

Consumer Perceptions and Preferences Towards Organic Fruits and Vegetables in Andhra Pradesh

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Abstract:

The present study examines consumer perception and preferences toward organic fruits and vegetables in selected districts of the Rayalaseema region of Andhra Pradesh, focusing on their influence on consumer satisfaction. Using a quantitative research design, data were collected from 169 respondents through a structured questionnaire on a five-point Likert scale. The findings reveal that middle-aged adults, particularly females, dominate the consumption of organic produce, with most respondents being well-educated and professionally employed. Analysis of consumer perception factors indicates that Price–Value has the strongest impact on satisfaction, followed by Quality, Health & Safety, Availability & Access, and Certification & Trust, suggesting that consumers prioritize affordability, product quality, and health benefits when evaluating organic products. Furthermore, consumer perception significantly enhances satisfaction both directly and indirectly through consumer preference as a mediator, highlighting that preferences amplify the effect of perceptions on satisfaction. The study underscores the importance of improving consumer perception and fostering preferences to boost satisfaction, adoption, and loyalty toward organic fruits and vegetables. These findings provide actionable insights for marketers, local producers, and policymakers to design strategies that align with consumer expectations and promote the growth of the organic food market in Rayalaseema.

Keywords: *Consumer perception, Consumer preference, Consumer satisfaction, Organic fruits and vegetables, Rayalaseema, Andhra Pradesh*

Introduction

The perception and preference of consumers toward organic fruits and vegetables have become a central area of research in recent years, reflecting a growing global emphasis on health, food safety, and environmental sustainability. Organic produce, cultivated without synthetic fertilizers, pesticides, or genetically modified organisms, is widely associated with healthier lifestyles and reduced ecological impact. As concerns about the harmful effects of conventional farming practices continue to rise, consumers are increasingly drawn toward organic alternatives that are perceived to be safer, more nutritious, and environmentally friendly.

India has witnessed significant growth in organic farming, supported by government programs, certification mechanisms, and consumer-driven demand. Among the states, Andhra Pradesh has emerged as a leader, particularly through large-scale initiatives such as Zero Budget Natural Farming (ZBNF), which aim to promote natural cultivation practices and reduce dependence on chemical inputs. With agriculture forming the backbone of the state economy, consumer awareness and demand for organic produce—especially fruits and vegetables—have gained prominence. This growing interest aligns with rising urbanization, changing dietary patterns, and increasing income levels, all of which are shaping consumer behaviour in favour of healthier and sustainable food choices.

Understanding consumer perception and preferences is vital for multiple stakeholders. For policymakers, it provides insights into how awareness campaigns, pricing interventions, and certification policies can promote wider adoption of organic produce. For producers and retailers, it highlights consumer expectations in terms of quality, pricing, and availability, enabling them to design appropriate marketing and distribution strategies. For consumers themselves, the decision to purchase organic fruits and vegetables is often shaped by a complex interplay of health concerns, environmental consciousness, trust in labelling, accessibility, and affordability. However, despite positive perceptions, barriers such as high prices, lack of trust in authenticity, and limited product availability continue to restrict the widespread adoption of organic produce.

The study of consumer perception and preferences toward organic fruits and vegetables in Andhra Pradesh thus provides valuable insights into how this sector can be strengthened. It also sheds light on the challenges faced by both producers and consumers in bridging the gap between demand and supply, creating opportunities for sustainable agriculture, food security, and improved consumer health outcomes.

Review of Literatures

Nandi, Gowdru, Bokelmann, and Dias (2015) investigated smallholder organic farmers' attitudes, objectives, and barriers toward organic fruit and vegetable production in India, given the sector's growth potential but limited adoption. The findings revealed that farmers' objectives clustered into economic, environmental, and sociocultural dimensions, while barriers were categorized into production, marketing, techno-managerial, and financial challenges. Three distinct farmer clusters emerged, highlighting variations in orientation toward organic farming, with market and economic drivers being particularly influential. The study concludes that targeted policy interventions, marketing strategies, and institutional support are essential to foster sustainable organic farming adoption in India.

Rajeswari and Magesh (2016) conducted a study to examine consumer preferences toward purchasing organic fruits and vegetables in the southern region of Chennai. The findings revealed that consumers were environmentally conscious and perceived organic products as healthier and safer, while many expressed willingness to buy more if prices were reduced. Additionally, online purchasing was preferred as a time-saving option. The study concluded that although awareness and attitudes were generally positive, it remains uncertain whether these factors directly influence actual purchase intentions.

Sudhalakshmi and Chinnadorai (2015) conducted a study to examine consumer awareness and preferences regarding the purchase of organic fruits and vegetables. The findings revealed that increasing environmental awareness has influenced consumer attitudes toward adopting green lifestyles, though the trend is still evolving. Results indicated that consumers show positive beliefs and attitudes toward organic produce, linking their choices with environmental protection. The study concludes that growing consumer consciousness is shaping purchasing behavior, presenting opportunities for businesses in the green market industry.

