

## Marketing Mix Strategies: A Key Factor in Influencing Consumers' Purchase Intention of Harumanis Mango in Perlis

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**Abstract:** This study examines the effect of the marketing mix (product, price, place, and promotion) on purchase intention and consumer purchasing decisions on Harumanis mango in Malaysia. The data in the study are quantitative using a primary data source. Data was collected using a convenience sampling method from April to June 2023. A set of questionnaires was distributed to the consumers who have experience in purchasing and eating Harumanis mango. A total of 310 respondents responded to the questionnaires, which were distributed online. The data was then filtered and proceeded to the data analysis. The results showed that the two elements, namely product and place, had a positive and significant effect on the purchase intention and purchasing decision of Harumanis, while the other two elements (price and promotion) were insignificant in influencing consumers' intention to purchase Harumanis. Hence, the study recommends the government revise the ceiling price of Harumanis mango as the current market price of this mango is considered high, and an intensive promotional activity should be properly strategized to attract consumers to purchase Harumanis.

**Keywords:** *Marketing mix, Consumer's Purchase Intention, Harumanis*

### 1. Introduction

Harumanis mango was introduced by the Malaysian Agricultural Research and Development Institute (MARDI) in 1980. It is one of the best-tasting mango types in Malaysia and has grown in popularity in Perlis (Uda, Gopinath, Hashim, Hakimi, Afnan Uda, Anuar, Bakar, Sulaiman & Parmin, 2020). It was cultivated commercially in Perlis and a small portion in Kedah since it is particularly susceptible to climate change and needs a prolonged dry period to bloom (Farook, Aziz, Harun, Husin, Shakaff, Jaafar, Ndzi, Zakaria & Kamarudin, 2012). This mango also requires a hot and dry climate with a high temperature and less rain. The distinctiveness of the Perlis region has made the Harumanis mango famous and allowed *Magnifera indica Cv*, the premium Perlis variety, to be exported to other countries such as Japan (Musa, Hassan, Mohd Yusof & Mohd Daud, 2010). Harumanis is the most sought-after cultivar in Perlis since it is only available for a short period each year, from the middle of April to the middle of June (Farook et al., 2012). This situation has led to a substantial rise in demand for this fruit during its harvesting season. Nevertheless, Harumanis growers have certain limitations in securing an adequate supply of these fruits, resulting in their elevated market value.

Table 1 shows the statistics of Harumanis mango in Perlis from 2019 until 2022 (Department of Statistics Malaysia Perlis, 2024). The table reveals significant trends in the cultivation and yield of this premium mango variety. It can be seen that the number of Harumanis growers has shown a notable increase from 1,292 in 2019 to 3,247 in 2022. This growth indicates a rising interest and investment in Harumanis cultivation, likely driven by the Harumanis premium market value and consumer demand. Despite the increase in the number of Harumanis growers, the data reveals fluctuations in trends in both the planted area and harvested area over the years. The total planted areas have decreased from 2222.0 Ha in 2019 to 1716.6 Ha in 2022, with a significant drop observed between 2019 and 2021. This decline may reflect challenges in land availability, climatic conditions, and the availability of agricultural inputs. Similarly, the harvested areas have also experienced a decline from 1850.6 Ha in 2019 to 1698.9 Ha in 2022. Over time, the reduction of the harvested areas suggests that not all planted areas produce fruits or that certain Harumanis farms may have been taken out of production due to various factors such as disease or unfavourable growing conditions. The total production of Harumanis mangoes has seen a marked decrease from 2019 to 2022, a reduction of approximately 60 per cent. The significant drop in production can be attributed to several potential factors such as extreme weather conditions, which affected the flowering process of Harumanis.

**Table 1: Statistics of Harumanis mango in Perlis for 2019 until 2022**

Year	2019	2020	2021	2022
No. of Harumanis growers	1292	1918	2026	3247
Planted Area (Ha)	2222.0	1465.5	1045.7	1716.6
Harvested Area (Ha)	1850.6	1060.0	1016.8	1698.9
Total Production (Metric Tonne)	4255.0	2121.0	1894.6	1698.9

Source: Department of Statistics Malaysia, Perlis, (2020)

Up to now, Harumanis growers have tried to increase production to meet high domestic and international demand. Coupled with the rise in population growth trends, the demand and supply seem to fluctuate every year during the production season. The production of Harumanis mostly depends on the weather conditions, hence the production is uncertain. Due to the unpredictable weather conditions and the spike in production cost, the price of Harumanis has increased, resulting in an abundance of Harumanis in the market. As consumers refuse to pay a high price, the demand for Harumanis has decreased. However, consumer demands keep changing. A high demand sometimes results in an insufficient supply of the Harumanis. The inconsistency in the demand and supply of the Harumanis has a huge effect on the producers, especially as it can reduce their profit margin. The problems arise when the supply exceeds the demand, which is a dumping issue. Previous studies stated that dumping of Harumanis mango can affect the growers' income and losses (Mustafa & Razli, 2022).

