RESEARCH PAPER

Understanding Consumer Preferences for Millet-Based Products: Evidence from an Emerging Urban Market

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ABSTRACT
The resurgence of interest in the millet-based products in India is attributed to the increasing demand for climate-resilient agriculture and sustainable health-conscious diet choices in urban areas. Despite rising health consciousness and robust institutional promotion, there exists a disparity in millet consumption. This paper examines the factors influencing urban consumers preferences for millet-based products in Noida, Uttar Pradesh. The primary data was collected from 100 urban consumers with the help of a well-structured questionnaire. A Composite Consumer Choice Index (CCI), comprising frequency of consumption and monthly expenditure, was devised to capture the depth of consumer involvement for better understanding of consumer behavior. Socio-economic attributes, health consciousness, and product attribute parameters influencing consumer choice were analyzed through Multiple linear regression analysis. Garrett Ranking Technique was used to examine the constraints faced by consumer. Monthly household income and health awareness significantly and positively influence the choice of consumers. On the other hand, low perceived convenience is a significant deterrent in the adoption process. Product availability is another very important factor influencing the purchasing behavior. Educational level and price perception do not have an independent effect on the intensity of consumption. The most binding constraints explaining the limited consumption of millet are very limited product diversity and availability, while lack of awareness plays only a minor role. In sum, the spreading of millet consumption in urban areas does not seem to be driven by information asymmetries, but rather by the mismatch between lifestyles and the design of the market. Increasing product variety, improving product availability and promoting convenient product formats are fundamental for healthful intentions to translate into regular behaviour's contributing demand-side evidence for climate-resilient crops and sustainable, resilient urban food environments Overall the results suggest that market integration and product development resulting in accessible and affordable millet-based products could narrow the gap between the positive perceptions of the product and its adoption in regular diets.

Keywords: *Climate-resilient crops, consumer choice, health awareness, millet-based products and urban food markets*
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1. INTRODUCTION

Global food systems are changing; they are under pressure from both the sides: people not having enough good food to eat and the environment getting degraded. More people are getting sick from eating foods which has made people focus on grains that are good for them. At the time the weather is getting more unpredictable and we are using up all our resources too fast. This has shown us that growing some grains in a way that uses a lot of water is not good for the planet. People are talking more about farming in a way that is good for the environment. They want crops which are nutritious and can grow well even when the weather is not ideal. These crops should also not need a lot of resources to grow. Experts in economics say that farmers need to use resources in a smart way, they need to grow the crops in

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the right places and use farming methods that are good for the planet.

Optimization-based agricultural planning also provides important evidence of how aligning economic objectives with environmental constraints leads to greater income stability and reduced excessive input use (Chandel et al., 2025); similarly, studies of resource use efficiency in protected cultivation systems have demonstrated that optimized input allocation leads to increased productivity and economic returns, and also to sustainability (Nikhil & Bala, 2021). They found that when farmers use the number of resources they can grow more food and make more money without hurting the planet. All of these findings support the idea that we need to change how we produce and eat food to make it more sustainable. We need to make sure that farmers are using resources in a way and that people are eating food that is good, for them and the planet.

Within this sustainability framework millets have become a strategic crop again, this is because they are rich in micronutrients and have a low glycaemic index can tolerate drought and need less water and fertilizer (Saleh *et al*.,2013). The recognition of these qualities in millet as a crop made the Food and Agriculture Organization decide to make 2023 the International Year of Millets. This was because millets can help make agriculture stronger against climate change and improve nutrition. India strongly supported this idea to increase millet production add value to them and get more people to eat them. However, with good policies to increase millet supply and improve processing, the key to making the millet market grow is getting people to accept and eat millets regularly. This is especially important in cities where people are changing what they eat. Millets can play a role in making our food system more sustainable and healthier. People need to be more comfortable eating millets for the market to really change.

Urban consumption environments are influenced by various factors apart from health motivations, such as prices, market integration, and supply stability. Agricultural market research points out that when prices are transmitted efficiently and producers and consumers centres are well integrated, there is less price fluctuation and the consumer's trust is increased This means that in case of new food categories like millet products, if the supply chain is broken and prices are inconsistent, consumers may perceive them as being more expensive or not easily available, which will limit their consumption on a regular basis.

Also, the behavioural research suggests that people's awareness of the environment and their perception of the climate have an impact on the way households make decisions. According to the perception based studies, people's behavioural changes at home are largely influenced by their concern about climate change and environmental degradation (Nikhil *et al*.,2023). Thus, this kind of environmental awareness may provide a direct rationale for climate resilient grains such as millets, especially amongst the urban consumers who link their food choices with sustainability concept.