Darga and Gali (2024) investigated consumer perception and awareness of green products in Kadapa, Andhra Pradesh, with the purpose of understanding attitudes toward eco-friendly products and green marketing. Findings revealed that although consumers were aware of green marketing, their actual preference for purchasing green products remained low. The study highlighted that environmental concern was the key motivating factor for purchasing green products, while their high cost was the main deterrent. The authors concluded that enhancing affordability and awareness is crucial for increasing consumer adoption of green products.

Acharya (2023) examined the harmful effects of chemical pesticides in India, particularly in the context of post-Green Revolution agricultural practices. Findings revealed that although India is one of the largest consumers and exporters of pesticides globally, its per-hectare consumption remains significantly lower than countries like China, Japan, and the USA. The study highlighted that cotton, paddy, fruits, and vegetables account for the majority of pesticide use, with Andhra Pradesh, Maharashtra, and Punjab being the highest-consuming states. It concluded that despite contributing to higher crop yields, pesticide overuse poses environmental and health concerns, emphasizing the need for sustainable alternatives.

Koduru (2023) conducted a study to examine consumer perceptions and preferential choices towards dairy products in selected districts of Andhra Pradesh. The findings revealed no significant differences between gender or age groups in terms of motivation and perception toward purchasing dairy products. The study concluded that consumer preferences for dairy products are relatively consistent across demographic categories.

Mohanapriya, Kalpana, and Aravinth (2022) conducted a review study to assess the quality enhancement of fruits and vegetables through organic cultivation. The review revealed that organic produce contained higher levels of vitamins (ascorbic acid and beta carotene), polyphenols, fiber, dry matter, and total soluble solids, while mineral content remained similar in both systems. It was also noted that organic crops had lower levels of pesticide residues, nitrates, ammonium, and heavy metals, though they showed higher polyphenol loss during high-temperature cooking. The study concluded that organic fruits and vegetables are nutritionally superior and environmentally safer, though their supply remains constrained by high production costs.

Mujere (2024) examined the *health benefits of organic fruits that resemble body organs*, highlighting their role in reducing risks of chronic diseases such as cardiovascular conditions and cancer. Findings indicated that organic fruits not only support the healthy functioning of body organs they resemble but also provide protection against various diseases. The study concludes that promoting awareness of the nutritional and symbolic benefits of organic fruits can enhance dietary inclusion, contributing to food security, nutrition, and sustainable agroforestry.

Anitha Devi and Ravi Kumar (2015) examined consumer behaviour with reference to organised and conventional retail stores in Guntur and Krishna districts of Andhra Pradesh. The findings indicated that consumers preferred organised retail stores primarily due to the availability of greater product variety, while unorganised stores retained appeal through discounts and quality. The study concluded that demographic factors such as age, gender, and occupation significantly influence consumer buying behaviour, highlighting the growing shift towards organised retailing in urban India.

Radulescu, Cetină, Cruceru, and Goldbach (2021) examined Romanian consumers' attitudes and intentions towards organic fruits and vegetables, aiming to understand the factors shaping demand in an underdeveloped organic market. Findings revealed that positive attitudes were strongly influenced by awareness of organic product characteristics, personal motivations, and external influences, while purchase barriers had minimal impact on intentions. The authors concluded that enhancing consumer knowledge and addressing motivational drivers are essential strategies for expanding Romania's organic food market and supporting the growth of sustainable agriculture levels.

Hordyjewicz-Baran et al. (2024) conducted a study aimed at developing a smart detergent to enhance safety and efficiency in removing pesticide residues from fruits and vegetables. The findings revealed that the model detergent was effective in eliminating pesticide residues while ensuring skin safety, thereby addressing consumer concerns regarding food safety. The

study concludes that such innovative detergents have the potential to significantly improve consumer health and satisfaction, offering a sustainable approach to safer food preparation.

McFadden, Bovay, and Mullally (2021) examined the broader implications of rising demand for organic fruits and vegetables (FV) in the United States, where consumption of FV remains below dietary recommendations despite rapid growth in the organic sector. The results revealed that increasing demand for organic FV could reduce overall FV consumption when production areas are finite, with consumption effects differing across consumer segments. The authors conclude that while demand for organic produce grows, it may unintentionally limit total FV consumption, highlighting the need for strategies that balance both organic and conventional markets.

