

# Factors Influencing Purchase Decision of Jackfruit Products in Thiruvananthapuram District

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## ABSTRACT

**Aim:** Jackfruit is popularly known as a poor man's fruit in the eastern and southern parts of India. In India, Kerala is the largest jackfruit-producing state. Beyond its nutritional benefits, jackfruit has received attention for its significant environmental and economic benefits, which arise from its numerous culinary applications and potential as a sustainable food supply. Understanding the factors influencing consumer purchase decisions for jackfruit products is becoming increasingly important as the global perspective on food choices moves towards healthier and more sustainable options. Considering this, the study aimed to analyse different factors influencing the purchase decision of jackfruit products in the Thiruvananthapuram district.

**Methodology:** Primary data were collected from the consumers residing in urban centres of Thiruvananthapuram district who had consumed at least one selected product. A purposive sampling method was employed to select 30 consumers for each product category, namely jackfruit chips, jackfruit ice cream, jackfruit flour, and jackfruit varatty. Secondary data were gathered from government reports, publications, and journals. Statistical tools like the Index method, Kruskal-Wallis test, and Mann-Whitney test were used for the analysis. The study was conducted during the period from August to September 2023.

**Results:** The taste and quality of the product emerged as common variables significantly influencing the four consumer groups in their purchase decisions. Factors like brand availability, quality certification, brand image, and social media were the factors not influencing consumers, except for jackfruit ice cream, which stands out due to additional promotional activities compared to other products. The results of the Kruskal-Wallis and Mann-Whitney test highlight significant differences among consumer groups regarding variables such as taste, ~~convenient~~ convenience to use, ~~convenient~~ convenience to cook, and ~~convenient~~ convenience to travel.

**Conclusion:** The influence of each variable on selected products showed different levels of influence. The taste and quality of the product emerge as common variables significantly influencing consumers in their purchase decisions. The results of the Kruskal-Wallis and Mann-Whitney test showed that the effects of these factors on each consumer group were not consistent.

**Keywords:** Jackfruit chips, jackfruit ice cream, jackfruit flour, jackfruit varatty, factors influencing a purchase decision, Index method, Kruskal-Wallis test, and Mann-Whitney test.

## 1. INTRODUCTION

The jackfruit, botanically known as *Artocarpus heterophyllus* Lam, is native to southern India and Southeast Asia and is the biggest tree-borne fruit in the Moraceae family. India is the world's largest producer of jackfruit, producing a remarkable 3301.04 thousand tonnes in 2021–2022 (MoAFW,

2022). Kerala took the lead in the industry with a production of 1467.11 thousand metric tonnes of jackfruit during this period (MoAFW, 2022). The largest market for jackfruit exports from India was the United Arab Emirates, which imported jackfruits worth 0.37 USD, with a market share of 16.03 ~~per cent~~percent, followed by the United Kingdom (13.91 ~~per cent~~percent), Nepal (11.3 ~~per cent~~percent), Thailand (10.43 ~~per cent~~percent), Vietnam (9.57 ~~per cent~~percent) (CGMFP Federation, 2022). During 2018-19, Idukki (61 million numbers) ~~is was~~the largest jackfruit-producing district in Kerala, followed by Kannur (22 million number) and Thiruvananthapuram (21 million number) (GOK, 2019).Jackfruit is popularly known as a poor man's fruit in the eastern and southern parts of India. On 21st March 2018, the jackfruit was declared as Kerala's state fruit. Which also highlighted the fruit's huge impact on Kerala culture. It also represents abundance, and energy, and is integral to the state's identity. After the declaration of jackfruit as the state fruit by the Government of Kerala, a few numbers of units started value addition in jackfruit. However, despite these efforts, the market remains largely unorganized, and most people are not aware of the value-added products of jackfruit and their associated health benefits. In this situation the study aims to uncover specific factors that influence consumers' purchase decisions for jackfruit products, offering information that can be used to create targeted awareness campaigns and strategic interventions.

## 2. MATERIALS AND METHODS

Primary data were collected from urban consumers of Thiruvananthapuram district. For the study, only consumers consuming at least one selected product were included. Thirty consumers were selected for each value-added product using the purposive sampling method. Thus, the number of sample respondents was a minimum of 30 (in case one respondent was consuming all selected value-added jackfruit products) and a maximum of 120 (in case one respondent was consuming only one of the selected value-added jackfruit products). Data were analysed using statistical tools like the Index method, Kruskal Wallis test, and Mann-Whitney test. The study was conducted during the period from August to September 2023.