People think that because millets and ancient grains are good for the planet everyone will want to eat them, but that is not what happens. What we see in countries is that people may want to buy millets and ancient grains when they know they are healthy, however they do not always buy them because they do not know how to cook them and they are not sold in stores.

Research done in Africa and Southeast Asia shows that being aware of health benefits can impact consumers' willingness to purchase, but at the same time, some difficulties such as those consumers not being familiar with the way of preparing the food and the product not being available in many retail stores hinder them from having it regularly (Devi *et al.* , 2014; Bouis & Saltzman, 2017). Studies in urban markets of Europe and Latin America reveal that consumer preferences are influenced positively by health benefits and natural product positioning perception but the repeat purchases are weakened by higher prices and limited branding (Van der Kamp et al. , 2014) and Saravanan et al. (2025).

For example, in research conducted in Hyderabad, around half of the participants favoured millet due to its health benefits like diabetes management and easy digestion although their regular consumption was restricted due to steep prices and lack of knowledge of preparation (Sangappa et al., 2023). Increased awareness and availability would therefore greatly improve the acceptance of millet-based products. It has been observed that consumption patterns are influenced considerably by socio-economic profiles which demonstrate that higher family income, larger household size and older age groups are associated with a higher demand for value-added millet products.(Mohanraj *et al.* , 2023).

While traditional millet consumption has been slowed by processing repetitions and restricted to occasional use even among growers (Patil *et al.,* 2018), emerging urban markets show a different trend as consumers pivot toward modern, value-added millet products. Market studies conducted by the Indian Council of Agricultural Research- Indian Institute of Millets Research (2022) indicate the increasing demand for value, added millet snacks and ready, to, eat products in urban India. However, they also point out that the supply is fragmented, the branding is weak, and the processing capacity is limited, which are some of the structural bottlenecks that have lasted for a long time.

The conceptual framework for understanding consumer acceptance of millet-based goods will now be adapted into Lancaster's characteristics theory and Theory of Planned Behaviour. On the practical side, consumers derive satisfaction or utility from intrinsic properties (such as taste and nutrition) and extrinsic properties (such as price, packaging, and the reputation of the brand they are

buying). Purchase intention is driven by health-oriented attitude, perceived behavioral control of planning and meal situation and the societal scale.

The literature is really helpful. There are three big problems that still need to be fixed. First a lot of studies just look at basic numbers and what people think, instead of using complicated math models that can figure out how strong the links are between social and economic factors what people know and the products themselves. The Indian studies do not use things like multivariate modelling to understand the Indian market. Second not many researchers have looked at how sustainability, market efficiency and what people do all fit in the same big picture. The researchers have not studied the market efficiency and behavioural determinants of the market. Third we do not have a lot of information from big cities in India that are changing really fast especially when it comes to shopping. The Indian market and the retail transformation, in cities are not well understood.

Against this background this study looks at what makes city dwellers buy millet-based products. The study tries to understand this by looking at things like people's income, education and health awareness well as the characteristics of millet-based products. It also considers problems that people might face when buying these products and factors related to the market. By combining all these factors, the study aims to connect what producers think about sustainability with what consumers do. In doing it adds to the conversation about crops that can withstand climate change eating habits that are good for the environment and changing the way food is produced and consumed in cities. The study focuses on millet-based products because they are good for the environment and people's health. It wants to help make cities more sustainable, by understanding what makes people buy eco- food.

Besides, the research also tries to understand how daily habits in cities may affect the choices people make about food. Working very long hours, the availability of food in local stores, and knowledge of millets may be factors influencing the decision to buy. To find out the reasons why even a person who knows the advantages of millets does not regularly have them in his/her diet, it is necessary to understand the practical and behavioural aspects.

2. MATERIALS AND METHODS

2.1. Research Design and Study Area

The objective of the study was to evaluate the different factors affecting consumer choice of millet-based products in urban markets with a focus on awareness, socio-economic characteristics, product-related attributes, and perceived constraints. The study employs both descriptive and analytical methodologies to yield contextual as well as empirical investigation of consumer behaviour. The descriptive section primarily involves profiling the socio-economic characteristics of urban consumers and examining their consumption and preference behaviour millet-based products. The analysis assesses the impact of selected socio-economic, awareness-related and product-related predictors on consumer choice using multiple regression analysis. Observations on constraints intentionally influencing the consumption of millet were determined and prioritized through Garrett's Ranking Technique.

The research study was conducted in Noida, Uttar Pradesh, India. Noida is a rapidly developing city where organized retail is expanding, disposable incomes are increasing, and health-consciousness is growing. With rapid growth of supermarkets, branded retail and processed food segment, it is a suitable place to study factors influencing millet-based product adoption behaviour in urban markets.

