

Tingkah Laku Pembelian Mahasiswa Institusi Pengajian Tinggi dalam Jualan Secara Langsung di Aplikasi Tiktok

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FACTORS INFLUENCING PURCHASE INTENTION TOWARDS NATURAL COSMETICS AMONG STUDENTS IN UNIVERSITI PUTRA MALAYSIA

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Abstract

This study investigates the factors influencing purchase intention toward natural cosmetics among students at Universiti Putra Malaysia (UPM). A survey of 210 UPM students, conducted via Google Forms using simple random sampling, revealed significant positive correlations between purchase intention and price ($r = 0.449$, $p < .001$), brand awareness ($r = 0.408$, $p < .001$), and product quality ($r = 0.486$, $p < .001$) through Pearson correlation analysis. Multiple linear regression demonstrated that these factors collectively accounted for 30.1% of the variance in purchase intention (Adjusted $R^2 = 0.301$), with product quality emerging as the strongest predictor (Beta = 0.299). The findings underscore the importance of prioritizing product quality, competitive pricing, and brand recognition to enhance consumer appeal. Additionally, this study offers actionable insights for marketers, policymakers, and researchers aiming to advance sustainable consumption trends in the natural cosmetics industry. By elucidating key determinants of purchase behavior, this research contributes to fostering consumer awareness and driving innovation in the sector.

Keywords: Purchase intention, natural cosmetics, product quality, brand awareness, price, sustainable consumption

Abstrak

Kajian ini menyelidik faktor-faktor yang mempengaruhi niat pembelian kosmetik semula jadi dalam kalangan pelajar di Universiti Putra Malaysia (UPM). Tinjauan terhadap 210 pelajar UPM yang dijalankan melalui Google Forms menggunakan pensampelan rawak mudah menunjukkan korelasi positif yang signifikan antara niat pembelian dengan harga ($r = 0.449$, $p < .001$), kesedaran jenama ($r = 0.408$, $p < .001$), dan kualiti produk ($r = 0.486$, $p < .001$) melalui analisis korelasi Pearson. Analisis regresi linear berganda mendapati bahawa faktor-faktor ini secara kolektif

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menyumbang 30.1% varians dalam niat pembelian (R^2 terlaras = 0.301), dengan kualiti produk muncul sebagai peramal terkuat ($\text{Beta} = 0.299$). Hasil kajian menegaskan kepentingan mengutamakan kualiti produk, penetapan harga yang kompetitif, dan pengiktirafan jenama untuk meningkatkan daya tarikan pengguna. Selain itu, kajian ini memberikan pandangan praktikal kepada pemasar, pembuat dasar, dan penyelidik yang bertujuan memajukan trend penggunaan mampan dalam industri kosmetik semula jadi. Dengan menjelaskan penentu utama tingkah laku pembelian, penyelidikan ini menyumbang kepada memupuk kesedaran pengguna dan mendorong inovasi dalam sektor ini.

Kata kunci: Niat pembelian, kosmetik semula jadi, kualiti produk, kesedaran jenama, harga, penggunaan lestari

Introduction

Cosmetics have long played a significant role in human society, serving not only as tools for enhancing physical appearance but also as a means of self-expression and confidence-building (Shekhawat, 2024). Defined as substances applied to the body for cleansing, beautifying, or altering appearance, cosmetics encompass a wide range of products, including skincare items, makeup, hair treatments, and personal hygiene products (Britton, 2012). The psychological impact of cosmetics is well-documented, with studies showing they can significantly boost users' self-esteem and social perception. Recent research highlights that applying cosmetics not only enhances physical appearance but also stimulates positive emotional states, such as increased self-confidence and relaxation, as evidenced by neurophysiological responses like changes in brain activity and muscle relaxation (Diwoux et al., 2024; Mohammed et al., 2023). Shekhawat (2024) further highlights makeup's transformative effects on self-perception and social interactions, emphasizing its role in self-expression and identity formation. In addition, makeup has been shown to enhance confidence by allowing individuals to express their personality and manage insecurities effectively (Malhotra Chadha, 2024).

