Consumer Willingness to Pay (WTP) for Organic Cabbage in Chegutu, Zimbabwe

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Abstract

An assessment of consumer willingness to pay for 'novel' products is critical because it determines the market entry point for a business venture. A research study was conducted between July and September 2023 in Chegutu to analyse consumers' willingness to pay for organic cabbage with the conventional cabbage as the benchmark. Data from 200 respondents was collected using a mall-intercept survey from the 4th of July to the 10th of September 2023 using convenience sampling. The study targeted consumers that are 18 years and above as the primary grocery shoppers of their households. This paper represents the first attempt to analyse the consumer willingness to pay for organic foods in Zimbabwe to the knowledge of the researcher. The modern approach to consumer demand theory (The Attribute/Lancaster Model) regards consumption as an activity with goods as inputs yielding output in terms of a pool of attributes. Unlike the traditional economic demand theory, it is able to explain why some consumers prefer highly priced organically produced foods to the cheaper conventionally produced alternatives. A double-bounded contingent valuation approach was used to determine the price premium while logistic regression was used to analyse the factors affecting willingness to pay. An average price premium of 61% was established. Lifestyle and organic source of information (agricultural fairs or exhibitions) were shown to negatively affect willingness to pay. On the other hand, consumers who had high ethical values and were married had a high probability of a willingness to pay for organic cabbage. In future, willingness to pay should be measured through actual purchase of these credence foods at the point of sale.

Keywords: Organic foods, Willingness to pay, Price premium, Contingent Valuation, Logistic regression

Introduction

It is not unexpected that one of the clarion calls recently made is for economies to embrace sustainable production amid increased environmental degradation, climate change and public health concerns in line with Sustainable Development Goals (SDGs). While these efforts need no disparagement, sustainable consumption is germane and should, therefore, take centre stage. Research has reported that individual consumer behaviour is a key driver to the current patterns of unsustainable development while sustainability issues were perceived as mainly a responsibility of producers (Gieger, Fischer & Schrader, 2018). Pantzar, Strube, Gionafra and Modee (2018) maintain that consumption directly and indirectly drives an array of environmental consequences. The Earth Summit's Rio Declaration on Environment and

Development of 1992 identified consumption and production as the major causes of the persistent destruction of the environment. However, it was not until 1994 that the Oslo Symposium on Sustainable Consumption and Production (SCP) was held; a working definition was coined that identified consumption and production as reacting to basic needs for a better quality of life and, at the same time, lessening the use of natural resources and poisonous substances and the discharge of waste and contaminants throughout the life cycle of the commodities, which endangered or compromised the needs of the future generations (Oslo Symposium on Sustainable Consumption, 1994). In 2015 the Heads of State and Governments set sustainable consumption and production as one of the African Union priority areas of the Agenda 2063 (Africa Union Commission, 2015).

Consumer awareness of the scarcity of natural resources and climate change (Moisander, 2007), their increasing worries about health and food threats and the perception that organic foods are healthy, safe, natural and environmentally friendly (Van Loo et al. 2010; Singh and Verma, 2017) have positioned organic foods as part of SCP. The organic food movement has the potential to reform the food system. SDG 12: Sustainable Consumption and Production, focuses on the role of both consumers and producers in achieving sustainable consumption and production. On one hand, the need for producers to produce more food while lowering the deleterious environmental consequences so as to feed the world sustainably (FAO, 2017) cannot be overemphasised. On the other hand, there is need to accelerate the role of consumers in demanding and shifting to nutritious and safe diets also minimising deleterious environmental consequences. Therefore, SDG 12 has two implications of substance to this study. Firstly, it raises practical issues of awareness check of SCP. In order to achieve commitment and public support for SCP, it is vital for people to appreciate why it is important and what it means in practical terms. Secondly, it stresses the need to synchronise sustainable production with sustainable consumption so that food production is demand-driven rather than supply-driven.