2.2. Data Sources and Sampling

The collection of primary data for the analysis was done using a structured and pre-tested questionnaire, which was supplied in person through face-to- face-interview to the respondents. Based on the literature review conducted on millet consumption and consumer behaviour, the questionnaire was designed to meet the following sections:

1) Socio-economic characteristics
2) Awareness and perception of nutritional benefits
3) Evaluation of product attributes
4) Purchase frequency and expenditure patterns
5) Constraints affecting consumption

The clarity, internal consistency and relevancy of the items were checked through pre-testing. Subsequently, modifications were implemented, followed by the conduction of the final data collection. The findings were interpreted using secondary data that helped convey key concepts.

The above information is sourced from published research articles, government reports, policy document and publications of Indian Council of Agricultural Research that deal with millet promotion and nutritional policies.

The sampling unit was a single urban consumer who made household food purchasing decisions and was either aware of or had purchased millet-based products.

A purposive sampling technique was adopted due to the lack of a complete sampling frame of millet consumers.

Respondents were chosen from branded retail stores, grocery stores, and housing communities to ensure that a well-informed group of city residents participated in the survey; 100 respondents participated, and the sample size was deemed sufficient for descriptive analysis, multiple regression estimation, and Garrett ranking within the study area based on the exploratory nature of the study and the perception-based variables involved.

2.3. Construction and Operationalization of Variables

2.3.1. Dependent Variable: Consumer Choice Index (CCI)

The study of consumer behaviour through the 'consumer choice index' was a composite index comprising two aspects of behaviour namely: (1) Frequency of consumption and (2) Expenditure on consumption of millet-based products. Both the dimensions were measured on ordinal scales of 1-4. Consumer choice index development was computed as the average of frequency and expenditure scores, having values between 1-4 with a mean of 2.38 and standard deviation of 0.80, showing moderate adoption among urban consumers.

2.3.2. Independent Variables

The study utilized six explanatory variables for analysis. Two ordinal codes were given for the family monthly income and educational qualification taking values from 1 to 4. Health Awareness Index was based on five statements related to health aspects like healthiness, no cholesterol, no fat, nutrition and vitamin content (1=Strongly Disagree to 5=Strongly Agree). Price Perception Index (Likert-scale statements on affordability and price influence, with reverse coding); Convenience Index (mean of responses on easiness in cooking and time-saving aspect); and Product Availability Constraint (one Likert-scale item on whether restricted availability of the products limits the consumption or not.

2.4. Analytical Tools and Model Specification

2.4.1.Descriptive Analysis

To analyze the socio-economic characteristics and consumption pattern of the respondents, descriptive statistics like percentage, mean, standard deviation were used.

2.4.2.Multiple Regression Analysis

The Consumer Choice Index (CCI) determines the choice of consumers towards millet-based products. Moreover, the study uses regression analysis to find out relevant variables.

The regression model is given as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

Where Y = Consumer Choice Index; X1 = Monthly family income; X2 = Educational qualification; X3 = Health Awareness Index; X4 = Price Perception Index; X5 = Product availability constraint; X6 = Convenience Index.The model's fit was assessed using R2, adjusted R2, and the F-statistics. The Garrett Ranking Technique was used to assess the constraints analysis. Data was coded in Microsoft Excel and analyzed using SPSS, STATA and R statistical analysis software. All participants willingly took part in this research study and gave their informed consent for the research study. Their data was kept strictly and completely confidential. The model will determine the extent to which each of the factors (socio-economic, awareness and product related) impacts the purchasing decision of consumers of these products.

The overall fit of the model will be seen using the value of R^2, adjusted R^2 and the F-statistics. The statistical significance of the model variables will be tested using t-tests at conventional significance levels.

3. RESULTS AND DISCUSSION

3.1. Socio-Economic Profile and Consumption Behavior

The socio-economic distribution of the consumers of these millet products indicates that the majority of consumers within the product sample are of a younger age group. Specifically, 68% of the consumers of these products are of the age of 25 years of age or younger. Thus, the products made from millet are attracting the attention of younger consumers in urban areas of the country. Additionally, younger consumers are generally more exposed to digital health and health-related communication and narratives than are consumers of an older age group. Therefore, the increased interest in millet-based products of the younger age group may indicate an interest in the health benefits of millet as compared to other crop-based products currently available to consumers. The findings of our study align with the studies that show that younger urban residents are more likely to adapt to alternative and wellness-related food choices because of their awareness and health-conscious life choices.

