelihood of purchase (Ampuero & Vila, 2006). In response to these findings, many retailers have invested in packaging innovations, incorporating high-quality materials, eco-friendly designs, and premium aesthetics to make private label brands more competitive with national brands (Wells, Farley, & Armstrong, 2007). Such strategies have proven effective in reducing consumer hesitation and increasing purchase intention for private label products. For retailers and marketers, understanding the importance of packaging in consumer decision-making is critical. By investing in appealing, functional, and informative packaging, private label brands can enhance consumer trust, improve brand perception, and increase market share (Silayoi & Speece, 2007). Based on this, the following hypotheses are proposed:

H4a: Perceived packaging is significantly related to private label brand purchase intention.

H4b: Perceived packaging significantly influences private label brand purchase intention.

2.5 Conceptual Framework

The study explores the influence of the four factors on purchase intention of private label brands. Fig. 1 shows the research framework.

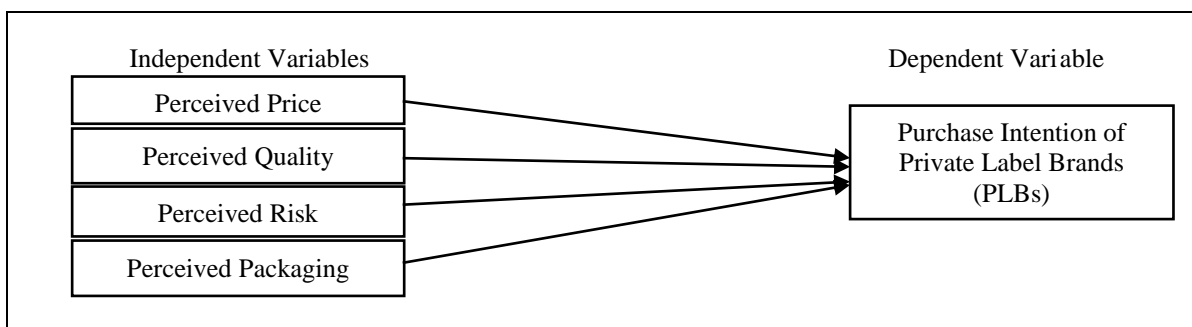


Fig. 1 Research framework

3. Research Methodology

The quantitative method has been used to obtain information in conducting this research. The questionnaires were distributed among UTHM students, which consist of three sections namely; section A, section B and section C. Section A covers the demographics of UTHM students, section B is covering the factors influencing whereas section C covering the purchase intention of private label brands. In section A, multiple choice question will be used in the questionnaire while in section B dan C, the Likert scale will be used with the scale ranging from (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree and 5= Strongly Agree). Population refers to a complete set of cases or group members to whom the research applies (Nguyen, 2014). The target population is UTHM student that consists of around 15,000 of students which the data was obtained from all the faculties (Pejabat Pengurusan Akademik (PPA), UTHM). Minimum number of sample size of 375 students were randomly chosen from 9 faculties which were Fakulti Sains Komputer dan Teknologi Maklumat (FSKTM), Fakulti Kejuruteraan Awam dan Alam Bina (FKAAB), Fakulti Kejuruteraan Elektrik dan Elektronik (FKEE), Fakulti Kejuruteraan Mekanikal dan Pembuatan (FKMP), Fakulti Teknologi Kejuruteraan (FTK), Fakulti Sains Gunaan dan Teknologi (FAST), Fakulti Pengurusan Teknologi dan Perniagaan (FPTP), Fakulti Pendidikan Teknikal dan Vokasional (FPTV) and Pusat Pengajian Diploma (PPD) (Krejcie & Morgan, 1970). The Statistical Package for the Social Science (SPSS) software was used to analyze all the data like mean score, standard deviation, frequency and percentage, correlation and multiple linear regression analyses. The output of the descriptive analysis will be using interpretation of Central of Tendency by Landell (1997) showing the mean score of 1.00-2.33 is considered low, 2.34-3.66 in average, and 3.67-5.00 is high. The correlation analysis is carried out before hypothesis testing to evaluate the degree of connection. Pearson correlation has been chosen to determine whether there is a relationship between perceived price, quality, risk, packaging and intention. The correlation analysis is conducted also to explore the strength and direction of the linear relationship between five variables. Specifically, this analysis determined the relationship between perceived price, quality, risk and packaging towards PLBs. The correlation interpretation (*r*-coefficient) referring to; 0.91 to 1.00 (-0.91 to -1.00) Very High, 0.71 to 0.90 (-0.71 to -0.90) High, 0.41 to 0.70 (-0.41 to -0.70) Moderate, 0.21 to 0.40 (-0.21 to .040) Low, 0.01 to 0.20 (-0.01 to -0.20) Very Low, and <0.01 shows No correlation (Sarantakos, 1956). A pilot test was conducted prior to actual data collection to test the reliability and the validity of a questionnaire. The questionnaire was distributed to 30 respondents. The Cronbach’s Alpha result is between 0.80-0.89 to perceived price and perceived packaging which is 0.858, and 0.859. It was 0.911 for purchase intention, the result is excellent when the Cronbach’s Alpha is greater than 0.9. Cronbach’s Alpha for perceived risk is 0.797 which is acceptable, while for perceived quality it shows Cronbach’s Alpha is 0.655 which is questionable. Yet in many research contexts, a value of more than 0.6 is considered acceptable. Therefore, all items in the questionnaire remained and used for actual data collection.