Organic Agriculture (OA) focuses on food production that avoids the use of any type of chemicals including fertilisers, pesticides and growth regulators. According to World Health Organisation (2015), there is need to scrutinise dietary patterns for their impact on human health, environment and climate change. A belief in environmental protection and animal welfare triggered the movement towards organic foods (Shafie & Rennie, 2012). Global organic production encompasses many pulses, cereals, vegetables, cash crops (such as cotton) and many animal products (FiBL & IFOAM- Organics International, 2022). Statista (2020) reports that from 2000 to 2018, sales of organic food globally increased by US 77 billion dollars with nearly 70 million hectares of land put under organic agriculture globally. Internationally, organic food sales reached US $112 billion in 2019 (FiBL & IFOAM- Organics International, 2022). Also, in 2018, 71.5 million hectares up from 11 million hectares in 1999 were globally put under organic agriculture. For organic vegetables, FiBL & IFOAM- Organics International (2022) reports that global sales have risen up by up to 30% in some countries. FiBL & IFOAM-Organics International (2022) also reports that more than 433 000 hectares which account for 0.7% of total land for organic agriculture was under global organic vegetables and that since 2013 the global organic market has expanded by 55%. These statistics give a clear indication that organic agriculture is globally gaining popularity not only in terms of supply but also in terms of demand.

Owing to growing worries and risks posed by lifestyles, in general, and food, in particular, consumption of organic foods seems to have reached a crescendo globally as consumers shun conventional foods and prefer the former. Organic agriculture activities were amplified to

match the demand of a motivated and informed community with respect to health and environmental concerns (Essoussi & Zahaf, 2008; Chekima, Oswald, Wefa & Chekima, 2017). The shift from conventional to organic foods was called upon by FAO (2017). Ranking the general motivations for consumption of organic foods indicate that most consumers consider the private benefits (health) followed by public benefits (environmental concerns). Although organic foods are highly priced, consumers substitute them for conventional products. The traditional economic demand theory fails to explain why consumers prefer organic foods which fetch higher prices compared to their conventional alternatives. It does not account for consumer reactions to new commodities on the market. According to Pearson, Henryks, Sultan and Anisimova (2013), from a marketing perspective, organic foods can be identified as 'new' products. Copper (2019) reinforces that identification of demands and expectations of consumers is a prerequisite constituent of attaining success with these 'novel' or 'new' products. On the one hand, the modern approach to consumer demand theory (The Attribute/Lancaster Model) regards consumption as an activity with goods as inputs yielding output in terms of a pool of attributes (Lancaster, 1971). It is possible for different goods to generate similar characteristics. Therefore, consumers do not demand a good *per se* but the characteristics which are embodied in the good. This explains why some consumers prefer highly-priced organically produced foods to the cheaper conventionally produced alternatives.

Assessment of the price premiums that consumers are willing to pay and the motivation for such payments becomes imperative to determine the market entry point for organic foods before real purchase is conducted. A price premium refers to the amount paid in excess of any extra economic costs of production (Rao & Biergen, 1992). Producers impose price premiums on luxury products to gain a competitive advantage over market rivals (Salemi & Chaichi, 2018), while for consumers they reflect willingness to buy a given product regardless of the price (Zhang & Kim, 2013). Classical consumer behaviour theory posits that perception determines consumer behaviour which in turn determines willingness to pay for a commodity. The real willingness to pay is reflected by purchase behaviour and the consumer gains positive or negative experiences which affect consumer's WTP in future. Therefore, according to this, consumer's characteristics which affect the purchase behaviour can also affect the WTP.

Zimbabwe Organic Producers and Promoters Association (ZOPPA) Trust developed Zimbabwe's organic standards which were incorporated by the Standards Association of Zimbabwe (SAZ) and IFOAM in 2012 and 2014, respectively, into their statutes (McAllister, 2015). Certification increases consumer confidence in organic food products. ZOPPA Trust is the custodian of 'Zim Organic' and 'Zim Natural'. These two labels are registered with Africa Regional Intellectual Property Rights Organisation (ARIPO). The labels are in compliance with EU and US organic standards. The labels are accepted in eight ARIPO member countries under the Banjul Protocol. These countries are Botswana, Lesotho, Malawi, Namibia, Swaziland, Tanzania, Uganda and Zimbabwe.