In modern consumer culture, cosmetics have transitioned from luxury items to daily necessities. A study revealed that 88% of European consumers find life without cosmetics challenging (Cosmetic Europe, 2016). Additionally, marketing strategies that frame cosmetics as tools for creative self-expression rather than mere enhancement are gaining traction among younger demographics. This approach fosters greater acceptance and authenticity in social contexts (Learn Canyon, 2023). The growing awareness of health and environmental concerns has spurred a notable shift toward natural cosmetics in recent years (Barros & Barros, 2020). Natural cosmetics are distinguished by their use of plant-based and mineral ingredients that undergo minimal processing, avoiding synthetic additives like parabens, sulfates, and artificial fragrances (Stita & Alkhayyat, 2021). This category of products appeals to

environmentally conscious consumers due to their biodegradable formulations and sustainable production methods (Wischhover, 2018). Moreover, the perceived health benefits, particularly for users with sensitive skin or chemical allergies, have contributed to their increasing popularity (Wirtu, 2024).

Market trends indicate a growing preference for natural cosmetics, with the global market projected to expand from \$41.74 billion in 2024 to \$52.65 billion by 2029, at a compound annual growth rate (CAGR) of 4.4% (The Business Research Company, 2025). This growth is driven by increasing consumer awareness of the harmful effects of synthetic chemicals and a rising demand for eco-friendly, sustainable products, particularly among younger demographics like university students who prioritize sustainability and ingredient transparency in their purchasing decisions. Cosmetics play a multifaceted role in society, influencing physical appearance, emotional well-being, and social interactions. While their psychological and neurophysiological impacts are globally documented, limited research exists on cultural and demographic factors shaping cosmetic usage. This gap is particularly evident in Malaysia, where younger consumers increasingly emphasize sustainability and transparency in their choices (Nik Mud et al., 2020). However, existing studies primarily focus on halal certification awareness among Malaysian Gen-Z consumers (Nik Mud et al., 2020), leaving unexplored the interplay between price sensitivity, brand awareness, and product quality in driving preferences for natural cosmetics. Therefore, this study seeks to address this gap by examining these factors among students at Universiti Putra Malaysia (UPM). The findings aim to provide actionable insights for marketers seeking to align strategies with the evolving preferences of environmentally conscious and health-oriented consumers in Malaysia's higher education sector.

Literature review and hypotheses development

Consumers who are increasingly environmentally and health-conscious have also led to a high demand for natural cosmetic products around the world (Tewary et al., 2021; Ishaq et al., 2021). These studies emphasized that environmental consciousness and health consciousness will influence consumers' purchase intention towards natural cosmetics. Therefore, consumers are likely to accept organic cosmetics from different brands.

Several factors drive consumers to purchase natural cosmetics. Based on the previous research, when it comes to product quality, price, status, features, and packaging, consumer purchase patterns vary. Ishaq et al. (2021) emphasized that consumers are influenced by certain aspects when choosing a natural cosmetic product, which include health consciousness, environmental consciousness, price sensitivity, product quality information purchase, and need for uniqueness.

The global natural cosmetics market has grown exponentially, driven by consumer demand for safer, eco-friendly products. In Malaysia, this trend is evident, with both local and international brands like Claire Organics and Kora Organics dominating the market. However, despite its popularity, gaps persist in understanding how factors like price, brand awareness, and product quality influence consumer behavior, particularly among university students.

Price perception and purchase intention

Past studies have shown that consumers use price as a heuristic for determining product quality (Farah Lynn Amira et al., 2023). Consumers also often equate higher prices with superior quality, a phenomenon observed in branded cosmetics (Mohammed et al., 2021). Similarly, Hasmdida and Siti Hamidah (2018) emphasized the bioactivities of natural ingredients, such as antioxidants and anti-aging properties, that justify premium pricing. However, confusion arises when this logic is applied to natural products. The challenges, such as inconsistent ingredient quality and a lack of clinical trials, limit consumer trust in high-priced products. Consumers may mistakenly assume high prices guarantee safety or efficacy, even though natural ingredients do not inherently ensure quality due to the complexity of evaluating natural products, such as toxicity, impurities, and variability in formulations (Lam et al., 2023).