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## 3. RESULT AND DISCUSSIONS

### 3.1 Level of influence of factors on the purchase decision of Jackfruit Products

Numerous factors influence consumers' decisions to purchase Jackfruit products. It helps to customize marketing efforts and improve the whole experience of purchasing and consuming jackfruit products by finding out which variables are most important to consumers. For this data were collected on a 5-point Likert scale. The index was constructed by giving a weightage of 5 points from 5 to 1 (very highly influencing to not influencing).

Table 1: Level of influence of factors on purchase decision of Jackfruit Products

Statements	Level of Influence (VHI- Very Highly Influencing, HI- Highly Influencing, AI- Average Influencing, LI- Less Influencing, NI- Not

	Influencing)			
	Jackfruit chips	Jackfruit Ice cream	Jackfruit Flour	Jackfruit Varatty
Affordability of price	AI	VHI	VHI	AI
Awareness of the product	HI	VHI	VHI	AI
Culture and tradition	VHI	AI	VHI	VHI
Opinions of friends	HI	VHI	AI	HI
Promotional factors	NI	LI	AI	NI
Taste	VHI	VHI	VHI	VHI
Quality	VHI	VHI	VHI	VHI
Packaging	AI	HI	AI	NI
Packaging size	VHI	HI	AI	HI
Shelf-life	AI	NI	VHI	AI
Convenient to use	VHI	AI	NI	VHI
Convenient to cook	NI	NI	AI	NI
Convenient to travel	VHI	NI	NI	HI
Personal values and beliefs	VHI	HI	VHI	VHI
Sociable nature of salesmen	HI	AI	AI	HI
Availability of product	VHI	HI	AI	HI
Availability of brand	NI	AI	NI	NI
Quality certification	NI	AI	NI	NI
Brand image	NI	AI	NI	NI
Social media influence	NI	LI	NI	NI
Product review and ratings	NI	LI	LI	LI
<b>Composite index /Total score</b>	<b>AI</b>	<b>AI</b>	<b>AI</b>	<b>AI</b>

Source: Compiled from primary data

Table 1 shows that culture, taste, quality, packaging size, convenient-convenience to use, convenient-convenience to travel, personal values and beliefs, and availability of product, were very highly influencing factors for consumers of jackfruit chips. This suggests that consumer preferences were deeply influenced by these factors while making purchase decisions. Promotional factors, convenient-convenience to cook of cooking, availability of brand, quality certification, brand image, social media influence, product review, and ratings were the factors that did not influence consumers, due to the absence of strong marketing initiatives and, absence of well-established brands in the jackfruit chips market. It was a ready-to-eat product, therefore convenient to cook did not influence them. Regarding consumers of jackfruit ice cream, factors such as price affordability, product awareness, opinions of friends, taste, and quality of the product were the very highly influencing factors indicating these were the most significant factor-factors that greatly influences-influence consumer preferences while making purchasing decisions. Shelf life, convenient-convenience to cook-cooking, and convenient-convenience to travel-traveling were the factors not influencing consumers because ice cream requires no cooking and is not convenient for travel.

For consumers of jackfruit flour, Price affordability, product awareness, culture and tradition, taste, quality, shelf-life, and personal values were the very highly influencing factors for purchasing jackfruit flour. Indicating that these factors have a significant impact on consumer decision-making. Consumers were more likely to

choose jackfruit flour when it is offered at a reasonable price, when it connects with their personal beliefs, and when it is offered with high quality and taste. It was found that certain factors were not influencing their purchase decisions. Factors such as [convenient-convenience](#) to use, [convenient-convenience](#) to travel, availability of the brand, quality certification, brand image, and social media influence were not influencing, due to the need for preparation before consumption, limited availability of brands, and lack of social media activities presence. Concerning consumers of jackfruit varatty, culture and tradition, taste, quality, [convenient-convenience](#) to use, and personal values were very highly influencing factors. Because of these factors, this traditional product was highly preferred by consumers. Consumers were not at all influenced by factors like promotional factors, packaging, convenience in cooking, brand availability, quality certification, brand image, and social media influence when deciding to purchase jackfruit varatty due to the lack of well-established brands, limited marketing activities, and consumers using varatty as a standalone product rather than as an ingredient in other preparations. The composite index indicates that when all variables were considered together, there was an average level of influence on consumer purchasing decisions for the selected jackfruit products.

### 3.2 Association Between Consumer Groups

The [KruskalWallisKruskal-Wallis](#) test is used to analyse the association between the groups of consumers towards each variable.

