

Factors Influencing And Consumer Perception Towards Value Added Products In Farmer Producer Organization Of Erode District

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Abstract

Consumers in everyday life are concerned about their health, so it is prudent for everyone to consume chemical-free food. Nowadays, Farmers Producer Organization (FPO) is performing incredible activities. They use their processing unit to create value-added food products. They could use natural raw materials to produce value-added foods and sell them through their own retail stores. The objective of this investigation was to determine consumer perceptions of FPO value added food products as well as factors influencing and constraints faced by the FPO product purchases. The 60 respondents were collected and analyzed using Perceptions Mapping, Relative Importance Index and Garret Ranking. The analysis concluded that consumers' perceptions of FPO food products included price, quality, health, and taste, as well as factors such as good health, good quality, and product packaging. Higher price is a predominant constraint that faced by the consumer. FPOs that are well-developed and promoted must attract consumers to buy their products, as well as run more campaigns to attract customers. The government should take more initiatives to support and implement more schemes for developing FPOs.

Key Words: Farmer Producer Organization, Consumer Perception, Value added products, Perception Mapping, Good Quality, Relative Importance Index.

INTRODUCTION

Farmer Producer Organizations are collaborative actions that involve farmers in production, processing, marketing, and distribution. FPO value-added products are produced naturally by their processing unit, without the use of chemicals. Especially in this FPO the value-added products like jaggery, honey products like wise honey, amla honey, gulkandu. Millets likewise ragi biscuits, sorghum mittai, flour mix, pearl millet laddu, and etc., Oil products like ground nut oil, sesame oil, coconut oil etc.,

The millet value chain encounters several hurdles; yet, the establishment of primary processing facilities and the enhancement of value at the farmgate are essential for augmenting earnings for millet cultivators and Farmer Producer Organizations (Sangappa et al., 2023). FPO participation positively and significantly influences net returns, return on investment, and profit margins (Gurug et al., 2024). Farmer Producer Organizations significantly enhance farmers' lives by providing diverse services, including training, scientific agricultural techniques, and essential farming inputs (Sharma et al. 2023). Agricultural producers are excluded from the value enhancement of their produce. Farmers were solely involved in production, whilst the FPO undertook input provision, technical support, produce procurement, and wholesale distribution of value-added goods marketed as "DMillets". The retailers procured the product from the FPO and distributed it to the consumers (Gokul Vignesh et al., 2019). The organizational frameworks of Farmer Producer Companies are profoundly influenced by cooperative principles, however they are managed professionally to ensure economic viability. The Indian government must vigorously support these enterprises, since evidence suggests that FPOs advocate for their members' interests and can articulate their needs for agricultural services (Mohamad A Khan et al., 2020). Perceptual maps assist

companies in identifying patterns within complex data and showing critical and relevant information. To succeed in competitive markets, firms must do marketing research employing perceptual mapping to assess essential attributes of their brand, products, and services, while also focusing on consumer perception (Gigauri et al., 2019). Perceptual mapping is an essential marketing research tool employed in new product creation, advertising, product positioning, and several other marketing areas. Gigauri et al., 2019. The proficiency of the staff can significantly impact projects. Mamata Rajgor and colleagues, 2016. Relative index analysis was utilized to establish the hierarchical ordering of the criteria, based on the numerical scores of the identified criteria. The ranking study revealed that all characteristics were categorized as "high" or "high-medium" in significance for sustainable design and construction activities pertaining to green roads (Muhammad Rooshdi et al., 2018). The consumer must recognize the quality embedded in the package by the brand, which may be accomplished by several design aspects like color, form, imagery, material, and packaging (Srivastava et al., 2022). Consumer purchasing behaviors regarding organic food goods, which will assist organic sellers in formulating strategies and enhancing the organic food industry (Yilmaz 2023). FPO facing constraints were personal, operational, economic, infrastructural and marketing. Economic and operational constraints were the major constraints by the FPO members. (Tiwari et al., 2021).

The study seeks to evaluate customer impressions of FPO food goods inside Kazhani Farmers Producer Organization Company Limited, Factors impacting customer purchasing decisions about FPO food items and consumer facing constraints towards the FPO food products.