Consumers are influenced by price to decide whether to purchase a particular product or one that is comparable but costs less. Nik Mud et al. (2020) believed that consumers nowadays are willing to spend a lot of money to preserve the beauty of their face and skin by purchasing a trustworthy cosmetic and brand. In addition, Hassali et al. (2015) also showed that cosmetics users are willing to spend more for a high-quality product with advantages like whitening, multi-functionality, and anti-aging. However, several studies showed that price has no impact on some consumers. For instance, Pokhrel (2023) highlights that consumers who prioritize quality and brand reputation are less influenced by price considerations, as they perceive value in paying a premium for trusted brands.

While existing literature examines price-quality associations in general cosmetics, there is limited focus on how price influences purchase intentions for natural cosmetics, particularly whether affordability or perceived quality drives their decisions. Aligned with the previous research and the above description, the first hypothesis is:

H₁: There is a significant relationship between price and UPM students' purchase intention towards natural cosmetics.

Brand awareness in a competitive market

Previous studies have explored the relationship between brand awareness and

purchase intention of natural cosmetics. Al-Haddad et al. (2020) proved that there is a statistically significant effect of brand awareness on consumers' purchase intention toward natural cosmetics. Especially among those between 20 and 30 years old who are becoming increasingly conscious of eco-friendly and natural products. Lestari and Roostika (2022) also found that brand knowledge has a significant effect on natural cosmetic purchase intention. They discovered that consumers would have purchase intent for green cosmetics if they were informed about or had knowledge of these products, which would raise their level of awareness. The consumer will believe that green cosmetics will not affect their health after learning about them and will then go on to make a purchase. Therefore, brand awareness is very important to consider in natural cosmetic purchase intention.

However, the results of a study conducted by Azzari and Pelissari (2021) showed that brand awareness has no actual effect on consumers' purchase intention. Only when the three consumer-based brand equity characteristics of perceived quality, brand associations, and brand loyalty are present will consumers' purchase intention to purchase a product or service be affected. This leads to the second hypothesis:

H₂: There is a significant relationship between brand awareness and UPM students' purchase intention towards natural cosmetics.

Product quality and safety misconceptions

High-quality cosmetics are critical in influencing purchase intentions. Studies reveal that perceived product quality significantly impacts consumer satisfaction and purchasing decisions. For example, consumers assert that natural cosmetics are superior due to fewer synthetic additives (Wirtu, 2024). Cosmetic product quality is increasingly defined by reliability, aesthetic appeal, and the use of natural ingredients that are long-lasting and free from harmful side effects. Recent studies emphasize the importance of eco-friendly and allergen-free formulations in response to rising consumer demands for safer products. Modern cosmetic chemistry integrates advanced methodologies such as AI-assisted techniques, green chemistry, and lab-on-a-chip devices for product assessment and optimization (Wirtu, 2024).

Consumers also often view natural cosmetics as safer alternatives to synthetic products, emphasizing ingredients like plant extracts and organic formulations (Harlofida et al., 2020). However, the National Centre for Complementary and Integrative Health (2022) cautions that "natural" does not always mean "safe," as unregulated herbal supplements may contain harmful compounds (Alnuqaydan, 2024). Similarly, Formulabotanica (2024) highlights that organic certification does not guarantee efficacy or safety. Despite this critical nuance, research rarely addresses how students perceive product quality or safety in natural cosmetics. For example, do UPM students scrutinize ingredient lists, or do they rely on brand claims? Clarifying

this gap could highlight opportunities to educate consumers about quality standards and safety protocols. Research rarely explores how students assess quality, prompting the third hypothesis:

H₃: There is a significant relationship between product quality and UPM students' purchase intention towards natural cosmetics.

Hierarchy of influence on natural cosmetic purchase intention

Recent studies continue to affirm that consumer attitudes, shaped by product quality, are often the strongest predictors of purchase intention for natural cosmetics, surpassing price sensitivity and brand awareness. For instance, Al-Haddad et al. (2020) found that consumer attitudes toward product safety and ecological benefits significantly influence purchase intention, suggesting that perceived product quality is a dominant factor. Similarly, Liu et al. (2023) emphasized that health-conscious consumers prioritize high-quality ingredients in natural cosmetics, even in inflationary environments where price sensitivity might typically be higher. Thus, the final hypothesis is:

H₄: There is one strongest factor among price, brand awareness, and product quality that influences UPM students' purchase intention towards natural cosmetics.