4. Results and Discussion

4.1 Demographic Statistics

From a total of 375 distributed questionnaires using simple random sampling, 220 usable returned questionnaires were received from UTHM students from nine faculties. This return questionnaires bring to a 58.7% response rate altogether. The respondents consisted with 34 male and 186 females. The percentage of female respondents is higher compared to male respondents with female 84.5% and male with only 15.5%. The highest frequency of age range is 18-24 years old with a frequency of 211 respondents (95.9%). The respondents are mostly single with a percentage of 99.50% and coming from first year students (33.2%). FPTP students responded to the survey the most with a frequency of 75 students (34.1%). Table 1 presents the data of respondents’ demographics in further details.

Table 1 Demographic profiles of respondents

Demography	Item	Frequency (n=252)	Percent (%)
Gender	Male	34	15.5
	Female	186	84.5
Age (years)	< 20	1	0.5
	20 – 24	211	95.9
	25 – 29	8	3.6
	30 – 34	0	0
	> 34	0	0
Marital status	Single	219	99.5
	Married	1	0.5
	Divorced	0	0
Faculty	FPTP	75	34.1

	FPTV	33	15.1
	FKMP	17	7.7
	FKEE	17	7.7
	FKAAS	52	23.6
	FSKTM	26	11.8
	FTK	0	0
	FAST	0	0
	PPD	0	0
Year of study	1	73	33.2
	2	41	18.6
	3	49	22.3
	4	57	25.9

4.2 Descriptive Analysis

Table 2 presents the mean score for all items. The items in Perceived Price are high for PPR1, PPR2, PPR3, PPR4, and PPR7, while PPR5, PPR6 and PPR8 were recorded as average. Overall, they purchase PLBs because they are cheaper was 3.59. As a whole, the average mean score of perceived prices among respondents was 3.92 which indicates that the individuals agreed that perceived price is very important towards purchasing private label brands. The results obtained for perceived quality analysis show mean scores were average for PQT3, PQT4, PQT5 and PQT8 and high for PQT1, PQT2, PQT6 and PQT7. In conclusion, the overall central tendency for perceived quality was high with a total average mean score was 3.81. Hence, the respondents believed that the quality of private brand is high without comparing with the price of manufacturer product. The central tendency for all of the item in perceived risk was recorded as average except PRS1 which recorded high. As a whole, the average mean score was 3.65. From the result, the respondent's feelings were positive on perceived risk towards private label brands. The central tendency for perceived packaging was average for PPG2 and PPG3 and high for PPG1, PPG4, PPG5, PPG6 and PPG7. In overall, the total average mean score was 3.79 indicates high central of tendency. In other words, the majority of the respondents were attracted by the packaging of the private brands as their choice in the future. The central tendency for all of the item in Purchase Intention was recorded as average with the total average mean score was 3.53. It shows that, majority respondents were contemplating or in between decision whether to purchase private label brands in the future or otherwise. The descriptive analysis is used to determine the most dominant factor that influences purchase intention towards private label brands. Based form the agreement level among respondents, the most dominant factor that contributing to purchase intention towards private brand is perceived price followed by quality, packaging and risk. The result is partially in line with the previous study by Bilal and Ali (2013), which found that perceived packaging is the most dominant factor of purchase intention towards private label brands followed by perceive quality, price and risk. According to Calvo-Porrall and Lévy-Mangin (2017), the perceived quality is conceptualized as the consumer's judgement about a product's overall excellence or superiority and following perceived quality results from the comparison of consumer expectations with the actual performance of a brand or product (Snoj, et al., 2004).