METHODOLOGY

The study was carried out at Kazhani Farmers Producer Organization Company Limited in Tamil Nadu's Erode district. In this FPO, 60 customers were chosen at random from high-volume retail stores. Primary data was gathered using a pre-tested interview schedule. The perception mapping was used to determine consumer perceptions of food product price, quality, health, and taste. The Relative Importance Index was used to analyze factors impacting consumer purchases of FPO value added food products and the Garret Ranking Tool was used to analysis the constraints facing the consumer at the time of purchasing.

Perception mapping

Perception mapping is a technique for determining how individuals or groups perceive a specific product, brand, service, or concept. It entails gathering data from surveys, interviews, and other sources in order to create visual representations or charts that depict people's perceptions and associations with the subject. This enables businesses and organizations to identify their own strengths, weaknesses, and areas for improvement in order to better align with the preferences and expectations of their target audience. Respondents were asked to rate attributes on a three-point Likert scale from 1 to 5, with 1 indicating a "low" rating, 3 indicating a "medium" rating, and 5 indicating a "high" rating.

Relative importance index

The Relative Importance Index (RII) is a statistical measure that evaluates the significance of several aspects or variables within a certain analysis or study. It aids in determining which factors have a more substantial influence on a certain outcome relative to others. The criteria provided by respondents were examined, and the Relative Importance Index approach was utilized to rank the components of FPO items. The Relative Importance Indices (RII) for each element were calculated using a five-point Likert scale, with values from 1 (minimum relevance) to 5 (most importance), as shown in Eq. 1. (Eslam et al., 2022).

$$RII = \sum \frac{W}{A \cdot N} \dots \dots \dots \text{(Eq. 1)}$$

Where,

W - weight given to each by the respondents (ranging from 1 to 5),

A - highest weight (i.e., 5 in this case), and

N is the total number of respondents.

GARRET RANKING

The constraints were recorded from the respondents and the ranks were converted into percent position using following formula.

$$\text{Percent Position} = \frac{100 (R_{ij} - 0.5)}{N_{ij}}$$

Where,

R_{ij} - Rank given for the i^{th} attribute by the j^{th} individual

N_{ij} - number of items ranked by j^{th} individuals

RESULT AND DISCUSSION

To analyze the study's objectives, the necessary information was gathered and analyzed using economic methods.

The findings are organized under the following headings for economic interpretation.

Consumer perception of FPO's value added food products.

Factors impacting consumers to purchase FPO value added food products.

Constraints faced by the consumer to purchase of FPO value added food products

Consumer perception about food products

Table 1. Average values of consumers' perceptions in selected variables

Products	Price	Quality	Health	Taste
Jaggery	3.6	3.8	3.9	4.3
Honey	4.5	4	4.1	4
Oil	3.9	4.5	3.5	3.7
Millet	3.6	4.2	4.4	3.9

Table 1. presented consumer perceptions of value-added food products. In terms of price, honey can be ranked first, oil second, and jaggery and millets third. If quality is considered, oil takes the first place, followed by millets, honey, and jaggery. In terms of health, millet value added products rank first, followed by honey, jaggery, and oil. In terms of taste, jaggery was the most popular product, followed by honey, millet, and oil.

Consumers perceived the quality and pricing of food goods at FPOs retail outlets to be superior compared to other retail establishments. Malarkodi et al. (2023) Figure 1. The comparison between price and quality. The price of oil was elevated in comparison to other items such as jaggery and honey. In terms of quality, oil was superior to other items such as millet, honey, and jaggery.

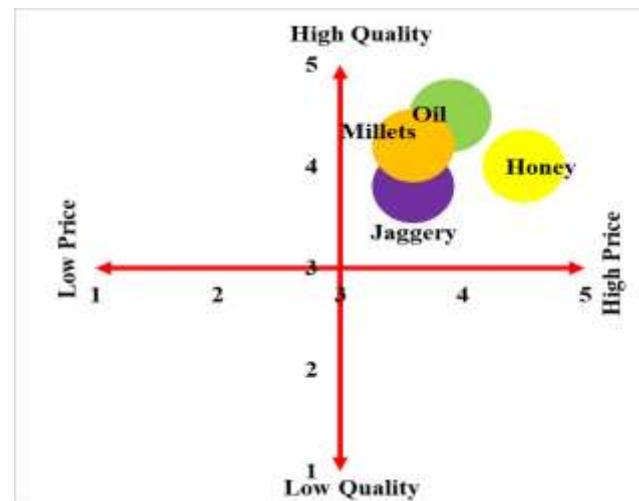


Fig. 1. Perception mapping for price and quality

Quality assurance is a crucial phase in the product development process (Bansal et al., 2022). Figure 2. A comparison between health and flavor. Millet goods are seen as beneficial for health, hence they are

associated with more health significance compared to other products such as honey, jaggery, and oil. In terms of flavor, jaggery possesses a more pronounced taste, surpassing that of honey, millet, and oil.