The sample was 64% female, which highlights their main role in the decision, making process regarding the procurement of food for the family. The greater participation of women indicates their influence in judging the health benefits of the diet, the quality of the product, and its suitability for the family needs. The respondents showed significantly high educational levels, with 35% having postgraduate qualifications.

About 54% of those surveyed confessed that their average monthly income at home is over 75, 000. With their greater purchasing power, such consumers might be less sensitive to the price of improved millet products and more willing to try different grain varieties.

From the family size distribution data, it appears that most households are comprised of 4 to 5 members. Medium, size families might weigh the nutritional value of millet products in addition to their price and taste when deciding on the frequency and variety of their consumption of such products.

Table 1. Socio-Economic Profile of Respondents

Variable	Category	Frequency	Percentage (%)
Age (Years)	Below 25	68	68.0
	25-34	10	10.0
	35-44	12	12.0

Variable	Category	Frequency	Percentage (%)
	45-54	8	8.0
	55 and above	2	2.0
Gender	Female	64	64.0
	Male	36	36.0
Educational Qualification	Up to School	25	25.0
	Undergraduate	7	7.0
	Graduate	33	33.0
	Post-Graduate	35	35.0
Monthly Family Income (Rs.)	Below 25,000	23	23.0
	25,000-50,000	11	11.0
	50,001-75,000	12	12.0
	75,001-1,00,000	26	26.0
	Above 1,00,000	28	28.0
Family Size	Up to 3 members	28	28.0
	4-5 members	54	54.0
	More than 5 members	18	18.0

3.2. Descriptive Analysis of Perceptual Variables

The distribution of the responses to the key perceptual statements was analysed using Likert, scale visualizations. Figures 1, 3 show the percentage distribution of responses across the health awareness, price perception, and convenience and availability dimensions. This initial analysis gives an idea of the consumer attitudinal patterns in urban areas and helps in deriving the composite indices that are used in the subsequent analytical framework.

Responses that were in the health-awareness category tells us that they have positive approach for making healthy food choices. Most of respondents have agreed or strongly agreed with the statements, “I prefer healthy food choices”, “I actively seek nutritious alternatives”, and “Millets are healthier than refined cereals”. The majority of the responses at the end of the scale where strongly agree is there tells us that consumers take their health seriously and pay attention to the nutritional value of the millet products. The answers for price perception are evenly spread between agree, disagree and neutral.

Most of the respondents agree that millet products are more expensive than regular cereals, and the price usually affect how often people buy these products. Most of the respondents are neutral on these issues, this tells us that the ability to pay and price sensitivity are different for different income and demographic groups.

There have been differences in respondents' views on statements talking about convenience and availability. A large number of respondents concurred that if the availability is limited, then it will restrict how often they can consume such products, thus highlighting the critical role of both market access and the presence of products on store shelves in retail outlets.

It is observed that people, on the one hand, find the attributes of ease of cooking and time, saving quite dissimilar to those of millet, while on the other hand, they are not sure if such products fit well with their lifestyles. The variation in responses might also be due to the differences in people's product knowledge and lifestyle compatibility.