Table 2 Descriptive analysis

Code	Item	Mean (μ)	SD (σ)	Level
Perceived Price				
PPR1	Price is an important criterion when I purchase a product.	4.40	0.862	High
PPR4	I compare prices of product label brand with other manufacturer brands before I make a purchase.	4.19	0.866	High
PPR2	I think it is natural and worth it to spend time looking for the lowest price.	4.15	0.835	High
PPR3	I always try to find the cheapest products when I do my shopping.	4.07	0.978	High
PPR7	I am more likely to buy PLBs that are on sale.	3.78	0.925	High
PPR5	PLBs are reasonably priced compared to other brands.	3.60	0.835	Average
PPR8	Overall, I purchase PLBs because they are cheaper.	3.59	0.893	Average
PPR6	Price of PLBs is lower than the average market price for similar products.	3.54	0.823	Average
<i>Total Average Score</i>		3.92	0.877	High
Perceived Quality				
PQT1	Quality is an important criterion when I purchase a product.	4.42	0.826	High
PQT2	The quality of the product increases the value of the brand in my perception	4.27	0.739	High
PQT6	PLBs seem to be good in quality.	3.75	0.773	High
PQT7	The quality of PLBs is very reliable.	3.71	0.830	High
PQT8	Overall, PLBs offer better quality than other manufacturer brands.	3.64	0.878	Average
PQT5	I believe that PLBs have higher quality than other manufacturer brands.	3.63	0.863	Average
PQT4	Low price of PLBs is not perceives as low quality.	3.59	0.858	Average
PQT3	There is not much difference in terms of quality between PLB and other manufacturer brands.	3.49	0.939	Average

<i>Total Average Score</i>		3.81	0.838	<i>High</i>
Perceived Risk				
PRS1	I will choose the product carefully before considering to purchase PLBs.	4.18	0.805	High
PRS6	I feel uncertain and worry that PLBs do not worth the money.	3.64	0.867	Average
PRS2	I feel PLBs may have risks due its low price.	3.62	0.859	Average
PRS3	I feel PLBs may have risks due to its low quality.	3.60	0.877	Average
PRS7	There is high probability that PLBs do not work/ function as it should be.	3.60	0.908	Average
PRS5	I feel suspicious with the ingredients and materials used to manufacture the PLBs.	3.56	0.956	Average
PRS4	I worry that I will receive negative criticism from people who I value their opinions if I purchase PLBs.	3.33	0.995	Average
<i>Total Average Score</i>		3.65	0.895	<i>Average</i>
Perceived Packaging				
PPG1	I like to buy the product that has attractive packaging.	4.00	0.960	High
PPG5	The picture quality of the product packaging draws attention of final consumers.	3.97	0.813	High
PPG4	The font used on the product attracts attention from distance.	3.82	0.881	High
PPG6	The picture of the product packaging reflects the fact that it is high in quality.	3.75	0.981	High
PPG7	The packaging shows that the products are enriched with quality.	3.75	0.954	High
PPG3	I think PLBs have equally good packaging as manufacturer brands.	3.64	0.899	Average
PPG2	I think the packaging of PLBs look similar to the packaging of manufacturer brands	3.60	0.943	Average
<i>Total Average Score</i>		3.79	0.919	<i>High</i>
Purchase Intention of Private Label Brand				
PIPLB1	I will purchase private label brand products.	3.63	0.781	Average
PIPLB2	I will consider buying private label brand products.	3.63	0.726	Average
PIPLB3	The probability that I will buy private label brand products.	3.63	0.809	Average
PIPLB6	I purchase PLBs because the benefits outweigh the cost.	3.55	0.867	Average
PIPLB9	Overall, purchase of PLBs is more beneficial.	3.55	0.867	Average
PIPLB7	I do not mind spending more time sourcing for PLBs.	3.52	0.904	Average
PIPLB5	It is likely that I will purchase PLBs in the next six (6) months.	3.49	0.836	Average
PIPLB4	I intend to purchase and use PLBs in the future.	3.44	0.839	Average
PIPLB8	I would still buy PLBs even though other manufacturer brands are on sale.	3.35	0.947	Average
<i>Total Average Score</i>		3.53	0.842	<i>Average</i>

4.3 Correlation and Multiple Linear Regression Analysis

Cronbach’s Alpha values derived from reliability analysis for 220 data recorded as follows; perceived quality (0.809), perceived packaging (0.819), perceived price (0.787), perceived risk (0.737), and purchase intention (0.896). All of the items have good internal consistency because they sit in the range of 0.70 to 0.79 and all items remained for further analysis. Upon carrying out the normality analysis, Table 3 presents the data of Skewness and Kurtosis. Normality testing showed using skewness and kurtosis values meet the requirements of the range between ±2.00 and ±5.00 respectively with standard error of 0.164 and 0.327 respectively.

