THE INFLUENCE OF THE MARKETING MIX (4PS) ON PURCHASING BEHAVIOR TOWARD PLASTIC-PACKAGED SNACKS AMONG BANSOMDEJCHAOPRAYA RAJABHAT UNIVERSITY STUDENTS

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Abstract

The snack food industry is a rapidly growing sector in Thailand, yet localized empirical evidence on student consumer behavior within university retail environments remains limited. This study aims to investigate the level of purchasing behavior toward plastic-packaged snacks and to analyze the influence of the marketing mix (4Ps: Product, Price, Place, and Promotion) on purchasing behavior among students at Bansomdejchaopraya Rajabhat University. Employing a quantitative research design, data were collected from 400 undergraduate students using a structured questionnaire developed with 5-point Likert scales. Validity was assessed through the Index of Item-Objective Congruence (IOC), and reliability was confirmed via Cronbach's Alpha coefficients ranging from .789 to .864 (overall α = .945). Data were analyzed using descriptive statistics, Pearson correlation analysis, and multiple linear regression. The regression model explained 53.9% of the variance in purchasing behavior (R^2 = .539, F = 115.519, $p < .001$). The findings reveal that Promotion (β = .402, $p < .001$), Price (β = .175, p = .003), and Product (β = .161, p = .002) has a significant influence on students' purchasing behavior, with Promotion being the strongest predictor. The study concludes that campus retailers and snack brands should shift strategic focus from expanding physical distribution to implementing dynamic promotional campaigns and maintaining competitive pricing. These findings validate the marketing mix framework in a localized context and provide actionable, evidence-based insights for retail managers and university administrators.

Keywords: Marketing Mix, 4Ps, Purchasing Behavior, Snack Foods, University Students, Promotion Strategies, Thailand

Introduction

The snack industry is a highly competitive and dynamic sector, particularly within the microcosm of a university campus. University students represent a significant consumer segment in this market due to their distinct consumption behaviors, limited budgets, and high accessibility to various snack products. Understanding the factors that influence students' snack-buying decisions is crucial for businesses operating in a university environment.

The global snack food industry has demonstrated significant expansion over the past decade, with its market valuation reaching approximately USD 692.5 billion in 2023 and projected to exceed USD 719 billion in 2024 (Grand View Research, 2024). This growth is fueled by shifting consumer lifestyles, urbanization, rising disposable incomes, and an increasing demand for convenient, portable food options. The market encompasses a wide array of product categories, from traditional sweet and savory snacks to growing segments like health-oriented and functional snacks. In Thailand, this sector is particularly dynamic, Thailand's overall snack market: 2024 revenue: US$2.67 billion; 2029 forecast: US$3.69 billion; compound annual growth rate: 6.68% (2024-2029) (Statista 2024), Characterized by intense competition between local and international brands. Thai consumers, especially the younger generation, are increasingly open to diverse flavors and innovative snack formats, creating a fertile ground for both established players and new entrants.

Snack purchasing behavior refers to the observable actions, decision-making processes, and consumption patterns associated with selecting, buying, and consuming snack products. It is a multi-dimensional construct commonly measured through metrics such as purchase frequency, spending amount, brand preference, and purchase intention. Contemporary research highlights the significant role of the university food environment in shaping these metrics, revealing that nearly 60% of college students frequently purchase food and beverages on campus, often prioritizing convenience and accessibility over nutritional value(Whatnall et al., 2021).

Student lifestyles are inherently shaped by heavy academic demands, irregular schedules, and a high degree of digital connectivity. Consequently, snacks serve multiple functions beyond simple hunger satisfaction. They frequently act as meal replacements, study fuel, stress-relief mechanisms, and facilitators of social bonding. Psychologically, these digital-native consumers exhibit high brand awareness and are highly susceptible to peer influence, actively seeking convenient and portable options that align with their mobile, fast-paced lifestyles.

The snack purchasing behavior of contemporary university students exhibits highly dynamic and impulse-driven patterns. Recent consumer behavior studies indicate that a substantial majority of

students' snack purchases are unplanned, acting as low-involvement decisions triggered by immediate emotional needs, academic stress, and compelling point-of-sale or digital marketing stimuli (Martinez-Perez et al., 2022). Furthermore, navigating a challenging economic landscape with limited personal allowances, today's young consumers demonstrate acute price sensitivity. Consequently, they actively engage in price comparison and aggressively seek out promotional deals to maximize value for money (Bakar & Rosbi, 2023).