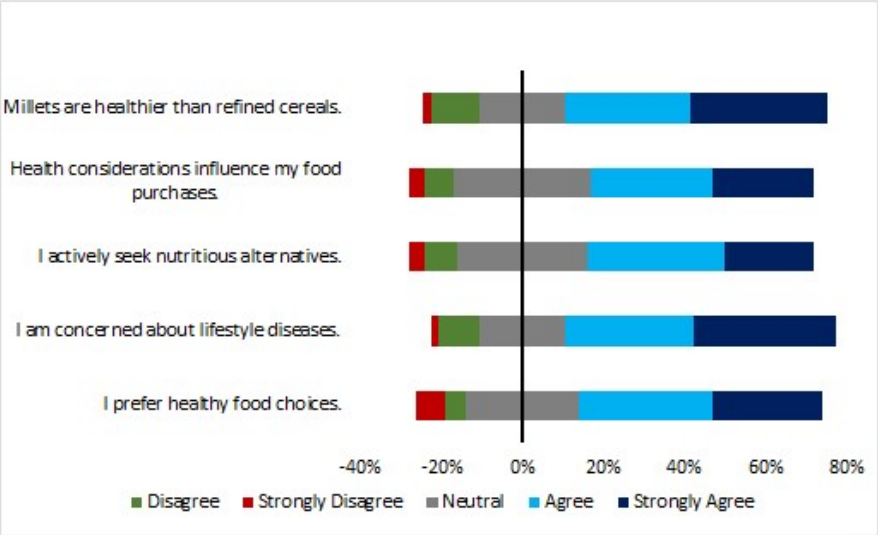

Figure 1. Distribution of Responses to Health Awareness Statements

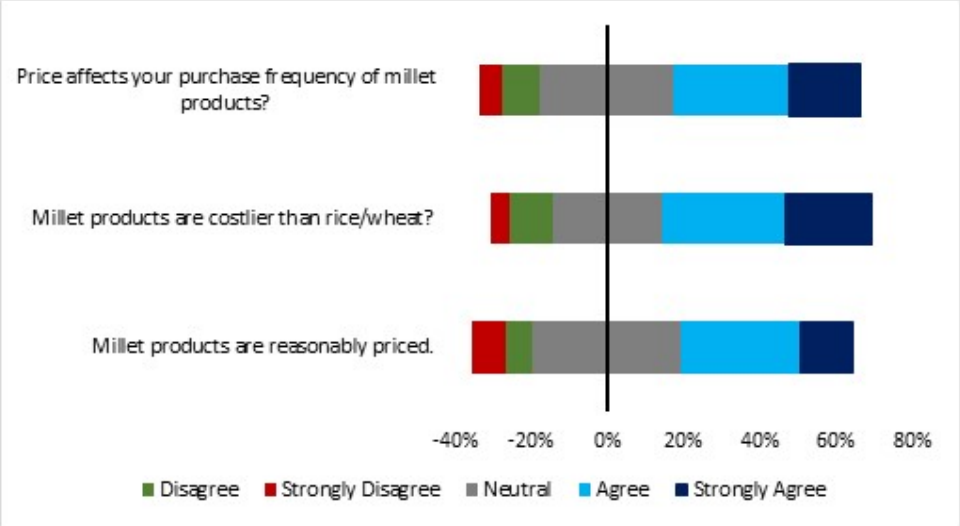

Figure 2. Distribution of Responses to Price Perception Statements

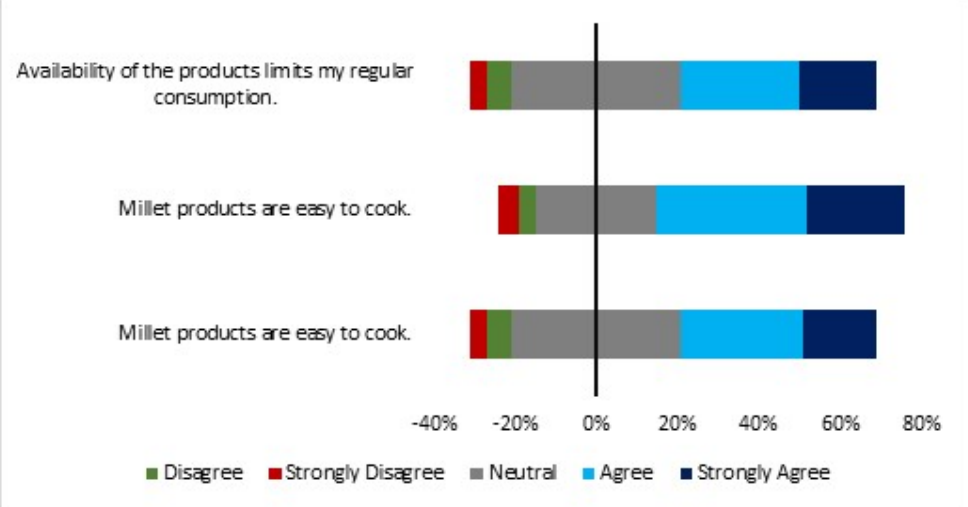

Figure 3. Distribution of Responses to Convenience and Availability Statements

3.3. Determinants of Consumer Choice: Regression Results

The calculated regression model explains approximately 28.2% of the variation in the Consumer Choice Index (R2 = 0.282; adjusted R2 = 0.236). The F-statistic is statistically significant at the 1% level which indicating that the selected variables jointly influence consumer choice behavior in urban millet markets. (Table 2).

Table 2. Multiple Linear Regression Results for Consumer Choice Index

Variable	Coefficient	Std. Error	t-value	p-value
Intercept	1.287	0.524	2.456	0.016
Monthly Family Income	0.113	0.049	2.293	0.024 **
Educational Qualification	0.071	0.062	1.134	0.260
Health Awareness Index	0.199	0.081	2.459	0.016 **
Price Perception Index	0.046	0.125	0.365	0.716
Convenience Index	-0.274	0.085	-3.241	0.002 **
Product Availability Constraint	0.177	0.081	2.177	0.032 **

** The Significance level is at 5%

The monthly family income reveals that there is statistically significant positive relationship with consumer purchasing decisions, which means that higher-income consumers have greater consumption intensity and they spend more money on millet-based products. Although good educational qualification is seen in the responses but it doesn't have statistical significance, indicating that awareness does not totally depend on education level. The Health Awareness Index is also positive and statistically significant, which confirms that consumers with a greater sense of health prefer to then eat millet products more often.

