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Understanding the Growth Trajectory of the Organic Food Market: An Empirical Investigation

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Abstract

The widespread application of synthetic pesticides and chemical-based fertilisers has significantly elevated agricultural productivity; however, it has simultaneously generated severe public health and environmental concerns. This context has catalysed consumer interest in organic food, making the organic food market one of the most dynamic and fastest-growing segments in the global agri-food sector. The present study empirically investigates the factors that underpin the growth trajectory of the organic food market. A structured questionnaire was administered to 179 respondents associated with the food market, and data were analysed using Exploratory Factor Analysis (EFA) followed by Multiple Regression Analysis. Four principal constructs were extracted: concerns regarding the environment, consciousness about health, willingness to pay, and governmental support. The regression model explains approximately 70.2% of variance in organic food market growth (Adjusted R^2 = 0.702, F = 105.689, $p < 0.001$). Among these constructs, willingness to pay emerged as the most significant predictor ($\beta = 0.807$), followed by consciousness about health ($\beta = 0.188$), concerns regarding the environment ($\beta = 0.111$), and governmental support ($\beta = 0.096$). These findings provide actionable insights for policymakers, marketers, and stakeholders committed to mainstreaming organic agriculture.

Keywords: Organic food market, growth trajectory, consumer behaviour, willingness to pay, environmental consciousness, governmental support, exploratory factor analysis, multiple regression.

1. Introduction

Organic farming constitutes a foundational pillar of circular agriculture, ensuring the efficient utilisation of natural resources through nature-based approaches that mitigate the adverse consequences of climate change. Widely recognised as a cost-effective strategy to address environmental degradation, organic farming has garnered substantial consumer interest, particularly in the wake of escalating waste generation attributable to rapid urbanisation.

Modern consumers are increasingly well-informed regarding the food they consume, placing a premium on safety, nutritional integrity, and environmental stewardship. The global marketplace has witnessed a proliferation of green and organic food products carrying eco-labels, reflecting a systemic shift in consumer

preferences. Superior taste, verifiable quality, recognised certification, and transparent production practices are among the central determinants that lead consumers to pay premium prices for organic products. This willingness to pay, even in the face of acknowledged limitations, underscores the profound trust that consumers place in organic food production processes and in the certification standards that govern them (Paul & Rana, 2012).

A critical driver of this growing market is environmental consciousness. Consumers who are more acutely aware of ecological issues demonstrate a stronger propensity to purchase green and organic products. Organic farming contributes positively to environmental sustainability by protecting soil health, maintaining farm ecosystems, and preventing the contamination of surface and groundwater. The broader principle that greater environmental concern translates directly into heightened demand for organic products has been extensively documented in the scholarly literature (Kriwy & Mecking, 2012; Yadav & Pathak, 2016).

Health consciousness represents an equally compelling force shaping the organic food market. Technological advancements, growing awareness of nutritional value, and concerns over food safety have collectively steered informed consumers towards organic alternatives. Prior research has consistently highlighted health and lifestyle concerns as the foremost motivators for organic food purchase, followed by environmental benefits, perceived quality, price considerations, trust in certification, and marketing effectiveness. These factors collectively influence consumer behaviour, which in turn accelerates the expansion of organic retail infrastructure.

Beyond individual motivations, governmental support plays a decisive institutional role. Subsidies, certification frameworks, policy incentives, and educational initiatives directed at both farmers and consumers constitute the structural scaffolding upon which organic markets are built and sustained. In a developing economy such as India, where the adoption of organic farming remains nascent relative to conventional practices, targeted policy interventions are indispensable to bridging the supply-demand gap and fostering market maturation.

Against this backdrop, the present study seeks to empirically delineate the factors that drive the growth trajectory of the organic food market and to quantify their relative impact, thereby contributing to both academic scholarship and practical policy formulation.

2. Literature Review

2.1 Consumer Motivations and Demand Dynamics

Yadav and Pathak (2016) identified several demand-side determinants for organic food products, including health awareness, environmental concern, spirituality, and educational attainment. Their study confirmed that health consciousness is among the most significant motivators driving purchase intention, particularly among urban and semi-urban consumers.

Nandi et al. (2016) highlighted a gap in the literature on how emotional responses to food safety incidents shape individual decisions to transition towards organic consumption. Their study emphasised that while health consciousness is a prominent factor, emotional triggers related to fear and trust also play a meaningful, though underexplored, role.