Popular as the most expensive mangoes in Malaysia, the premium price of RM30-45 per kilogram may discourage consumers (Muhamad, Ruslan, Ibrahim, Sali and Ismail, 2021) especially given the current economic situation characterised by high living costs and inflation, which leads consumers to be more discerning about their expenditures. Additionally, a shift in consumer purchase behaviour, driven by these economic challenges, impacts their willingness to purchase luxury items like Harumanis, even during the peak season. Despite the annual availability of Harumanis and its strong demand during the season, the premium price does not necessarily guarantee increased sales, as consumers remain cautious about their expenditures. Nevertheless, for Harumanis lovers and some groups of consumers, a high price is not the main barrier in getting this mango because of their availability once a year. The evolution of consumer purchasing behaviour has compelled growers to adapt their marketing strategies to better promote Harumanis. The advancement in technology is no longer a reason for consumers outside the state of Perlis to face difficulty in getting Harumanis. It has also been marketed in both physical stores and online platforms to increase the place's utility. This expansion in distribution channels has made the mango more widely available.

Although there are extensive promotional efforts aimed at encouraging consumers to purchase Harumanis, the limited seasonal availability of Harumanis means that excessive marketing may not be necessary to stimulate interest. Producers and government agencies have implemented various initiatives to enhance consumers' interest, such as improving their field maintenance and postharvest management practices to ensure high-quality mango. Additionally, establishing a fixed floor price aims to make Harumanis more affordable for a broader audience. Despite these efforts, there remains no definitive reason compelling consumers to choose Harumanis over other options (Sani, Abbas, Jaafar & Ghaffar, 2018). Growers are forced to compete with one another by offering better products and services to attract consumers to purchase them. This is because customers are becoming extremely selective nowadays. Consumers nowadays are planning to reduce their overall spending and be more selective in the products they buy. It is expected that consumers tend to spend more money on essentials. Growers or retailers should recognize their target customer's understanding, preferences, and perceptions. Knowing this will help growers to select the most appropriate strategies to attract the consumer's intention to purchase Harumanis. Growers should pay attention to the concept of marketing mix strategies to match the expectations of consumers as well as influence consumers' intention to purchase Harumanis.

Previously, many Harumanis growers used a conventional method to market their Harumanis. They focus on marketing their mango through expos, carnivals, and growers' markets and deliver directly to customers. This only attracts a limited number of consumers to purchase and the market expansion becomes restricted. The findings on marketing mix strategies have demonstrated that these four elements (product, price, place and

promotion) have a positive relationship towards consumers' purchase intentions, and price was found to be the most significant factor influencing consumer purchase decisions (Kotler & Keller, 2016). The interplay between product, price, place and promotion strategies highlights the complexities faced by Harumanis growers in promoting this mango effectively. Addressing these challenges will be essential in sustaining the market for Harumanis in an increasingly competitive landscape. Hence this paper aims to investigate the effect of the marketing mix (product, price, place, and promotion) on consumers' intention to purchase Harumanis mango in Perlis.

## 2. Literature Review

**Consumer Purchase Intention:** According to Kotler and Keller (2016), customers' purchasing behaviour refers to their actions while deciding to purchase a product that fits their needs. It comprises the mental, social, and physical acts of a potential buyer. Consumer purchasing behaviour is dynamic because each consumer reacts differently and is unique, and it is tied to the individual's goals, preferences, and aspirations. In general, consumers are said to go through five stages of the purchase process, including need recognition, information search, alternative comparison, purchase implementation, and lastly, post-purchase.

