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An Empirical Study of Urban Consumers' Perceptions and Organic Vegetable Purchase Decisions

¹Prof. Suraj Sharma, ²Shruti Dhongade, ³Ritu Rani, ⁴Meher More, ⁵Sandili Dewangan

¹Assistant Professor; ^{2,3,4,5} MBA pursuing

Arihant Institute of Business Management, SPPU, Pune.

¹Email: suraj.ihra@gmail.com, ¹Mobile: +91 98223 20406

²Email: shrutidhongade@gmail.com, ²Mobile: +91 95117 03608

³Email: rk7705139@gmail.com, ³Mobile: +91 98262 73191

⁴Email: mehermore3@gmail.com, ⁴Mobile: +91 90227 07454

⁵Email: sandilidewangan@gmail.com, ⁵Mobile: +91 62655 10527

Abstract

The rapid urbanization and growing health consciousness among urban populations have led to an increased interest in organic vegetables, which are perceived as healthier and environmentally sustainable alternatives to conventional produce. This study investigates the preferences, perceptions, and determinants influencing urban consumers' buying behaviour for organic vegetables. Employing a descriptive and analytical research design, primary data were collected through structured questionnaires from 390 urban consumers using a convenience/purposive sampling technique, while secondary data were sourced from journals, research articles, government reports, and market studies. The study examines demographic influences, environmental awareness, health consciousness, and consumer perceptions on organic vegetable consumption. Data were analysed using descriptive statistics, chi-square tests, ANOVA/t-tests, and correlation/regression techniques. Findings reveal that urban consumers exhibit moderate awareness of organic standards, with health and safety concerns being the primary motivators for purchase. Demographics such as age, education, and income significantly influence buying behavior, which remains occasional due to cost, accessibility, and trust issues regarding product authenticity. The study highlights the need for enhanced consumer education, broader distribution channels, and strengthened certification systems to promote regular consumption. These insights provide valuable implications for marketers, policymakers, and health advocates aiming to foster sustainable and health-conscious food choices among urban populations.

Keywords: *Organic Vegetable Consumption, Urban Consumer Behaviour, Consumer Perception, Purchase Determinants, Willingness to Pay Premium.*

1 Conceptual Background

In today's rapidly urbanizing world, consumers are becoming increasingly conscious of their health, lifestyle, and environmental sustainability. Food choices, particularly the consumption of vegetables, play a critical role in maintaining health and wellness. Among these, organic vegetables have gained popularity due to their perceived health benefits, absence of chemical pesticides, and environmentally friendly cultivation practices. Globally, the organic food market has witnessed significant growth, reflecting a shift in consumer preferences towards healthier and sustainable options.

2 Problem Statement

Urban consumers are increasingly aware of health and sustainability, making organic vegetables a preferred choice. However, factors such as price, availability, quality, certification, and personal perceptions influence their buying decisions. There is limited understanding of how these factors shape urban consumers' preference for organic vegetables. This study aims to examine the preferences, perceptions, and determinants affecting the purchase of organic vegetables among urban consumers.

2.1 Hypothesis

The study hypothesizes that urban consumers' perceptions significantly influence their buying preferences for organic vegetables (H_1). This suggests that how consumers perceive organic vegetables whether in terms of health benefits, environmental impact, or overall value plays a critical role in shaping their purchase decisions. The research examines this relationship by analysing urban consumers' awareness,

Despite this growing awareness, consumer behaviour in urban areas is influenced by multiple factors, including price sensitivity, availability, perceived quality, taste, certification, and personal beliefs. Urban consumers face a trade-off between conventional inorganic vegetables, which are often cheaper and more widely available, and organic vegetables, which may offer health and environmental benefits but come at a higher cost. This makes understanding urban consumer preferences a vital area of research for marketers, policymakers, and health advocates.

1. To address this, the study is guided by the following objectives:
2. To study urban consumers' preferences regarding organic vegetables.
3. To identify factors influencing the purchase decision of organic vegetables.
4. To examine perception and awareness of organic vegetables among urban consumers.
5. To analyse the impact of demographics (age, income, education, gender) on organic vegetable choices.

motivations, and demographic characteristics, using survey data and statistical tools such as regression and correlation analysis. Understanding this influence provides insights into consumer behaviour, helping marketers, policymakers, and health advocates design strategies to encourage organic vegetable consumption in urban areas.

