

Does Urban Consumer Preference Affect Willingness to Pay for Value-added Chickpea Products in Peshawar, Khyber Pakhtunkhwa-Pakistan

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Abstract

The research endeavor was conducted to assess the consumer's preferences and their willingness to pay for chickpea value added products in the urban region of Peshawar district, Khyber Pakhtunkhwa. We have made an attempt to investigate consumer's preferences for chickpea consumption, their awareness regarding the value-added products of the chickpea and their willingness to pay a price premium for locally produced chickpea value added products over imported products. For this purpose, Contingent Valuation Survey was undertaken to gather primary data from a random sample of 120 respondents, comprising 110 consumers and 10 high-end stores. The data was analyzed through descriptive statistics, regression analysis and CVM based frequency tables. The results indicate that a majority of the sampled respondents were aware of the chickpea value added products and expressed their willingness to pay a price premium for locally produced value-added chickpea products as compared to imported ones. Around two-third (74%) of the respondents were aware of chickpea value-added products, while one-third (26%) were not aware of them. Moreover, 79.09 percent of the respondents expressed their willingness to pay for locally produced chickpea value-added products and they were willing to pay a considerable amount of price premium (76 PKR), while 20.91 percent were not inclined to prefer the buying of locally produced value added products of chickpea. Regression analysis depicted that respondents' age, education, households' expenditure, household size of the consumer and consumers' awareness of chickpea value added were significant determinants of consumers WTP for the locally produced value-added products of chickpea. Based on these findings the study recommends, policy

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measures should prioritize supporting local processing industries by providing financial incentives, facilitating infrastructure development, and providing regulatory support. Collaborative efforts with retailers and promotional activities can enhance market access and visibility for value-added chickpea products. The government may also incentivize local processors to supply canned chickpeas domestically.

Keywords: Urban Consumer, Willingness to pay, Chickpea Products, Peshawar

Introduction

Agriculture sector is a bedrock of Pakistan's economy and it contributes 24 percent in GDP and account 37.4 percent to the labor force. Recognizing the significance of agriculture, the government has prioritized policies related to agriculture in order to generate lucrative results, which has cleared the path for increased yields of crops. Besides the major crops, pulses are categorized as minor crops in Pakistan, yet they are essential for helping to meet the food demands of the country's increasing population. An increase in production of pulses can provide a paved way to eliminate hunger, food insecurity, and nutritional deficiency permitting the UN's Sustainable Development Goals (SDGs) to be met. In accordance to the literature, solubilize phosphates (free soil-bound phosphorous) and pulses fix atmospheric nitrogen lowering the need for artificial fertilizers in the fields. Unknowingly, pulses contribute to lower the risk of contamination of water and soil, improving soil biodiversity, battle and creating resistance against climate change. Moreover, by lowering the need for (or use of) artificial fertilizers, the volume of greenhouse emissions released into the environment decreases indirectly. Because of their great nutritional significance, pulses are also vital allies in the global fight against malnutrition and food insecurity. (FAO, 2022)

The major aim of this research endeavor is to examine the consumers' willingness to pay for the value-added products of chickpea in Peshawar District. Willingness to pay "WTP", is the highest price a consumer is ready to spend for a good or service. However, consumer behavior is one of the important components in the realm of economics because Customers' willingness to pay can differ considerably. This variation is frequently generated by differences in the consumer population, which are typically categorized as intrinsic or extrinsic. The consumers of chickpea are willing to pay more as they have various attributes to consume chickpea. Previous research endeavors have proved that willingness to pay for the value-added products of chickpea includes various factors and attributes such as the packaging style of the chickpea, size of the chickpea, moisture level of the chickpea, labelling on the can and quality of the chickpea as well as its nutritional value. Canning is probably the most efficient meal preservation method. It ensures the destruction and spoilage microorganisms and allows foods to be easily handled and transported. People are more likely to pay for canned chickpeas because they are nutritious, available in different flavors like sweet, salted flavors and also because of its high shelf life.

The surge in demand for convenient and nutritious food options has enhanced the curiosity of the urban consumer of Peshawar towards value-added chickpea products. The value-added products particularly canned chickpeas are gaining more popularity that are readily available at high-end stores and some retail shops across the city. However, the food inflation makes these value-added products inaccessible to lower-income consumers, limiting the reach of this product to more affluent buyers. This study, explores how consumer preferences in Peshawar impact their willingness to pay for chickpea value-added products. By having awareness about these preferences, this research aims to assess the potential market for affordable, value-added chickpea products that could cater to a wider range of socioeconomic groups, supporting both consumer needs and local value chains. Ultimately, this study seeks to provide the strategy that could encourage more inclusive pricing and accessibility for value-added chickpea products in Peshawar.