When income and awareness are taken into consideration, price perception is not statistically significant, suggesting that price factors may not be the only factors influencing consumption. Lower perceived convenience dramatically limits consumer choice, as evidenced by the Convenience Index's negative and highly significant coefficient. Consumer choice variation is positively and significantly correlated with product availability constraint, indicating the crucial significance of retail presence and accessibility. The assumptions of homoscedasticity and linearity are fairly satisfied, according to residual diagnostics.

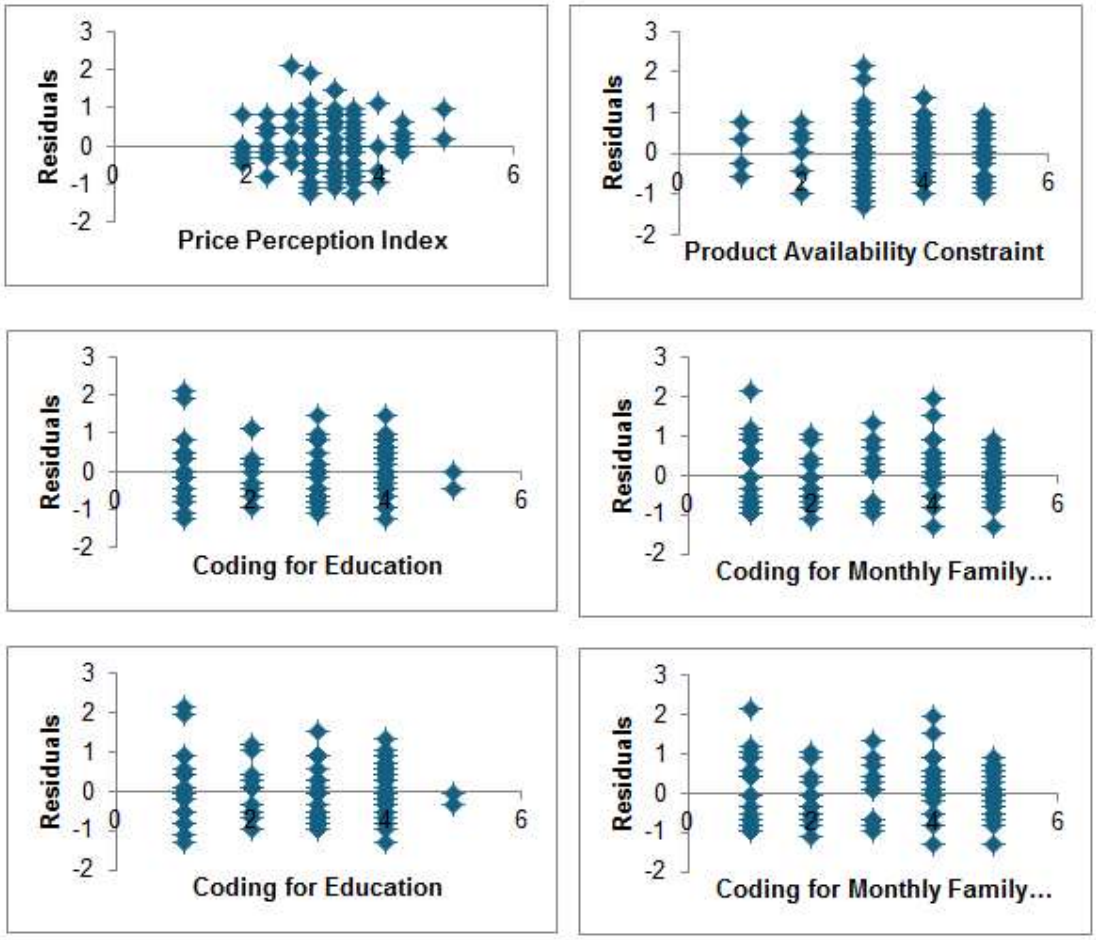

Figure 4. Residual Diagnostics for the Multiple Linear Regression Model

3.4. Constraints Affecting Consumption: Garrett Ranking Analysis

Garrett's Ranking Technique was used to identify and rank the key constraints affecting millet-based products in urban markets. This technique asked respondents to rank the most important perceived constraints in terms of severity and then converted the assigned ranks to Garrett scores, which are then averaged to calculate the mean Garrett score. The results indicate that limited product variety is the most significant constraint affecting millet consumption in urban markets (highest mean Garrett score), and that millet-based products appear to be less varied in terms of format, flavour, and functionality when compared to other cereals (conventional cereals are available in various processed and packaged forms), this lack of variety reduces consumer experimentation and repeat purchase behaviour.