### Effects of Marketing Mix on Consumer Purchase Intention

The marketing mix may be utilized as a tactical approach to fulfil market demands. Both internal and external influences are included in the marketing mix. Government, competition, the environment, and technology are examples of external influences, while price, product, promotion, and place of distribution channels are examples of internal elements. The price, product, promotion, and place or distribution channel are internal elements that producers or marketers may manage. To raise customer interest in making a purchase, these elements are integrated into a marketing strategy. The marketing mix has an impact on consumers' choices. Istiqomatin, Setiadi and Ekowati (2021) stated that this is because if the customers choose to make a purchase, the marketing mix strategy's goals of boosting sales volume and profitability will be fulfilled.

**Product Strategy:** Product is the most important element of the marketing mix. Without products, other elements of the marketing mix have no relevance. Product quality, standard, grade, brand, packaging and labels are part of the product dimension (Deeksha & Sunita, 2018). Various methods have been attempted by growers to maintain the quality and increase the quantity of Harumanis. Premium and a good grade Harumanis are usually sold at higher market prices, reflecting a premium fruit itself. Harumanis is an oblong-shaped mango with a prominent beak, and green and glossy skin colour. This fruit will turn yellowish-green when it ripens. The fruit weights ranged between 300 and 650 grams. Harumanis has a nice colour, sweetness, high-quality fruit, and a pleasant scent, making it a great choice for the domestic and international market (Musa et al., 2010). This fruit also has micronutrients, vitamins, and other phytochemicals, plus a significant nutritional value as an excellent source of minerals, vitamins A, B, and C, making Harumanis ranked sixth globally in terms of output and the second-most-traded tropical fruit. Consumers always want to be completely satisfied with the products or services that they purchase. Customer satisfaction ratings after the use of the items will determine whether or not a company delivers quality services, since higher levels of quality result in higher levels of customer contentment. Based on the research by Yaseen, Mehdi, Somogyi and Ahmad (2016), they stated that from the standpoint of customers, the most important strategic objective to purchase is a concern for the quality of fresh products. Quality will influence consumers to pay a premium price for fresh fruit, hence its significance.

A previous study done by Badar Ariyawardana and Collins (2016), stated that the consumers of Harumanis preferred their quality, freshness, sweet taste, undamaged, and unblemished skin as the most important attributes when buying mangoes. In a different study by Yaseen, Mehdi, Somogyi and Ahmad (2016), a quality attribute and consumer willingness to pay a premium price for mango as shown in Table 2. The freshness and fruit size ranked first and second for the quantity attributes concerned by the consumer to purchase mangoes with mean scores of 81.59 and 79.44, respectively. It is then followed by fruit color, sometimes used as an indicator of a good quantity of fruit. Meanwhile, firmness ranked last and became the least important criterion for quality attributes to affect consumers to purchase.

**Table 2: A quality attribute and consumer willingness to pay for a premium price for mango**

Quality attribute	Mean Score	S.D.	% age of Respondent Willing to Pay a Premium
Freshness	81.59	10.95	76
Fruit size	79.44	16.47	72
Fruit color	76.37	14.69	62
Sweetness	73.94	13.32	89
Chemical-free	72.60	2.84	45
Firmness	69.56	11.30	81

Source: Yaseen et al. 2016

Consumers praised the Harumanis as the king of mangoes and their favourite of all. Mangoes are popular among consumers mostly because of their taste, which they regard as delicious, unique, and unparalleled. Other justifications for enjoying mangoes were their nutritional value and seasonal availability. Mango consumption was popular among consumers because they thought it provided high levels of nourishment and energy. They believed that a good-grade mango should be healthy and that it should not be either overripe or underripe. Customers praised the Harumanis fruit for being the greatest and tastiest owing to its flavour, scent, and accessibility. According to a customer, the Harumanis fruit has a unique scent that can be smelt throughout the whole vehicle if it is placed inside (Sani, Abbas, Jaafar & Ghaffar, 2018).

**Price Strategy:** The other marketing mix variable, namely price, affects consumers' intention to purchase Harumanis mango, necessitating a price-focused marketing strategy (Astuti et al. 2015). The pricing strategy for Harumanis marketing should take into account three factors: cost, competition, and demand. In determining the price of Harumanis, producers should consider the cost involved, or otherwise, profits might not be made. If the producers believe that customers are more likely to purchase Harumanis at their competitors' prices, they should base the price of Harumanis on those prices as well. Since the price of Harumanis can have an impact on demand, the producer should take demand into account when setting the price of Harumanis. The strategies are to follow competitor pricing to avoid unfair competition, odd pricing to impress price-sensitive consumers, discount pricing, which is done when the producer has a high level of Harumanis inventory, and promotion (Sabri & Najwan Ali, 2021). Another study by Yaseen, Mehdi, Somogyi and Ahmad (2016) reveals that customers are more willing to pay a premium price when they experience sweetness, chemicals free, and aroma in mangoes. The premium price of mango is not a factor that discourages consumers from paying for it when they have a good experience and credence attributes. The consumer also stated a readiness to spend more money because they want to consume high-quality mangoes. The study confirmed that the high price of premium mangoes such as Harumanis would not be a hindrance factor for them to pay. While Aswini, Ashok, Hemalatha and Balasubramaniam (2021) highlighted that consumers often perceive the price as an indicator of quality and value, especially when there is a significant price variation, leading to a price-perceived quality association. Consumers are more willing to make purchases when the quality of offered fruits aligns with the prices set by marketers.