Conceptual framework

This study investigates the impact of price, brand awareness, and product quality (independent variables) on purchase intention toward natural cosmetics (dependent variable) using the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975). TRA posits that behavioral intention, as the strongest predictor of actual behavior, is determined by attitudes and subjective norms. Attitudes in TRA reflect an individual's evaluation of the behavior based on expected outcomes. In this study, the attitudes variable is represented by price and product quality. In this context, price influences attitudes by shaping perceived value. Consumers may view lower-priced natural cosmetics as affordable, increasing purchase favorability, while premium pricing may signal superior quality, appealing to value-driven buyers (Zeithaml, 1988); and product quality reinforces positive attitudes, as consumers believe high-quality natural cosmetics deliver better results, safety, and sustainability (Dodds et al., 1991). Stronger perceived quality enhances purchase intention by increasing perceived benefits (Fishbein & Ajzen, 1975).

Meanwhile, subjective norms refer to social pressures that motivate behavior, influenced by normative beliefs and the desire to comply. Brand awareness serves as a key social cue. Recognizable brands create social proof, leading consumers to

align their choices with perceived trends or endorsements (Fishbein & Ajzen, 1975). High brand awareness signals trust and credibility, increasing purchase likelihood as consumers seek approval from peers, influencers, or societal standards (Bosnjak et al., 2020). Therefore, TRA provides a clear framework for understanding how price and product quality (attitudes) and brand awareness (subjective norms) collectively shape purchase intentions. Favorable attitudes toward affordability and quality, combined with strong social influence from recognized brands, drive consumers' willingness to buy natural cosmetics. Figure 1 shows the conceptual framework for this study.

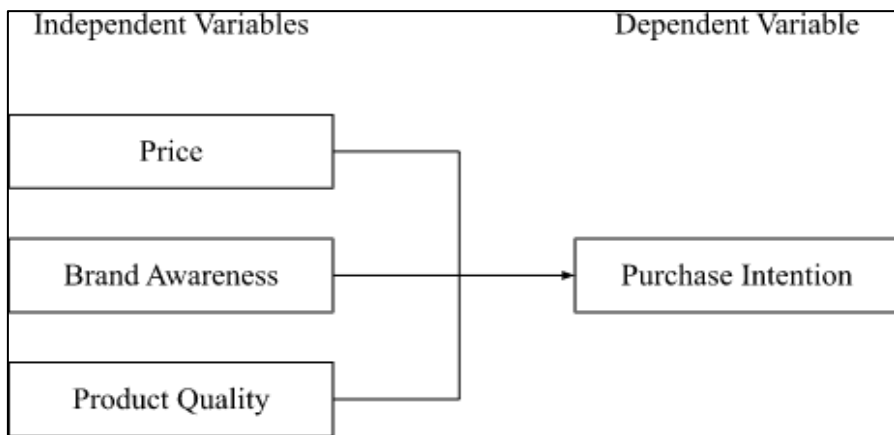


Figure 1: Conceptual Framework of Factors Influencing UPM Students' Purchase Intention towards Natural Cosmetics

Research Method

This study employs an explanatory research design incorporating hypothesis testing, descriptive analysis, and correlational methods to examine the relationships between price, brand awareness, product quality, and purchase intention toward natural cosmetics among Universiti Putra Malaysia (UPM) students. The research framework integrates both descriptive and inferential statistical analyses to validate the proposed hypotheses.