Akter et al. (2023) found that organic food is disproportionately popular among health-conscious consumers who make regular organic purchases. By contrast, more conventional shoppers remained sceptical about the authenticity of organic claims, citing limited availability, narrow product variety, and elevated pricing as persistent barriers to adoption.

Palma et al. (2016) stressed the centrality of consumer knowledge in effective organic food marketing. Their findings indicate that awareness of production methods cultivates positive attitudes and increases receptivity to organic products, underscoring the need for clear, accessible, and credible information strategies.

2.2 Environmental and Health Considerations

Kriwy and Mecking (2012) documented a global shift in food consumption patterns driven by environmental and health concerns, with demand for organic food growing at more than five billion dollars

annually. Their analysis revealed that the use of agrochemicals, while enhancing yields, has precipitated significant environmental degradation and heightened regulatory scrutiny.

Singh, Singh, and Verma (2013) advocated for organic agricultural methods as a pathway to producing high-quality, nutritionally superior food without depleting soil nutrients or disrupting ecosystems. They argued that organic farming preserves the interconnections between water quality, soil nutrients, and environmental integrity, positioning it as a long-term strategy for agricultural resilience.

Das, Chatterjee, and Pal (2020) documented India's growing acceptance of organic farming, noting that the country is now among the leading organic food producers globally. Their research underscored the eco-friendly nature of organic practices, which promote soil health and environmental robustness, and highlighted the rapidly expanding domestic market for organic products.

Morshedi et al. (2017) examined organic farming from the perspective of rural farmers, identifying technology adoption, health and safety improvements, and production upgrades as key capabilities for enhancing food quality. Their study also highlighted the economic benefits of organic farming, including employment generation and a reduction in rural-to-urban migration.

2.3 Trust, Certification, and Market Infrastructure

Paul and Rana (2012) characterised organic farming as a sustainable approach that, despite its benefits, remains underdeveloped in India, accounting for less than 0.05% of total agricultural land. Certification was identified as a critical mechanism for assuring consumers about the absence of pesticides and synthetic fertilisers, with implications for both domestic and export markets.

Mittal, Kaur, and Vishwakarma (2014) noted that consumer trust in organic products is eroding, with approximately 40% of surveyed respondents reporting quality-related concerns. Given that a substantial proportion of Indian consumers fall within low-to-middle income brackets, trust in sellers' and producers' claims becomes a decisive factor in purchase decisions.

Sondhi (2014) observed that while fear-inducing narratives about food safety are prevalent, they do not alone suffice to drive organic consumption in India. Pricing remains one of the most significant barriers, as evidenced by the country's domestic organic food sales remaining at approximately 0.13 billion USD at the time of the study.

2.4 Governmental and Policy Dimensions

Archana (2013) discussed the role of government regulations including tax exemptions, subsidies, and marketing support in incentivising farmers to adopt organic practices. Crop diversification strategies adopted under such policies were shown to create year-round employment, reduce the vulnerability of crop failure, and promote biodiversity.

Buragohain (2020) documented the positive outcomes of government-organised workshops and training programmes that introduced farmers to bio-manure technologies such as vermicomposting and EM composting, as well as to bio-pesticides derived from locally available medicinal plants and cow urine. These initiatives have been instrumental in fostering farmer confidence in organic methods.

Sushmita, Sharma, and Lal (2025) situate organic farming at a pivotal juncture in global food systems, arguing that its transformative potential can only be realised through sustained commitment, cross-sector collaboration, and continuous innovation in policy and technology.

3. Research Objectives

The present study pursues two principal research objectives:

i. To identify and explore the factors that underpin the growth trajectory of the organic food market.

ii. To examine and quantify the impact of the identified factors on the growth trajectory of the organic food market.

4. Research Methodology

This study adopts a quantitative, survey-based research design. Primary data were collected from 179 respondents associated with the food market through a structured questionnaire developed on the basis of existing literature and expert consultation. A random sampling technique was employed to ensure representativeness across geographic and demographic categories.

The questionnaire comprised 16 items rated on a five-point Likert scale. Data were analysed using Exploratory Factor Analysis (EFA) to identify latent constructs, with the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity applied to validate the factorability of the data. Following factor extraction, Multiple Regression Analysis was conducted to assess the relative impact of the identified factors on the overall growth trajectory of the organic food market. Internal consistency of the instrument was assessed using Cronbach's Alpha. All analyses were performed using IBM SPSS Statistics.

