



RESEARCH ARTICLE

Marketing Innovation and Trust Affecting Customer Satisfaction and Purchase Decision for Cannabis-Hemp Drinks in Thailand

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ABSTRACT

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Students' language skills in regional languages are still low. One effort to The cannabis-infused food industry has experienced rapid growth following the legalization of recreational cannabis use, with a surge in cannabis-infused hemp beverage offerings. This study investigated factors influencing Thai consumers' purchasing decisions for these beverages and developed a structural equation model to assess the roles of marketing innovation, perceived value, and trust in customer satisfaction and purchasing behavior. The study sampled 360 Bangkok consumers who had repeatedly purchased cannabis-infused hemp beverages. Data was collected using a five-point Likert scale questionnaire with a reliability coefficient of 0.94. Statistical analyses included descriptive metrics and confirmatory factor analysis using the LISREL program. Results revealed high levels of marketing innovation, perceived value, trust, customer satisfaction, and purchasing decisions. The structural equation model exhibited an excellent fit with the data (Chi-Square = 5.36, df = 17, p = 0.98, χ^2/df = 0.31, RMSEA = 0.00, RMR = 0.00, GFI = 0.99, AGFI = 0.99). Causal variables significantly influenced purchasing decisions, explaining 74% of the variance (R^2). Marketing innovation had the highest total effect (0.86), followed by perceived value (0.81), trust (0.70), and customer satisfaction (0.22). Marketing innovation was identified as the most critical factor driving purchasing decisions. The findings provide actionable insights for product development and strategic planning to enhance competitiveness in Thailand's cannabis-infused food and beverage industry.

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INTRODUCTION

In Thailand, the liberalization of cannabis for medical and agricultural purposes has spurred interest in its cultivation, with farmers focusing on cannabis and hemp as cash crops. Cannabis and hemp contain THC (Tetrahydrocannabinol) and CBD (Cannabidiol) (Tipparat et al., 2014), the former known for psychoactive effects and medicinal uses, while the latter is valued for therapeutic benefits such as pain relief and epilepsy management. While THC remains a controlled substance, CBD is recognized for its medicinal applications (Zinboonyahgoon et al., 2021). Cultivation is restricted to licensed groups, including government agencies, healthcare professionals, and research institutions, under strict regulations from the Thai Ministry of Public Health (Ritmontree et al., 2019).

Hemp is a versatile crop used in textiles, biodiesel, culinary oils, and medicine. Research highlights CBD's potential in treating conditions like cancer, diabetes, neurological disorders, anxiety, and skin diseases (Nath, 2022). Developing cannabis strains for the food industry requires a biobased economic approach to optimize CBD production for medical and culinary uses. Cultivation strategies include indoor breeding for strain purity, outdoor cultivation, and greenhouse systems to enhance compound yields and meet safety standards (Assanangkornchai et al., 2022; Sukrueangkul et al., 2022; Zinboonyahgoon et al., 2021).

Thailand's beverage industry, comprising 98.3% of domestic consumption, is increasingly incorporating cannabis-hemp into innovative beverage products. These offerings create unique consumer experiences and present significant market opportunities. This study investigates the structural equation model exploring the effects of marketing innovation, perceived value, and trust on customer satisfaction and purchasing decisions for cannabis-hemp beverages. The objective is to cultivate cannabis strains that thrive in Thailand's climate, yielding high-quality products and beneficial compounds for the food and beverage sector (Laohavanich, 2022). Using quantitative research, it integrates theoretical frameworks with empirical data from Bangkok consumers to identify factors influencing satisfaction and purchasing behavior (Chitsena, 2020; Tanthanapanyakorn, 2024).

This study analyzed the effects of marketing innovation, perceived value, and trust on customer satisfaction and purchasing decisions for cannabis-hemp beverages in Thailand using a quantitative research approach. The findings identified key factors influencing consumer behavior, offering insights for developing strategies to enhance product quality and align with Thai beverage industry standards. The research supports innovation in Thailand's beverage sector, aiming to elevate product quality and boost the global competitiveness of cannabis-hemp beverages while promoting international recognition of Thai beverage standards.

LITERATURE REVIEW

This research examined the impact of marketing innovation on customer satisfaction and purchase decisions regarding cannabis-hemp drinks in Bangkok. It explored key concepts and theories related to marketing innovation, perceived value, trust, customer satisfaction, and purchasing behavior. The study aimed to identify the factors influencing purchase decisions, establishing a conceptual framework that outlines the relevant variables and hypotheses to be tested.

Marketing innovation, defined as the implementation of novel marketing strategies (Chen, 2006), exemplifies a distinctive and valuable approach through the development of cannabis-hemp infused beverages, aligning with contemporary service processes and addressing consumer demands. The concept encompasses four key aspects: providing unique features that differentiate the product and enhance its value (Unique Proposition), employing a customer-centered strategy to establish goals and tactics that align with consumer needs and satisfaction (Customer Focus), and implementing a market-oriented approach that considers external factors in selecting target groups and developing effective marketing campaigns (Market Focus) (Delafrooz, Taleghani, & Taghineghad, 2013; Robertson & Yu, 2001).

Perceived value refers to the benefits consumers perceive from purchasing cannabis-hemp beverages and encompasses three key aspects: perceived usefulness, which includes the health benefits associated with consumption; perceived price, reflecting the value of the beverages relative to their cost; and perceived hedonic, which pertains to the emotions and experiences derived from the purchase. These factors significantly influence consumers' evaluations and decision-making processes (Ledden, Kalafatis, & Samouel, 2007).