The second constraint, limited availability, tells the significance of retail penetration and market accessibility; millet-based products are not available in all stores on a regular basis and even consumers who have a positive attitude towards millets may not be able to consume them if they cannot physically access the products. The third constraint, poor branding, suggests that product positioning and promotional strategy issues play a major role in the lack of brand distinctiveness and low brand awareness which reduces consumer recognition and trust in the brand, and in an intensely competitive urban food markets, the brand image of a health, beneficial, and alternative grain product is particularly influential in purchase decision-making.

Price and Cooking Inconvenience are at the middle ranks, and these things matter to some degree, but not as much as access and product diversity, which are ranked higher for urban consumers, suggesting that the constraints of market, structure may be more important than direct economic ones in this demographic context. Lack of Awareness and Lack of Ready, to, Eat Options rank the lowest, suggesting that millet products have reached a baseline level of awareness in the urban population, but that use of millet products is still being constrained by structural and product, level issues.

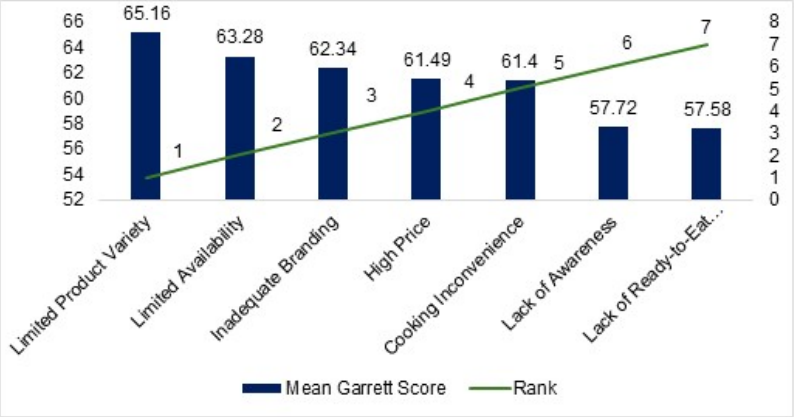

Figure 5. Garrett Ranking of Constraints Affecting Millet Consumption

4. CONCLUSIONS

This study explores consumer choice behavior for millet-based products in an urban market setting with reference to Noida, Uttar Pradesh, using a composite Consumer Choice Index, multiple regression analysis, and Garrett's Ranking Technique, and provides a multi-dimensional analysis of how socio-economic characteristics, perceptual factors, and market constraints influence millet consumption in urban settings.

The findings indicate that lack of information is not a major constraint on urban millet consumption and that socio-economic characteristics, perceptual factors, and market constraints are the main determinants of millet consumption, although the respondent profile indicates that the respondents are relatively well-off, educated, health aware, and able to purchase, yet their consumption frequency is at a moderate level.

This indicates the gap between the positive attitudes and deep dietary integration. Income and health awareness emerge as key enabling factors; households with higher purchasing power demonstrate greater intensity of consumption, and health-conscious members of families are more likely to choose millet-based products. These findings suggest that urban acceptance of millet is a consequence, at least in part, of lifestyle choices and a natural tendency to seek nutritional health and disease prevention. The main message from this research is that convenience and availability are the main drivers of choices

When perceived convenience is low, consumption intensity will drop significantly, indicating that ease of preparation is a major factor that determines food choices when time is scarce for city dwellers. Likewise, product scarcity hampers preference becoming purchase behaviour. These findings suggest that, in order to support new behaviours, people not only need to have positive views about them, but also consider how well such behaviours are compatible with the existing urban lifestyles and the regular shopping occasions.

The constraint analysis supports these findings. Limited product variety and restricted availability are perceived as the most severe barriers, followed by branding limitations. Awareness deficiency, on the other hand, comes across as one of the lower-level barriers, meaning that urban consumers already have some basic knowledge about the nutritional value of millets. The econometric results and the ranking analysis are largely in line with each other, suggesting that the supply-side and market-structure limitations are more significant than cognitive factors alone.

This research implies that we need to improve the availability of millets through the supply chain and retail network and offer more millet-based products to increase their consumption, especially in urban areas, by making it more visible (stocking it in different ration stores, local grocery outlets, and online platforms), by providing a greater choice of ready-to-eat and ready-to-cook millet products, and by making the product more convenient (e.g., minimal preparation time). This not only enhances their attractiveness but also aligns the consumption of millets with eating habits of working and small families.