Prior research has examined the influence of the marketing mix on consumer purchasing decisions across various contexts. For instance, Bakar and Rosbi (2025) demonstrated that all four 4P elements significantly influence halal food purchasing decisions among university students in Malaysia, collectively explaining 73.1% of the variance. Similarly, Kasiye (2022) found that price and place were the most influential marketing mix factors on student purchase decisions in university mini marts in Malaysia. Hanifah, Nuringwayhu, and Krisdianto (2022) further confirmed that product and place significantly affect purchasing decisions in a retail store context in Indonesia. However, the majority of these studies have been conducted in Malaysian or Indonesian university settings, with limited focus on the Thai university retail context. To date, no empirical study has systematically examined how the 4P marketing mix elements influence plastic-packaged snack purchasing behavior specifically among students at Bansomdejchaopraya Rajabhat University in Bangkok, Thailand. This gap in localized, data-driven evidence limits the ability of campus retailers and snack brands to develop effective, targeted marketing strategies for this specific student population. Therefore, this study aims to bridge this gap by systematically exploring how the fundamental marketing mix elements (4Ps) influence Bansomdejchaopraya Rajabhat University students' purchasing behavior toward plastic-packaged snacks, providing actionable insights for both academic research and practical business applications.

The marketing mix (4Ps) is a fundamental framework for explaining consumer purchasing behavior, as Product, Price, Place, and Promotion represent controllable factors influencing decision-making and consumption patterns. In university retail environments, where students exhibit limited budgets and high promotional sensitivity, examining the 4Ps is essential for both theoretical validation and practical marketing strategy development.

Research Objectives

(1) To study the level of purchasing behavior toward plastic-packaged snacks among Bansomdejchaopraya Rajabhat University students

(2) To analyze the influence of the marketing mix (4Ps: Product, Price, Place and Promotion) on purchasing behavior toward plastic-packaged snacks among Bansomdejchaopraya Rajabhat University students

Research Hypothesis

Based on the theoretical framework, the following hypotheses are proposed:

H1: Product has a significant influence on purchasing behavior toward plastic-packaged snacks among Bansomdejchaopraya Rajabhat University students.

H2: Price has a significant influence on purchasing behavior toward plastic-packaged snacks among Bansomdejchaopraya Rajabhat University students.

H3: Place has a significant influence on purchasing behavior toward plastic-packaged snacks among Bansomdejchaopraya Rajabhat University students.

H4: Promotion has a significant influence on purchasing behavior toward plastic-packaged snacks among Bansomdejchaopraya Rajabhat University students.

Research Framework

Within the research framework of this study, the four elements of the marketing mix—Product, Price, Place, and Promotion—serve as the independent variables. These variables are conceptualized as interrelated yet distinct influencing factors that collectively impact the dependent variable, which is Consumers' Purchasing Behavior towards Plastic-packaged Snacks. While these independent variables may be correlated, no causal relationship is assumed among them. The nature, strength, and direction of their individual and collective effects on the dependent variable constitute the core hypotheses that this study aims to test.

The research framework illustrates the relationship between the independent variables (4P marketing mix elements) and the dependent variable (snack purchasing behavior). The framework demonstrates how product, price, place, and promotion factors collectively influence students' snack purchasing decisions.

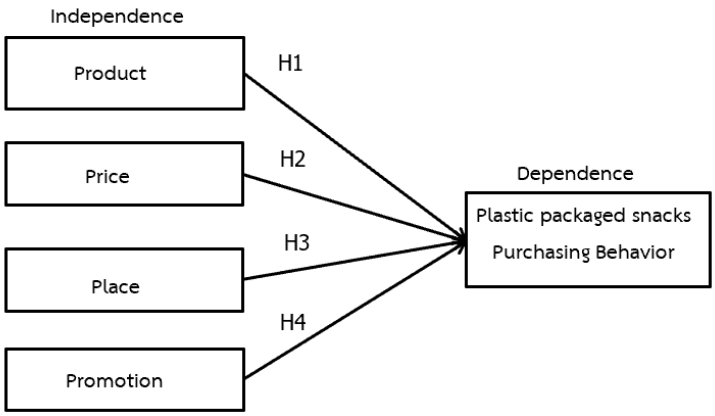


Figure 1. Research Framwork

Research Methodology

This study employed quantitative research design. The target population comprised all undergraduate students currently enrolled at Bansomdejchaopraya Rajabhat University during academic year 2024–2025, totaling approximately 9,455 students across six faculties. A sample size of 384 was determined using Yamane's formula (1973) at a 95% confidence level and 5% margin of error. An additional 4% reserve was added, yielding a final sample of 400 respondents. Stratified random sampling was employed, with the six faculties serving as strata. Sample sizes for each faculty were allocated proportionally based on the number of enrolled students in each faculty, ensuring representative coverage across all academic units.