Justification of the study

Consumers are gravitating towards value-added chickpea products, which offer hygiene, safety, and ease of storage compared to traditional options. These products offer a variety of nutritional benefits, including protein, carbs, fiber, and various vitamins and minerals, making them attractive to vegan and vegetarian consumers. Furthermore, the global trend towards quick meals and the promotion of legume consumption by governments further contribute to the growing popularity of chickpea value-added products. The COVID-19 pandemic has also accelerated this demand, particularly for canned goods, including chickpeas, as consumers seek long-lasting and readily available food options. Considering these factors, the study aims to analyze consumer preferences and willingness to pay for value-added products of chickpeas, particularly focusing on different flavors and packaging. This research has made an attempt to provide valuable attention into market dynamics and consumer behavior in Peshawar District, informing strategies for product development and marketing in the region. Canned chickpeas and pulses are hygienic and germs free, and are much safer than the conventional chickpeas that are selling at the local vendor's shop. They easy to store and can be eaten directly because they are precooked. Consumers are likely to buy more canned goods like chickpeas because of their low cost and high shelf life. The global demand for quick meals is expanding due to an increase in working population groups, notably dual income households. Lentils and chickpeas are projected to expand in popularity in the coming years as ethnic foods become more popular. This study was aimed to investigate the socioeconomic features of consumers and their spending on pulses. Similarly, this research endeavor was carried to investigate the impact of various contingent valuing elicitation formats on consumer willingness to Pay "WTP".

Research Methodology

This section is divided into the following sections. The first portion explains the research field, while the second part gives the study's conceptual framework. The second segment contains a full overview of the research methodology. This chapter discusses sampling for data collection and analysis.

Study Universe

This study was conducted in Peshawar district of Khyber Pakhtunkhwa Pakistan. Peshawar is the capital city of Khyber Pakhtunkhwa, serves as a pivotal hub for trade within the entire province. In terms of population, Peshawar ranks as the most densely populated district in the province and serves as a substantial market for agricultural goods. The city is located in the Khyber Pass, directly west of the Bara River, an outflow of the Kabul River.

Sampling Method

A two-stage sampling procedure was adopted to select the sampled respondents from the study universe.

Stage 1 Selection of district Peshawar

Though KP is consisted of 38 districts, however due to time and financial constraints only Peshawar was purposely chosen in the initial stage. Moreover, the reason of selection was that the demand of value-added products of chickpea was predicted high as compared to other districts of KP.

Stage 2 Interview of consumers

In stage 2, the data was gleaned from the retailers, high-end stores and consumers from Peshawar district. The selection of sampled retailers, high-end stores and consumer was made through random sampling technique.

Data Collection and Analysis

The primary data was collected through face-to-face interview of the sampled high-end stores and consumers on the prescribed interview schedule. These interviews covered various aspects including socio-economic attributes, preferences of the respondents and the inclination to invest or consume in chickpea value-added products. For data collection from the research region, we took 120 respondents out of which 110 respondents were consumer and the remaining 10 were the storekeepers.

Conceptual Framework

Contingent Valuation Approach Designing

SPM is a survey-based method in which respondents are asked questions in order to reveal information about their preferences (Freeman2003). Based on the types of questions SPM can be divided into several types; however, the contingent valuation method (CVM) is the most popular method and widely used to measure the monetary value for public goods. CVM can measure customer satisfaction (CS) directly by creating a hypothetical market and use a survey method to directly ask respondents about their willingness to pay (WTP) for a hypothetical product.

CVM generates figures depending on the resource description and the method of payment mechanism. A complete description of the resource is required for reliable estimation of any resource (Loomis et al. 2000). The respondents were questioned about the relative significance of each advantage. Major aim for asking query is to uncover consumer choices, not financial values in terms of usage and nonuse advantages, and compare them to their stated WTP responses.