Perceived Usefulness relates to the extent to which a product is seen as beneficial, encompassing attributes such as intended function, reliability, quality, and efficiency. These factors collectively shape consumer perceptions (Karahanna & Straub, 1999). Research indicates that perceived value derived from such information enhances customers' sense of the worthiness of their interactions, with perceived usefulness significantly influencing purchase intentions (Dam, 2020). Thus, a higher perceived usefulness correlates with a stronger inclination to purchase the product. Previous studies have empirically examined the relationship between perceived usefulness and consumers' purchase intentions.

Perceived price involves recognizing the monetary amount exchanged for goods and services agreed upon by the buyer and seller (Grewal & Marmorstein, 1994). Price is a critical element of the marketing mix that influences consumer satisfaction when they perceive the products as having value and utility commensurate with their price. The perceived price value of a product is understood as the relationship between the product's value and its price. Consumers assess this relationship, and if they perceive the value to exceed the price, their intention to purchase increases (Büyükdağ, Soysal, & Kitapci, 2020; Martins & Monroe, 1994).

Perceived hedonic value refers to the extent to which a product elicits positive feelings and emotions in consumers, such as beauty, pleasure, enjoyment, and excitement. Customer perception plays a crucial role in how the value of the product is internalized, manifesting in their minds. This cognitive evaluation leads to specific emotional responses.

Research in the context of social media indicates that consumers derive enjoyment, entertainment, and pleasure from engaging with brand fan pages or communities. These interactions foster a sense of connection and satisfaction, reinforcing the idea that perceived hedonic value positively influences customer satisfaction.

Trust is a critical performance indicator in the relationship between customers and service businesses, especially due to the intangible nature of services (Ashraf, Jaafar, & Sulaiman, 2017). Hasan Beyari (2020) emphasizes the importance of trust in shaping customer-organization bonds, defining it as confidence based on perceived reliability and integrity. This concept is linked to marketing frameworks that consider personality and psychology. Research by Beldad, De Jong, & Stehouder (2010), Ashraf, Jaafar, & Sulaiman (2017) and Qurna, Yahyaoui, & Almulla (2017) identifies three key components of trust: communication, which involves effectively reaching the target audience through marketing channels like advertising and public relations; attention in service, which focuses on understanding and resolving customer issues; and convenience of service, referring to the ease and speed of accessing products and services. These components collectively build trust and foster long-term customer relationships.

Customer satisfaction refers to the evaluation of an individual's experience and involvement with a product or service (Abdallat & Emam, 2008), where positive attitudes indicate satisfaction and negative attitudes reflect dissatisfaction. It is typically assessed through a questionnaire focusing on three key aspects: taste, distribution channels, and safety. Taste evaluates consumers' positive feelings toward the flavor and quality of cannabis-hemp infused beverages, including attributes like deliciousness and overall flavor. Distribution channels refer to the methods through which products and services are delivered to meet consumer demand, emphasizing the importance of identifying target audiences and selecting effective channels to ensure accessibility. Safety involves the control processes in food production, ensuring cannabis-hemp beverages are produced safely, adhere to established standards, and are free from harm to consumers (Lin, Liu, Jiang, & Lin, 2022; Maggon & Chaudhry, 2018; Mary & Nuangjamnong, 2022).

A purchase decision is defined as the process of selecting one option from a range of alternatives, a routine activity in consumers' lives influenced by specific information and situational constraints (Foster & Johansyah, 2019). Marketers who align with consumers' thoughts and emotions can effectively promote their products and foster acceptance. This process involves both psychological (cognitive) and physical factors, encompassing mental and physical activities that may also influence others' purchasing behaviors (Rahmadani & Febryandhie, 2018). For cannabis-hemp infused drinks, the purchase decision process can be delineated into five key components: recognition of need, where consumers identify their desire for such a product due to internal or external stimuli; information searches, during which they actively seek details about these beverages; evaluation of alternatives, where they assess and compare different options based on the gathered information; repurchase intention, reflecting their decision to buy based on evaluations; and post-purchase feeling, where consumers express satisfaction or dissatisfaction with the product (Pasaribu & Purba, 2020; Rahmadani & Febryandhie, 2018; Rizki, Kadarisman, & Lusy, 2019). Foster and Johansyah (2019) define a purchase decision as the process of selecting one option from a range of alternatives. Consumers engage in this decision-making process daily when choosing products or services, influenced by specific information and situational constraints. Marketers who understand and resonate with consumers' thoughts and emotions can more effectively promote their products and foster consumer acceptance. Rahmadani and Febryandhie (2018) further characterize the purchase decision as the process of choosing one product among multiple options, highlighting that consumers consider both psychological and physical factors during this process. Purchasing involves both mental and physical activities that unfold over time, potentially influencing the purchasing behaviors of others.

HYPOTHESIS AND CONCEPTUAL FRAMEWORK

This study explores the relationships between marketing innovation (MI), perceived value (PV), Trust (TU) customer satisfaction (CS), and Purchase decision (DC). Marketing innovation serves as the foundation for enhancing perceived value through creative strategies, advanced technologies, and unique features that resonate with consumers. Perceived value mediates the relationship between marketing innovation and customer satisfaction, as consumers perceive greater worth in products or services that incorporate innovative marketing approaches. Customer satisfaction, in turn, fosters trust, reinforcing long-term relationships between consumers and brands. Additionally, marketing innovation influences trust both directly and indirectly through perceived value and customer satisfaction. This integrated framework underscores the critical role of marketing innovation in building perceived value, satisfaction, and trust, ultimately strengthening consumer-brand relationships.

H1a: Marketing innovation has a direct influence on purchase decisions.