Data were collected via a structured questionnaire comprising 30 items divided into three parts: (1) demographic information (5 items); (2) marketing mix factors—Product, Price, Place, and Promotion (5 items each, 20 items total); and (3) purchasing behavior (5 items). The questionnaire items were developed and adapted from established instruments used in prior marketing mix and consumer behavior research, including Bakar and Rosbi (2025), Kasiye (2022), and Wang Fangqingyun (2023). All items employed a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Content validity was assessed by three experts using the Index of Item-Objective Congruence (IOC), with all items exceeding the 0.6 threshold. Reliability was tested via Cronbach's Alpha coefficient on a pilot sample of 30 respondents, with all constructs achieving values above 0.75, confirming acceptability.

Measurement of Variables

In this study, purchasing behavior was conceptualized as a multi-dimensional construct reflecting students' actual consumption patterns and decision-making tendencies. Based on prior literature, purchasing behavior was measured using five key indicators.

Each of these indicators was measured using Likert-scale items and collectively represents the behavioral and psychological dimensions of snack consumption among students.

Table 1 Measurement of Variables

Variable Type	Variable	Indicators / Measurement Items	Scale
Dependent Variable	Purchasing Behavior	Purchase Frequency, Spending Level, Brand Preference, Purchase Intention, Impulse Buying Behavior	5-point Likert Scale

Table 4 (Continued)

Variable Type	Variable	Indicators / Measurement Items	Scale
Independent Variable	Product	Product quality, packaging, variety, taste, brand trust	5-point Likert Scale
	Price	Perceived affordability, discount attractiveness, value for money, price-quality relationship, competitive pricing	5-point Likert Scale
	Place	Accessibility, product availability, ease of purchase, channel diversity, store atmosphere	5-point Likert Scale
	Promotion	Advertising exposure, promotional campaigns, social media influence, peer recommendations, brand communication	5-point Likert Scale

Note: All measurement items were adapted from prior studies and assessed using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The items were validated through expert review and pilot testing.

Result

Demographic Profile

The 400 respondents comprised 68.0% female, 29.5% male, and 2.5% other. The majority (79.3%) were aged 23 or younger. Second-year (31.8%) and third-year (33.5%) students constituted the largest academic year groups. Most respondents (77.8%) operated with monthly living expenses below 15,000 Thai Baht, underscoring the budget-conscious nature of this market. Geographically, 61.5% were from Bangkok, with the rest from other cities.

Reliability Analysis

All constructions demonstrated acceptable to excellent reliability as shown in Table 1

Table 1 Reliability Test Results for 4Ps and Purchasing Behavior (n = 400)

Variable	No. of Items	Cronbach's α	Result
Product Factors	5	.789	Reliable
Price Factors	5	.831	Reliable
Place Factors	5	.864	Reliable
Promotion Factors	5	.825	Reliable
Purchasing Behavior	5	.796	Reliable
Total	25	.945	Reliable

Descriptive Statistics

The descriptive analysis of all four marketing mix factors achieved high mean scores above 4.0 on the 5-point Likert scale. Place Factors received the highest overall mean (M = 4.21, SD = .945), with students particularly valuing quick and convenient payment processes (M = 4.27) and ease of finding products (M = 4.26). Promotion Factors ranked second (M = 4.15, SD = .930), with students actively seeking promotional offers such as buy-one-get-one-free deals (M = 4.19). Both Product Factors and Price Factors achieved equal overall means of 4.11. For Product, packaging convenience rated highest (M = 4.23), while for Price, the influence of discounts ranked highest (M = 4.18). Purchasing Behavior achieved an overall mean of 4.08 (SD = 1.015), with brand repurchase loyalty scoring highest (M = 4.30).