The valuation question type and payment method have an impact on the CVM results (Carson and Hanemann, 2005). Single bounded dichotomous choice CV questions with required payment mechanisms were advised by the National Oceanic and Atmospheric Administration (NOAA) Blue Ribbon Panel (Arrow et al., 1993). Recent research, however, indicates that the single bounded dichotomous option approach delivers higher WTP in comparison to the open-ended question and payment card methods and offers little information about consumers' WTP (Zhongmin et al., 2006). To accurately estimate WTP using A large number of responses are required for the single-question dichotomous preference strategy (Carson and Hanemann, 2005). Nobody in the research region had heard of the CV Survey. An open-ended question approach may provide high WTP responses. As a result, this study used the full three payment procedure to determine consumer WTP for canned goods free of pesticides.

Consumers' Survey

Primary data was the main source for this study. With the use of an interview schedule, the main data was gathered. A well-defined questionnaire was developed based on the study's goals, before the final data collection, a small Pre-test took place. Face-to-face interviews were conducted with Peshawar residences. Face-to-face interviews are more reliable in contingent valuation inquiries. (Carson, 2000). Information on the consumers' socio demographic features, attitudes, and behaviours was gathered. Data from urban regions of the chosen District Peshawar was collected through this survey. The differences between conventional chickpea and the

chickpea value added- products were explained to the respondents before asking them if they would be prepared to pay a higher price. To better understand how the respondents relate various characteristics of the chickpea value-added products, customer attitudes and information regarding their preferences and WTP for chickpea were also gathered.

WTP and CVM

Consumers' willingness to pay can be estimated using a variety of approaches based on mentioned desires. Economists and market investigators have utilized contingent valuation (CV), choice experiment (CE), experimental auction (EA), or a combination of all three methodologies to elicit detailed customer preferences regarding food labelling on many qualities Fox et al, 1994; Fox 1995; Huffman et al, 1996; Hossain et al, 2003; Loureiro and Umberger, 2003, 2005. Due to the lack of marketplaces for the commodity or service, economists must rely on the hypothetical to determine the willingness to pay (WTP). In past centuries, the Contingent Valuation Method (CVM) was employed to assess customer preferences for commodities that were not accessible on the market.

The contingent valuation approach is a survey-based technique in which responders are given a hypothetical payment situation for product, in this case, chickpea value-added products. Face-to-face interviews, surveys, are the tools employed during contingent valuation to elicit the desire of customers to pay for the value-added products of chickpea. S.V. Ciariacy-Wantrup (1947) provided a contingent valuation technique based on a survey method, but Davis (1963) experimentally applied a contingent valuation technique for the first time. Because of its effectiveness, many scholars and policymakers have employed this approach to elicit customer valuations for items that are not yet available on the market, such as environmental, wellness, and recreational research (Jakobsson &Dragun, 1996).

Elicitation Techniques

According to Portney (1994), multiple elicitation strategies are used to build CV inquiry scenarios in order to extract the value of an item or service. It is a essential component of every CVM investigation. There are different types of elicitation employed in contingent valuation methodologies. The prevalent methods are the auction game, open-ended, credit card, and dichotomous choice approaches.

Bidding Game Approach

In this strategy, each responder is allocated a bid at random from a list of prepared bids. The allocated bid might be either lower or greater. Respondents must respond the bid, and the procedure is repeated until the greatest overwhelming reaction is taken into account (Randall et

al, 1974, as quoted in Venkatachalam, 2004). As this technique produces a market-like scenario and allows respondents to investigate what they want, the findings gained are far superior.

Open-ended Elicitation Method

The people who responded are asked to determine a particular quantity without being given a value in open-ended questions. Respondents are asked to express their willingness to pay for a specific trait. Mitchell and Carson (1989) discovered many disadvantages to utilising this question structure. They stated that this strategy produces the greatest number of no responses, no answers, and outliers. Respondents in this manner have no idea what value to choose.

WTP Elicitation Method

The Contingent Valuation Method (CVM) was utilized to determine consumers' preferences and their willingness to pay for chickpea value-added products. An open-ended elicitation format was employed for the willingness-to-pay approach.

Elicitation Question

Suppose a local food processing company is interested to produce different chickpeas value-added products such as Chickpea snacks (roasted, flavored, etc.), chickpea flour, canned or processed chickpeas, chickpea-based spreads (hummus, etc.), chickpea pasta/noodles, chickpea-based beverages and for this purpose raw materials or raw beans would be purchased from local growers. Would you and your consumer be willing to purchase their products

Answer: Yes No

If “Yes” How much would you be willing to pay at a maximum for the value-added products of the local companies if we assume the average price of other companies’ products to be Rs. 150/500 grams.