Marketing innovation directly influences purchase decisions by offering unique and creative strategies that attract consumers and encourage them to choose specific products or services. (Delafrooz, Taleghani, & Taghineghad, 2013)

H1b: Marketing innovation has a direct influence on customer satisfaction.

Marketing innovation directly impacts customer satisfaction by meeting or exceeding customer expectations through innovative features, experiences, or approaches. (Robertson & Yu, 2001)

H2a: Perceived value has a direct influence on customer satisfaction.

Perceived value directly affects customer satisfaction as consumers are more likely to feel satisfied when they perceive a product or service as offering high quality or benefits relative to its cost.

H2b: Perceived value has a direct influence on purchase decision.

Perceived value directly influences purchase decisions by enhancing the attractiveness of a product or service, making it more likely for consumers to choose it over alternatives.

H2c: Perceived value has a direct influence on trust.

Perceived value directly impacts trust as consumers are more likely to trust a product or brand that consistently delivers perceived benefits and quality. (Ledden, Kalafatis, & Samouel, 2007).

H3: Customer satisfaction has a direct influence on purchase decision.

Customer satisfaction directly influences purchase decisions by increasing the likelihood of repeat purchases and positive recommendations when consumers are happy with their experience. (Abdallat & Emam, 2008)

H4a: Trust has a direct influence on customer satisfaction.

Trust directly affects customer satisfaction as consumers feel more confident and satisfied when they trust the reliability and integrity of a product or brand. (Qurna, Yahyaoui, & Almulla, 2017)

H4b: Trust has a direct influence on purchase decision.

Trust directly influences purchase decisions by encouraging consumers to commit to a purchase based on their confidence in the product or brand's credibility. (Beyari, 2020)

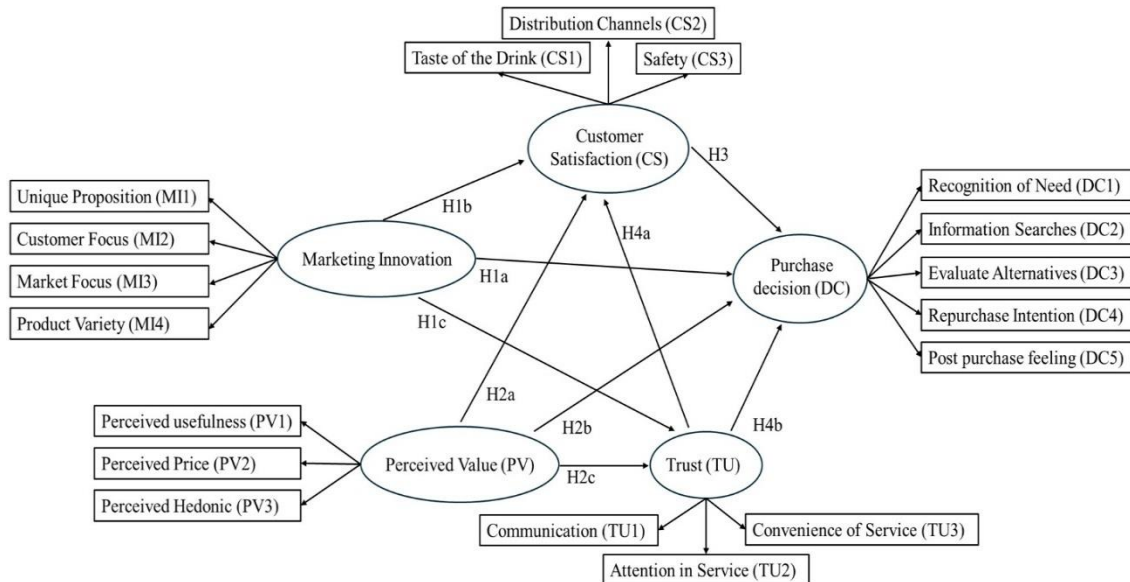


Figure 1: Conceptual framework of the structural equation model

RESEARCH METHODOLOGY

The population for this study consists of consumers in Bangkok, Thailand, who have purchased cannabis-hemp drinks more than once. The sample for this research comprises consumers in Bangkok who have repeatedly purchased cannabis-hemp drinks. Given the challenge of determining the exact population size, the sample size was calculated using criteria for structural equation modeling (SEM). According to Joreskog & Sorbom (1999) and Hair et al. (2010), the recommended sample size for SEM is 10-20 times the number of parameters. This study involves SEM analysis with 18 observed variables, leading to a maximum sample size of 20 times the number of variables, resulting in a total sample size of 360. In this research, quota sampling based on regional proportions was utilized. Following this, accidental sampling was employed to select 360 consumers who had purchased cannabis-hemp drinks from convenience stores in Thailand and were willing to participate in the study, as detailed in Table 1.

Table 1: Sample for research

Area	Population	Sample	Percentage
1. Inner area	1,588,185	104	28.88
2. Middle Area	2,307,907	150	41.66
3. Outer Area	1,598,840	106	29.46
Total	5,494,932	360	100

Demographic data were analyzed using percentages and frequencies. For part 2 of the questionnaire, quantitative descriptive analysis was employed. This section, comprising 5-point Likert scale items (Pongvichai, 2010), involved calculating means and standard deviations to interpret consumers' opinions on the significance of marketing innovations, perceived value, trust, and satisfaction in influencing their purchase decisions regarding cannabis-hemp drinks. Relationships between variables were tested using Pearson correlation, with a significance level set at 0.05. The strength of the correlation was interpreted based on the following criteria (Wongratana, 1991). Hypothesis testing was conducted by coding the data using SPSS/PC+ (Version 23.0). Data analysis included both descriptive and inferential statistics, employing Structural Equation Modeling (SEM) and path analysis using LISREL Version 9.20. The symbols used in the LISREL model analysis were clearly defined.

