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Comparison of motives to buy organic foods among middle income urban consumers of the state of Mexico, Mexico

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Expansion of organic food production requires increasing the number of organic food consumers. The aim of the study was to explore the relative importance of motives to buy organic foods in consumers of the state of Mexico by applying a 21-item questionnaire, each item with a set of fixed options, the consumer decided which of the options was closer to his/her own opinion. Frequencies expressed as a percent of respondents' buy option within an item were compared by Chi-square. The questionnaires analysed were 618. The decision to buy organic food was found in over 50% ($p<0.05$) of the respondents, indicating that there is a need to increase the visibility among consumers of the organic food advantages. Above 50% ($p<0.05$) of the respondents thought that organic foods were better than non-organic, this belief is a stronghold to gain organic food consumers. For 30% ($p<0.05$) of the respondents a major restrain to buying organic foods is that they are difficult to find and there was low availability; 80% ($p<0.05$) of the respondents buy organic food as a personal decision no matter other´s people opinion about organic foods; still there is a need to build up a social environment favourable to buy organic foods. Consumers' trust in all links of the organic food chain needs to be strengthened as there were around 40% ($p<0.05$) of respondents that their trust was not higher than average. It was concluded that drivers to increase the number of organic food consumers among the population of the state of Mexico are increasing availability, diversity, and visibility of organic foods, expanding the knowledge of the benefits of organic foods over non-organic and strengthening consumers' trust in all links of the organic food chain.

1. Introduction

Organic food has been defined as a food system production that provides healthy food to humans by applying environment-friendly management practices with no use of agrochemicals and harmful residuals and animal welfare considerations (Paul & Rana, 2012). Besides healthy food and environmental sustainability qualities, organic food production system expansion requires an increasing number of organic food consumers (Rodríguez-Bermúdez, et al., 2020). Some field research results provide information on consumers' driving factors to buy organic foods, which could lead to increased organic food con-

sumption and so the organic food production system (Sirieix, et al., 2011).

Perez-Cueto (2019) concluded that consumer´s food choices could be influenced; however, there was not a single major driver that works across people groups: age, nations, cultural backgrounds, income, previous experience, formal education level, rural or urban setting, and then specific field research should be done for target human groups or sub-groups.

Mexico and other emerging economy countries have shown a steady increase, from 2003 to 2018, in their population within the lower to upper middle-income group, which has meant an increase in buying power within domestic and international markets (World Bank, 2018). Higher family income allows larger food choices but not always better nutrient balance intake, selection of healthy food (Araujo, M. C. et al., 2013), or food from a production chain committed to environmentally friendly and animal welfare practices (Willett, et al., 2019).

Some consumer drivers to buy organic foods are environmental issues (Bai et al., 2019); organic food is healthier than non-organic (Zhang et al., 2018); ecological sustainability and animal welfare (Guido et al., 2010); consumers' reflection and personal attitudes (Saraiva, et al., 2020); social pressure, consumer attitudes and perceptions (Zagata, 2012); other people's judgment on the goodness of organic foods (Ruiz–de-Maya, et al., 2011); psychological, aspects about global life evaluation, satisfaction with specific aspects, physical health and nutritional concerns (Ares et al., 2015); and, healthier eating patterns compatible with the wellbeing concept (Ares et al., 2014).

Along with consumer's motives to buy organic food, research should be done on factors that prevent consumers from buy organic foods (Hansmann et al., 2020) among them are high prices, poor knowledge of benefits, distrust of organic labels and authorities, and unavailability in local markets (Hughner et al., 2007), uncertainty on shelf-life long (Traill et al., 2008), poor visibility on shelves and not enough amount for one-stop-shopping consumers and low family income (Hjelmar, 2011), poor accessibility and diversity (Urban et al., 2012).