Results and Discussion

The section further divulges the major findings regarding contingent valuation method (CVM).

Descriptive Statistics

Descriptive analysis is a statistical tool that is used to summarize the collected data in tabulated form. The range of data, mean value, median, standard error and variance coefficients are highlighted via statistical analysis.

Socioeconomic Characteristics

This section demonstrates the demographic and socio-economic characteristics of the respondents. The information was gathered from 110 consumers of the study area. The distribution of consumers according to the socioeconomic characteristics is shown in the following tables.

Age of the Consumer

Age is considered an important variable which affect a consumer's expenditures on consumable and non-consumable goods. Frequencies of various age groups have been estimated to reflect the highest and lowest occurrence of the age group of the sampled respondents. It is depicted from Table 1 that age group (41 to 50) had the highest frequency in the sampled respondents, while the lowest frequency was observed of age group (25-30). Furthermore, of those 110 sampled respondents, 11.20% were those having age 25 to 30 years, (32.73%) of the respondents were the age of between 31 to 40, 38.18 percent of the respondents were in the age of between 41 to 50 years, 17 percent of the respondents were above 50 years.

Table 1: Age of the Consumer

Age (years)	Frequency	Percent
Up-to 30	13	11.20
31 to 40	36	32.73
41 to 50	42	38.18
50 and above	19	17.27
Total	110	100.0

Source: Survey Data, 2024

Consumer's Education Level

Education is another important factor which can influence the consumer's preferences and their WTP for food products due to his awareness of the product's nutritive value. The consumer categories into different groups based on their education level which are reflected in Table 2. According to the survey the number of illiterate respondents were 8.18 percent of the total respondents, 19.09 percent fall into the education range of 1 to 5, 38.18 percent have an education level between 6 and 10, 10 percent of consumers fall within the education range of 10 to 14, and 24.55 percent of the respondents have an education level of 14 or more.

Table 2: Consumer's Education Level

Education	Frequency	Percent
Illiterate	9	8.18

1 to 5	21	19.09
6 to 10	42	38.18
10 to 14	11	10.00
Above 14	27	24.55
Total	110	100.0

Source: Survey Data, 2024

Household Size of The Consumer

Monthly income is directly related to the number of working individuals and indirectly to the household size. Household size of the consumer is given in table 3. According to table the household size of the respondents were divided in to three main categories. The result showed that more than half of the respondents were those whose household size were among numbers 5 to 8 members and its contribution was 65 percent of the total respondents. It shows that out of the 110 households, 32.73 percent consisted of less than 5 members and the number of respondents whose household size more than 8, were contributing 8.18 percent of the total respondents.

Table 3: Household Size of the Consumer

Household size of the consumer	Frequency	Percent
Less than 5	36	32.73
5 to 8	65	59.09
More than 8	9	8.18
Total	110	100.0

Source: Survey Data, 2024

Consumer's Monthly Income

Monthly income of the consumer is given in Table 4. The maximum number, (43.64%) of the respondents were belong to the category had an income between the range of 60000 PKR to 100000 PKR, those respondents who had an income range between 40000 to 60000 were contributing (23.64%). The respondents with income more than 100000 PKR were contributing (17.27%) and the lower contribution of (15.45%) were of those respondents who had an income of less than 40000 PKR.

Table 4: Consumer's Monthly Income

Consumer monthly income	Frequency	Percent
Less than 40000 PKR	17	15.45
40000 to 60000 PKR	26	23.64
60000 to 100000 PKR	48	43.64
More than 100,000 PKR	19	17.27
Total	110	100.0

Source: Survey Data, 2024

Consumer's Monthly Expenditure on Food

The Table 5 categorizes the sampled consumers into 5 different categories based on their monthly consumption expenditures. The table shows that the consumers, having food consumption expenditure of less than 30000PKR and 30000-40000PKR per month, were for 23.64 percent and 18.18 percent, respectively. The food consumption expenditure for 16.36 percent and 41.82 percent of the consumer were found between 40000-50000PKR and more than 50000PKR.