5. Findings And Analysis

5.1 Demographic Profile of Respondents

A total of 179 participants were surveyed. Males constituted the majority of respondents (56.4%), while females accounted for 43.6%. In terms of age distribution, 35.2% were below 35 years of age, 39.7% fell within the 35–46 years bracket, and 25.1% were above 46 years. Regarding market experience, 27.9% reported fewer than 7 years of experience, 40.8% had between 7 and 12 years of experience, and 31.3% had more than 12 years. With respect to market area, 27.4% of respondents were from rural markets, 34.1% from urban areas, 32.4% from semi-urban areas, and 6.1% from other localities.

Table 1: General Details of Respondents

Variable	Respondents (n)	Percentage (%)
Gender		
Male	101	56.4
Female	78	43.6
Total	**179**	**100.0**
Age		
Below 35 years	63	35.2
35–46 years	71	39.7
Above 46 years	45	25.1
Total	**179**	**100.0**
Market Experience		

Less than 7 years	50	27.9
7–12 years	73	40.8
More than 12 years	56	31.3
Total	**179**	**100.0**
Market Area		
Rural	49	27.4
Urban	61	34.1
Semi-Urban	58	32.4
Others	11	6.1
Total	**179**	**100.0**

Source: Primary Data

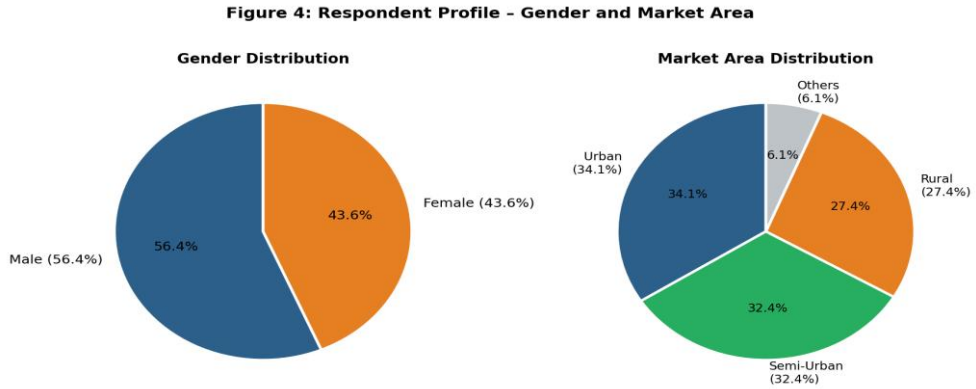

Figure 4: Respondent Profile – Gender and Market Area Distribution

5.2 Exploratory Factor Analysis

Table 2: KMO and Bartlett's Test of Sphericity

Statistic	Value
Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy	0.795
Bartlett's Test of Sphericity – Approx. Chi-Square	2656.134
Degrees of Freedom (df)	120
Significance (p-value)	.000

Source: Primary Data

The KMO value of 0.795 indicates meritorious sampling adequacy, and Bartlett's Test of Sphericity is statistically significant ($p < 0.001$), confirming that the correlation matrix is factorable and suitable for principal component analysis.

Table 3: Total Variance Explained

Comp.	Eigenvalue	% Variance	Cumulative %	Rot. Eigenvalue	Rot. % Var.	Rot. Cumul. %	Comp.	Eigenvalue	% Variance
1	4.752	29.697	29.697	3.656	22.852	22.852	9	.287	1.791
2	4.325	27.031	56.728	3.286	20.538	43.390	10	.227	1.417
3	2.383	14.894	71.623	3.078	19.240	62.630	11	.183	1.143
4	1.638	10.237	81.859	3.077	19.229	81.859	12	.169	1.059
5	.564	3.523	85.383	–	–	–	13	.104	.651
6	.441	2.758	88.141	–	–	–	14	.099	.617
7	.395	2.469	90.610	–	–	–	15	.068	.426
8	.310	1.935	92.545	–	–	–	16	.056	.352

Source: Primary Data

Principal component analysis identified four components with eigenvalues exceeding 1.0, together accounting for 81.859% of the total variance. Post-rotation, the four components explained 22.852%, 20.538%, 19.240%, and 19.229% of variance respectively, indicating a well-balanced factor structure.