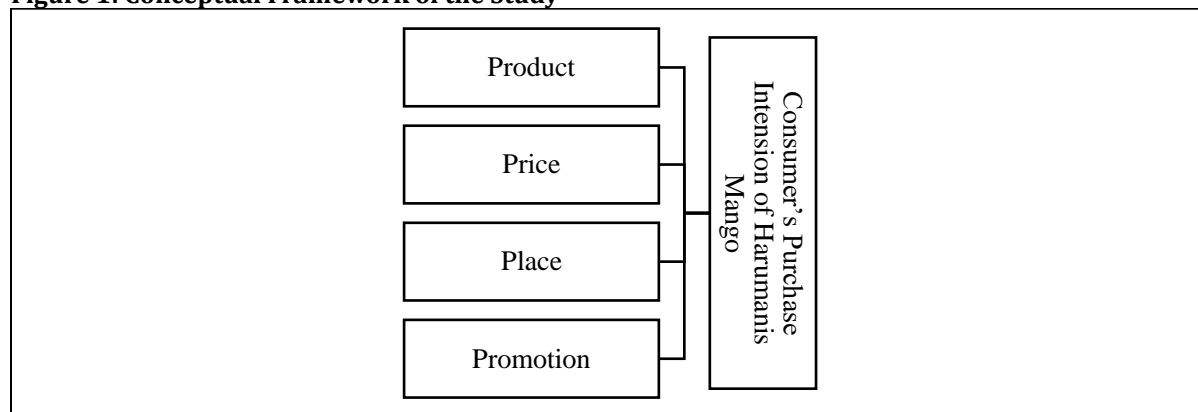
**Place Strategy:** Place is the main part associated with the distribution of goods from producers to consumers (Effendi, Najib & Brandoko, 2019). The place is considered as the location where the fruit and products can be purchased is an important factor in maximizing sales, a location or a distribution route is the connection between the fruit and the consumer. A market is a physical or online location where people are interested in purchasing fruit and products, as well as product and fruit-related information. The best place to sell products impacts how quickly, easily, and affordably customers may obtain the goods they want. The strategy here is to choose sales locations that emphasize the aspects of fruit and product distribution channels that serve or deliver products to target consumers. A successful marketing plan depends on providing the appropriate fruits and products at the appropriate time, place, and location. Due to some roadside markets' highly convenient facilities, including the ability for customers to purchase high-quality fruit of the Harumanis variety, producers generally offer the Harumanis in a convenient place such as a fruit stall located near the main road. To attract people travelling by road to buy Harumanis fruit, roadside stalls are typically placed close to a public road. Positive rates or offers are regularly advertised on roadside signage. Roadside markets often operate for longer seasons and provide a greater selection of fruits, including mangoes, for the benefit of customers. Marques Torres, Behe Langenhoven and Boas (2021) in their studies, found that driven by the price and convenience of

the marketplace, the distance of the marketplace place is preferred by the consumers to purchase fruits. They suggest that those who purchase at independent grocery stores such as the fruit stall are willing to pay premium prices as long as they have access to speciality fresh fruits. Meanwhile, Muhamad, Ruslan, Ibrahim, Sali and Ismail (2021) conducted a study in Melaka revealing that consumers preferred traditional retail formats rather than modern traditional retail formats when purchasing local fruits. The strategic location of the traditional retail sometimes makes it easy for consumers to go and buy the fruits.