Table 5: Consumer's Monthly Expenditure on Food

Monthly food expenditure	Frequency	Percent
Less than 30000 PKR	26	23.64
30000 to 40000 PKR	20	18.18
40000 to 50000 PKR	18	16.36
More than 50000 PKR	46	41.82
Total	110	100.0

Source: Survey Data, 2024

Consumers' Willingness to Pay for Local Value-Added Products of Chickpea

The WTP for local value-added products of chickpea reveals that 78.18% of respondents affirmatively expressed their inclination to invest in such products, indicating a positive consumer sentiment towards locally sourced items as illustrated in Table 6. On the other hand, 21.82% of individuals conveyed a reluctance to pay for local value-added products. This data highlights a noteworthy interest among the surveyed population in supporting and investing in locally sourced goods. The insights derived from these responses can inform business strategies and marketing efforts aimed at promoting and capitalizing on the appeal of local value-added products within the surveyed community.

Table 6: Willingness to Pay for the Local Value-Added Products of Chickpea

WTP for local value-added products of chickpea	Frequency	Percent
No	24	21.82
Yes	86	78.18
Total	110	100.00

Source: Survey Data, 2024

Consumers' Willingness to Pay for Imported Chickpea Value Added Products

The Table 7 outlines consumers' (WTP) for imported chickpea value-added products within the surveyed cohort. A significant 74.55% of respondents expressed a positive inclination, indicating a readiness to invest in imported chickpea value-added products. In contrast, 25.45% reported a reluctance to pay for such products. This divergence in WTP underscores the varied perspectives within the surveyed population regarding the monetary commitment to imported

chickpea value-added offerings. The insights from this data prompt consideration of factors influencing consumer decisions and provide valuable input for market strategies related to chickpea-based products.

Table 7: Consumers' Willingness to Pay for Imported Chickpea Value Added Products

Consumers' WTP for imported chickpea value added products	Frequency	Percent
Not Willing	28	25.45
Willing to Pay (WTP)	82	74.55
Total	110	100.00

Source: Survey Data, 2024

Consumer Preferences for specific Attributed of Chickpea Product

The Table 8 sheds light on the preferences for specific attributes of chickpea products that sellers believe would be most appealing to their customers. Out of the total 10 sellers, a notable 30% each expressed a strong preference for locally sourced and non-GMO attributes, emphasizing the significance of the product's origin and its free-from genetically modified organisms. Additionally, 20% of respondents favored chickpea products with high protein content and organic characteristics each. These findings underscore a collective interest among participants in promoting locally sourced, non-GMO, high-protein, and organic features in chickpea products, reflecting a shared understanding of customer preferences.

Table 8: Specific Chickpea Product Attributes preferred by Consumers

Variable	Frequency	Percent
High protein content	2	20.00
Locally Sourced	3	30.00
Non-GMO	3	30.00
Organic	2	20.00
Total	10	100.00

Source: Survey Data, 2024

Regression Analysis

Regression is a statistical technique used to examine the relationship between one or more independent variables and a dependent variable. The primary goal is to understand and quantify how changes in the independent variables correspond to changes in the dependent variable.

Summary Statistics for Variable Used in Regression Analysis

The Table 9 depicts summary statistics for variable used in regression analysis. There were 110 observations in the dataset ranging from 1 to 110. The mean willingness to pay for 500 grams of local chickpea value added products was approximately 140.36 PKR, with a standard deviation of 76.40 PKR and a range of 0 to 220 PKR. The average age of the respondents was around 42.62 years, with a standard deviation of 9.58 years, ranging from 25 to 75. consumer had an average education level of 9.81 years, with a standard deviation of 5.30 years, ranging from 0 to 22 years. Total consumer income had an average of 90,590.91 PKR, a standard deviation of 53,736.92 PKR, and ranged from 30,000 PKR to 300,000 PKR. The average household size of the consumer was approximately 5.69, with a standard deviation of 2.07, ranging from 2 to 12. The total monthly food consumption expenditures had a mean of 50,827.27 PKR, a standard deviation of 22,840.44 PKR, and ranged from 14,000 PKR to 120,000 PKR. The sampled consumer consumed an average of 2.5 kilograms of chickpea products, with a standard deviation of 1.04 kilograms, ranging from 1 to 4 kilograms. The average awareness level of chickpea value-added products was approximately 0.74, with a standard deviation of 0.44, ranging from 0 to 1. The mean willingness to pay for imported value-added chickpea products was around 0.79, with a standard deviation of 0.41, ranging from 0 to 1. The average willingness to pay for local chickpea value added products was about 0.75, with a standard deviation of 0.44, ranging from 0 to 1.