***Figure 1**: The 'Zim-Organic' and the 'Zim-natural' labels certified by the ZOPPA Trust*

The year-to-year organic agricultural land growth in Zimbabwe is recorded (FiBL & IFOAM - Organics International, 2020 and FiBL & IFOAM- Organics International 2022). However, the organic consumption or demand in terms of retail sales in the organic sub-sector is not known. There is therefore no link between the value chain actors of organic vegetables. This lack of information consequently hinders market development (ZOPPA Trust, 2015). This study seeks to unpack the price premium for organic cabbage and factors affecting it. The National Agricultural Policy Framework (2018-2030) is premised on production that is informed by consumer-demand and is responsive to the needs of all agricultural value chain actors. This forms one of the pillars of the Agricultural Knowledge, Technology and Innovation Platforms (ATKIPs) (Government of the Republic of Zimbabwe, 2018). Organic vegetables can therefore foster the inclusion of small-scale farmers and rural communities by opening more possible markets because organic farming is pro-poor.

It is possible to measure the benefits by offering individuals different choice of goods. The individual prioritises the value of the good (benefit) over the price (cost) and is willing to pay for the good (Pearce & Turner, 1990), hence, cost and/or benefit analysis is applied. Willingness to buy or purchase should exist to provide the threshold of entering the market, before the real purchase is undertaken. Consumer surplus is the difference between the maximum price consumers are willing to pay for a product and the actual price (Marshall, 1992). In dollar terms, consumer surplus reflects the extra utility gained from paying a lower price than what is required to obtain the good. Hicks (1939) classify measurement of consumer surplus as compensating and equivalent variation. On one hand, compensating variation is the monetary compensation that is required by the consumer to bring him/her back to the original utility level after the prices have had changed (Henderson, 1941). On the other hand, Hicks (1942) defines equivalent variation as the amount of income that is required to obtain the same level of utility after the price change. The Hicksian demand theory is static in nature and can therefore be interpreted as the compensating variation, a welfare measure that is directly applied in cost-benefit analysis (CBA). Therefore, compensating variation is equivalent to maximum price (WTP). Consumer marginal healthy utility is premised on the cognisance and perception of risks, that are functions of consumer's socio-economic characteristics, learning ability and experience levels to food-borne threats (Eom, 1994). Measuring consumer willingness to pay relies either on stated (survey) preferences or revealed (observed) preferences. While the latter method relies on the real expenditure by consumers (laboratory and field experiments), it may be through giving the consumers money and asking them to spend it on specified goods and returning the goods after the exercise hence it may result in bias. Also, the participants may alter the behaviour due to being observed (Zizzo, 2010), there are no real-world consequences as they do not face actual consequences for their choices reducing stakes (Harrison & List, 2004) and do not face realistic budget constraints leading to inflated WTP estimates (Cummings & Taylor, 1999). On the one hand, the stated preference methods such as single and double bounded contingent valuation approaches, conjoint analysis, discrete choice experiment and payment card approach work for a case of goods in which recognisable markets for the commodity do not exist hence their suitability for organic foods. The strengths include flexibility, being cost-effective (Carson & Mitchell, 1995) and easy to implement (Champ & Bishop, 2001). However, they do not have inherent problems as they present information bias (Blomquist & Whitehead, 1998) and social desirability bias (Fisher, 1993). To correct these, the researcher provided clear and concise information about organic cabbage, tested for understanding and adjusted the survey, accordingly, used anonymous or confidential surveys and screened the survey questions.