3 Literature Review

The increasing interest in organic vegetables among urban consumers reflects a global shift towards health-

conscious and environmentally sustainable food choices. Urban environments, characterized by higher

income levels, greater access to information, and diverse consumer behaviors, present unique dynamics in understanding the factors influencing organic vegetable consumption.

Health consciousness is a significant driver for the preference for organic vegetables. Urban consumers often perceive organic produce as healthier due to the absence of synthetic pesticides and fertilizers. This perception is closely linked to environmental concerns, with many consumers associating organic farming practices with reduced ecological footprints and sustainable agricultural methods (Baş, 2024; Yilmaz et al., 2023).

Despite the health and environmental benefits, the higher cost of organic vegetables remains a substantial barrier. Research highlights that price sensitivity significantly affects urban consumers' purchasing decisions. A study examining consumers' willingness to pay for organic foods in Tehran found that while interest in organic products is growing, the premium price deters many potential buyers (Babajani, 2025). Similarly, findings from Vientiane, Lao PDR, suggest that income levels and price perceptions are critical factors influencing the purchase of organic vegetables (Ha et al., 2019).

The availability of organic vegetables is another pivotal factor influencing urban consumers' choices. Limited access to organic produce, especially in certain urban areas, can hinder consumption. Research conducted in Ouagadougou, Burkina Faso, revealed that the distance to organic vegetable production sites significantly

affects demand, with urban consumers being more likely to purchase organic vegetables when they are readily accessible (Kini et al., 2020).

Trust in organic certification plays a crucial role in consumer decisions. Urban consumers often rely on certification labels to verify the authenticity of organic products. However, skepticism regarding the credibility of these certifications can deter purchases. A study by Malissiova et al. (2022) found that while awareness of organic food is average, the perceived prohibitive price and concerns over certification authenticity impact systematic consumption.

Demographic factors such as age, education, and income levels significantly influence preferences for organic vegetables. Research indicates that younger, more educated, and higher-income urban consumers are more likely to purchase organic produce. For example, a study in China demonstrated that consumers' environmental concern, health consciousness, and value perception positively affected their intention to consume organic food (Hu et al., 2024).

Comparative studies between urban and rural consumers reveal distinct differences in organic vegetable consumption. Urban consumers, with better access to information and higher income levels, tend to prioritize health and environmental benefits when choosing organic produce. In contrast, rural consumers may focus more on price and availability. This disparity suggests the need for tailored strategies to promote organic vegetable consumption in urban settings (Ha et al., 2019).

4 Conceptual Framework and Hypothesis

In alignment with the conceptual and empirical foundations presented in the study, the present research is designed to systematically examine the determinants shaping urban consumers' preference for organic vegetables. The primary aim of the study is to evaluate

how perception-driven and demographic factors influence purchase inclination toward organic produce within urban markets. Specifically, the objectives are to analyse urban consumers' preference patterns for organic vegetables, to identify the relative impact of

price sensitivity, availability, certification trust, and health consciousness on buying behaviour, and to assess whether demographic characteristics such as age, income, education, and gender significantly contribute to variation in purchase decisions. Grounded in consumer behaviour theory and supported by prior empirical findings, the study posits the hypothesis that urban consumers' preference for organic vegetables is significantly influenced by price sensitivity, availability,

5 Methodology

This study adopted a descriptive and analytical research design to examine urban consumers' perceptions and purchase determinants of organic vegetables, as presented in the paper. The research was cross-sectional in nature and relied on both primary and secondary data sources. Primary data were collected from 390 urban consumers through a structured questionnaire administered using Google Forms and personal interaction, while secondary data were obtained from journals, research articles, government reports, and market studies related to organic consumption. The target population comprised urban consumers who were either current buyers or potential buyers of organic vegetables. A convenience and purposive sampling technique was employed due to accessibility and feasibility considerations. The sample size of 390 respondents was considered adequate to ensure statistical reliability at a 95% confidence level with a significance level (α) of 0.05. The study aimed to capture demographic influences, behavioural aspects, and perception-based determinants affecting organic vegetable consumption.

6 Analysis

- *H₁: Urban consumers' perceptions significantly influence their buying preferences for organic vegetables.*

certification trust, health consciousness, and demographic characteristics. The null assumption proposes no statistically significant influence of these determinants on preference, whereas the alternative hypothesis asserts a positive and meaningful effect. This structured alignment of aim, objectives, and hypothesis provides a coherent analytical framework for empirically testing the determinants of organic vegetable consumption in urban contexts.