Yogesh and Ravindran (2023) investigated the impact of IT literacy on farmers' profitability from online sales of organic fruits and vegetables during the COVID-19 pandemic. The findings indicated that both IT literacy and positive attitudes toward organic farming significantly correlated with higher profitability in online sales, with the COVID-19 outbreak moderating these relationships. The study concludes that enhancing IT literacy and digital platforms can improve farmer profitability, offering valuable insights for policymakers to strengthen online sales systems for organic produce.

Research Gap

Although a substantial body of literature exists concerning consumer behavior toward organic produce in India and elsewhere, a critical research gap persists. Prior studies have extensively documented consumer perceptions, preferences, and attitudes towards organic fruits and vegetables (e.g., Rajeswari and Magesh, 2016; Sudhalakshmi and Chinnadorai, 2015). Similarly, challenges faced by organic farmers (Nandi et al., 2015) and the nutritional superiority of organic produce (Mohanapriya et al., 2022) have been well-established. However, the existing research fails to comprehensively investigate the intricate relationship between consumer perception, consumer preference, and subsequent satisfaction. Specifically, there is a notable absence of studies that empirically analyze the mediating role of consumer preference in the pathway from consumer perception to consumer satisfaction. This is a significant omission, as satisfaction is not a direct result of perception alone; rather, it is often filtered through the choices and preferences a consumer develops based on that perception. Furthermore, this gap is particularly pronounced within the Rayalaseema region of Andhra Pradesh, a geographical area with unique market dynamics that has not been a specific focus of prior research on this topic. Hence, there is a need to investigate how consumer perceptions shape satisfaction and how preferences mediate this relationship in the context of organic fruits and vegetables in selected districts of Rayalaseema, thereby contributing region-specific insights to the broader discourse on organic food consumption.

Objectives of the Study

1. To examine the influence of consumer perception on consumer satisfaction towards organic fruits and vegetables in selected districts of Andhra Pradesh.
2. To analyze the mediating role of consumer preference in the relationship between consumer perception and consumer satisfaction.

Hypothesis of the study

H₀₁: Consumer perception has no significant effect on consumer satisfaction towards organic fruits and vegetables.

H₀₂: Consumer preference does not significantly mediate the relationship between consumer perception and consumer satisfaction.

Research Methodology

The present study adopts a **quantitative research design** as it seeks to test hypotheses and examine causal relationships between consumer perception, consumer preference, and consumer satisfaction toward organic fruits and vegetables. A quantitative approach is suitable because it allows the constructs to be measured using structured scales, enables statistical testing of the relationships, and provides generalizable insights from the sample to the wider population. Unlike qualitative research, which is more exploratory, the quantitative design ensures objectivity, reliability, and precision in analyzing the data.

The **geographical scope of the study** is confined to the **Rayalaseema region of Andhra Pradesh**, covering the four districts of Kadapa, Anantapuram, Chittoor, and Kurnool. This region has been purposively selected because it is an important horticultural zone with significant production of fruits and vegetables, including crops that are increasingly being cultivated under organic practices. Furthermore, past literature has focused mainly on urban and coastal regions of Andhra Pradesh, while limited research exists on consumer behavior toward organic produce in Rayalaseema. Thus, the study not only addresses a geographical gap in the literature but also provides region-specific insights that are relevant for local policymakers, marketers, and farmers.

The study uses **convenience sampling technique** to select respondents. Convenience sampling is justified as it enables the researcher to collect data efficiently from consumers who are accessible and willing to participate in the survey. Although this method has limitations with respect to representativeness, it is widely used in consumer behavior studies where direct access to respondents is essential, particularly in regions where organized sampling frames are difficult to obtain. This approach also ensures the feasibility of data collection within the available time and resources. A total of **200 questionnaires** were distributed across the four districts of Rayalaseema. Out of these, **169 valid responses** were collected, representing an effective response rate of 84.5%. To ensure fairness in representation, the questionnaires were equally distributed among the four districts (50 per district), though the final valid responses varied slightly due to incomplete questionnaires.

Table 1: Sample Distribution across Districts

District	Questionnaires Distributed	Valid Responses Collected
Kadapa	50	42
Anantapuram	50	43
Chittoor	50	41
Kurnool	50	43
Total	200	169

The **research instrument** used for data collection was a structured questionnaire developed on a **five-point Likert scale** ranging from “1 = Strongly Agree” to “5 = Strongly Disagree.” The questionnaire consisted of three main sections namely Consumer Perception, Consumer Preferences and Consumer satisfaction corresponding to the key constructs of the study.