The target population consisted of 21,675 local UPM students, as international students (22.7% of the total enrollment) were excluded to ensure homogeneity. A probability sampling approach, specifically simple random sampling, was adopted to enhance representativeness. Using Yamane's (1967) formula for finite populations at a 95% confidence level and $\pm 7\%$ precision ($p = 0.5$), the minimum required sample size was calculated as 204 respondents. To account for potential non-responses, the sample was expanded to 210 students. To ensure diversity, respondents were drawn

from five different academic programs, with 42 students randomly selected per program. The sampling frame was derived from faculty-specific WhatsApp groups, where members’ phone numbers served as the basis for randomization. Each student had an equal probability of selection, aligning with the principles of simple random sampling.

Despite efforts to ensure a representative sample, there are several limitations to this research. First, the sample size of 210 students, though statistically adequate, represents only a small fraction of UPM’s total student population, potentially limiting the generalizability of the findings. Other students may hold differing perspectives not captured in this study. Additionally, the research focused on only three independent variables (price, brand awareness, and product quality). At the same time, other factors—such as celebrity endorsement, shopping experience, and environmental consciousness—could also influence purchase intentions toward natural cosmetics. Prior studies (e.g., Khan et al., 2017; Chen & Yang, 2021) suggest these variables significantly impact consumer behavior, indicating that the current model may not fully predict UPM students’ purchasing intentions.

Data were collected via a structured Google Forms questionnaire distributed individually to selected participants. The questionnaire comprised five sections: Demographic profile (e.g., age, gender, program of study), price perception, brand awareness, product quality perception, and purchase intention. Measurement items for the key constructs (price, brand awareness, product quality, and purchase intention) were adapted from established scales in prior literature, and they were measured by using a 5-point Likert scale (refer to Table 1).

Table 1: Description of Research Variables

Variable	Item Statement	Sources
Price of Natural Cosmetics	1. I think price is important when purchasing natural cosmetics. 2. I compare the prices of different brands when purchasing natural cosmetics. 3. I am price-conscious when buying natural cosmetics. 4. I think the price of natural cosmetics is reasonable for shoppers. 5. I buy natural cosmetics because they are worth using regarding their price.	Islam and Hani (2021), Oosthuizen et al. (2015), Tien (2014), Jaafar (2012)
Brand Awareness of Natural Cosmetics	1. Brands make it easier for me to choose natural cosmetic products. 2. Brands influence my choice to purchase natural cosmetics. 3. I prefer buying well-known brands of natural cosmetics. 4. I am likely to buy natural cosmetics from the brand that I remember best. 5. I usually choose well-advertised natural cosmetics with brands.	Nofri (2019)

Table 1 (continued)

Variable	Item Statement	Sources
Product Quality of Natural Cosmetics	1. I think quality is an important criterion when I buy natural cosmetics. 2. I think natural cosmetics have a good functional quality. 3. I think the materials used in natural cosmetics are effective. 4. Quality is my main concern when purchasing natural cosmetics. 5. It is important for me to buy high-quality natural cosmetics.	Islam and Hani (2021), Jaafar (2012)
Purchase Intention of Natural Cosmetics	1. I intend to buy natural cosmetics in the future. 2. I am likely to buy new natural cosmetics in future. 3. I am willing to buy new natural cosmetics. 4. I am willing to shop around to buy natural cosmetics. 5. I plan to buy natural cosmetics regularly. 1. I expect to buy natural cosmetics regularly.	Islam and Hani (2021), Nofri (2019), Khalid et al. (2018)

Data analysis and discussion

The analytical approach consisted of two phases, i.e., descriptive analysis to summarize respondents' background and inferential analysis, specifically Pearson correlation to test the bivariate relationships between price and purchase intention (H_1), brand awareness and purchase intention (H_2), and product quality and purchase intention (H_3). Then, multiple regression analysis evaluated the combined effect of all independent variables on purchase intention (H_4). This two-step analytical strategy ensured robust validation of the hypothesized relationships while maintaining methodological rigor.

Socio-demographic background of respondents

A demographic profile of the respondents was constructed from the information obtained from 210 respondents, as shown in Table 2. Gender, age, ethnicity, religion, current level of education, and faculties are included in the demographic variables.