SUMMARY OF RESEARCH RESULTS

Descriptive statistics were used to present the general information of the respondents.

The basic descriptive statistics provide an overview of the general characteristics of the sample of Bangkok consumers who have purchased cannabis-hemp drinks more than once. According to Joreskog & Sorbom (1999) and Hair et al. (2010), an appropriate sample size for analysis should be

10-20 times the number of variables in the conceptual framework. This study's sample size of 360, calculated as 20 times the 18 observed variables, is deemed adequate for analysis using LISREL, ensuring accurate parameter estimation and representativeness of the target population.

All 360 questionnaires distributed were successfully returned, resulting in a 100% response rate. The detailed results are summarized in Table 2.

Table 2: The percentage distribution of the general information of the respondents

Characteristics of the sample	Number	Percentage
1. Gender		
Male	188	52.20
Female	172	47.80
Total	360	100.00
2. Age		
Under 21 years old	15	4.30
21-30 years old	80	22.20
31-40 years old	88	24.40
41-50 years old	70	19.40
51-60 years old	85	23.60
Over 60 years old	22	6.10
Total	360	100.00
3. Educational level		
Less than a bachelor's degree	15	4.20
Bachelor's degree	250	69.40
Master's degree or higher	95	26.40
Total	360	100.00
4. Occupation		
Student	26	7.20
Government officer	46	12.80
State enterprise employee	20	5.60
Trader	91	25.30
Self-employed	63	17.50
Employee	14	3.80
Private sector employee	100	27.80
Total	360	100.00
5. Monthly income (Baht)		
Less than 15,001 Baht	17	4.70
15,001-20,000 Baht	70	19.40
20,001-25,000 Baht	107	29.70
25,001-30,000 Baht	108	30.00
30,001-35,000 Baht	33	9.30
More than 35,000 Baht	25	6.90
Total	360	100.00

According to Table 2, the majority of consumers in Bangkok who purchased cannabis-hemp drinks more than once are male (52.2%) compared to female (47.8%). Most respondents are aged 31-40 years (24.4%), followed by 51-60 years (23.6%) and 21-30 years (22.2%). The majority hold a bachelor's degree (69.4%), with fewer having a postgraduate degree (26.4%). Employment-wise, most work in private companies (27.8%), followed by sales (25.3%) and self-employment (17.5%). Monthly income is highest in the 25,001-30,000-baht range (30%), followed by 20,001-25,000 baht (29.7%).

Results of hypothesis testing using structural equation modeling (SEM) and inferential statistics

The analysis of the linear structural equation model of the influence of marketing innovation on the satisfaction and decision to purchase cannabis-hemp drinks of consumers in Thailand with empirical data was shown in Table 3.

Table 3: Correlation of observed variables in the SEM of marketing innovation’s influence on satisfaction and purchasing decisions for cannabis-hemp drinks

Observed variables	Correlation values				
	MI	PV	TU	CS	DC
MI	1.00				
PV	0.73**	1.00			
TU	0.54**	0.68**	1.00		
CS	0.34**	0.43**	0.56**	1.00	
DC	0.68**	0.70**	0.67**	0.69**	1.00

KMO: Measure of Sampling Adequacy = 0.828
 Bartlett's Test of Sphericity: Chi-Square= 430.502, df = 10, p = 0.00

**denotes $p < .01$

From Table 3, the Pearson product-moment correlation coefficients reveal significant statistical relationships among the five observed variables. The results show that all ten pairs of observed variables exhibited significant correlations at the .01 level. The highest correlation was observed between Purchase Decision for Cannabis-Hemp Drinks (DC) and Perceived Value (PV) ($r = 0.70$), followed closely by the correlation between Purchase Decision (DC) and Customer Satisfaction (CS) ($r = 0.69$). The lowest correlation was found between Customer Satisfaction (CS) and Marketing Innovation (MI) ($r = 0.34$). Importantly, none of the correlation values among the observed variables exceeded 0.80, suggesting no severe multicollinearity issues within the dataset. This indicates that each observed variable correlated appropriately within the specified limits and in a consistent direction.

Additionally, Bartlett’s Test of Sphericity was conducted to assess whether the correlation matrix of the observable variables was an identity matrix. The results showed a Chi-Square value of 430.502, with 10 degrees of freedom (df) and a p-value of 0.00, indicating a significant deviation from zero to the 0.01 level. This was further supported by the Kaiser-Meyer-Olkin (KMO) index, which yielded a value of 0.828, well above the acceptable threshold of 0.05. These findings confirm that the correlation matrix of the observable variables was not an identity matrix and that sufficient correlations existed among these variables to proceed with structural equation modeling to examine the influence of marketing innovation on customer satisfaction and purchase decisions for cannabis-hemp drinks in Thailand.