Table 2: Reliability Test and Literature Support

Construct / Parameter	Number of Items	Cronbach's Alpha (Expected >0.70)*	Literature Support (Previous Studies)
Consumer Perception – Quality	3	0.81	Sudhalakshmi & Chinnadorai (2015).
Consumer Perception – Health & Safety	3	0.86	Rajeswari & Magesh (2016)
Consumer Perception – Price–Value	3	0.79	Nandi et al. (2015) – economic and financial considerations are key drivers/barriers.
Consumer Perception – Availability & Access	3	0.77	Darga & Gali (2024) – availability and affordability strongly influence adoption.
Consumer Perception – Certification & Trust	3	0.82	Vukasović (2015) – trust in authenticity influences EU consumers' organic purchase.
Consumer Preference	6	0.88	Radulescu et al. (2021) – personal motivation and awareness drive preferences.
Consumer Satisfaction	4	0.85	McFadden et al. (2021) – repurchase intention linked with satisfaction in organic FV market.

Goodness of Fit Index:

Model fit indices are statistical measures used to evaluate how well a proposed structural model represents the observed data. The Chi-square (χ^2) test examines the difference between the observed and expected data, though it is highly sensitive to sample size. The Goodness of Fit Index (GFI) and its adjusted version, AGFI, indicate the proportion of variance explained by the model, with values above 0.90 suggesting good fit. The Normed Fit Index (NFI) and Relative Fit Index (RFI) compare the proposed model with a null model, where values close to or above 0.90 indicate adequacy. Similarly, the Comparative Fit Index (CFI) and Tucker Lewis Index (TLI) assess model improvement over a baseline model, with values greater than 0.90 showing strong fit. Finally, the Root Mean Square Error of Approximation (RMSEA) evaluates how well the model fits the population per degree of freedom, with values below 0.05 indicating a close fit and values up to 0.08 considered acceptable. Together, these indices provide a comprehensive understanding of model adequacy beyond reliance on a single statistic.

Table 3: Goodness of Fit Index

Fit statistic	Recommended Value	Obtained Value
Chi square		768.584
Df		189
Chi square significance	$p < = 0.05$	0.000
Goodness Fit Index	>0.90	0.964
Adj. Goodness Fit Index	>0.90	0.967
Normed Fit indexes	>0.90	0.997
Relative Fit Index	>0.90	0.893
Comparative Fit Index	>0.90	0.906
Tucker Lewis Index	>0.90	0.904
RMSEA	<0.05	0.035

The model fit indices presented in the table indicate that the proposed structural model demonstrates an acceptable to excellent fit with the observed data. The chi-square value ($\chi^2 = 768.584$, $df = 189$, $p = 0.000$) is significant, which is common in large-sample SEM studies, as chi-square is highly sensitive to sample size. Therefore, reliance on additional fit indices is necessary for a more accurate assessment. The Goodness of Fit Index (GFI = 0.964), Adjusted Goodness of Fit Index (AGFI = 0.967), and Normed Fit Index (NFI = 0.997) all exceed the recommended threshold of 0.90, indicating a very good model fit. Similarly, the Comparative Fit Index (CFI = 0.906) and Tucker–Lewis Index (TLI = 0.904) also surpass the 0.90 benchmark, further supporting the adequacy of the model. Although the Relative Fit Index (RFI = 0.893) is slightly below the ideal threshold of 0.90, it is close enough to suggest that the model still provides a reasonably good fit. Importantly, the Root Mean Square Error of Approximation (RMSEA = 0.035) falls well below the maximum acceptable value of 0.05, indicating a close fit between the hypothesized model and the data. Overall, despite the significant chi-square and the marginally lower RFI, the majority of indices meet or exceed the recommended criteria, suggesting that the model demonstrates strong validity and adequately represents the underlying relationships among the constructs.

Statistical Tools

The present study employs Structural Equation Modeling (SEM) as the primary statistical tool for analyzing the data. SEM is a multivariate technique that integrates factor analysis and regression modeling to examine both direct and indirect relationships among observed and latent variables simultaneously. Unlike traditional regression models, which test relationships in isolation, SEM allows researchers to test complex theoretical models that include multiple dependent and independent variables, measurement errors, and mediating relationships within a single analytical framework (Hair et al., 2019). This makes SEM particularly suitable for consumer behavior research, where constructs such as perception, preference, and satisfaction are interrelated and measured through multiple indicators.

Within SEM, this study applies mediation analysis to test the hypothesized role of consumer preference as a mediating variable between consumer perception and consumer satisfaction. Mediation analysis helps determine whether the influence of an independent variable (consumer perception) on a dependent variable (consumer satisfaction) is transmitted, wholly or partially, through a third variable (consumer preference). Using SEM for mediation provides several advantages over traditional regression-based methods (e.g., Baron & Kenny’s approach) as it allows simultaneous estimation of both direct and indirect effects, incorporates measurement error, and uses bootstrapping procedures to assess the statistical significance of mediation paths (Preacher & Hayes, 2008).

Thus, by employing SEM and mediation analysis, this study ensures a robust evaluation of the hypothesized relationships and provides deeper insights into the structural dynamics among consumer perception, preference, and satisfaction toward organic fruits and vegetables in the Rayalaseema region of Andhra Pradesh.