**Promotion Strategy:** One of the most important aspects of marketing success is promotion. Even if a product is excellent, a consumer will never purchase it if he has not heard of it and is not persuaded that it would be beneficial. Promotion is a crucial part of marketing because it can increase brand recognition and sales. Chaharsoughi and Yasory (2012) stated that sales promotions are frequently used to advertise products to consumers. Effects from advertising or other campaigns do influence the consumer to purchase fresh fruit. Different forms of promotion include public relations, advertising, sales promotion, television commercials, radio commercials, print ads, and internet ads. Furthermore, Kotler and Keller (2016) stated that word-of-mouth advertising is a form of product marketing. Word of mouth is an informal method of product promotion used by regular people. Word of mouth can also circulate on the internet. If harnessed effectively, it has the potential to be one of the most important resources for increasing online earnings. Social networks are a very helpful tool in connecting with potential customers and building loyalty. In the promotion, producers can also create digital spaces for fruit and products. For example, an online fruit catalogue not only enables producers to sell at any time from any location but also serves as a means of attracting consumers to purchase. Additionally, producers may quickly share it through conversations and networks, so that purchasing is only a click away. Local radio stations and newspapers may be cheap sources of marketing and advertising that can provide profitable benefits. For producers who sell their goods at growers' markets or on-the-side-of-the-road stands, product packaging and presentation are also important (Malau, 2020). In addition, the publicity and sales promotions were found to be the significant factors to stimulate consumers' demand for the goods. A good skills and performance by the sales persons plays an important role to persuade a potential consumer to buy the product (Segun Ogunmuyiwa, 2022).

Based on the above-reviewed literature, this study aims to gain an insight and better understanding of the effect of marketing mix strategies; product, price, place, and promotion toward the consumer's purchase intention of Harumanis mango. The proposed conceptual framework is depicted in Figure 1.

**Figure 1: Conceptual Framework of the Study**



### 3. Methodology

The study employed a survey research design of the descriptive type and data were gathered using a primary data method. A non-probability sampling method was used to acquire a decent response rate. Convenience sampling was employed to gather feedback from the consumers who have experience purchasing and eating Harumanis mango from Peninsular Malaysia and East Malaysia. The sample size of the study was determined by using a Krejcie and Morgan (1970) table and a recommended 384 respondents were required. A set of questionnaires was distributed using convenience sampling methods and completed questionnaires were only



returned by 310 respondents. The data was collected via two methods, namely online data collection via Google Forms and manual data collection via a face-to-face approach. The development of the questionnaire has been based on the previous studies in the study area and it consists of four sections. The demographic information on the respondents was asked in Section A, while Section B consists of questions about the purchase behaviour of Harumanis. Questions related to consumers' purchase intention of Harumanis were covered in Section C and the effect of marketing mix towards consumers' intention to purchase Harumanis mango was asked in Section D. The scale used in the instrument of study is the Likert scale. The Likert scale is a scale used to measure the attitudes, opinions and perceptions of a person or group of people about social phenomena. The data was processed using a Likert scale with answers to questions, namely a scale of 1-5 values. The value in question is the score on the respondent's answer. In this study, the data was analyzed by using descriptive analysis and multiple linear regression. The descriptive analysis was conducted to give a clear overview of the respondent's profile while the multiple linear regression was to determine the relationship of the market mix elements toward consumers' intention to purchase Harumanis.

#### 4. Results and Discussion

**Demographic Profile of Respondents:** The distribution of the respondents' profile has been summarized in Table 3. The finding of this study reveals that 198 respondents are male (63.87%) and 112 respondents are female. It can be seen that the majority of the respondents' ages are young and aged between 18-27 years, accounting for 63.5%. More than half (61.6%) of the respondents are single and 116 out of 310 are married and the rest are divorced. The occupations of the respondents varied from working in the government sector, the private sector and others. Students are the highest group of respondents in the study with 147 respondents or 47.4%. Meanwhile, those working as a government servant and in the private sector recorded 69 and 65 respondents, respectively. Most of the respondents who participated in the study were Malay, occupied 285 or 91.9%. The findings of the study also show that the level of respondents' education is encouraging. It shows that almost 80% of the respondents have reached the tertiary educational level with at least a certificate and diploma qualification. The distribution of income by the respondents is varied and close to half with 44% of them having earned less than RM1000 a month. About 27.4% of them have a monthly income of RM1001-3000, while 89 of them earn more than RM3000 per month.