Table 2: Respondents' Background (N=210)

	Frequency (n)	Percentage (%)
Gender		
Male	58	27.6
Female	152	72.4

Table 2 (continued)

	Frequency (n)	Percentage (%)
Gender		
Male	58	27.6
Female	152	72.4
Age (years old)		
Below 20	28	13.3
20 -24	160	76.2
25-29	18	8.6
Above 29	4	1.9
Ethnic		
Malay	106	50.5
Chinese	69	32.9
Indian	27	12.9
Others	8	3.8
Religion		
Islam	110	52.4
Buddha	67	31.9
Hindu	23	11.0
Others	10	4.8
Current level of education		
Foundation	0	0
Diploma	0	0
Degree	210	100.0
Master	0	0
PhD	0	0
Faculty		
School of Economics and Management	42	20.0
Faculty of Educational Studies	42	20.0
Faculty of Forestry and Environment	42	20.0
Faculty of Human Ecology	42	20.0
Faculty of Modern Language and Communication	42	20.0

There were 77.6% female respondents and 27.6% male respondents. For the respondents' age, the age group between 20 and 24 years old is dominant, which represents about 76.2%. Followed by the respondents who are below 20 years old, with 13.3%, followed by those aged between 25 and 29 years old, 8.6%. In terms of race, the majority of respondents were Malays, accounting for 50.5%, followed by Chinese (32.9%) and Indians (12.9%). With regard to religion, the highest number of respondents is Islam, which is 52.4%, Buddhists reach 31.9%, Hindus reach 11.0%, followed by other religions (3.8%). The results also showed that all the respondents are currently studying at a degree level of education, which is an equal percentage (20.0%) for various faculties selected in this study, namely the School of

Economics and Management, Faculty of Educational Studies, Faculty of Forestry and Environment, Faculty of Human Ecology, and Faculty of Modern Language and Communication.

Hypothesis testing

In the study, Pearson correlation coefficient analysis is used to test the first three (3) hypotheses, and the results are tabulated in Table 3. To test H_4 , multiple linear regression analysis is applied, and the findings are tabulated in Table 4.

Table 3: Results for Pearson Correlation Analysis

Variables	Pearson Correlation (R-values)	Significance (p-value)
Price	0.449	<.001
Brand Awareness	0.408	<.001
Product Quality	0.486	<.001

Note: Correlation is significant at the 0.01 level

Based on the results shown in Table 3, all the factors examined are found to have a significant relationship with the purchase intention. Moreover, they generated positive R-values each, and all the factors had a positive linear relationship with the purchase intention. The R-values related to the price variable is 0.449, which indicates that there is a positive relationship between price and purchase intention. This result implies that the greater the price, the greater the purchase intention towards natural cosmetics. Therefore, when the price increases, the UPM students' purchase intention towards natural cosmetics also increases, which also implies that the UPM students are willing to pay more for natural cosmetics when the price of natural cosmetics becomes higher. The current result seems to be consistent with a previous study, which also found that price has a positive and significant effect on purchasing decisions (Qisthina 2020; Limpo et al. 2018). Limpo et al. (2018)'s previous report had the same view as this study since the report stated that price can affect the purchase intention, as well as that price is the primary factor influencing customers' decisions to buy a product.

As for the brand awareness variable, the R-values ($r = 0.408$) also indicates that there is a positive relationship between brand awareness and UPM students' purchase intention towards natural cosmetics. This situation indicates that the higher the brand awareness, the greater the purchase intention towards natural cosmetics. Additionally, given that the R-values ranges from 0.4 to 0.6, there is a moderate association between brand awareness and purchase intention. This current result is aligned with the findings from previous studies. For example, Budiono et al. (2021), Noorlitaria et al. (2020), and Bakator et al. (2019) also found that there was a significant relationship between brand awareness and purchase intention.

Finally, for the third variable of this study, i.e., product quality, the R-values is 0.486, and the p-value is less than 0.001, which implies that there is a significant relationship between product quality and UPM students' purchase intention towards natural cosmetics. This result is also consistent with the previous study, which also reported that there is a positive and significant influence between product quality and purchase intention (Septy Purba et al., 2018; Limpo et al., 2018).