Data Analysis

The present data analysis is structured to address the objectives of the study. The first objective, which examines the influence of consumer perception on consumer satisfaction toward organic fruits and vegetables in selected districts of Andhra Pradesh, is analyzed using Structural Equation Modeling (SEM). The second objective, which explores the mediating role of consumer preference in the relationship between consumer perception and consumer satisfaction, is assessed through mediation analysis within the SEM framework. Additionally, the demographic profile of the respondents is presented using frequency distribution, providing a clear overview of characteristics such as Age, Gender, Education and Occupation across the sampled population.

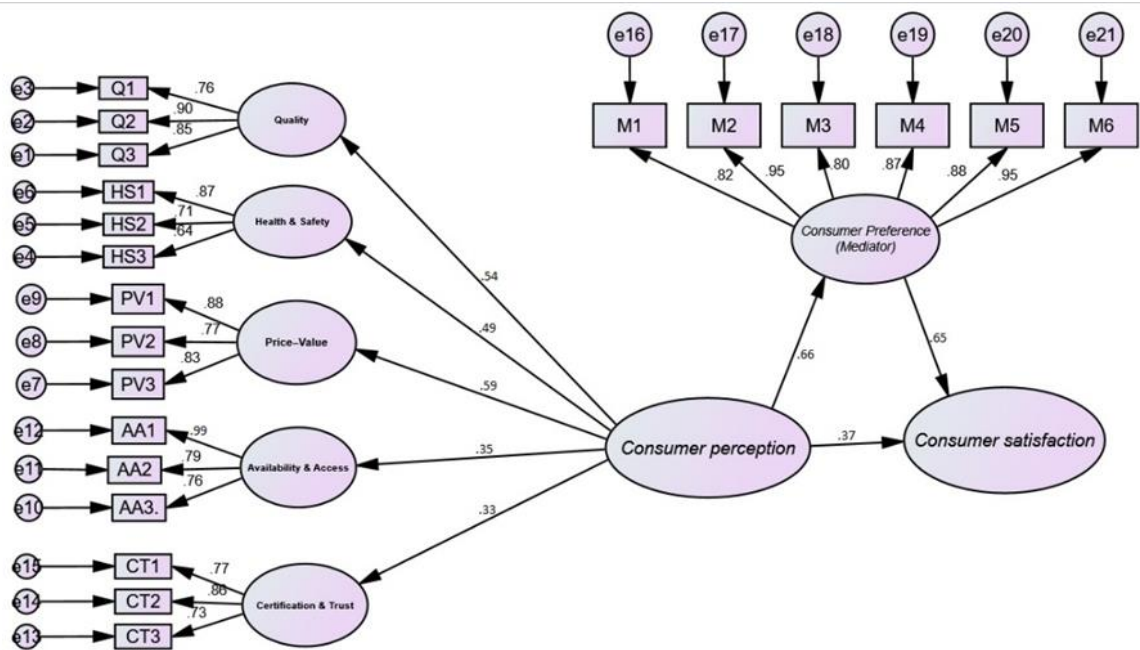
Table 5: Demographic Profile

Age	Frequency	Percent	Gender	Frequency	Percent
20–29	40	23.7	Male	69	40.8
30–39	84	49.7	Female	100	59.2
40–49	23	13.6	Total	169	100
50 and above	22	13			
Total	169	100			
Education	Frequency	Percent	Occupation	Frequency	Percent
Up to 10th	21	12.4	Homemaker	21	12.4
Intermediate	25	14.8	Private	28	16.6
Graduate	65	38.5	Government	85	50.3
Postgraduate+	58	34.3	Business / Self-employed	35	20.7
Total	169	100	Total	169	100
	Frequency	Percent			
Lesser than 25,000	17	10.1			
25,000–49,999	22	13			
50,000–99,999	86	50.9			
1,00,000 and above	44	26			
Total	169	100			

The demographic profile of the respondents from the Rayalaseema region, who consume organic fruits and vegetables, indicates a diverse distribution across age, gender, education,

and occupation. The majority of respondents (49.7%) belong to the 30–39 age group, followed by 23.7% in the 20–29 range, while 40–49 and 50 and above groups constitute 13.6% and 13.0%, respectively, suggesting that middle-aged adults are the predominant consumers of organic produce. In terms of gender, females represent a slightly higher proportion (59.2%) compared to males (40.8%), indicating greater female participation in organic food consumption in the region. Regarding educational qualifications, most respondents are graduates (38.5%) or postgraduates (34.3%), reflecting a relatively high level of educational attainment among consumers of organic fruits and vegetables, while those with intermediate and up to 10th education account for 14.8% and 12.4%, respectively. Concerning occupation, government employees form the largest group (50.3%), followed by business/self-employed individuals (20.7%) and private sector employees (16.6%), with homemakers representing 12.4% of the sample. The majority of respondents from the Rayalaseema region who consume organic fruits and vegetables fall within the monthly income group of ₹50,000–99,999 (50.9%), followed by those earning ₹1,00,000 and above (26%). A smaller proportion belongs to the income groups below ₹50,000, together accounting for about 23.1% of the respondents. Overall, the data suggest that consumers of organic fruits and vegetables in Rayalaseema are predominantly middle-aged, well-educated, and actively engaged in professional or governmental occupations, with a slightly higher participation of females.