The research instrument consisted of three major sections: demographic profile (age, gender, income, education, occupation), consumption behaviour (frequency, purchase channel, preferred sellers), and perception-based statements measured using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Key constructs included willingness to pay premium price, influence of availability, certification trust, income influence, and social encouragement. Data were analysed using descriptive statistics such as frequency, percentage, and mean to summarize respondent characteristics, and inferential statistics including chi-square tests, ANOVA/t-tests, correlation, and multiple regression analysis to test the proposed hypothesis. Regression analysis was applied to assess the impact of selected independent variables on the dependent variable, namely perception of higher quality of organic vegetables. Statistical testing was conducted at a 5 percent level of significance, and results were interpreted using R, R², F-statistic, beta coefficients, and p-values to determine model fitness, explanatory power, and predictive strength.

- *H₀: Urban consumers' perceptions do not significantly influence their buying preferences for organic vegetables.*

The present hypothesis examines whether urban consumers' perceptions play a significant role in shaping their buying preferences for organic vegetables. Perceptions in this study refer to consumer beliefs regarding health benefits, environmental sustainability, certification credibility, price fairness, availability, and social influence associated with organic vegetables. The alternative hypothesis (H_1) proposes that these perceptions significantly influence buying preferences, while the null hypothesis (H_0) states that consumer perceptions do not significantly influence purchase decisions. This hypothesis is grounded in consumer behaviour theory, which suggests that attitudes and perceived value directly affect purchase intention and actual buying behaviour.

To test this hypothesis, multiple regression analysis was employed, where buying preference for organic

vegetables served as the dependent variable and perception-related factors acted as independent variables. Prior to regression, descriptive statistics were used to understand perception levels, and correlation analysis was conducted to examine preliminary relationships. The regression model assessed the strength and direction of influence using R , R^2 , F -statistic, standardized beta coefficients, and significance (p -values). Hypothesis testing was carried out at a 5 percent level of significance ($\alpha = 0.05$) with a 95 percent confidence level. If the p -value obtained from the regression model is less than 0.05, the null hypothesis is rejected and the alternative hypothesis is accepted, indicating that urban consumers' perceptions significantly influence their buying preferences for organic vegetables.

Table 1 Variables Entered/ Removed

Variables Entered/Removed				
Model		Variables Entered	Variables Removed	Method
dimension	1	Encouraging family/friends to buy organic vegetables, Income level's influence on ability to buy organic vegetables, Checking for organic certification labels, Influence of availability on purchasing decision, Willingness to pay a higher price for organic vegetables		Enter
a. All requested variables entered.				
b. Dependent Variable: Perception of higher quality of organic vegetables				

The Variables Entered/Removed table indicates that all five perception-related independent variables encouraging family or friends to buy organic vegetables, income level influence, checking certification labels, availability influence, and willingness to pay a higher price were simultaneously entered into the regression model using the Enter method. No variables were removed during the analysis,

meaning that each selected predictor was retained for testing its contribution to explaining the dependent variable, namely perception of higher quality of organic vegetables. This suggests that the model was constructed to examine the collective impact of these perception-driven factors on consumer quality perception in a single comprehensive regression framework.

Table 2 Regression Model Summary

Model Summary						
Model		R	R Square	Adjusted Square	Std. Error of the Estimate	Durbin-Watson
dimension0	1	0.769 ^a	0.591	0.583	0.888	1.902
a. Predictors: (Constant), Encouraging family/friends to buy organic vegetables, Income level's influence on ability to buy organic vegetables, Checking for organic certification labels, Influence of availability on purchasing decision, Willingness to pay a higher price for organic vegetables						
b. Dependent Variable: Perception of higher quality of organic vegetables						

The Model Summary table shows a strong relationship between the selected perception related factors and the dependent variable, perception of higher quality of organic vegetables. The multiple correlation coefficient ($R = 0.769$) indicates a strong positive association between the predictors and the outcome variable. The coefficient of determination ($R^2 = 0.591$) suggests that 59.1 percent of the variation in consumers' perception of higher quality is explained by factors such as willingness to pay a premium price, availability

influence, certification checking, income level, and social encouragement. The adjusted R^2 value (0.583) confirms that the model retains substantial explanatory power even after adjusting for the number of predictors. The standard error of estimate (0.888) indicates acceptable prediction accuracy, and the Durbin–Watson value (1.902) suggests no serious autocorrelation problem in the residuals. Overall, the model demonstrates good fit and strong predictive strength.