Table 4: Results of the analysis of the validity and factor loading of the model

Latent variables	Observed variables	Factor loading			
		b _{sc}	SE	t	Reliability (R ²)
MI	MI1	0.66**	<-->	<-->	0.58
	MI2	0.67**	0.05	22.01	0.51
	MI3	0.64**	0.05	20.12	0.49
	MI4	0.70**	0.05	24.64	0.68
PV	PV1	0.75**	<-->	<-->	0.70
	PV2	0.72**	0.06	24.95	0.68
	PV3	0.78**	0.06	25.26	0.72
TU	TU1	0.77**	<-->	<-->	0.71
	TU2	0.75**	0.06	24.98	0.70
	TU3	0.79**	0.06	26.63	0.74
CS	CS1	0.72**	<-->	<-->	0.67
	CS2	0.75**	0.05	24.92	0.69
	CS3	0.80**	0.05	26.74	0.75
DC	DC1	0.68**	<-->	<-->	0.52
	DC2	0.66**	0.06	20.44	0.49
	DC3	0.72**	0.06	24.21	0.69
	DC4	0.70**	0.05	23.51	0.63
	DC5	0.74**	0.05	24.66	0.69

Chi-Square = 5.36, df = 17, p = 0.98, $\chi^2/df = 0.31$, RMSER = 0.00, RMR = 0.00, GFI = 0.99, AGFI = 0.99

Remark: ** $p < 0.01$, b_{sc} means standardized factor loading

Symbol <--> indicates a fixed parameter, meaning that the standard error (SE) and t-value

Table 4 presents the results of the model fit assessment for the structural equation model examining the influence of marketing innovation on customer satisfaction and purchase decisions for cannabis-hemp drinks in Thailand. The Chi-square value was 5.36 with $df = 17$ and a p-value of 0.00, indicating a significant deviation from zero. Additionally, the RMSE = 0.00 and RMR = 0.00, both of which are close to 0. The Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI) were both close to 1. The ratio of χ^2/df was 0.31, which is less than 2, suggesting that the model was inconsistent with the empirical data. The factors loadings of the observed variables related to all latent variables were positive and significantly different from zero at the 0.01 level. Among the observed variables related to the internal latent variables, safety had the highest factor loading with a standardized loading of 0.80. Meanwhile, the observable variable related to the external latent variables with the highest factor loading was perceived hedonic, with a standardized loading of 0.78. In contrast, the observable variable related to the internal latent variables with the lowest factor loading was information search, with a standardized loading of 0.66. Similarly, the observable variable related to the external latent variables with the lowest factor loading was unique proposition, with a standardized loading of 0.66. Furthermore, the coefficient of determination (R^2) for the observable external variables, which could jointly explain the variance, ranged from 0.51 to 0.72, while the internal observable variables ranged from 0.49 to 0.75.

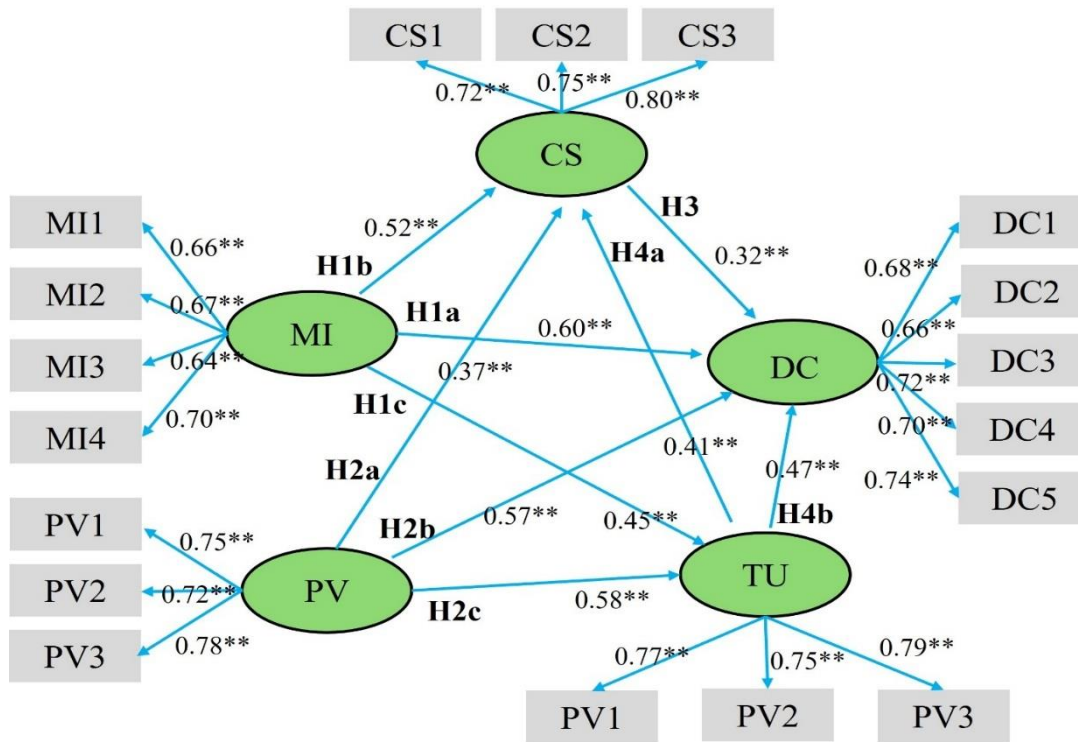
Table 5: Statistical analysis of hypotheses on marketing innovation’s influence on customer satisfaction and purchase decisions for cannabis-hemp drinks

Dependent Variable	R ²	Effect	Independent Variable			
			CS	TU	PV	MI
TU	0.40	DE	-	-	0.58**	0.45**
		IE	-	-	-	-
		TE	-	-	0.58**	0.45**
CS	0.53	DE	-	0.41**	0.37**	0.52**
		IE	-	-	0.23**	0.24**
		TE	-	0.41**	0.60**	0.76**
DC	0.74	DE	0.32**	0.47**	0.57**	0.60**
		IE	-	0.23**	0.24**	0.26**
		TE	0.32**	0.70**	0.81**	0.86**

Note: **p<0.01; DE means direct effect, IE means indirect effect, TE means total effect; - means no parameter line according to research hypothesis.