Figure 1: Scree Plot – Principal Component Analysis

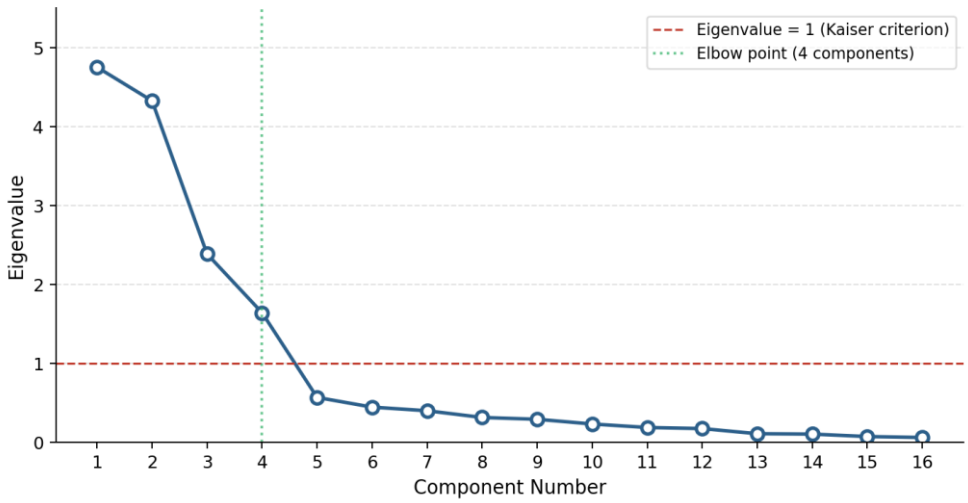

Figure 1: Scree Plot – Eigenvalues from Principal Component Analysis

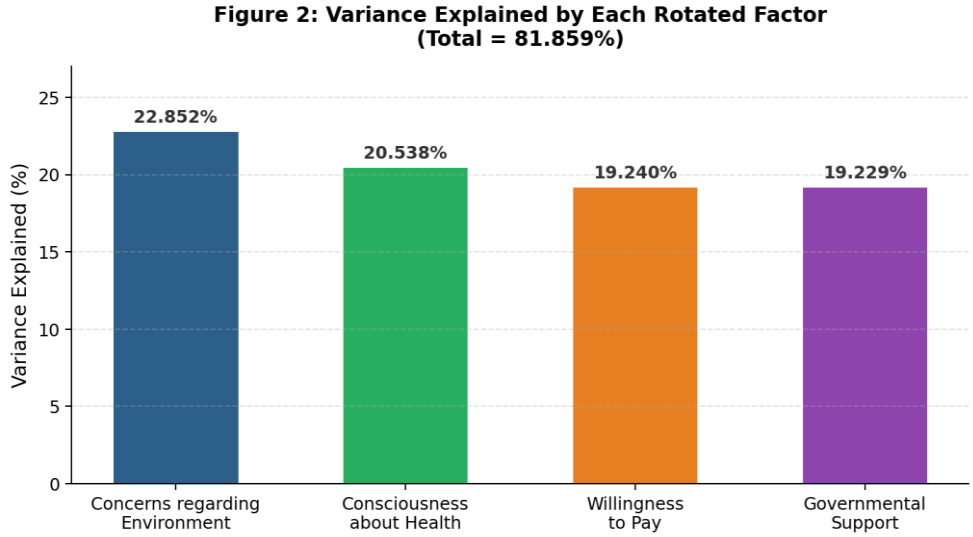

Figure 2: Variance Explained by Each Rotated Factor (Total = 81.859%)

Table 4: Rotated Component Matrix

S. No.	Statement	Factor Loading	Factor Reliability (α)
	Factor 1: Concerns regarding Environment		**.968**
1	Growth of the organic food market supports sustainable farming	.945	
2	Organic food market growth contributes to reduced pollution levels	.941	
3	Growth of the organic food market helps in protecting biodiversity	.939	
4	Organic farming protects both surface and groundwater from fertilisers and pesticides	.932	
	Factor 2: Consciousness about Health		**.924**
5	Consumer preference for pesticide-free food drives organic market growth	.939	
6	People are increasingly inclined towards foods with natural nutrient profiles	.905	
7	Rising incidence of lifestyle diseases is encouraging the organic food market	.844	
8	Growing awareness of healthy eating habits supports organic food market expansion	.818	