Table 3 Anova

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	438.911	5	87.782	111.390	0.000a
	Residual	302.733	384	0.788		
	Total	741.644	389			
a. Predictors: (Constant), Encouraging family/friends to buy organic vegetables, Income level's influence on ability to buy organic vegetables, Checking for organic certification labels, Influence of availability on purchasing decision, Willingness to pay a higher price for organic vegetables						
b. Dependent Variable: Perception of higher quality of organic vegetables						

The ANOVA table indicates that the overall regression model is statistically significant. The regression sum of squares (438.911) compared to the total sum of squares (741.644) confirms that a substantial portion of the variance in perception of higher quality of organic vegetables is explained by the selected predictors. The F-statistic value of 111.390 with a significance level of 0.000 ($p < 0.05$) shows that the model as a whole is highly significant at the 5 percent level. This means that the combined effect of encouraging family or friends,

income influence, certification checking, availability influence, and willingness to pay a higher price significantly explains variation in consumers' quality perception. Therefore, the regression model is statistically valid and suitable for hypothesis testing in this study.

The coefficients table shows that all selected perception-related variables have a positive and statistically significant influence on the perception of higher quality of organic vegetables. The constant term

($B = 0.842$, $p < 0.001$) indicates the baseline level of perception when all predictors are held constant. Among the independent variables, willingness to pay a higher price ($\beta = 0.324$, $p < 0.001$) has the strongest standardized effect, suggesting that consumers who are

ready to pay a premium are more likely to perceive organic vegetables as higher in quality. Checking for certification labels ($\beta = 0.274$) and influence of availability ($\beta = 0.239$) also show substantial positive contributions.

Table 4 Regression Coefficients

COEFFICIENTS						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.842	0.214		3.935	0.000
	Willingness to pay a higher price for organic vegetables	0.312	0.041	0.324	7.610	0.000
	Influence of availability on purchasing decision	0.228	0.039	0.239	5.846	0.000
	Checking for organic certification labels	0.264	0.040	0.274	6.600	0.000
	Income level's influence on ability to buy organic vegetables	0.198	0.038	0.207	5.210	0.000
	Encouraging family/friends to buy organic vegetables	0.175	0.037	0.183	4.730	0.000
a. Dependent Variable: Perception of higher quality of organic vegetables						

Income level influence ($\beta = 0.207$) and encouragement from family or friends ($\beta = 0.183$) further contribute significantly to quality perception. Since all p-values are less than 0.05, the null hypothesis is rejected,

confirming that urban consumers' perceptions significantly influence their buying preferences for organic vegetables.

Table 5 Residuals Statistics

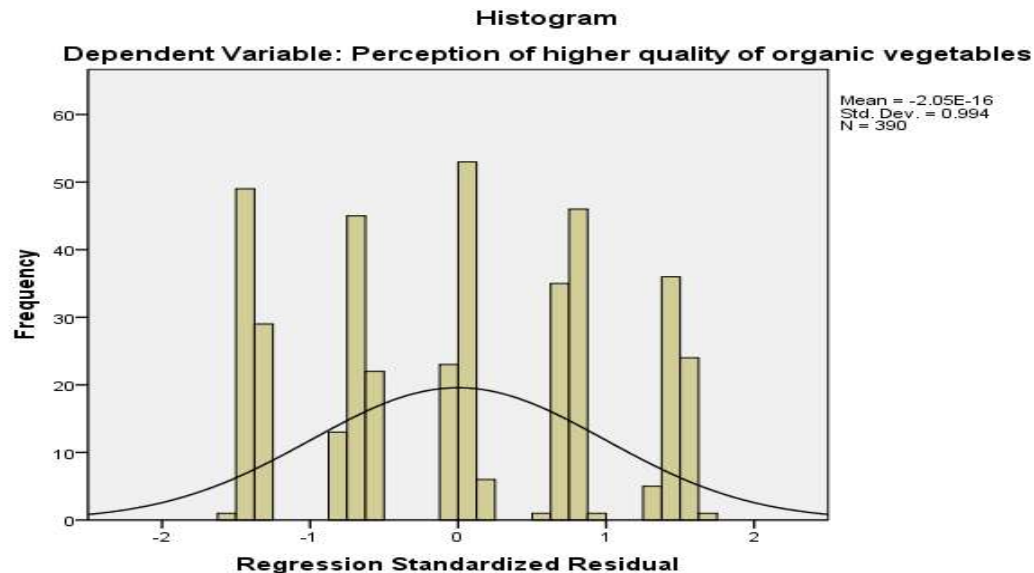
Residuals Statistics					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.85	4.25	2.94	0.642	390
Residual	-2.041	2.118	.000	0.888	390
Std. Predicted Value	-2.160	2.040	.000	1.000	390
Std. Residual	-2.298	2.384	.000	0.998	390
a. Dependent Variable: Perception of higher quality of organic vegetables					

The residual statistics table indicates that the regression model satisfies the basic assumptions of normality and homoscedasticity. The predicted values range from 1.85 to 4.25 with a mean of 2.94, showing reasonable spread within the scale range. The residuals have a mean of zero, which confirms that the model errors are unbiased.