Table 9: Summary Statistics for Variable Used in Regression Analysis

Variable	Observations	Mean value	Std. Dev.	Min	Max
Sno	110	55.5	31.89	1	110
WTP amount for value added products	110	140.36	76.40	0	220
Age of the sampled consumer	110	42.62	9.58	25	75
Consumer's education	110	9.81	5.30	0	22
Consumer's income	110	90,590.91	53,736.92	30000	300000
Households size of the consumer	110	5.69	2.07	2	12
Total monthly food consumption expenditure	110	50,827.27	22,840.44	14000	120000
Consumption of chickpea	110	2.5	1.04	1	4
Awareness of chickpea value added products	110	0.74	0.44	0	1
WTP for imported chickpea value added products	110	0.79	0.41	0	1

WTP for local chickpea value added products	110	0.75	0.44	0	1
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Source: Survey Data, 2024 (F-statistics: 46.49 ; Prob> F:0.00 ; R-squared:0.67; Adjusted R-Squared:0.67)

In the regression analysis, the variable age of the sampled consumer exhibited a negative relationship, with a one-year increase in the age of consumer being associated with a decrease of approximately 4.3.14 rupees in the willingness to pay for 500 grams of local chickpea products. This relationship was statistically significant at the 5% level. Conversely, consumer education showed a positive association, indicating that each additional year of education for the consumer corresponded to an increase of about 6.75 rupees in the willingness to pay, and this effect was statistically significant at the 1% level. Total monthly food consumption expenditures demonstrated a positive relationship, with a one-rupee increase leading to a rise of approximately 0.00257 rupees in the willingness to pay, and this effect was statistically significant at the 1% level. Household size of the consumer was negatively associated, with a one-member increase resulting in a decrease of around 23.70 rupees in the willingness to pay, and this effect was statistically significant at the 1% level. The consumption of chickpea products was not statistically significant despite a positive coefficient. The awareness of chickpea value-added products displayed a positive relationship, where aware consumers were found willing to pay about 32.30 rupees for chickpea value-added products, and this effect was statistically significant at the 1% level. The intercept was statistically significant, representing the estimated value of the dependent variable when all independent variables were zero.

Table 10: WTP Regression Analysis for Local Chickpea Value Added Products

WTP for 500 grams of local chickpea value-added products	Coefficient	SE	T	P>t	[95% conf. interval]
Consumer's age (in years)	-1.1282	0.458738	-2.46	0.016	-2.038 -0.2184
Consumer's Education in years	6.745704	1.498498	4.5	0.00	3.773787 9.717621
Total monthly food consumption expenditures	0.00257	0.000868	2.96	0.004	0.000848 0.004292
Household Size of the consumer	-23.6951	7.868898	-3.01	0.003	-39.3012 -8.089
Consumption of chickpea products in kgs	2.415074	6.147239	0.39	0.695	-9.77653 14.60667
Awareness of chickpea Value added Products	32.29907	11.68938	2.76	0.007	9.115944 55.48221
_Constant	96.67343	24.69086	3.92	0.00	47.70493 145.6419

Conclusion and Recommendations

The socioeconomic characteristics of the surveyed consumers, including age, education, household size, and income level, provide valuable understandings for market segmentation and targeted marketing strategies. Understanding the diverse socioeconomic profile of consumers allows for product offerings and promotional campaigns to effectively reach and engage different segments of the market.

The study reveals a significant level of awareness and willingness to pay for both locally produced and imported chickpea value-added products among consumers. This indicates a growing market potential for diverse chickpea-based offerings beyond traditional chickpea consumption, presenting opportunities for product innovation and expansion in the value-added product segment.

Regression analysis highlights the influence of socioeconomic factors such as income, education, and household size on consumers' willingness to pay for locally produced chickpea value-added products. Understanding these factors can guide pricing strategies and promotional efforts to maximize consumer uptake and market penetration.

The importance of certifications, such as quality control and organic certifications, and effective marketing strategies, including promotions and collaborations, emerge as crucial factors in promoting chickpea value-added products. Aligning product attributes with consumer preferences and investing in targeted marketing efforts can enhance product appeal and market competitiveness, driving consumer adoption and market growth.

It was recommended that policy measures should focus on supporting local processing industries through financial incentives, infrastructure development, and regulatory support. Similarly training programs and research initiatives can enhance product quality and innovation. Moreover, collaboration with retailers and promotional efforts can improve market access and visibility for chickpea value-added products

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