	Factor 3: Willingness to Pay		**.897**
9	Consumers are willing to pay a premium price for certified organic food	.872	
10	Rising household income positively influences the growth of the organic food market	.856	
11	High-income consumers exhibit a stronger interest in organic and health-oriented products	.845	
12	Higher disposable income encourages greater expenditure on sustainable food items	.813	
	Factor 4: Governmental Support		**.896**
13	Government financial support catalyses growth in the organic food market	.910	
14	Official product certification enhances consumer trust in organic food	.866	
15	Government initiatives to educate farmers and consumers about organic farming are effective	.863	
16	Agricultural policies and incentives for organic farmers support market growth	.804	

Source: Primary Data (Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization)

The rotated component matrix reveals that all 16 items loaded cleanly onto their respective factors, with loadings ranging from 0.804 to 0.945, well above the conventional threshold of 0.50. Factor 1 (Concerns regarding Environment) exhibited the highest reliability (α = .968), followed by Factor 2 (Consciousness about Health, α = .924), Factor 3 (Willingness to Pay, α = .897), and Factor 4 (Governmental Support, α = .896), all reflecting excellent internal consistency.

Table 5: Reliability Statistics

Cronbach's Alpha	Number of Items
0.836	16

Source: Primary Data

The overall Cronbach's Alpha of 0.836 across the 16-item, four-factor instrument indicates good internal consistency, satisfying the widely accepted threshold of 0.70 for social science research.

5.3 Multiple Regression Analysis

Multiple regression analysis was conducted to evaluate the collective and individual impact of the four extracted factors on the overall growth trajectory of the organic food market. The factors were entered simultaneously as predictors.

Table 6: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of Estimate
1	.842	.708	.702	.37871

Predictors: (Constant), Concerns regarding the Environment, Consciousness about Health, Willingness to Pay, Governmental Support

The model exhibits a multiple correlation coefficient (R) of 0.842, indicating a strong association between the predictor set and the outcome variable. The coefficient of determination (R^2) of 0.708 suggests that the four factors jointly explain 70.8% of the variance in organic food market growth, while the Adjusted R^2 of 0.702 confirms robust model fit after accounting for the number of predictors.

Table 7: ANOVA

Model	Source	Sum of Squares	df	Mean Square	F
1	Regression	60.632	4	15.158	105.689*
	Residual	24.955	174	.143	
	Total	85.587	178		

** $p < 0.001$. Dependent Variable: Overall Growth Trajectory of the Organic Food Market*

The ANOVA result confirms the overall statistical significance of the regression model ($F(4, 174) = 105.689$, $p < 0.001$), indicating that the predictor set collectively explains a significant proportion of variance in the dependent variable.

Table 8: Regression Coefficients

Predictor	B	Std. Error	Beta (β)	t	Sig.
(Constant)	4.274	.028	–	150.984	.000
Concerns regarding Environment	.077	.028	.111	2.711	.007
Consciousness about Health	.131	.028	.188	4.600	.000
Willingness to Pay	.560	.028	.807	19.716	.000
Governmental Support	.067	.028	.096	2.347	.020

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Dependent Variable: Overall Impact of Factors on the Growth Trajectory of the Organic Food Market

All four predictors demonstrate statistically significant contributions to the growth of the organic food market. Willingness to pay is by far the most influential predictor ($\beta = 0.807$, $t = 19.716$, $p < 0.001$), reflecting the decisive role of consumer economic capacity and disposition in driving market expansion. Consciousness about health is the second most significant predictor ($\beta = 0.188$, $t = 4.600$, $p < 0.001$), highlighting the centrality of health motivations in organic purchasing decisions. Concerns regarding the environment contribute meaningfully ($\beta = 0.111$, $t = 2.711$, $p = 0.007$), and governmental support, while the smallest contributor in this sample, remains statistically significant ($\beta = 0.096$, $t = 2.347$, $p = 0.020$), affirming the importance of institutional frameworks in sustaining market growth.