The state of Mexico has in its urban areas a middle-income and high formal education level population that could be a target population to increase organic food consumers (Bai et al., 2019). Two previous studies in this same state showed that preference for organic food among consumers was based on environmental concern and animal welfare with no major impact on economic aspects (Escobar-López et al., 2017; Espinoza-Ortega et al., 2016). Kooijmans and Flores-Palacios (2014) found that urban and rural populations of the state of Mexico showed different perceptions regarding the significance of organic and natural foods.

The aim of this research was to explore the relative importance of motives to buy organic foods in consumers settled in any of the three major cities of the state of Mexico to identify consumers' specific motives to buy organic foods.

2. Materials and Methods

Field data came from an application of a questionnaire with a total of 21 questions: seven demographic related; four related to intention and attitude to buying organic foods; two about behavioural control; three on subjective norms; and, five on trust in specific organic food links. The questionnaire structure followed the recommendations of Bai et al. (2019).

All questions had a set of fixed options, the consumer was asked to decide which of the options offered was closer to his/her own opinion. The questionnaire was applied by face-to-face questioning; possible respondents were approached at the exit of supermarkets in three major cities of the state of Mexico, Mexico. Sampling was a convenience non probability one (Kalton, 1983), as respondents were those willing to provide all the answers to the questions made.

Data analysed were the frequencies of respondents in each option within each question; frequencies were expressed as a percent. Statistical analysis of frequencies within each question was by Chi-square (Stokes et al., 2010) under the null hypothesis that respondents were evenly distributed across all options within each question, to declare significant effect p-value was equal to or less than 0.05.

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3. Results

Of all the consumers interviewed, 618 of them answered all questions; the core (p≤0.05) of these consumers was made of urban residents, female, college degree, married, middle age (36-55 years old), and low and medium middle-class income, in charge of deciding and doing family´s purchase of food (Table 1).

Up to 45 and 52% (p≤0.05) of the respondents indicated some chance in the future or in the next shopping, respectively, to buy organic food while around 35 and 28% (p≤0.05) were not sure in terms of the future and next shopping, respectively (Table 2). The proportion of consumers with the intention to buy organic foods was larger than the undecided consumers, some work needs to be done to reinforce among consumers the intention to buy organic foods.

Around one-third (p≤0.05) of the respondents expressed that organic foods were difficult to very difficult to find at the supermarkets; while another one-third (p≤0.05) that organic foods were as easy to find as other food types; and, over 75% (p≤0.05) of the respondents indicated that once they made up their mind to buy organic foods they did (Table 3).

Over 70% (p≤0.05) of the respondents perceived a social environment around them that was from not-against up to very-positive about organic foods; however, over 80% (p≤0.05) mentioned that decision of buying organic foods was a personal one not determined by other people's opinion or suggestion (Table 4).

Close or above 70% (p≤0.05) of the respondents indicated average to absolute trust in any of the five links of the organic food chain shown to them; however, the organic food market still has some work to do to move trust from average to large in all links, if organic food market is to be expanded (Table 5). This improvement in trust should be focused mainly on the supervision of quality and technology of domestic and international organisms related to the retail sale of organic food.

Table 1. Distribution of respondents by some demographic characteristics (n=618)

Demographic characteristic	Value	Frequency (%)
Gender	Female	63.59a
	Male	36.41b
Age (years)	18 - 35	41.26b
	36 - 55	48.55a
	>55	10.19c
Educational level	Elementary to Junior high	5.34c
	High school	41.59b
	College or above	50.49a
	None	2.58c
Marital status	Married w/out children	3.56c
	Married with children	55.83a
	Single	33.01b
	Divorced	7.60c
Monthly income (MXN)	<1,875	29.61b
	1,876 - 9,375	48.06a
	9,376 - 13,125	9.23c
	13,126 - 16,875	8.25c
	> 16,876	4.85c

Continue table 1. Distribution of respondents by some demographic characteristics (n=618)

Demographic characteristic	Value	Frequency (%)
Place of residence	Rural	23.62b
	Urban	76.38a
Having at home people over 60 and children under 12 years old	Yes	59.87a
	No	40.13b

a, b, ..= percentages within demographic characteristics with at least one letter in common are not different (p>0.05)