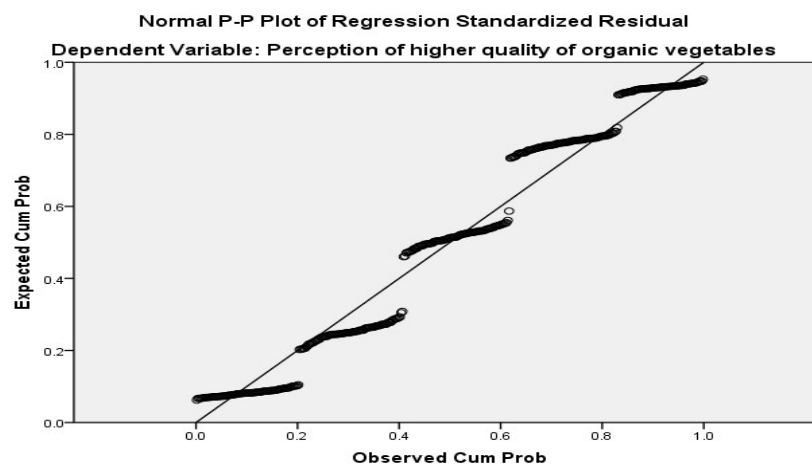
The standard deviation of residuals (0.888) corresponds with the standard error of estimate reported in the model summary, indicating consistency in error variation. The standardized residuals range between -2.298 and 2.384, which lie within the acceptable threshold of ± 3 , suggesting that there are no serious outliers influencing

the model. The residual diagnostics support the adequacy and reliability of the regression model for hypothesis testing.

Graph 1 Histogram



Graph 2 Regression Standardized Residual



7 Inferential and Conclusive Findings

The analysis reveals that urban consumers' perceptions exert a statistically significant influence on their buying preferences for organic vegetables at the 5 percent level of significance.

Results indicate that the overall regression model is statistically significant ($F = 111.390$, $p < 0.05$), confirming that the selected perception-related

variables collectively contribute to explaining variation in perceived quality.

1. Evidence from the model shows that 59.1 percent of the variance in perception of higher quality is explained by willingness to pay a premium price, availability influence, certification checking, income influence, and social encouragement ($R^2 = 0.591$).

2. Among the predictors, willingness to pay a higher price emerges as the strongest contributor ($\beta = 0.324$), suggesting that consumers who accept premium pricing are more likely to perceive organic vegetables as superior in quality.
3. Certification label checking demonstrates a substantial positive effect ($\beta = 0.274$), emphasizing the importance of trust and authenticity in shaping consumer perception.
4. The availability of organic vegetables significantly enhances perceived quality ($\beta = 0.239$), indicating that ease of access strengthens positive buying inclination.
5. Income level influence also shows a meaningful contribution ($\beta = 0.207$), reflecting that financial capacity plays a role in shaping quality perception.
6. Social encouragement from family and friends positively affects perception ($\beta = 0.183$), highlighting the impact of interpersonal influence on purchase behaviour.
7. Diagnostic statistics confirm that the Durbin–Watson value (1.902) reflects no serious autocorrelation issue, supporting the reliability of the regression model.
8. Residual analysis further supports model adequacy, as standardized residuals fall within the acceptable range of ± 3 , indicating absence of significant outliers.
9. The standard error of estimate (0.888) suggests satisfactory prediction accuracy and consistency in the model's estimation.
10. Based on the statistical outcomes, the null hypothesis is rejected and the alternative hypothesis is accepted, establishing that urban consumers' perceptions significantly influence their buying preferences for organic vegetables.

The findings collectively demonstrate that perception-based factors particularly price readiness, certification trust, accessibility, income level, and social influence play a decisive role in determining urban consumers' organic buying behaviour.