Table 3 Normality analysis

	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Price	220	-0.737	0.164	2.134	0.327
Quality	220	-0.343	0.164	2.212	0.327
Risk	220	0.049	0.164	-0.151	0.327
Packaging	220	-0.709	0.164	1.363	0.327
Intention	220	-0.016	0.164	0.187	0.327

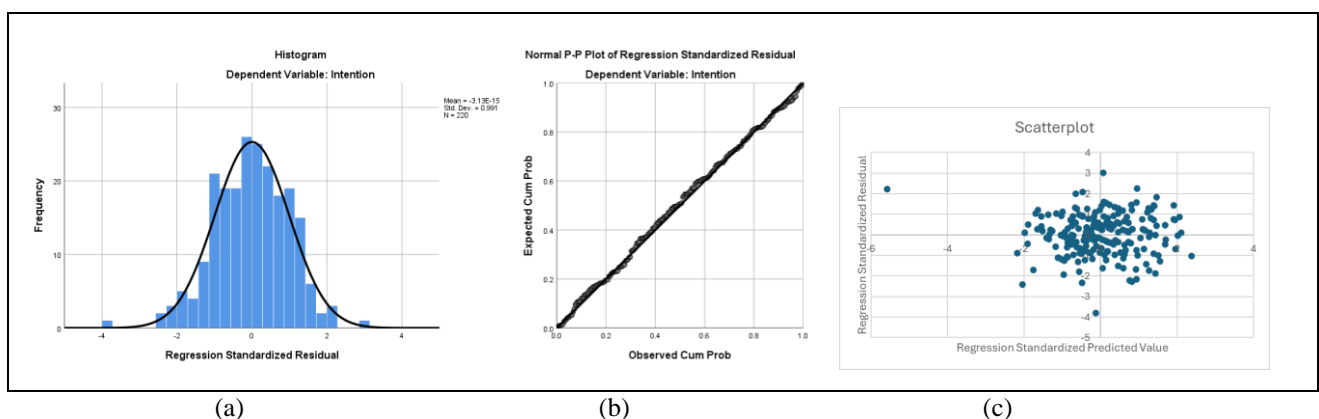


Fig 2 (a) Histogram, (b) P-P plot, and (c) Scatterplot

The graphical data of histogram, PP-plot and scatterplot show a normal distribution of the data (Figure 2). Thus, Pearson correlation analysis was used to analyze the relationship between the factors and purchase intention. According to the Pearson correlation analysis in Table 4, purchase intention for private label brands is moderately positively correlated with perceived price, perceived quality, and perceived packaging. The correlation coefficients for these variables are specifically $r = 0.420$ for perceived price, $r = 0.575$ for perceived quality, and $r = 0.554$ for perceived packaging. These values imply that consumers' intention to buy private label brands tends to rise in proportion to their perception of increased value in these areas. Perceived quality has the greatest association ($r = 0.575$) among the three, suggesting that customers give private label product quality a high priority when making selections about what to buy. However, there is a weaker positive association ($r = 0.291$) between purchase intention and perceived risk. This implies that although consumers are influenced by perceived risk, this influence is not as great as that of the other components. This may suggest that while some consumers may be wary of private label brands, these worries are not as important in influencing their decisions to buy as factors like price, quality, and packaging. Additionally, all of the correlation values are statistically significant at $p < 0.01$, suggesting that these associations are strong in describing consumer purchase intention towards private label items and are extremely unlikely to have happened by accident.

Table 4 Pearson Correlation

	Price	Quality	Risk	Packaging	Intention
Price	1	0.600**	0.397**	0.416**	0.441**
Quality		1	0.408**	0.600**	0.586**
Risk			1	0.360**	0.264**
Packaging				1	0.564**
Intention					1

** Correlation is significant at the 0.01 level (2-tailed).

The model summary in Table 5 shows an R value of 0.650, indicating a moderate to strong relationship between the independent variables and purchase intention. The R-square (R^2) value is 0.423, meaning that 42.3% of the variance in purchase intention can be explained by perceived price, quality, packaging, and risk. The adjusted R^2 value of 0.412 accounts for the number of predictors in the model, confirming that the model remains a good fit even when adjusted for sample size. The standard error of the estimate is 0.47834, which measures the average deviation of observed values from the predicted values. A lower standard error suggests a more precise model.