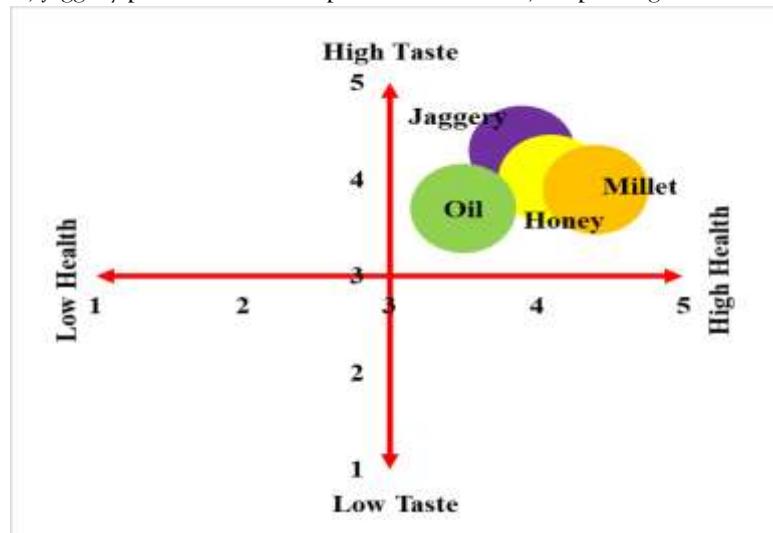


Fig. 2. Perception mapping for health and taste

Factors influencing the consumer to purchase FPO food products

Table 2. Factors influencing the consumer to purchase FPO food products

Factors	Percentage	Rank
Good for health	0.76	I
Good quality	0.75	II
Good packaging	0.71	III
Available in required quantities	0.69	IV
Reasonable Pricing	0.63	V

The most important factors impacting consumer purchases of FPO food products are quality, health, packaging, availability, and price. Health-focused point-of-decision prompts persuade consumers to buy healthier food products (Arslain et al., 2021). The primary reason to purchase the product is for good health. Every purchase is based on quantity, quality, and value standards (Bansal et al., 2022). One of the most important factors impacting consumers was the product's high quality. The medium level of purchase impacted good packaging, which was available in sufficient quantities. The least level factor, reasonable price, impacted consumers to buy FPO food products. The factors impacting FPO's food product purchases were ranked.

Constraints faced by the consumer to purchase of FPO food products

Table 3. Constraints faced by the consumer to purchase of FPO food products

Constraints	Score	Rank
Higher price	78.9	I
Long Distance	74.7	II
Shorter shelf life	69.1	III
Limited Availability	67.5	IV
Low marketing and Promotion	63.4	V

Table 3. presented the constraints faced by the consumers in value added products purchase in FPO. The major constraints based the garret rank score (78.9) was rank first in higher price. Long distance is a second rank of respondents and that garret mean score is (74.7). shorter shelf life is a occupied third rank of the respondents and it state the score on (69.1). Limited Availability is a fourth rank of the respondents and it state the score is (67.5). Low marketing and promotion is a fifth rank of the respondents and it is state that the score is (63.4).

CONCLUSION

The study concluded by delineating customer views and identifying the determinants influencing and constraints faced by consumer purchases of Kazhani Farmer's Producer Organization Limited food goods. The predominant responders purchase cold-pressed oil, honey, jaggery, and millets at the FPO retail outlet. The perception map indicates that oil is priced highly, honey is of superior quality, millet items are nutritious, and jaggery products are flavorful. The majority of customers considered health and quality to be significant, hence these criteria substantially influenced their acquisition of FPO food items. Higher price is a first problem because products wise the price was varied and long distance are frequently consumer facing the purchase of FPO value added products. FPO may formulate efficient marketing methods to entice new clients, both local and non-local. The majority of individuals are oblivious about FPO's retail establishments. Consequently, FPOs have to prioritize the promotion of their products and the expansion of retail stores to attract clients and enhance sales.