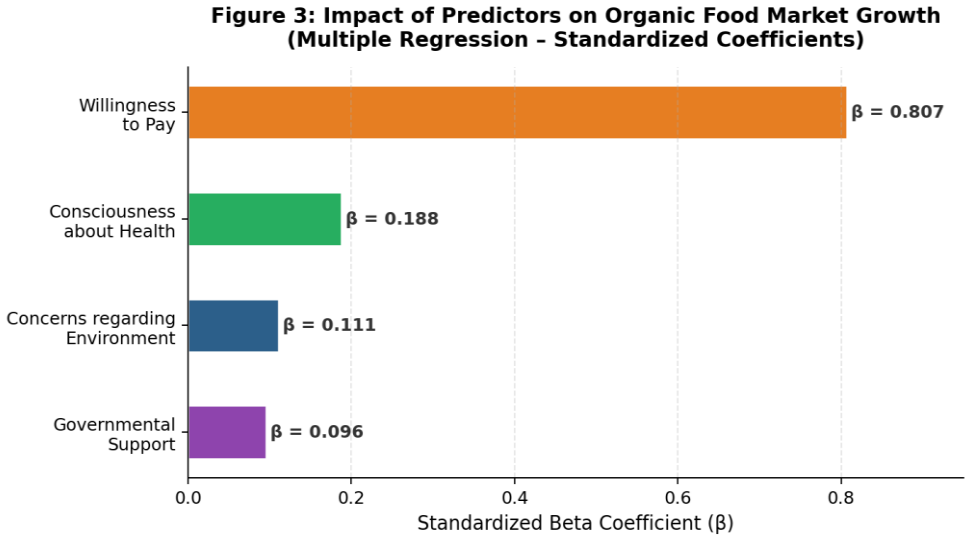

Figure 3: Standardised Beta Coefficients – Impact of Predictors on Organic Food Market Growth

6. Discussion

The empirical findings of this study converge with and extend existing scholarship on the determinants of organic food market growth. The dominant influence of willingness to pay ($\beta = 0.807$) corroborates earlier work by Sondhi (2014) and Mittal et al. (2014), who identified price sensitivity and income level as central mediators of organic purchase behaviour in India. The result implies that market expansion strategies must be anchored not only in product quality and environmental messaging but in ensuring economic accessibility through price rationalisation and targeted income-segment marketing.

The significant role of health consciousness ($\beta = 0.188$) aligns with findings by Nandi et al. (2016) and Yadav and Pathak (2016), who placed health awareness at the forefront of consumer motivations. As chronic and lifestyle-related diseases continue to proliferate, health-driven demand for organic alternatives is expected to intensify. Marketers would benefit from communicating specific, evidence-based nutritional claims that resonate with health-aware consumer segments.

Environmental concern ($\beta = 0.111$), while statistically significant, appears to be a secondary driver compared to economic and health factors. This finding is consistent with Kriwy and Mecking (2012), who observed that environmental motivation is real but often subordinated to more immediate personal concerns. Campaigns that draw explicit connections between individual organic purchasing and measurable environmental outcomes may help elevate the salience of this factor.

Governmental support (β = 0.096) emerges as a statistically significant, albeit modest, predictor. This aligns with Archana (2013) and Buragohain (2020), who emphasised the importance of subsidies, certification schemes, and farmer education programmes. The relatively lower beta value may reflect the current limitations of policy reach and implementation effectiveness in the sampled contexts, suggesting that strengthening institutional mechanisms could yield disproportionate market benefits.

7. Conclusion

This study provides robust empirical evidence that the growth trajectory of the organic food market is shaped by a distinct constellation of demand-side and institutional factors. Using Exploratory Factor Analysis and Multiple Regression Analysis on data from 179 food market respondents, four key constructs were identified: concerns regarding the environment, consciousness about health, willingness to pay, and governmental support. Together, these factors account for 70.2% of the variance in organic food market growth.

Willingness to pay is the paramount predictor, underscoring the necessity of aligning product pricing and value propositions with the economic realities of diverse consumer segments. Health consciousness follows as a formidable driver, reinforcing the need for clear nutritional communication and evidence-based health claims. Environmental concerns, while motivationally present, require more concerted advocacy to translate into purchasing behaviour. Governmental support, though modest in its current effect size, remains indispensable as the structural backbone that sustains certification systems, farmer capacity, and consumer awareness.

The organic food market stands at a pivotal moment of opportunity. Sustained growth will require coordinated action across policy, industry, and civil society to dismantle barriers such as high certification costs, policy fragmentation, and supply chain inefficiencies. Future research should adopt longitudinal designs and expand geographic coverage to capture temporal shifts and cross-regional variations in organic food market dynamics.

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