**Table 3: Summary of the demographic profile of respondents**

Demographic Profiles	Response categories	Frequency (N=310)	Percentage (%)
Gender	Male	112	36.1
	Female	198	63.9
Age	18-27	197	63.5
	28-37	57	18.4
	38-47	33	10.6
	48-57	20	6.5
	58-67	3	1.0
Marital status	Marriage	116	37.4
	Single	191	61.6
	Divorced	3	1.0
Occupation	Government	69	22.3
	Private sector	65	21.0
	Retired	9	2.9
	Students	147	47.4
	Business	10	3.2
	Other	10	3.2
Race	Malay	285	91.9
	Chinese	18	5.8

	Indian	4	1.3
	Others	3	1.0
Educational level	Primary education	34	11.0
	Secondary education	28	9.0
	Tertiary education	247	79.7
	Informal education	1	0.3
Monthly income	Less than RM1000	136	43.9
	RM1001 – RM3000	85	27.4
	RM3001 – RM5000	44	14.2
	RM5001 and above	45	14.5

**Consumer Purchase Behavior of Harumanis Mango:** The consumer purchase behaviour of Harumanis mango has been analyzed and comprises four parts, namely the quantity purchased of Harumanis mango, frequency of buying Harumanis mangoes (during the season), total amount of money spent and the location of respondents purchasing Harumanis mango. The quantity of Harumanis mango (kg) purchased by the consumers is shown in Table 4. It can be seen that a large number of respondents did purchase Harumanis with a quantity below 10 kg for each season, with 86.1%. While 35 respondents purchased 10-20kg, and the lowest number of respondents purchased a Harumanis for a quantity of more than 21 kg, accounted for 2.6%. Generally, consumers purchase at low quantities due to the price of Harumanis, which is considered expensive. Hence, it reduces a consumer's purchasing power to buy a large quantity of Harumanis.

**Table 4: The quantity of Harumanis mango (kg) purchased**

		Frequency	Percent
Valid	< 10	267	86.1
	10-20 KG	35	11.3
	21-30 KG	8	2.6
	Total	310	100.0

The study also identified the frequency of purchase of Harumanis during the season. Table 5 shows the frequency of purchase, which is categorized into four frequencies: once a week, once in every two weeks, once in a season and once uncertain. As we can see, the number of respondents who purchased Harumanis with uncertainty frequency accounted for 162 respondents (52.3%), while a total of 123 respondents (39.7%) did purchase Harumanis once in a season. This is because some consumers just want to have at least one experience eating Harumanis, resulting in them purchasing it one time only. Only one respondent purchased Harumanis once in two weeks. Furthermore, 24 respondents (7.7%) reported that they had purchased Harumanis once a week during the season. However, since the quantity of purchases is generally in a small amount, respondents have to repeat making purchases.

**Table 5: The number of respondents who purchase Harumanis mango**

		Frequency	Percent
Valid	Once a week	24	7.7
	Once every two weeks	1	.3
	Once in season	123	39.7
	Uncertainty	162	52.3
	Total	310	100.0

The total amount of money that respondents spent each time they buy Harumanis mango in Malaysia is shown in Table 6. Majority of the respondents paid less than RM 200 when purchasing Harumanis mango, with 263 respondents (84.8%). It is then followed by 12.3% or 38 respondents who spent between RM201 and RM300 on Harumanis mango. Only seven respondents spent money between RM301 and RM400 each time they purchased the mango. The lowest number of respondents spent money on RM401–RM500 and RM500 and above, which is 3% with 1 respondent respectively. The majority of respondents spent less than RM 200 might

be due to the price of Harumanis, which is quite expensive. Hence, consumers spent less to purchase it. Plus, some of the consumers just want to experience consuming Harumanis during the season. The respondents who spent more than RM500 to purchase Harumanis stated the lowest percentages because some of the consumers purchase in bulk and resell it at other places.

**Table 6: Total amount of spend money to purchase Harumanis mango**

The total amount of money	No. of respondents	Percentage (%)
Below RM 200	263	84.8
RM201 – RM300	38	12.3
RM301 - RM400	7	2.3
RM401- RM 500	1	0.3
RM501 and above	1	0.3