Figure: 1
Path diagram of Consumer Perception on Consumer Satisfaction in relation with Consumer Preference.



The path diagram presents a structural equation model consisting of three main latent constructs: consumer perception, consumer preference, and consumer satisfaction. Consumer perception is represented as a higher-order construct formed by five dimensions—quality, health & safety, price-value, availability & access, and confidence & trust—each measured by multiple observed variables. These dimensions collectively define consumer perception as a comprehensive factor. The diagram also shows consumer preference as a mediating construct, measured through six observed indicators, linking consumer perception with consumer satisfaction. Finally, consumer satisfaction is positioned as the outcome construct,

influenced both directly by consumer perception and indirectly through consumer preference. Overall, the diagram depicts the measurement and structural components of the model, outlining how consumer perception is conceptualized and connected with preference and satisfaction in the study.

Objective 1: To examine the influence of consumer perception on consumer satisfaction towards organic fruits and vegetables in selected districts of Andhra Pradesh.

This objective seeks to examine the influence of consumer perception on consumer satisfaction towards organic fruits and vegetables in selected districts of Andhra Pradesh. The structural equation model along with its estimated values is presented below. The following is the hypothesis

Null Hypothesis: Consumer perception has no significant effect on consumer satisfaction towards organic fruits and vegetables.

Table 6: Impact of Consumer Perception on Consumer Satisfaction

			Estimate	S.E.	C.R.	P
Consumer Satisfaction	<---	Quality	0.541	0.081	6.679	***
Consumer Satisfaction	<---	Health & Safety	0.493	0.068	7.250	***
Consumer Satisfaction	<---	Price-Value	0.591	0.078	7.577	***
Consumer Satisfaction	<---	Availability & Access	0.352	0.072	4.889	***
Consumer Satisfaction	<---	Certification & Trust	0.335	0.074	4.527	***

Table represent the regression weights with respect to the Consumer Perception factors and Consumer Satisfaction are presented in the table below. Here, Consumer Perception acts as the independent variable and Consumer Satisfaction as the dependent variable. It signifies that consumer perception is positively and significantly influencing consumer satisfaction towards organic fruits and vegetables in selected districts of Andhra Pradesh. This indicates that consumers who perceive organic produce more positively are more likely to express higher levels of satisfaction. The findings are in line with earlier studies which suggest that perceptions regarding price fairness, quality, and health benefits strongly shape consumer satisfaction.

It is also shown that there is a significant impact of all five consumer perception factors on consumer satisfaction. Among them, the Price-Value dimension recorded the highest significant impact (0.591) on consumer satisfaction, reflecting that consumers consider value for money as the most crucial factor in shaping their satisfaction. The Quality dimension also showed a significant and relatively high impact (0.541), followed by Health & Safety (0.493), confirming that consumers strongly associate satisfaction with the quality and health-related benefits of organic produce. Meanwhile, Availability & Access (0.352) and Certification & Trust (0.335) too exert significant but comparatively lower influence on consumer satisfaction. Thus, among the five dimensions of consumer perception, Price-Value has the strongest effect on consumer satisfaction, followed by Quality, Health & Safety, Availability & Access, and Certification & Trust.

Table 7: Regression Weights with respect to Consumer Perception

			Estimate	S.E.	C.R.	P
Quality related factors						
Organic fruits/vegetables I buy are fresh and visually appealing.	<---	Consumer Perception	0.755	0.163	4.631902	***