In summary, all hypotheses H_1 , H_2 , and H_3 generated in this study are supported since the p-values shown were 0.000, which are less than the 0.01 significance value. Besides that, when comparisons are made for all the R-values, product quality is the highest, which indicates that the perception of product quality is strongest among all, with the other two studied variables. The findings of the study are also in line with the report of Al-Haddad et al. (2020), who succeeded in proving that product quality had a significant effect on purchase intention toward natural cosmetics and that product quality is the most important factor to consider while buying natural cosmetics. Nevertheless, this initial result will be further discussed in the next section, multiple regression analysis.

The most significant factor influencing the purchase intention of natural cosmetics.

Based on the result of multiple linear regression, the F-value (84.572) is significant at less than 0.001, indicating that the independent variables (price, brand awareness, and product quality) in the model are influential predictors of the dependent variable (purchase intention). Besides that, the R-value is 0.546, which means that the strength of the connection between the independent factors and the dependent variable is 54.60%. The adjusted R^2 of 0.291 indicates that the independent factors (price, brand awareness, and product quality) account for 30.1% of the variance in the dependent variable (purchase intention).

Table 4: Results for Multiple Linear Regression

Variables	Unstandardized Beta	Standardized Coefficients Beta	t-statistics	Significant Value
Constant	.433		1.131	.259
Price	.256	.188	2.471	.014
Brand Awareness	.195	.175	2.500	.013
Product Quality	.388	.299	4.114	.001

Note: A significant level of 0.05

$R=0.546$, $R^2 = 0.301$, Adjusted $R^2 = 0.291$, F-value= 29.597

The product quality has the highest standardized coefficient beta (β -value), which is 0.299. Thus, product quality is the strongest factor influencing UPM students' intention to purchase natural cosmetics because it has the highest β -value. Furthermore, the

equation of multiple linear regression for this study is shown below.

$$y = \beta_0 + \beta_1 x_1 + \dots + \beta_k x_k + \epsilon$$

$$y = 0.433 + 0.256 + 0.195 + 0.388 + \epsilon$$

Based on the equation above, 0.433 (constant) indicates that if price, brand awareness, and product quality variables are considered constant, the purchase intention variable will be 0.433. The 0.256 (price), 0.195 (brand awareness), and 0.388 (product quality) mean that if the dependent variables increase by one unit, then the purchase intention towards natural cosmetics will increase by 0.256 for price, 0.195 for brand awareness, and 0.388 for product quality. Looking back at the result of Pearson correlation analysis, product quality had the strongest relationship with UPM students' purchase intention towards natural cosmetics since it had the highest value of R-values among the three independent variables (price, brand awareness, and product quality). Hence, the result of multiple linear regression was in line with the result of the Pearson correlation analysis in this study. In addition, this result is also consistent with a previous study, which also found that product quality was the strongest factor that influenced consumers' purchase intention (Lu et al., 2021). Products with higher quality can improve consumers' purchase intention since consumers nowadays prefer eco-friendly products with high quality (Septy Purba et al., 2018; Al-Haddad et al., 2020).

Implications, limitations, and recommendations for future research

Implications

The findings of this study align closely with the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), which posits that an individual's behavioral intention is shaped by their attitudes toward the behavior and subjective norms (social influences). In the context of UPM students' purchase intention toward natural cosmetics, product quality emerged as the strongest influencing factor, followed by price and brand awareness. This suggests that students' attitudes (positive evaluations of product quality) play a dominant role in shaping their purchase decisions, while subjective norms (such as brand reputation and perceived social acceptance of natural cosmetics) also contribute to their behavioral intentions.

1. Product Quality as a Key Determinant of Purchase Intention

According to TRA, consumers' attitudes toward a product are shaped by their beliefs about its attributes. The strong relationship between product quality and purchase intention indicates that UPM students hold a positive attitude toward high-quality natural cosmetics, reinforcing their intention to purchase them. This finding suggests that marketers should enhance product formulations, safety, and efficacy to align with

consumer expectations, as TRA emphasizes that favorable beliefs about a product lead to stronger purchase intentions.