From Table 5, all causal variables in the model had a positive influence on the purchase decision for cannabis-hemp drinks of consumers in Thailand. They could jointly explain 74 % of the variance of the variables influencing the purchase decision (DC) (R^2). When considering the total effect on the purchase decision, it was found that the marketing innovation had the highest total effect size of 0.86, followed by perceived value with a total effect size of 0.81, trust with a total effect size of 0.70, and customer satisfaction with a total effect size of 0.32, respectively. When examining the direct influences on purchase decision (DC), it was found that these variables are influenced by marketing innovation (MI), perceived value (PV), trust (TU), and customer satisfaction (CS) variables, with effect sizes of 0.60, 0.57, 0.47, and 0.32, respectively. These effect sizes were statistically significant at the 0.01 level. Additionally, purchase decision (DC) was also indirectly influenced by marketing innovation (MI), perceived value (PV), and trust (TU), with effect sizes of 0.26, 0.24, and 0.23, respectively with a statistical significance level of 0.01.

In addition to the direct and indirect influences on purchase decision (DC), there were other variables that experience both direct and indirect influences. The trust was directly influenced by the marketing innovation (MI) and the perceived value (PV), with effect sizes of 0.45 and 0.58, respectively, with a statistical significance level of 0.01. Customer satisfaction was directly influenced by the marketing innovation (MI), perceived value (PV), and trust (TU) variables, with effect sizes of 0.52, 0.37, and 0.41 respectively, with a statistical significance level of .01. Furthermore, customer satisfaction was indirectly influenced by marketing innovation (MI) and perceived value (PV), with effect sizes of 0.24 and 0.23 respectively, with a statistical significance level of 0.01, as shown in Figure 2.



Chi-Square = 5.36, df = 17, p = 0.98, $\chi^2/df = 0.31$, RMSE = 0.00,
 RMR = 0.00, GFI = 0.99, AGFI = 0.99

Figure 2: Examination of the validity of the structural equation model of the influence of marketing innovation on customer satisfaction and purchase decisions for cannabis-hemp drinks

From Figure 2, it was observed that the structural equation model of the influence of marketing innovation on customer satisfaction and purchase decision was consistent with empirical data. Marketing innovation (MI) was identified as the factor that significantly influenced consumers' purchase decision, followed by the perceived value (PV), the trust (TU), and the customer satisfaction (CS), respectively. Table 6 presents the outcomes of the hypothesis testing for the structural equation model examining the influence of marketing innovation on customer satisfaction and purchase decisions for cannabis-hemp drinks in Thailand. Each hypothesis was evaluated for consistency with empirical data, focusing on the relationships among the key variables.

Table 6: Summary of hypothesis testing results

Research hypothesis	Coef	t-test	Results
1. H1a: Marketing innovation has a direct influence on purchase decision.	0.60	14.52**	Consistent
2. H1b: Marketing innovation has a direct influence on customer satisfaction.	0.52	10.74**	Consistent
3. H2a: Perceived value has a direct influence on customer satisfaction.	0.37	6.26**	Consistent
4. H2b: Perceived value has a direct influence on purchase decision.	0.57	12.36**	Consistent
5. H2c: Perceived value has a direct influence on trust.	0.58	13.48**	Consistent
6. H3: Customer satisfaction has a direct influence on purchase decision.	0.32	5.66**	Consistent
7. H4a: Trust has a direct influence on customer satisfaction.	0.41	8.24**	Consistent

8. H4b: Trust has a direct influence on purchase decision.	0.47	10.34**	Consistent
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From Table 6, it was found that the structural equation model of the influence of marketing innovation on customer satisfaction and purchase decisions for cannabis-hemp drinks in Thailand showed that the results of testing all eight hypotheses indicated a positive causal influence of the independent variables on the dependent variable of purchase decision, with statistical significance. Therefore, it can be concluded that the research findings were consistent with all the hypotheses of the research framework.

CONCLUSION

This research investigated the factors influencing purchase decisions for cannabis-hemp drinks among consumers in Thailand, with a focus on the role of marketing innovation and customer satisfaction. The findings revealed that the proposed structural equation model was valid and explained 74% of the variance in purchase decisions. Marketing innovation emerged as the most significant factor, emphasizing the importance of unique propositions, customer focus, market focus, and product variety in driving consumer behavior. The study highlighted the need to explore additional variables, such as management innovation, product innovation, and customer loyalty, to enhance the understanding of consumer purchase behavior. Furthermore, a multi-level analysis considering both executive and customer perspectives is recommended for future research. Practical implications include the development of innovative marketing strategies and participatory action research to better address consumer expectations. Overall, this study provides valuable insights for businesses aiming to optimize their strategies and strengthen their position in the emerging cannabis-hemp drink market in Thailand.

DISCUSSION OF RESEARCH FINDINGS

The research findings are discussed under the following key points:

1. The research identified five factors influencing the purchase decision for cannabis-hemp drinks among Thai consumers, with standard factor loadings (L) ranging from 0.64 to 0.77. The highest loading was evaluation of alternatives (L=0.77), followed by post-purchase feelings (L=0.73), repurchase intention (L=0.72), information search (L=0.68), and recognition of need (L=0.64). This aligns with Kotler and Keller's (2013) five-step model: recognition of need, information search, evaluation of alternatives, repurchase intention, and post-purchase feelings. Supporting studies emphasize that purchase decisions involve selecting from alternatives based on psychological and situational factors. Foster & Johansyah (2019) highlighted the importance of understanding consumer decision-making to improve product distribution and acceptance. Similarly, Aksari (2018) described purchasing as a sequential process, starting from problem recognition to post-purchase attitudes. Related studies, such as those by Phalitkul (2022) confirmed the role of marketing factors, attitudes, health awareness, and risk perceptions in influencing the purchase of cannabis-related products, demonstrating consistency with this research's findings.
2. The research findings revealed that the structural equation model of marketing innovation influencing customer satisfaction and purchase decisions for cannabis-hemp drinks in Thailand was valid. The model aligned with empirical data and satisfied all consistency index criteria, including a non-significant chi-square value ($\chi^2 = 5.36, df = 17, p = 0.98, \chi^2/df = 0.31, CFI = 0.99, RMSE = 0.00, RMR = 0.00, GFI = 0.99, AGFI = 0.99$). All causal variables in the model positively influenced purchasing decisions for cannabis-hemp drinks, jointly explaining 74% of the variance in factors affecting these decisions ($R^2 = 0.74$). This model was developed based on a comprehensive review of literature, textbooks, and studies conducted both domestically and internationally. It was consistent with empirical data collected from consumers in Bangkok, Thailand, who had purchased cannabis-hemp drinks more than once. Intention, considered an individual's desire preceding a specific behavior, is influenced by personal motivation, situational factors, and significant others (Chang, 2013). The findings align with Angsuchote (2011), who highlighted that causal influence analysis is an effective method to examine the direct and indirect effects of predictor variables on a dependent variable. This is further supported by research from Nwachukwu & Vu (2022), which demonstrated that service and marketing innovations significantly impact customer

satisfaction in microfinance banking services at the .01 significance level. Additionally, Karnjanakunchorn (2017) found that marketing innovations significantly influenced purchasing decisions for Intel and AMD computer equipment at the .01 significance level. Similarly, Phumpho & Nutteesri (2022) reported that marketing innovations had a significant impact on purchasing decisions for cleaning and disinfecting products distributed by manufacturing companies, also at the .01 significance level.

SUGGESTIONS FOR FUTURE RESEARCH

1. This research examined the variables influencing the purchase decisions for cannabis-hemp drinks among consumers in Thailand, collectively explaining 74.00% of the variance. This indicates that other variables, not included in this study, may also play a role. Therefore, the development of future causal variable models should consider additional influential factors, such as management innovation, product innovation, customer expectations, and customer loyalty.
2. Further studies should investigate multilevel causal variables affecting the purchase decisions for cannabis-hemp drinks among Thai consumers. This analysis should encompass data at two levels: the executive level and the customer level, to gain a more comprehensive understanding of purchasing behavior. Variables potentially influencing purchasing decisions could include store quality, service quality provided by employees, communication via social media, and service delivery motivation. It would be worthwhile to explore whether a multilevel structural equation model for consumer purchase decisions aligns with empirical data collected at different levels.
3. The research findings indicated that marketing innovation had the highest total effect. Consequently, future research should prioritize the development of marketing innovations through research and development, emphasizing participatory action research. The four observable variables unique proposition, customer focus, market focus, and product variety should be leveraged to establish management guidelines that enhance customer decision-making in purchasing cannabis-hemp drinks.

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REFERENCES

- Abdallat, M., & Emam, H. (2008). Customer satisfaction. *Journal of King Saud University*, 17, 45-60.
- Aksari, M. F., (2018), The influence of product quality, price, promotion, and distribution on Toto Sanitary ware product purchase decision in Denpasar city. *E-Journal of Unud Management*, Vol. 7, No. 1, 441-469.
- Angsuchoti, S., et al. (2011). *Statistical analysis for social and behavioral research: Techniques for using LISREL*. Bangkok: Charoen Dee Man Kong Printing.
- Ashraf, M., Jaafar, N. I., & Sulaiman, A. (2017). The mediation effect of trusting beliefs on the relationship between expectation-confirmation and satisfaction with the usage of online product recommendation. *Southeast Asian Journal of Management*, 10(1), 180606.
- Assanangkornchai, S., Thaikla, K., Talek, M., & Saingam, D. (2022). Medical cannabis use in Thailand after its legalization: a respondent-driven sample survey. *Peer J*, 10, e12809.
Bangkok: Chulalongkorn University.
- Beldad, A, De Jong, M & Steehouder, M. (2010). How shall I trust the faceless and the intangible? A literature review on the antecedents of online trust. *Computers in Human Behavior*, 26(5), 57-69.
- Beyari, H. (2020). The role of trust and its impact on consumer satisfaction in the context of social commerce. *Journal for Research on Business and Social Science*, 3(9).
- Büyükdağ, N., Soysal, A. N., & Kitapci, O. (2020). The effect of specific discount pattern in terms of price promotions on perceived price attractiveness and purchase intention: An experimental research. *Journal of Retailing and Consumer Services*, 55, 102112.