Organic produce has better taste than conventional produce	<---	Consumer Perception	0.902	0.111	8.126126	***
The shelf life of organic produce is acceptable.	<---	Consumer Perception	0.852	0.134	6.358209	***
Health & Safety related factors						
Organic produce is safer because it has fewer chemicals/pesticides.	<---	Consumer Perception	0.866	0.164	5.280488	***
Organic produce contributes to my family's health.	<---	Consumer Perception	0.714	0.143	4.993007	***
I feel confident serving organic produce to children/elderly.	<---	Consumer Perception	0.636	0.136	4.676471	***
Price-Value related factors						
Organic produce offers good value for money.	<---	Consumer Perception	0.882	0.174	5.068966	***
The price premium for organic produce is justified by benefits.	<---	Consumer Perception	0.774	0.19	4.073684	***
I am willing to pay a little more for certified organic produce.	<---	Consumer Perception	0.829	0.128	6.476563	***
Availability & Access related factors						
Organic produce is easily available where I shop.	<---	Consumer Perception	0.996	0.208	4.788462	***
The variety of organic fruits/vegetables meets my needs.	<---	Consumer Perception	0.794	0.16	4.9625	***
It is convenient to purchase organic produce when I need it.	<---	Consumer Perception	0.756	0.134	5.641791	***
Certification & Trust related factors						
Labels/certifications on organic produce are trustworthy.	<---	Consumer Perception	0.767	0.124	6.185484	***
I can verify whether produce is genuinely organic at the store/online.	<---	Consumer Perception	0.859	0.111	7.738739	***
I trust the retailer/brand selling organic produce.	<---	Consumer Perception	0.729	0.12	6.075	***

The table presents the regression weights of the factors associated with consumer perception in the consumption of organic fruits and vegetables.

Quality Related Factors (QRF): The regression weight is represented in the table with respect to quality-related factors, which is one of the major dimensions under consumer perception. It indicates that quality aspects such as better taste of organic produce (0.902) and acceptable shelf life (0.852) are the key to enhancing consumer satisfaction, followed by freshness and visual appeal (0.755). This implies that consumers who strongly perceive organic fruits and vegetables as tasty, fresh, and with sufficient shelf life are more likely to express higher satisfaction. Thus, product quality acts as a crucial determinant in shaping consumer preference and loyalty towards organic produce.

Health & Safety Related Factors (HSF): Health and safety are central elements in consumer perception. The regression results show that organic produce being safer due to fewer chemicals/pesticides (0.866) has a strong influence on satisfaction, followed by the perception that it contributes to family health (0.714), and confidence in serving to children/elderly (0.636). This implies that the belief in organic produce as a healthier and safer choice positively enhances consumer satisfaction. In particular, safety assurance emerges as a dominant reason for choosing organic products.

Price–Value Related Factors (PVF): Price–value emerged as another important dimension influencing consumer satisfaction. The table indicates that consumers perceive good value for money (0.882) and are willing to pay more for certified organic produce (0.829), both of which show significant impact on satisfaction. The perception that the price premium is justified by benefits (0.774) also contributes positively, though to a slightly lesser extent. This shows that value-for-money perception and willingness to invest in quality certification strongly determine satisfaction with organic produce.

Availability & Access Related Factors (AAF): Availability and accessibility also significantly shape satisfaction levels. The regression weight shows that the easy availability of organic produce where consumers shop (0.996) is the strongest determinant under this dimension, followed by variety meeting consumer needs (0.794) and convenience in purchase (0.756). This highlights that wide availability and convenient access play a critical role in ensuring consumer satisfaction, especially in developing retail networks in local markets.

Certification & Trust Related Factors (CTF): Trust and certification are also vital in reinforcing satisfaction. The regression results show that the ability to verify genuine organic produce (0.859) exerts the strongest influence, followed by trustworthy labels/certifications (0.767) and trust in retailers/brands (0.729). This implies that consumer satisfaction is strengthened when they are assured of authenticity and transparency, highlighting the importance of certification mechanisms and brand trust.

Table results indicate that consumer perception has a strong and significant influence on consumer satisfaction towards organic fruits and vegetables. Chronologically, availability of organic produce (0.996), better taste (0.902), value for money (0.882), safety due to fewer chemicals (0.866), and authenticity verification (0.859) emerged as the top five attributes contributing to consumer satisfaction. Thus, the findings confirm the research objective by showing that ensuring wide availability, maintaining high quality and taste, demonstrating value-for-money, ensuring health safety, and strengthening trust through certification mechanisms are key to enhancing consumer satisfaction in the organic produce market of Andhra Pradesh.

Objective 2: To analyze the mediating role of consumer preference in the relationship between consumer perception and consumer satisfaction.

This objective attempts to analyze the mediating role of consumer preference in the relationship between consumer perception and consumer satisfaction. The estimated values are presented to examine the mediation effect, and the corresponding hypothesis is

Null Hypothesis: Consumer preference does not significantly mediate the relationship between consumer perception and consumer satisfaction.