Correlation Analysis

Pearson correlation analysis revealed significant positive correlations between all marketing mix factors and purchasing behavior at the $p < .01$ level, as presented in Table 2

Table 2 Pearson Correlation Matrix

Pearson Correlation	Product	Price	Place	Promotion	Purchasing Behavior
Product	1				
Price	.703**	1			
Place	.651**	.718**	1		
Promotion	.684**	.734**	.743**	1	
Purchasing Behavior	.610**	.640**	.608**	.699**	1

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

Multiple Regression Analysis

Multiple linear regression analysis was conducted to examine the simultaneous influence of the four marketing mix factors on purchasing behavior. Multicollinearity diagnostics confirmed acceptable VIF values (2.312–2.925), all well below the threshold of 10. The regression model demonstrated strong overall fit ($R = .734$, $R^2 = .539$, Adjusted $R^2 = .534$, $F = 115.519$, $p < .001$), indicating that the four marketing mix factors collectively explained 53.9% of the variance in student purchasing behavior. Detailed results are presented in Table 3

Table 3 Regression Coefficients

Model	Variable	Unstandardized Coefficients		Standardized Coefficients (β)	t	Sig.
		B	Std. Error			
1	(Constant)	.544	.169		3.221	.001
	Product	.171	.055	.161	3.091	.002
	Price	.178	.059	.175	3.035	.003
	Place	.078	.056	.079	1.410	.159
	Promotion	.426	.062	.402	6.886	.000

Note: $R^2 = .539$; Adjusted $R^2 = .534$; $F = 115.519$; $p < .001$

Hypothesis Testing

Based on the regression results, hypothesis testing outcomes are summarized in Table 4.

Table 4 Summary of Hypothesis Testing

Hypothesis	Statement	β	t-value	P-value	Result
H1	Product has a significant influence on purchasing behavior toward plastic-packaged snacks among Bansomdejchaopraya Rajabhat University students.	.161	3.091	.002	Supported

Hypothesis	Statement	β	t-value	P-value	Result
H2	Price significantly influences purchasing behavior toward plastic-packaged snacks among Bansomdejchaopraya Rajabhat University students.	.175	3.035	.003	Supported
H3	Place has a significant influence on purchasing behavior toward plastic-packaged snacks among Bansomdejchaopraya Rajabhat University students.	.079	1.410	.159	Not Supported
H4	Promotion significantly influences purchasing behavior toward plastic-packaged snacks among Bansomdejchaopraya Rajabhat University students.	.402	6.886	.000	Supported

Conclusion and Discussion

Conclusion

This study investigated the influence of the marketing mix (4Ps) on purchasing behavior toward plastic-packaged snacks among 400 students. The multiple regression model successfully explained 53.9% of the variance in purchasing behavior (R^2 = .539, F = 115.519, p < .001). Three of the four marketing mix elements—Promotion, Price, and Product—demonstrated significant positive influences on purchasing behavior, while Place did not reach statistical significance. The relative importance ranking was: Promotion (β = .402) > Price (β = .175) > Product (β = .161) > Place (β = .079, not significant).

Hypothesis H1 (Product) was SUPPORTED (β = .161, p = .002). Students who place higher importance on product attributes such as flavor variety, attractive packaging, quality, portability, and brand trust exhibit higher levels of snack purchasing behavior. Hypothesis H2 (Price) was SUPPORTED (β = .175, p = .003). The positive direction of this relationship reveals that price-conscious students who actively seek deals and compare prices actually purchase more frequently, as price sensitivity leads to proactive deal-seeking that creates additional purchasing opportunities. Hypothesis H3 (Place) was NOT SUPPORTED (β = .079, p = .159). Despite Place Factors receiving the highest descriptive mean (M = 4.21), variation in accessibility

perceptions did not significantly explain differences in purchasing frequency once other elements were controlled. Hypothesis H4 (Promotion) was STRONGLY SUPPORTED (β = .402, $p < .001$), establishing promotional activities as the most powerful driver of student snack purchasing.