Loke & Tan (2022) investigated consumers' willingness to pay for organic vegetables compared to conventional vegetables. The findings show that Malaysian consumers are willing to pay a premium price of 20-30% for organic vegetables compared to conventional vegetables. They also report that the factors influencing willingness to pay for organic vegetables include health consciousness, environmental concerns, price sensitivity, availability of organic options and demographic factors such as age, education and income. In China, Wang & Liu (2022) used contingent valuation approach to determine consumer willingness to pay for organic cabbage and found out that consumers are willing to pay an average price premium of 15-25% for organic cabbage compared to conventional cabbage. For factors influencing consumer willingness to pay, they report perceived benefits, environmental concerns, food safety concerns, trust in organic certification, consumer knowledge about organic produce and demographic factors such as age, education and income. Yormirzoev, Li and Teuber (2021) conducted a survey of 608 Russian consumers using a contingent valuation method to examine consumer willingness to pay (WTP) for certified organic, uncertified and all-natural and conventional milk using. 51% revealed a positive willingness to pay for organic milk relative to conventional milk with perceived health and environmental benefits chiefly influencing the willingness to pay in that order. In Turkey, Ramalingman and Anuradha (2021) investigated consumers' willingness to pay for organic food products based on product attributes. Their findings reveal that the majority of consumers (32%) were willing to pay 25% more for organic foods with reference to conventional foods and majority of the consumers were willing to pay high due to cognisance of health benefits.

Rizzo, Borrello, Guccione, Schifani and Cembalo (2020) adopted a multiple price list (MPL) methodology to elicit a willingness to pay for organic extra virgin olive oil. Their findings show that the health attribute contributes 78.9% to the average premium price for organic extra virgin olive oil. In Serbia, Vapa-Tankosic, Miler, Jerencic and Stanojevic (2020) used snowball sampling technique to analyse the willingness of consumers to pay for organic and local honey through a payment card system. To determine factors affecting the willingness to pay for organic and local honey, ordinal regression was employed. Results indicate that consumers were willing to pay 20-30% for organic honey and 10-20% for local honey. Income and the level of education positively affected this decision. Food safety and support for local community positively affected willingness to pay for organic honey. Amin, Andry, Humaidi, Wahyuni and Ningish (2020) used descriptive analysis and the Contingent Valuation Method (CVM) to analyse data to determine perceptions of consumers on organic rice and the value of willingness to pay. Consumers have a high positive perception of organic rice with a score of 63.6 and showed willingness to pay more for organic food relative to conventional rice which is Rp 16.838. In Vietnam, Luu (2019) investigated factors affecting willingness to pay through a survey of 210 consumers and used both logit and ordered logit regression models for analysis. Processing, packaging and labelling, certification, product supply, perceived health, nutrition of products and socio-economic characteristics such as income significantly influence not only the consumers' willingness to pay but also actual purchase decision of organic foods.

Closer home in Malawi, Shaba, Se-Hyun and Won-Ho (2018) used Contingent Valuation Method (CVM) to analyse consumer WTP for organic chicken. CVM analysis shows that consumers are willing to pay a price 25.7% higher than the regular conventional chicken. In India, Nandi, Bokelmann, Cowdru and Dias (2016) employed the Contingent Valuation Method, and the logit model was used for analysis. 90% and 74% respondents were willing to pay premium prices for organic vegetables and fruits. Consumers' perception about presence of chemical residue in conventional fruits and vegetables, trust on retailers, perception of environmental beneficial influence of organic foods, household monthly income, perception of

higher nutritional value, availability and household size explained willingness to pay. Sriwaranun, Gan, Lee and Cohen (2015), analysed consumers' willingness to pay for organic products by applying a contingent valuation method to collect data through convenience sampling in Bangkok, Thailand. The average willingness to pay for organic vegetables was 88% higher than the conventional vegetables. An ethical concern for food, perception of health benefits, and the presence of children younger than 18 years of age (positive) were the major determinants of WTP for rice. Also, experience in purchasing organic foods and residing in the city positively influenced WTP. Narine, Ganpat and Seepersad (2015) applied contingent valuation and logistic regression in Trinidad to analyse consumer WTP for organic tomato and determinants of WTP respectively. Relative to conventional tomatoes, consumers were willing to pay a premium price of 20%. The principal factors influencing WTP were identified as the level of income, area of residence, gender and perceived health benefits were the major factors influencing the willingness to pay a premium price for organic tomatoes.