It is also possible that a consortium of producers, processors and retailers could create a bright light that would then perhaps lead to a grown millet market ecosystem. And thus, the package, presentation and uniformity of quality is likely to enhance the trust of customers to buy again; influence customer loyalty to continue to purchase. This institutionalization of market mechanisms through policy initiatives and promotion of millet consumption in urban food promotion programmes is very important and urgent.

The study shows that millet-based product consumption choice is a multi-dimensional phenomenon influenced by economic capacity, health orientation, lifestyle compatibility, and retail structure and urban market adoption relies more on matching product features, market access, and convenience to modern consumer behaviours than on simply building awareness. Increasing millet consumption demands interventions that go beyond promotion to include structural market integration.

5. POLICY IMPLICATIONS

The findings generate several important implications for policymakers, food system planners, and agri-food entrepreneurs seeking to promote millet-based products in our urban markets.

At first, the emphasis of policies should move away from awareness-centred campaigns and focus more on enhancing value addition and product diversification. As the greatest limitation was found to be the lack of variety of products, therefore, expenditures on processing technology, product standardization, and the development of diversified millet, based products such as ready-to-cook and ready-to-eat variants could be majorly influential in gaining urban acceptance.

Secondly, there is a need to improve retail integration and supply chain coordination. The importance of availability restrictions reveals that millet marketing cannot just be promotion but must also be distribution backed up, with better shelf presence in the organized retail and heightened integration with the modern food supply systems, Public-Private partnerships could be instrumental in extending the retail penetration.

Thirdly, there is a need for branding and market positioning to be given strategic consideration. Because of the fierce competition in the food markets in the city, millet-based products must differentiate themselves by means of reliable labelling, quality certification and consistent branding strategies. Assistance of the government and the organizations to the SMEs in the millet processing industry would help them to achieve brand recognition as well as to gain a higher level of consumer trust.

Furthermore, while price did not emerge as the most severe constraint in the present context, targeted pricing strategies may still be necessary to expand adoption among lower-income urban households. Economies of scale in processing and distribution may be one of the factors to make price more reasonable without sacrificing quality.

Finally, from a wider sustainability point of view increasing urban demand for millet-based products is a way of diversifying food consumption patterns and thus supporting climate-resilient agricultural systems. Nevertheless, on the demand side a change in consumer behaviour cannot be expected unless it is supported by structural market reforms that allow health-related preferences to be effectively converted into lasting behavioural change.

When planning how to promote millet, focus on what actually matters to consumers make it easy for them. Food that takes too long to prepare is not what urban shoppers want, and millet is not likely to be used daily if it is only available as a whole grain. Here is where food companies will have to be creative, coming up with new recipes, improved packaging, and processing that keeps millet fresh on the shelf. But convenience is not the whole story. You also must bring millet farmers, processors, and city markets closer together.

A smart value chain keeps a steady supply of high-quality millet and reduces distribution challenges, linking all the pieces from farm to city shelf through farmer-producer organizations, contract farming, and aggregation platforms. When those connections function, you have consistent supplies, higher product quality, and a more stable market for all of the consumers who want to eat millet.

Institutional procurement not only purchases millet products but also builds demand for them by including millet-based foods on the menus of public nutrition programs, school lunches, and catering services, which are more likely to come to mind as everyday foods.

Such exposure can change what families purchase at home, leading to more diversity in diets. With digital marketing and e-commerce, new avenues for exposure are emerging to put millet products in front of urban shoppers, with online grocery stores, platforms for health, and direct-to-consumer brands breaking down the distance and distribution barriers for small and medium businesses working with millet.

Policy can also play a role in Clear labeling and accurate nutrition facts go a long way, and when packaging spells out the nutrition benefits, processing details, and quality, it builds trust, people might know a little about millets but the certification marks and traceability tools help them make an informed decision and differentiate between millet products from all the other cereals available on the shelf.

In summary, millet -based product are market opening in urban markets is a combination of product innovation, market expansion, branding strategies and strengthening our supply chain, all of which must be in equilibrium and harmonious to achieve balance in the millet-based product market. Awareness alone is not sufficient a sustainable shift in diet is dependent upon millets becoming practical, economic, and lifestyle choices for most urban consumers.

This transition would require millet-based foods to be easily available across multiple retail channels in various forms to suit contemporary consumption patterns, strengthened coordination between producers, processors, and retailers to ensure product availability and quality, also continued efforts to develop new products and attractive packaging to improve consumer appeal, and so on, until the favorable perceptions of millets become normal dietary practices in urban food systems.

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