Place is an element that must be emphasized in measuring customer satisfaction because it is a dominant factor and the most important thing about place in marketing. Therefore, the marketing place for Harumanis was found in a strategic location that is accessible by buyers. Currently, growers have used various places to sell their Harumanis, including selling in physical stores and online store platforms. To expand their market and widen their target consumer, growers market the Harumanis in various places to make it accessible to consumers. Table 7 shows the location of respondents in purchasing Harumanis mango. The highest number of respondents (108 respondents) stated that they had to purchase Harumanis at Harumanis farms and the fruit stall (32.9%). According to the consumers, they preferred to purchase directly from the farm because they could get a high quality and the fruit was freshly harvested on the farm. Respondents also got an experience to harvest Harumanis mango and can choose fresh fruit by themselves. Respondents also preferred to purchase at the fruit stalls because they can purchase a large quantity of Harumanis mango and many other fruits available. Plus, the fruit stall is located near the main road, thus making it easier for consumers to purchase Harumanis mango. The growers' market is also one of the popular places for the consumer to purchase Harumanis, accounting for 27.7%. Besides that, the consumers also choose to buy Harumanis at the Federal Agricultural Marketing Authority (FAMA) or Department of Agriculture (DOA) as they believe these agencies sell good quality Harumanis. A total of 41 respondents claimed that they purchased the fruits at the collection centre. In addition, only 11 out of 310 respondents (3.5%) had purchased Harumanis in other places such as in the online platform and by ordering from their friends or relatives who stayed in Perlis.

**Table 7: Location of the respondents to purchase Harumanis mango**

Location	Frequency	Percent
Harumanis farm	108	34.8
Collection centre	41	13.2
Supermarket/grocery store	59	19.0
Growers market	86	27.7
Fruits stall	102	32.9
FAMA/Department of Agriculture	45	14.5
Others (Friend, Online)	11	3.5

**Discussion of consumer's purchase intention of Harumanis mango:** The effectiveness of the marketing mix elements and consumers' intention to purchase Harumanis mango in Malaysia has been analyzed using a multiple regression analysis. Regression analysis was used to estimate the effect of product, price, promotion, and place on consumers' intention to purchase Harumanis mango. Regression analysis is a method that allows us to study relationships based on linear equations not only between one variable and another variable but also between one variable and several variables (Hair et al. 2010). Regression analysis is used to determine the significant relationship between dependent variables and independent variables. It also can be applied to test the hypothesis, and the result explains whether the hypothesis was rejected or accepted. Table 8 shows the result of the regression analysis between the dependent variable, consumers' intention to purchase Harumanis mango in Malaysia and the independent variables which are product, price, place and promotion.



**Table 8: The effect of the marketing mix in influencing consumer intention to purchase Harumanis mango**

Independent variable	$\beta$	t	p-value
(Constant)		3.013	.003
Product	.628	11.741	.000*
Price	.066	1.278	.202
Place	.128	2.289	.023*
Promotion	.021	.387	.699
R <sup>2</sup>	0.608		
Adjusted R <sup>2</sup>	0.603		
F-value	118.154		

Dependent variable: Consumer preference purchases Harumanis mango

Table 8 shows that only two variables, namely product and place, are positive and have a significantly influential effect on consumers' intention to purchase Harumanis, while the other two variables: price and promotion reveal insignificant results in influencing consumers' intention to purchase Harumanis. The regression result also indicates the R<sup>2</sup> value is 0.608, meaning that 60.8% of the independent variables explained the consumer's intention to purchase Harumanis mango. The table shows that two of the variables analyzed are very significant predictors of consumers' intention to purchase Harumanis mango. Product and places affect consumers' intention to purchase Harumanis mango, and two other variables are insignificant, which are price and promotion. The regression result shows that  $\beta$  value for the product was ( $\beta= 0.628$ ,  $p = 0.00$ ), indicating that the product is positive and has significant influences on the consumer's intention to purchase Harumanis. When the product of Harumanis increases, the consumer's intention to purchase Harumanis mango will increase by 0.628. The main criterion of the product that influenced consumers' intention to purchase Harumanis mangos was quality. Well-known as a premium fruit, Harumanis has always been in high demand during its season because this fruit is only available once a year and high quality is preferred. Although Harumanis have been sold at a premium price, an average of RM30-35 per kilogram, consumers are still willing and can afford to pay for this amount. The unique texture of the flesh with an orange-yellowish colour, in addition to the sweet aroma of the fruits, makes consumers excited to get it once the fruit is available in the market. The finding is similar to Safitri et al., (2023) where the product has a substantial impact on purchase decisions and intention to purchase. The found product is positive and has significantly influenced consumers' intention to purchase when the product offered improves in terms of quality and attractiveness. Plus, the consumers are concerned about the product quality, quantity and perceived value based on the purchased brand. They suggest that it is important for producers and sellers to increase the product quality, leading to a higher likelihood of consumers purchasing.