The contingent valuation (CV) literature has established that asking a series of questions that progressively narrow the bounds on willingness-to-pay (double-bounded) provides more efficient estimates of a willingness to pay than asking a yes/no question about willingness to pay a single amount (Hanemann, Loomis & Kanninen, 1991). The paper explores two major research questions. To begin with, how much are consumers willing to pay for organic vegetables in Zimbabwe using organic cabbage as a proxy for these credence goods? The follow-up question within this over-arching question is to explore whether willingness to pay for organic vegetables varies with socio-demographic characteristics such as age, marital status and gender.

The Contingent Valuation Method

Policymakers have often been interested in how the public value goods and services that are not traded in the marketplace. The values can easily be estimated using contingent valuation methods in which the survey questions elicit respondents' willingness-to-pay (Mitchell & Carson, 1989). Willingness to pay roughly consists of asking consumers or producers how much they are willing to pay to avoid a negative outcome or accept a positive outcome. Contingent valuation (CV) methods can be applied to estimate a willingness to pay (WTP) for organic foods. Their applicability in organic foods is three-fold. To begin with, they allow the elicitation of WTP. CV methods can effectively elicit consumers' WTP for organic foods, providing valuable information for policymakers and marketers. Moving on, CV is suitable for valuing non-market goods like organic foods which lack market prices or have externalities. Furthermore, CV methods are important to unearth consumer preferences and also capture attitudes towards organic foods which help them to understand their willingness to pay.

Research Methodology

A digital Open Data Kit (ODK) generated questionnaire was administered by the researcher to obtain consumer information to model the willingness to pay for organic cabbages. Data from 200 respondents was collected using a mall-intercept survey from the 4th of July to the 10th of September 2023 using convenience sampling. The research targeted consumers who were 18 years and above who were the primary grocery shoppers of their households in TM Pick 'n Pay and OK supermarkets and grocery stores in Chegutu. The researcher used his mobile phone to collect the data which was linked to the google drive through email.

Ethical clearance was obtained from Midlands State University and authority to research was sought from the management of both TM Pick 'n Pay and OK supermarkets in Chegutu. Moreover, the research process was guided by sound ethical principles that ensured voluntary participation of the participants, informed consent, respect, confidentiality and anonymity of respondents.

The respondents were requested to indicate their willingness to pay an initial offer price of \$1.50(P_i) for organic foods compared to \$1 for conventional cabbage. The second bid was contingent upon how the individual responded to the first bid as either the initial bid price was lowered or raised by 16.6 (\$0.25). An individual willing to pay the amount on the first offer price (responds 'Yes') was presented with a second bid of \$1.75(P_i^u). On the other hand, a respondent whose response was 'No' to the first bid was not willing to pay the initial price amount and was offered the second bid in which the amount was \$1,25(P_i^d) producing four possible responses to the two bids as:

1. 'Yes' to first and second bids (Yes/Yes), maximum price premium = \$1.75
2. 'Yes' to first bid and 'No' to second bid (Yes/No), price premium = \$1.50 < x< \$1.75
3. 'No' to first bid and 'Yes' to second bid (No/Yes), maximum price premium = \$1.25
4. 'No' to both first and second bids (No/No), maximum price premium - < \$1.25

It is imperative to note that the double-bounded approach reveals the four possible ranges of the maximum WTP with lower and upper value bounds making it difficult to observe the true WTP.
The four possible outcomes can be presented as dichotomous indicator variables: d_i^{yy}, d_i^{yn}, d_i^{ny} and d_i^{nn}.