Table 8: Mediating role of consumer preference in the relationship between consumer perception and consumer satisfaction

			Estimate	S.E.	C.R.	P
Consumer Satisfaction	<---	consumer perception	0.369	0.089	4.146	***

Consumer preferences	<---	consumer perception	0.655	0.101	6.485	***
Consumer Satisfaction	<---	consumer preferences	0.651	0.096	6.781	***

Table depicts the regression weights with respect to **Consumer Satisfaction**. It is clear that the dimension of consumer satisfaction has shown significant changes with the inclusion of **Consumer Perception**. It also signifies that consumer preferences seem to be highly impacted and influenced by consumer perception (Estimate = 0.655), similarly consumer satisfaction through preferences is also found to be highly impacted and influenced (Estimate = 0.651). Whereas the direct influence of consumer perception on consumer satisfaction (Estimate = 0.369) is significant but found to be comparatively moderate. These observations are related with the study objective, which states that consumer perception significantly shapes consumer satisfaction towards organic fruits and vegetables, and the influence is stronger when consumer perception first translates into consumer preferences, which then enhances satisfaction levels.

Table 9: Direct and Indirect effect of consumer preference in the relationship between consumer perception and consumer satisfaction

	Estimate
Direct effect (Customer Perception to Consumer satisfaction)	0.369
Indirect effect t(Customer perception to Consumer preference (Mediator) on Consumer Satisfaction)	0.426
Total Effect	0.795

The results indicate that consumer perception has both a direct and indirect influence on consumer satisfaction towards organic fruits and vegetables. The direct effect (0.369) shows a moderate positive impact, while the indirect effect through consumer preference as a mediator is stronger (0.426). Together, the total effect (0.795) highlights that consumer perception substantially enhances satisfaction, with the pathway through preferences contributing more strongly. This implies that while positive perceptions alone can improve satisfaction, they are far more effective when they shape consumer preferences, which in turn drive higher satisfaction levels.

Findings

1. The study reports that the majority of respondents are aged 30–39 (49.7%), with fewer in the 20–29 (23.7%), 40–49 (13.6%), and 50+ (13%) groups, while females (59.2%) slightly outnumber males (40.8%). It indicates that Middle-aged adults, particularly females, dominate organic fruit and vegetable consumption in Rayalaseema.
2. It reports that most respondents are graduates (38.5%) or postgraduates (34.3%), and government employees constitute the largest occupational group (50.3%), followed by business/self-employed (20.7%) and private sector (16.6%). It states that Consumers tend to be well-educated and professionally employed, highlighting a link between higher education, stable occupation, and organic food consumption.
3. The study found that Price–Value recorded the highest impact on consumer satisfaction (0.591), indicating that perceived value for money is the most critical factor shaping satisfaction. This implies that consumers prioritize affordability and cost-effectiveness when evaluating organic fruits and vegetables, showing that price perception strongly drives satisfaction.

4. The study found that Quality (0.541) and Health & Safety (0.493) also significantly influence consumer satisfaction, reflecting that product quality and health benefits are important to consumers. This indicates that satisfaction is strongly linked to consumers' perceptions of superior quality and safe, healthy produce.
5. The study found that Availability & Access (0.352) and Certification & Trust (0.335) exert significant but comparatively lower influence on satisfaction. This implies that while convenience and trust in certifications matter, they are less decisive than price, quality, and health considerations in shaping consumer satisfaction.
6. The study found that consumer perception significantly influences consumer satisfaction both directly (0.369) and indirectly through consumer preference as a mediator (0.426), with a total effect of 0.795. This indicates that while positive perceptions alone enhance satisfaction, their impact is stronger when they shape consumer preferences, highlighting that mediation through preferences amplifies overall consumer satisfaction towards organic fruits and vegetables.

Conclusion

The present study examined consumer perception, preferences, and satisfaction toward organic fruits and vegetables in selected districts of Rayalaseema, Andhra Pradesh, using a quantitative research design. The findings reveal that middle-aged adults, particularly females, dominate organic consumption, and most consumers are well-educated and professionally employed. Among the consumer perception factors, Price-Value, Quality, and Health & Safety have the strongest influence on satisfaction, while Availability & Access and Certification & Trust exert moderate effects. Furthermore, consumer perception significantly enhances satisfaction both directly and indirectly through consumer preference, indicating that preferences amplify the impact of perceptions on satisfaction. Overall, the study highlights that improving consumer perception—especially regarding affordability, quality, and health benefits—along with fostering consumer preferences, is crucial for increasing satisfaction and promoting the adoption of organic fruits and vegetables in the Rayalaseema region, providing valuable insights for marketers, policymakers, and local producers.

It is recommended that marketers and local producers emphasize competitive pricing and highlight the value-for-money aspect of organic products to attract and retain consumers. Quality assurance and clear communication of health and safety benefits should be prioritized to strengthen consumer trust and satisfaction. Improving product availability, accessibility, and reliable certification can further enhance consumer confidence. Additionally, promotional strategies should target middle-aged and female consumers, who constitute the major market segment, while educational campaigns can increase awareness about the advantages of organic produce, potentially fostering stronger consumer preferences and satisfaction.

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