Table 2. Association Between Consumer Groups

Variables	H value	P value
Affordability of price	2.39	0.50
Awareness of the product	1.014	0.80
Culture and tradition	6.164	0.10
Opinions of friends/ relatives	3.123	0.37
Promotional factors	2.593	0.46
Taste	8.272*	0.04
Quality	1.932	0.59
Packaging	1.907	0.59
Packaging size	4.841	0.18
Shelf-life	5.168	0.16
Convenient to use	12.557*	0.01
Convenient to cook	46.643*	0.00
Convenient to travel	46.074*	0.00
Personal values and beliefs	3.099	0.38
<a href="#">Sociable</a> <a href="#">The sociable</a> nature of salesmen	2.285	0.52
Availability of product	5.41	0.14
Availability of brand	3.951	0.27
Quality certification	2.252	0.52
Brand image	5.896	0.12
Social media influence	6.452	0.09
Product review and ratings	2.607	0.46

Source: Compiled from primary data; Note: H-value – Chi-square, P-value- Asymptotic significance. \*

Significant at 5 % level.

Table 2 shows that factors such as taste, convenience to use, convenience to cooking, and convenience to travel vary significantly. For all other factors, there was an association between consumers, suggesting that these variables were influencing four selected products similarly.

### 3.3 Differences Among Consumer Group Pairs

The Mann-Whitney test was used to discover which specific product combinations exhibit significant differences. The components that show a significant difference in Kruskal-Wallis results were analysed using the Mann-Whitney test to determine which two independent groups significantly differed.

Table 3: Differences Among Consumer Group Pairs

Products	Taste		Convenient Convenience to use		Convenient Convenience to cook		Convenient Convenience to travel	
	H value	P value	H value	P value	H value	P value	H value	P value
JC&JI	435.5	0.776	320.5*	0.045	361.5	0.061	78.5*	0.000
JC&JF	318.5*	0.023	266.0*	0.005	95.5*	0.000	198.5*	0.000
JC&JV	450.0	1.000	433.0	0.788	150.5*	0.000	246.0*	0.001
JI&JF	331.0*	0.041	377.0	0.262	163.0*	0.000	232.0*	0.001
JI&JV	435.5	0.776	329.5	0.062	235.5*	0.001	134.5*	0.000
JF&JV	318.5*	0.023	264.0*	0.004	339.5	0.079	359.5	0.155

Source: Compiled from primary data; Note: JC-Jackfruit chips, JI- Jackfruit ice cream, JF- Jackfruit flour, JV- Jackfruit varatty; H-value – Test statistic, P-value- Asymptotic significance. \*Significant at 5 % level.

Regarding the variable taste, there was a significant difference in consumers' opinions between product pairs JC & JF, JI & JF, and JF & JV. This suggests that the factor 'taste' was not influencing consumers of these three pairs similarly in making a decision. For the variable convenient to use, there was a significant difference in consumer opinion between the combinations JC&JI, JC&JF, and JF&JV. The significant differences show that while making purchasing decisions, people consider the variable convenience to use differently. Because jackfruit flour and ice cream need to be prepared or refrigerated ~~in order to~~ be consumed. Regarding the variable convenient to cook, the four combinations such as JC&JF, JC&JV, JI&JF, and JI&JV showed a significant difference. Indicating that this variable was not influencing consumers in the same way. This difference was due to its various culinary applications, since flour and varatty were used for cooking purposes. In the case of convenience to travel, a significant difference was between the combinations JC&JI, JC&JF, JC&JV, JI&JF, and JI&JV. This suggests that there was no association among consumers of this pair. Because ice cream melts easily, it may not be suitable for travel, flour cannot be considered as a ready-to-use product, and varatty requires careful handling to maintain its taste, making it less convenient for travel.

#### 4. CONCLUSION

The influence of each variable on selected products showed different levels of influence. The taste and quality of the product emerge as common variables significantly influencing consumers in their purchase decisions. Brand availability, quality certification, brand image, and social media, on the other hand, had a poor impact, except for jackfruit ice cream, which stood out due to additional promotional efforts. Consumer choices were also influenced by product availability, the friendly attitude of salespeople, the opinions of friends, and package size to a certain extent. Enhancing consumer awareness is key to fostering purchase decisions. Targeted marketing initiatives across traditional and social media along with attractive marketing campaigns could effectively communicate the benefits of jackfruit products. Furthermore, Expanding the range of branded value-added jackfruit products and developing an effective distribution system across Kerala would improve accessibility, ensuring that a bigger customer base can easily acquire these products.

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