d_i^{yy} - the i[th] respondent responds 'Yes' to both bids, coded YY (P_i and P_i^u), therefore WTP lies

$$P_i^u < WTP < \infty$$

d_i^{yn} - the i[th] respondent responds 'Yes' and 'No' to the first and second bids respectively, NY, (P_i and P_i^u), hence WTP lies $P_i < WTP < P_i^u$.

d_i^{ny} - the i[th] respondent answers 'No' and 'Yes' to the first and second bid respectively coded NY, (P_i and P_i^d), and the WTP lies $P_i^d < WTP < P_i$.

d_i^{nn} - the i[th] respondent answers 'No' to both bids, coded NN, (P_i and P_i^d), and WTP lies $0 < WTP < P_i^d$ as shown in Fig 1.

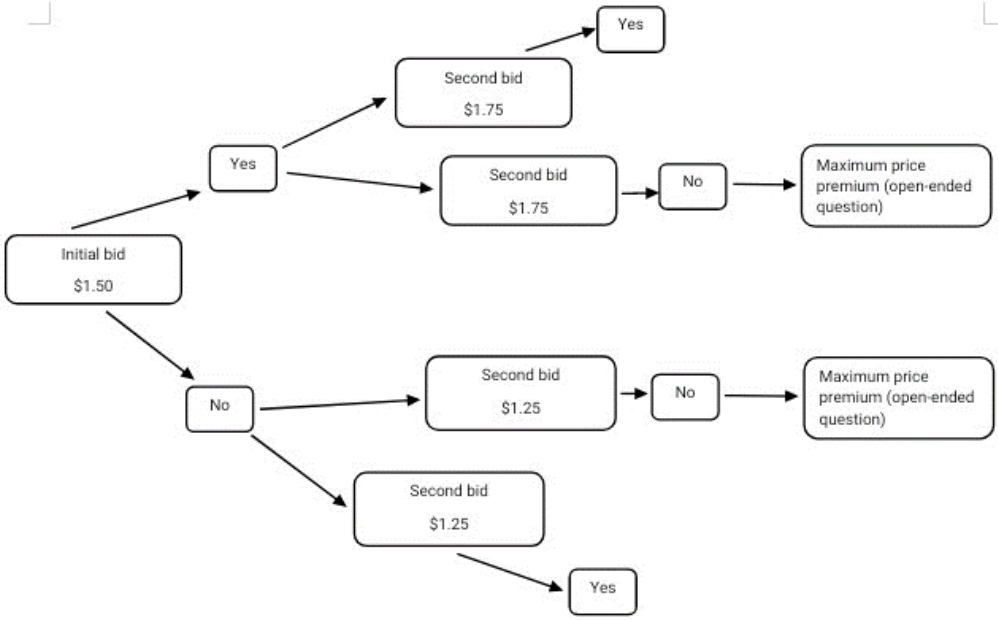

***Figure 2**: Bidding process for the double-bounded contingent valuation of organic cabbage*

Source: Author's construction

The respondents were, therefore, requested to indicate their actual maximum WTP through open-ended questions. No truncation was applied. In the case of open-ended and final bid WTP data, truncation is the omission of certain number or percentage of the highest bids (Bateman, Langford, Turner, Willis & Garrod, 1995). In order to obtain the actual valuation of organic cabbages, this was not done. SPSS version 27 was used for analysis for both double-bounded contingent valuation methods to obtain the price premium and logistic regression analysis to obtain the factors affecting consumer willingness to pay.