Table 5 Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.650	0.423	0.412	0.47834	0.423	39.371	4	215	0.000

Table 6 ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	36.034	4	9.009	39.371	0.000
Residual	49.194	215	0.229		
Total	85.229	219			

Table 7 Multiple Linear Regression

Model	Unstandardized Beta		Standardized Coefficient Beta	t	Sig.
	B	Std. Error			
(Constant)	0.501	0.281		1.782	0.076
Price	0.133	0.074	0.119	1.789	0.075
Quality	0.379	0.085	0.334	4.473	0.000
Risk	-0.041	0.065	-0.037	-0.630	0.529
Packaging	0.321	0.064	0.328	4.987	0.000

The ANOVA results in Table 6 show that the regression model is statistically significant ($F(4, 215) = 39.371$, $p < 0.001$). This confirms that at least one of the independent variables significantly predicts purchase intention, making the model reliable for further interpretation. Regression coefficient in Table 7 showed that perceived quality and perceived packaging significantly influence purchase intention. Perceived quality ($\beta = 0.334$, $p < 0.001$) is the strongest predictor of purchase intention, indicating that consumers who perceive private label

products as high-quality are significantly more likely to purchase them. Perceived packaging ($\beta = 0.328$, $p < 0.001$) also has a strong positive influence, showing that attractive and well-designed packaging plays a crucial role in driving purchase intention. However, perceived price and perceived risk do not significantly influence purchase intention. The perceived price ($\beta = 0.119$, $p = 0.075$) has a positive but statistically insignificant effect on purchase intention. This suggests that price alone may not be a decisive factor in consumer decision-making for private label brands, possibly because consumers already expect them to be affordable. Perceived risk ($\beta = -0.037$, $p = 0.529$) has a negative but non-significant relationship with purchase intention, indicating that risk concerns do not strongly deter consumers from purchasing private label brands. This might suggest that modern private label brands have improved their reputation, reducing consumer concerns over quality or reliability. The regression model suggests that while price and risk do not significantly impact consumer purchase intention, quality and packaging are key determinants of private label brand success. Retailers looking to increase sales of private label brands should focus on enhancing product quality and improving packaging design, as these factors are the most influential in driving consumer purchase decisions.

5. Conclusion

This study provides valuable insights for future researchers and retailers in understanding the key factors influencing consumer purchase intention toward private label brands, particularly among UTHM students. The study examines four key variables namely perceived price, perceived quality, perceived risk, and perceived packaging and determining their impact on consumer decision-making. The findings suggest that perceived quality and packaging significantly influence purchase intention, while price and risk do not have a substantial impact. These insights can help retailers develop effective strategies to enhance brand awareness and attract more consumers to private label brands. By prioritizing product quality and packaging improvements, retailers can strengthen consumer confidence and increase sales. By examining perceived price, perceived quality, perceived risk, and perceived packaging, the findings highlight that quality and packaging play a significant role in driving consumer purchase decisions, whereas price and risk have a lesser impact. These results offer practical implications for retailers and brand managers, suggesting that enhancing product quality and packaging design can improve consumer perception and increase purchase intention. Retailers can use these insights to refine their marketing strategies, strengthen brand positioning, and attract more consumers to private label brands (PLBs). To build on these findings, future studies can explore by expanding the consumer demographic. Investigate purchase intention for private label brands among different consumer segments, such as working professionals, rural consumers, or older adults, to see if perceptions vary across age, income, or lifestyle groups. Future study may also benefit from the influence of brand trust and loyalty on PLBs by examining how brand trust, loyalty, and past experiences affect consumer willingness to purchase private label brands. This could help determine whether long-term brand relationships impact purchasing behavior. A broader context can also be employed by doing comparative study between private and national brands by conducting a study comparing private label brands and national brands to understand differences in consumer perception, loyalty, and willingness to pay a premium for branded products. By addressing these areas, future research can provide a more comprehensive understanding of the evolving private label market and guide retailers in making data-driven decisions to enhance brand appeal and consumer engagement.

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Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of the paper.

Author Contribution

*The authors confirm their contribution to the paper as follows: **study conception and design:** Nor Syaida Yan; **data collection:** Nor Syaida Yan; **analysis and interpretation of results:** Nurazwa Ahmad; **draft manuscript preparation:** Nor Syaida Yan; Nurazwa Ahmad; Noor Aslinda Abu Seman. The author reviewed the results and approved the final version of the manuscript.*

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