2. Price and Brand Awareness as Influential Factors

While product quality was the most significant factor, price and brand awareness also showed a positive and significant relationship with purchase intention. According to TRA, subjective norms—such as societal perceptions of brand prestige and affordability—can shape behavioral intentions. If consumers perceive natural cosmetics as affordable (price) and reputable (brand awareness), their likelihood of purchase increases. Marketers can leverage this by strategically positioning their brands as both high-quality and reasonably priced, reinforcing positive consumer attitudes and social acceptance.

3. Policy Implications and Economic Growth

From a TRA perspective, government policies that regulate pricing, branding, and quality standards can shape consumer attitudes and subjective norms toward natural cosmetics. By implementing policies that ensure affordability, authenticity, and product excellence, the government can strengthen consumer trust and encourage purchase intentions. This can attract global brands to invest in Malaysia's natural cosmetics market, further boosting economic growth.

4. Consumer Awareness and Sustainable Consumption

TRA also highlights that behavioral intentions are influenced by awareness and beliefs. This study's findings suggest that increasing consumer awareness about the benefits of natural cosmetics (health, environmental sustainability) can positively shift attitudes and purchase intentions. Marketers and policymakers should educate consumers on distinguishing genuine natural cosmetics from counterfeit products, reinforcing trust and long-term demand.

Limitations and recommendations for future research

In this study, a few limitations are noted, and the consequent recommendations are suggested. Firstly, there were only 210 students from UPM taking part in this research. A large sample size from the university students in general could be taken to have a more reliable and consistent finding or result. Besides that, the big sample size can also help the results be more generalizable since the respondents come from a wide range of demographic backgrounds.

Secondly, this study has only determined three (3) independent variables, which are price, brand awareness, and product quality. It is recommended to

incorporate more independent variables into the framework to make it more comprehensive, since the adjusted R^2 from multiple linear regression results is just 30.1%. There are still more factors that were not studied in this study, but might influence consumers' purchase intention towards natural cosmetics. The additional independent factors include celebrity endorsement, shopping experience, environmental and health consciousness, and others. According to Tewary et al. (2021) and Ishaq et al. (2021), health and environmental consciousness were the main factors that will influence the consumers' purchase intention towards natural cosmetics; however, these two variables were not discussed and investigated in this study. Hence, it is impossible for the three independent factors to fully predict the UPM students' intentions to purchase natural cosmetics. Therefore, these independent variables should be increased to have a clearer and deeper prediction about students' purchasing intention.

Lastly, since this study only uses a quantitative research method, a qualitative research method can be adopted to have a more comprehensive understanding of the students' purchase intention towards natural cosmetics. According to Denny and Weckesser (2018), qualitative research refers to a research method that examines why people act or believe a certain way and how they learn to comprehend these complicated behaviours in their daily lives. This research should take advantage of techniques like interviewing, videography, and observation to examine UPM students' purchase intention towards natural cosmetics. These techniques may be useful additions to the traditional survey method used in this study.

Conclusion

This study highlights the key determinants of UPM students' purchase intention toward natural cosmetics, reinforcing the Theory of Reasoned Action (TRA) in explaining how attitudes (product quality) and subjective norms (price and brand awareness) shape behavioral intentions. The findings demonstrate that product quality is the most influential factor, followed by price and brand awareness, suggesting that consumers prioritize functional benefits (e.g., safety, efficacy) while also considering economic and social influences (affordability and brand reputation).

From a theoretical perspective, these results support TRA's premise that purchase intention is driven by consumer attitudes (positive perceptions of quality) and social norms (brand prestige and pricing perceptions). This implies that marketers must not only enhance product formulations to meet consumer expectations but also strategically position their brands as affordable and trustworthy to align with both individual preferences and societal influences.

Practically, the study underscores the need for industry and policy interventions to sustain market growth. Manufacturers should prioritize quality improvements to

maintain consumer trust, while policymakers could implement regulatory standards to ensure product authenticity and fair pricing. Additionally, consumer education on the benefits of natural cosmetics can further strengthen purchase intentions by reinforcing positive attitudes and sustainable consumption behaviors.

Ultimately, as Malaysia's natural cosmetics market expands, understanding these behavioral drivers will be crucial for businesses and policymakers to foster long-term demand and economic growth in this emerging sector.

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