Results and Discussion

The descriptive statistics show that 74.5% of respondents exhibited a positive willingness to pay. Specifically, 40.5 % were willing to pay US$1.75 for organic cabbage indicating they were willing to pay 75 percent more for organic cabbage in comparison to conventional cabbage. For 70 percent price premium, only one respondent (0.5 percent) showed willingness. Seven point five percent of the respondents showed that they were willing to pay 60 percent premium price for organic cabbage while 11.5 percent settled for 55 percent price premium. For the rest of the respondents who showed positive willingness to pay, 0.5% indicated 51% while 13.5 percent answered 'Yes' to the second bid (US$1.25) which translates to 25% price premium for organic cabbage. A considerable percentage (17.5) indicated that they were more willing to pay the same price for an organic cabbage as the conventional alternative which stood at US$1.00. This indicates neither a positive nor negative willingness to pay. 0.5% of the respondents were willing to pay US$0.90 which translates to a negative percentage price premium of 10 percent. Lastly, 7.5 percent seemed to suggest that they will be more willing to buy organic cabbage if the price is half that of conventional cabbage (negative 50% premium). The average price premium for organic cabbage is $1.61 cents which translates to 61 percent price premium. In China, Wang & Liu (2022) report that consumers were willing to pay a price premium of 15-25% for organic cabbage. For Malaysians, Loke and Tan (2022) report that consumers were willing to pay an average of 20-30% price premium for organic vegetables

compared to conventional vegatables. Yormirzoev, Li, and Teuber (2021) show that 51 showed a positive price premium for organic milk in Russia. In Thailand, Sriwaranun, Gan, Lee, & Cohen (2015) found out that consumers were willing to pay 88% higher prices for organic vegetables compared to the price of conventional vegetables.

A total of 33 of the respondents who had previously purchased organic foods were willing to pay $1.50 for organic cabbage (50% price premium), while 34% were not willing. This showed that real willingness to pay is reflected by purchase behaviour and the consumer gains positive experiences (66%) or negative experiences (34%) which affect consumer's WTP in future. With respect to the socio-demographic profile of respondents, 61 % were willing to pay a price premium of US$1.50 against 39 per cent who were not willing. The in-group comparison between males and females show that males were more willing to pay a price premium of US$1.50 for organic cabbage (64.9 % against 58.7%). The married category in the breakdown of marital status has 73 percent in the willing to pay category while the other two groups have almost the same percentages.

Table 1: *Willingness to pay a price premium for organic cabbage*

Amount	Frequency	Purchasers and non-purchasers of organic foods (n = 200)
$0.50	15	7.5
$0.90	1	0.5
$1.00	35	17.5
$1.25	27	13.5
$1.51	1	0.5
$1.55	23	11.5
$1.60	15	7.5
$1.65	1	0.5
$1.70	1	0.5
$1.75	81	40.5

Logistic regression was used to determine factors that influenced the willingness to pay for organic cabbage. Lifestyle, ethics and organic information source (agricultural fairs and exhibitions were significant at 5% while marital status (1) for the married was statistically significant at 10%. The odds ratio for lifestyle is 0.261 showing that an increase in one unit of lifestyle decreased the likelihood of paying a price premium of 50 percent for organic cabbage. No previous study reported the effect of lifestyle value on willingness to pay. The coefficient for ethics is significant at 5 percent suggesting that respondents who had high ethical concerns have two times the odds ratio of willing to pay for organic cabbage than respondents with a low ethical value. Again, no study reported ethical concern. On marital status, the odds ratio showed that married respondents had a high probability of willing to pay US$1.50 for organic cabbage than their single, divorced, widowed and separated counterparts. The study by Yormirzoev, Li, and Teuber (2021) showed that place of residence was the only significant socio-demographic characteristic to explain willingness to pay price premium for organic milk. The coefficient for agricultural fairs or exhibitions (-1.369) had an odds ratio of 0.254. This pointed out that respondents who obtained their organic information from agricultural fairs or exhibitions had a low probability of purchasing organic cabbage. This finding seemed to concur with Dumortier, Evans, Grebitus & Martin (2017) who reported that high level of trust in media sources of information regarding organic foods influenced positively the willingness to pay for organic foods. This finding seems to suggest that respondents lacked trust on organic information they obtained from agricultural fairs or exhibitions. A study by (Sriwaranun, Gan, Lee, & Cohen, 2015) found out that experience in purchasing organic foods, food ethical

concern, perception in health benefits, presence of children under 18 years and age had positive effect on consumer willingness to pay.