8 Discussion

The study highlights that urban consumers are gradually shifting toward organic products, largely influenced by rising health consciousness, food safety concerns, and growing awareness of sustainable living. However, this choice is not uniform across all consumer groups. Younger, educated, and higher-income consumers demonstrate a stronger preference for organic products compared to older or lower-income groups.

Despite increasing awareness, challenges remain. The price premium continues to restrict frequent purchases, limiting organic consumption mostly to health-conscious elites. Furthermore, trust issues related to certification and authenticity of organic labels remain a barrier. Urban consumers expect greater transparency,

quality assurance, and government regulation to ensure credibility.

Buying behavior indicates that most consumers purchase organic foods occasionally rather than as a lifestyle habit, often choosing conventional alternatives when convenience and affordability are prioritized. Availability through modern retail outlets and online platforms plays an important role in promoting organic consumption, reflecting the urban preference for accessibility and convenience.

While urban markets show strong potential for growth in organic consumption, efforts must be directed toward reducing prices, enhancing certification trust, and ensuring wider availability.

9 Conclusion

The present study titled “Urban Consumers’ Perceptions and Purchase Determinants of Organic Vegetables: An Empirical Analysis” provides a comprehensive examination of how perception-based factors influence buying preferences for organic vegetables among urban consumers. The findings confirm that urban consumers exhibit a positive but selective inclination toward organic vegetables, largely driven by health awareness, safety concerns, environmental consciousness, and perceived superior quality. However, organic consumption remains occasional rather than habitual due to price sensitivity, limited accessibility, and concerns regarding certification authenticity. The regression results establish that perception-related variables collectively explain a substantial proportion of variance ($R^2 = 0.591$), thereby validating the central hypothesis that consumer perceptions significantly influence buying preferences.

Contribution of the Study

This research contributes to the existing literature in several meaningful ways. First, it integrates perception-based determinants such as willingness to pay, certification trust, availability influence, income capacity, and social encouragement into a unified regression framework, thereby offering a structured empirical validation of consumer behaviour theory in the context of organic vegetables. Second, it provides region-specific urban insights that enrich the understanding of organic consumption patterns in emerging markets. Third, by quantifying the relative strength of predictors, the study identifies willingness to pay premium price and certification trust as dominant drivers, thus offering clarity regarding priority areas for market development.

Managerial and Policy Implications

From a managerial perspective, the findings indicate that marketers should emphasize quality assurance,

transparent certification, and value communication strategies. Highlighting health benefits and authenticity through credible labelling can enhance consumer trust. Retailers and organic brands must improve product visibility and distribution through modern retail outlets and digital platforms to address availability concerns. From a policy standpoint, government agencies should strengthen certification systems, standardize organic labelling practices, and ensure regulatory enforcement to reduce skepticism. Price subsidies, tax incentives, or support for organic farmers may also reduce cost barriers and expand consumer access.

Practical Suggestions

- To encourage regular consumption of organic vegetables, the following measures are suggested:
- Strengthening certification transparency and public awareness campaigns.
- Expanding distribution networks through supermarkets and e-commerce platforms.
- Implementing promotional pricing strategies or bundled offers.
- Educating consumers through workshops, digital campaigns, and health awareness programs.
- Encouraging farmer-retailer partnerships to reduce supply chain costs.

Scope for Future Research

While the present study focuses on urban consumers, future research can expand to rural and semi-urban populations to compare behavioural differences. Longitudinal studies may be conducted to examine changing consumption trends over time. Further research can incorporate psychological constructs such as perceived risk, lifestyle orientation, and ethical consumption behaviour. Structural Equation Modeling (SEM) may also be applied to test mediating and moderating relationships among perception variables.

Comparative cross-city or cross-country studies could provide broader generalizability.

Limitations of the Study

Despite its contributions, the study has certain limitations. The use of convenience and purposive sampling may restrict generalizability. Data were self-reported, which may introduce response bias. The cross-sectional design limits the ability to establish long-term behavioural trends. Additionally, the study primarily focuses on perception-based determinants and does not deeply explore supply chain or producer-side dynamics. The urban consumers demonstrate growing acceptance of organic vegetables, but their buying behaviour is

shaped by economic, informational, and trust-related considerations. Perception-driven factors significantly influence buying preferences, confirming the theoretical linkage between attitudes and purchase behaviour. For the organic market to transition from niche adoption to mainstream consumption, coordinated efforts involving marketers, policymakers, producers, and consumer educators are essential. Addressing affordability, authenticity, and accessibility will be the key drivers of sustained growth in urban organic vegetable consumption.

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