Discussion

The strong influence of Promotion on purchasing behavior (β = .402, $p < .001$) is the most prominent finding of this study. **This finding is consistent with** research demonstrating that integrated marketing communications effectively drive consumer behavior among digitally connected young consumers (Kothari et al., 2025; Nguyen, 2021). **This result also supports** the findings of Bakar and Rosbi (2025), who identified promotion as a significant predictor of halal food purchasing decisions among Malaysian university students (β = 0.269, p = .000). University students' high social media engagement, receptiveness to peer influence, and active deal-seeking behavior create a particularly fertile environment for promotional effectiveness. The strong effect of Promotion may also reflect the attention-based view of marketing: in information-rich campus environments, capturing student attention through coordinated multi-channel communication—advertisements, social media, peer recommendations, and in-store display successfully overcomes consumer filtering mechanisms.

The significant positive relationship between Price consciousness and purchasing frequency (β = .175, p = .003) is counterintuitive from a classical economic perspective. However, this finding is consistent with behavioral research by Azhar (2025) and Zhao et al. (2021), demonstrating that price-sensitive consumers proactively time and optimize purchases, creating more frequent purchasing occasions when acceptable value is identified. This result also supports the findings of Bakar and Rosbi (2025), who confirmed that price significantly influences university students' purchasing decisions (β = 0.313, p = .000). The significance of Product factors (β = .161, p = .002) further confirms that beyond promotional noise, core product attributes—quality, packaging design, and brand trust—remain essential foundations for sustained consumption and brand loyalty. This is consistent with Wang et al. (2023) and Dam (2020), who demonstrated that product quality and brand trust are key determinants of consumer purchase intention. This finding also supports the results of Kasiye (2022), who found that product quality was highly valued by students in university mini-mart settings.

The non-significance of Place in the regression model (β = .079, p = .159), despite its highest descriptive mean (M = 4.21), is the study's most theoretically interesting finding.

This result partially contradicts the findings of Kasiye (2022), who reported that Place was the strongest predictor of student purchase decisions in Malaysian university mini-marts ($r = .425$, $p = .000$), and those of Hanifah et al. (2022), who identified Place as the most dominant factor ($\beta = 0.534$) in their retail store study. The discrepancy may be explained by a ceiling effect: within the saturated Bansomdejchaopraya Rajabhat University campus retail environment, where convenience stores, vending machines, and nearby outlets are ubiquitous, accessibility has become a baseline expectation rather than a differentiating factor. This supports Herzberg's two-factor theory, wherein Place functions as a 'hygiene factor'—its adequate provision prevents dissatisfaction but does not actively stimulate additional purchasing. This finding has important practical implications, suggesting that further investment in distribution convenience yields diminishing returns in established campus retail environments.

Recommendations

Implications

Based on the empirical findings, businesses operating in university retail environments should prioritize promotional investment as the primary strategy for driving student snack purchases. A comprehensive, integrated marketing communications approach should be developed targeting platforms most frequented by students in the Thai context, including Instagram, TikTok, Facebook, and LINE. Student micro-influencers should be engaged to leverage the strong peer recommendation effect. Promotional calendars featuring regular discount campaigns, buy-one-get-one-free offers, and bundle deals should be implemented, as students actively seek such promotions. Point-of-purchase displays should be optimized at high-traffic campus locations to capitalize on impulse purchasing tendencies.

Pricing strategy must acknowledge students' budget constraints, with 77.8% of respondents operating on monthly budgets below 15,000 Baht. Value-based pricing with transparent cost-benefit communication, multiple size options at different price points, and strategic temporary price reductions are recommended. Product strategies should prioritize portable, easy-to-consume packaging formats and visually distinctive packaging designs. Consistent product quality and brand trust are essential for sustaining the strong brand loyalty behavior ($M = 4.30$) observed in this study. While distribution accessibility remains a necessary baseline condition, additional investment in expanding convenience beyond current adequate levels is unlikely to proportionally increase purchasing frequency, and resources are better directed toward Promotion and Price strategies.

Future Researches

Future research should investigate the psychological mechanisms underlying promotional effectiveness to determine whether promotion primarily operates through economic, attention-based, social, or affective pathways. More granular measurement of Place attributes—such as vending machine preferences, stock-out frequencies, and digital-physical channel integration—may reveal specific distribution dimensions that influence behavior beyond the global accessibility perceptions measured in this study. Consumer segmentation analyses using cluster or latent class approaches could identify distinct student consumer segments characterized by different marketing mix response patterns, enabling more targeted and personalized marketing strategies. Longitudinal research designs would also provide insights into temporal dynamics, habitual purchasing processes, and how seasonal factors such as examination periods influence the relative salience of different marketing mix elements in driving student snack consumption.

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