Table 2: Logistic regression output for willingness to pay price premium for organic cabbage

Variable	Coefficient (B)	Standard Error	Odds Ratio Exp (B)	95% CI Upper Lower	p- value
Lifestyle	-1.343**	0.333	0.261	0.136 0.501	0.000
Ethics	0.820**	0.364	2.270	1.113 4.634	0.024
Marital status	0.912*	0.520	2.489	0.898 6.895	0.079
Organic information (agricultural fairs and exhibitions	-1.369**	0.618	0.254	0.760 0.853	0.027

** indicates significance at 5%, * indicates significance at 10%

With regards to perceptions of respondents in relation to their sensory, health benefit, convenience, price and environmental benefit for organic foods, a majority of respondents (51%) agreed to the statement that organic foods are tastier while 37% strongly agreed to this statement. This generated a mean score of 4.19 for WTP group and 4.17 for non-WTP group with 4.18 as the total mean score. Exactly half of the respondents (50%) perceived that organic foods have a superior appearance in terms of freshness, colour and texture. 26% of the respondents strongly concurred with this statement (mean of 3.83). For the statement on nutrients, 80% of the respondents agreed with 31.5% strongly agreeing. Mean scores of 4.01 and 3.83 for purchasers and non-purchasers were generated. However, the difference is insignificant statistically. This is true for a statement that there are fewer chemical residues in organic foods than their conventional alternatives (a mean of 4.20 and 4.10 for purchasers and non-purchasers respectively). Also, 57 and 33% of the respondents strongly agreed and agreed to this statement respectively. 24.5% of the respondents were negative on the statement that organic foods are not easily found compared to 75.5 % (46% agree and 29.5% strongly agree) who responded positively. Statistically, however, there is no significant difference.

On the availability of a diversity of organic food choices, 77.5% affirmed this statement with 59.5% and 18% agreeing and strongly agreeing, respectively. On price perception, the majority (57.5% for the statement that organic foods are expensive and 52.5% on the items that price is a hindrance to purchase of organic foods) agreed that it has a negative influence on organic foods. The mean scores of the willing group for the price perception on the two items (3.52 and 3.62) were not statistically significant for the mean scores for the other groups 3.29 and 3.37). For environmental perception, the two items shared almost the same frequency with 94.5% of the respondents strongly agreeing and agreeing to the positive environmental effects of production of organic foods.

Conclusion and Recommendations

The study showed that 81.3 % of the respondents were willing to pay a price premium of US$1.50 against 18.7 per cent who were not willing. The comparison between male and female respondents showed that male respondents were more willing to pay a price premium of US$1.50 for organic cabbage (64.9 % against 58.7%). Chi-square tests run on previous purchase status and willingness to pay $1.50 for organic foods show that 66% of the respondents who had bought previously organic foods were willing to pay a price premium of

USD$1.50 for organic cabbage. Lifestyle, ethics, marital status (married) and organic information source (agricultural fairs and exhibitions) were the significant variables. Therefore, ethics and marital status positively influenced the willingness to pay showing that a married consumer with higher ethical value was more inclined to pay $US1.50 for organic cabbage. The results showed that consumers were willing to pay for organic cabbage driven by lifestyle and ethical concerns. Marketers can capitalise on this trend by adopting effective production and marketing strategies. The findings advanced by this research have significant implications for policies and initiatives to enhance organic agriculture in Zimbabwe. Policymakers can use these insights to inform consumer education programmes and environmental policies. The government can launch awareness campaigns in order to educate consumers about the benefits of organic foods and produce. For farmers, this should provide incentives for farmers to adopt organic practices to meet the growing consumer demand. Future research studies can explore the willingness to pay for other organic products for example organic meat and other organic crops. Moreover, studies can examine the impact of certification labels on consumer behaviour, the role of environmental concerns and health benefits in driving demand and consumer willingness to pay. On the supply side, there is need to investigate the factors influencing farmers' conversion from conventional to organic farming for both animals and crops.

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