Next, the variable place indicated ( $\beta= 0.128$ ,  $p = 0.023$ ). It shows that place has a positive significance at 5 per cent in influencing consumers' intention to purchase Harumanis. An increase in place element will increase the consumer's intention to purchase Harumanis by 0.128 units. There are many places used to market Harumanis. Nowadays, growers not only sell Harumanis in physical stores such as in fruit stalls and farmer's markets, but with the advanced use of technology, they have made Harumanis marketed on online platforms. Among the popular platforms used to market the Harumanis are Facebook, Shoppe, and Tiktok applications. By using these platforms and applications, the market of Harumanis becomes wider and consumers from all over the world can purchase it. Unfortunately, due to quality considerations, these fruits can only be shipped out within Malaysia. Easy access to the location, for example, located near the main road, has increased the consumer attraction to purchase it. This finding is in line with Marques et al., (2021) where consumers prefer to shop at the nearby convenience store, which is accessible for them to go and buy. On the contrary, Sari et al. (2024) reveal that place has a negative contribution to purchase intention. They found that consumers may not pay attention to the channels or technique of acquisition of goods, resulting in the place being insignificant in influencing purchase intention.

The other two independent variables that show insignificance in influencing consumers' intention to purchase Harumanis mango are price ( $\beta= 0.66$ ,  $p = 0.202$ ) and promotion. ( $\beta= 0.21$ ,  $p = 0.699$ ). Harumanis sold in the market were charged a different price based on the grade of the fruit. The premium and AA grades will be sold at a price of RM30 and above, while grades B and C usually can be purchased at prices below RM25 per kilogram.

The high price of Harumanis makes this fruit less demanded by consumers and less preferred to purchase. The current economic condition, coupled with a high cost of living, as well as high inflation, has reduced the consumers' purchasing power. Due to that, they preferred to spend their money on the important one only. While the promotion is insignificant in influencing consumers' intention to purchase Harumanis, it might be due to less effective promotional strategies used by the sellers. The advanced use of technology enables sellers to advertise their fruits in social media applications such as Facebook, Shopee and Tiktok. These applications have been used by the majority of young generations compared to senior citizens. The use of offline methods to promote their Harumanis has been used less by the sellers, such as using a banner, pamphlets and flyers. This advertising can be applied to attract consumers to purchase the Harumanis, especially among local consumers. Communication through promotion should be planned by the insider to ensure that consistent information about their products is successfully delivered and promoted in the media that tend to be used by consumers in the target market.

## 5. Conclusion and Recommendations

In conclusion, the product and place elements of the marketing mix were found to be positive and are significant in influencing consumers' purchase intention for Harumanis mango in Perlis, whereas the other two elements (price and promotion) were insignificant. Based on the results of the study, efforts to develop marketing strategies for Harumanis mango are as follows:

- Product – product has a positive and significantly influences consumers' intention to purchase. Hence, Harumanis growers should improve the production of Harumanis as well as trying out various methods to produce Harumanis during the off-season. With the latest technology, coupled with research and development in the field, it is possible to produce during the off-season.
- Price – price elements found to be insignificant in influencing consumers' purchase intention for Harumanis. This might be because the mango has been well-known as a premium mango, hence it does not have an impact on consumers' purchase intention. The government should control the selling price of the Harumais to ensure it sells at an affordable price and the growers still can earn a profit.
- Place – place has positive and is significant in influencing consumers' intention to purchase. The use of digital marketing instead of focusing on conventional methods shows a positive result in affecting consumers' intention to purchase Harumanis. Online platforms such as Shopee, Facebook, TikTok can be good platforms to reach a huge number of consumers.
- Promotion – Promotion is insignificant in influencing consumers' intention to purchase Harumanis. Harumanis growers should use a variety of promotional strategies such as discounts, free samples or testers, provide a money-back guarantee to consumers, as well as limited-time offers that could encourage consumers to grab the opportunities and make them do unplanned shopping.

The implications of this study suggest that the government should revise the ceiling price of Harumanis mango as the current market price of this mango is considered high and intensive promotional activity should be properly strategized to attract more consumers to purchase Harumanis.

**Ethical Consideration:** This study has obtained ethics approval from the UiTM Research Ethics Committee (reference number 539/2023).

**Conflict of Interest:** The authors declare no conflict of interest.

**Acknowledgement:** We would like to thank our colleagues at Universiti Teknologi MARA for their helpful feedback and support.

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