REFERENCE

1. Arslain, K., Gustafson, C. R., and Rose, D. J., 2021, "The effect of health prompts on product consideration, attention to information, and choice in large, online product assortments: The case of fiber," *Food Quality and Preference*, 94, pp. 104329. <https://doi.org/10.1016/j.foodqual.2021.104329>
2. Bansal, M.L. and I. K. N. M., 2022, "Level of Consumers Awareness Regarding ISI, FPO & Agmark Standards," *Indian Journal of Extension Education*, 45 (3&4), pp.128-130.
3. <https://epubs.icar.org.in/index.php/IJEE/article/view/122895>.
4. Eslam Tarek, Ibrahim Motawa and Islam Elmasoudi, 2022, "Relative Importance Index for the Key Performance Indicators for the construction industry in Egypt," *International Journal of Civil and Structural Engineering Research*, 10(1), pp. 125-131. <https://doi.org/10.5281/zenodo.7079244>.
5. Gigauri, I., 2019, "Applying Perceptual Mapping Method for Successful Positioning Strategy," *International Journal of Management and Business Sciences*, 1(1), pp. 14- 24.
6. Gigauri, I., 2019, "Perceptual Mapping as a Marketing Research Tool for Brand Positioning," *International Journal of Economics and Management Studies (SSRG - IJEMS)*, 6(4), pp.73-79.
7. Gokul Vignesh, U., Balaji, P., and Sivakumar, S.D., 2019, "Role of Actors in Farmer Producer Organization (FPO) based Millet Value Chain," *Madras Agricultural Journal*, Spl. 106, pp. 288-291. <https://masujournal.org/106/190261.php>.
8. Gurung, R., Choubey, M., and Rai, R., 2024, "Economic impact of farmer producer organization (FPO) membership: empirical evidence from India," *International Journal of Social Economics*, 51 (8), pp. 1015-1028.
9. Malarkodi, M., Sivakumar, S. D., Balaji Parasuraman, Divya, K., Shantha Sheela, M., Vidhyavathi, A., Parminder Singh and Ajay Kumar., 2023, "Perception and buying behaviour of consumers towards FPOs food products in Tamil Nadu," *India Journal of Agricultural Sciences*, 93 (3), pp. 339-341. <https://doi.org/10.56093/ijas.v93i3.132458>.
10. Mamata Rajgor, Chauhan Paresh, Patel Dhruv, Panchal chirag, and Bhavsar Dhrmesh., 2016, "RII & IMPI: Effective techniques for finding delay in construction project," *International Research Journal of Engineering and Technology*, 3(1), pp. 1173-1177.
11. Mohamad Ameer Khan, Jitendra Pratap, Riyaj Ahmed Siddique and Prashant M. Gedam., 2020, "Farmers Producer Organization (FPO): Empowering Indian Farming Community- Review Article," *International Journal of Current Microbiology and Applied Science*, Special Issue-11, pp. 2089-2099. <https://www.ijcmas.com/special/11/Mohd.%20Ameer%20Khan,%20et%20al.pdf>
12. Nisha Tiwari and Rajshree Upadhyay., 2021, "Constraints faced by the members of the farmer producer organizations in Udaipur district of Rajasthan," *The Pharma Innovation*, Sp-10 (12), pp. 320-324.
13. Raja Rafidah Raja Muhammad Rooshdi, Muhd Zaimi Abd Majid, Shaza Rina Sahamir and Noor Akmal Adillah Ismail., 2018, "Relative importance index of sustainable design and construction activities criteria for green highway," *Chemical Engineering Transactions*, 63, pp. 151-156.
14. Sangappa, D., Rafi1, B., Laxmi, E., Charishma and Srinivasa Babu, K., 2023, "Strengthening Millet Value Chain through Farmer Producer Organizations," *Indian Journal of Extension Education*, 59 (3), pp. 26-31. <http://doi.org/10.48165/IJEE.2023.59305>.
15. Sharma, M., Singh, R., Chiphang, S., and Prasad, A., 2023, "Impact Assessment Study of Farmer Producer Organizations (FPOs) on Livelihood of Farmers in Meghalaya, Indian Journal of Extension Education, 59(3), pp. 43-47. <http://doi.org/10.48165/IJEE.2023.59308>.
16. Srivastava, P., Ramakanth, D., Akhila, K., and Gaikwad, K. K., 2022, "Package design as a branding tool in the cosmetic industry: consumers' perception vs. reality," *SN business & economics*, 2(6), pp. 58.