- Chang, M.-L. (2013). Toward a theoretical model to understand teacher emotions and teacher burnout in the context of student misbehavior: Appraisal, Regulation and Coping. *Motivation and Emotion*, 37, 799-817.
- Chen, Y. (2006). Marketing innovation. *Journal of economics & management strategy*, 15(1), 101-123.
- Chitsena, A. (2020). Benefits and threats of hemp legalization for the agricultural sector in Thailand.
- Delafrooz, N., Taleghani, M., & Taghineghad, M. (2013). The impact of service innovation on customer satisfaction. *International Journals of Marketing and Technology*, 3(5), 127-144.
- Diamantopoulos, A., and Siguaw, A.D. (2000). *Introducing LISREL: A guide for the uninitiated*. London: Sage Publications.
- Foster, B., & Johansyah, M. D., (2019). The effect of product quality and price on buying interest with risk as intervening variables (Study on Lazada.com Site Users). *International Journal of Innovation, Creativity, and Change*. 9(9): 66-78.
- Grewal, D., & Marmorstein, H. (1994). Market price variation, perceived price variation, and consumers' price search decisions for durable goods. *Journal of Consumer Research*, 21(3), 453-460.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis*. 7th ed.
- Joreskog, K. G., & Sorbom, D. (1999). *LISREL 8 User's Guide*. Chicago, IL: Scientific Software International.
- Kalayasiri, R., & Boonthae, S. (2023). Trends of cannabis use and related harms before and after legalization for recreational purpose in a developing country in Asia. *BMC Public Health*, 23(1), 911. doi:10.1186/s12889-023-15883-6
- Karahanna, E., & Straub, D. W. (1999). The psychological origins of perceived usefulness and ease-of-use. *Information & management*, 35(4), 237-250.
- Karnjanakunchorn, J. (2017). Marketing innovations that affect the decision to purchase computer equipment of group Intel and AMD, consumers late teens to work in Bangkok.
- Kotler, P., & Keller, K. L. (2013). *Marketing Management (14th ed.)*. Pearson Education.
- Laohavanich, M. (2022). Political economy of cannabis in Thailand. *Chulalongkorn Medical Journal*, 66(1), 115-122.
- Ledden, L., Kalafatis, S. P., & Samouel, P. (2007). The relationship between personal values and perceived value of education. *Journal of Business Research*, 60(9), 965-974.
- Lin, M.-M., Liu, C.-S., Jiang, J.-S., & Lin, M.-H. (2022). A study on the impact of experiential marketing on service quality and customer satisfaction from the perspective of cultural creativity. *International Journal of Organizational Innovation*, 14(4).
- Maggon, M., & Chaudhry, H. (2018). Exploring relationships between customer satisfaction and customer attitude from customer relationship management viewpoint: An empirical study of leisure travellers. *FIIB Business Review*, 7(1), 57-65.
- Martins, M., & Monroe, K. B. (1994). Perceived price fairness: A new look at an old construct. *Advances in consumer research*, 21(1).
- Mary, M., & Nuangjamnong, C. (2022). Factors affecting customer satisfaction and customer loyalty toward myanmar green tea. *International Journal of Business Marketing and Management (IJBMM) Volume*, 7, 1-17.
- Nath, M. K. (2022). Benefits of cultivating industrial hemp (*Cannabis sativa ssp. sativa*) A Versatile Plant for a Sustainable Future. *Chemistry Proceedings*, 10(1), 14. Retrieved from <https://www.mdpi.com/2673-4583/10/1/14> New Jersey: Person Education.
- Nwachukwu, C., & Vu, H. M. (2022). Service innovation, marketing innovation and customer satisfaction: Moderating role of competitive intensity. *Sage Open*, 12(2), 21582440221082146.
- Pasaribu, L.N., & Purba, K., (2020), The influence of trust on the purchase decision with buying interest on the social networking site Instagram: case study of online shop users on Instagram. *Research, Society and Development*, 9(10): 868-874.
- Phalitkul, W., (2022). Marketing factors affecting the decision to purchase cannabis plants online among people in Bangkok. Master of Management Thesis, Management Program, Graduate School, Ramkhamhaeng University.
- Phumpho, R., & Nutteesri, S., (2022). Marketing innovation factors effecting decision to purchase for cleansing and disinfecting productsof a manufacturingand distribution company in Phra

- Nakhon Si Ayutthaya province. Faculty of Interdisciplinary Studies. Christian University of Thailand.
- Pongvichai, S. (2010). Computer-based statistical data analysis: Emphasizing research (21st ed.).
- Qurna, J. E., Yahyaoui, H., & Almulla, M. (2017). A new framework for the verification of service trust behaviors. *Knowledge-Based Systems*, 1)21(:7-22.
- Rahmadani, R., & Febryandhie, A., (2018), Analysis of the effect of price on purchase decision at the tokopedia online shop. *KBP College of Economics*, 13.
- Ritmontree, S., Kanato, M., & Leyatikul, P. (2019). The health, economic, and social effects of cannabis use in Thailand. *F1000Research*, 8, 614.
- Rizki, A. G., Kadarisman, H., & Lusy, D. R. D., (2019), the influence of brand image and price on purchase decision at Shopee Indonesia's E-commerce. *Business Administration*, 72)2(: 55-60.
- Robertson, P. L., & Yu, T. F. (2001). Firm strategy, innovation and consumer demand: a market process approach. *Managerial and Decision Economics*, 22(4-5), 183-199.
- Sánchez-Fernández, R., & Iniesta-Bonillo, M. Á. (2007). The concept of perceived value: a systematic review of the research. *Marketing theory*, 7(4), 427-451.
- Sukrueangkul, A., Panomai, N., Laohasiriwong, W., Sakphisutthikul, C., & Phimha, S. (2022). Factors influencing demand for medical cannabis use among cancer patients in the north of Thailand. *Asian Pac J Cancer Prev*, 23(1), 319-325.
- Tanthanapanyakorn, P. (2024). Spatial distribution analysis of cannabis-infused food and drink establishments in Pathum Thani province, Thailand Through Geographic Information Systems. *International Journal of Geoinformatics*, 20(1), 25-39.
- Tipparat, P., Kunkaew, W., Julsrigival, S., Pinmanee, S., & Natakankitkul, S. (2014). Classification of cannabis plants grown in northern Thailand using physico-chemical properties. *J. Nat. Sci. Res*, 10, 46-54.
- Wongratana, C. (1991). *Techniques for using statistics in research*. Bangkok: Pimlak.
- Zinboonyahgoon, N., Srisuma, S., Limsawart, W., Rice, A. S., & Suthisisang, C. (2021). Medicinal cannabis in Thailand: 1-year experience after legalization. *Pain*, 162, S105-S109.