Table 2. Distribution of respondents by intention and attitude aspects regarding the purchase of organic food (n=618)

Criterion	Frequency (%)
Intention aspects	
Possibility to buy organic foods in the short term	
High possibility	4.37d
Possible	14.89c
Some possibility	26.05b
Undecided	35.76a
No chance	18.93c
Would you buy organic foods in the next shopping?	
Definitive	5.83c
Most probably	13.92b
Almost sure	32.20a
Uncertain	28.32a
Not at all	19.73b
Attitude aspects	
Position about buying organic foods	
Strongly for	22.01b
Inclined to	36.41a
Borderline	37.86a
Not convinced	3.56c
Strongly against	0.16c
Organic food is better than non-organic	
Strongly agree	15.05c
Agree	34.95a
Without decision	25.73b
Disagree	18.61c
Strongly disagree	5.66d

a,b..=percentages within specific criterion with at least one letter in common are not different (p>0.05)

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Table 3. Distribution of respondents in two aspects of perceived behavioural control to buy organic food (n=618)

Aspect	Frequency (%)
Is it easy and readily available to buy organic food?	
Very difficult	5.66e
Difficult	26.70b
Same as other food types	34.30a
Easy	24.60c
Very easy	8.74d
Buying organic food is a decision entirely up to you	
Completely disagree	4.53e
Disagree	20.23c
Sometimes	37.22a
Agree	29.12b
Completely agree	8.90d

a, b, ..= percentages within the specific aspects with at least one letter in common are not different (p>0.05).

Table 4. Distribution of respondents in three aspects of subjective norms to buy organic food (n=618)

Aspect	Frequency (%)
Attitude of most people close to you toward buying organic food	
Very negative	3.88d
Negative	15.37c
Borderline	47.73a
Positive	27.83b
Very positive	5.19d
Influence of others on buying organic food	
Definitely against	4.69c
Against	18.77b
Borderline	44.82[a]
In favour	23.46b
Absolutely in favour	8.26c
Importance on you of other people's opinion to buy organic food	
None	25.24b
Little	29.13a
Some	29.94a
Big	13.75c
Definitive	1.94d

a, b, ..= percentages within specific aspects with at least one letter in common are not different (p>0.05).

Table 5. Distribution (%) of respondents by the level of trust in links of the organic food chain (n=618)

Link of the organic food chain	Level of trust				
	None	Some	Average	Large	Absolute
Farmers	4.53c	21.20b	35.76a	29.61a	8.90c
Processing companies	8.57c	23.79b	25.57b	37.70a	4.37c
Quality and technology of international and national organisms	16.02d	26.54b	35.76a	19.74c	1.94e
Certification institutions	4.36c	9.06c	35.60b	45.15a	5.83c
Organic food displayed	1.13d	10.68c	34.47b	44.01a	9.71c

a, b, ..= percentages within the same row with at least one letter in common are not different (p>0.05).

4. Discussion

The general profile of consumers interviewed agrees with the findings that the decision on buying or not organic foods depended on women college graduates, medium to high income with children (Singh & Verma, 2017; Zhang et al., 2018)) and urban residents (Hempel & Hamm, 2016). Approaching consumers at the exits of supermarkets might help explain this profile.

Intention to buy organic foods is strongly associated with a positive attitude toward organic foods (Bai et al., 2019; Urban et al., 2012). In this research (Table 2), over half of the respondents indicated a strong positive attitude towards organic foods in terms of whether it was good to buy organic foods and that they were better than non-organic foods. Building among consumers confidence in the benefits of organic food could move the proportion of consumers still undecided to have a positive attitude towards organic foods and then drive them to the intention of buying organic foods in the future. Ditlevsen et al., (2019) agree that one keystone factor for the growth of the organic food market is that consumers truly believe that organic food is better for their health than non-organic foods.

This study agrees with the findings of Hjelmar (2011) and Urban et al., (2012) that the limited availability of organic foods is a factor that restricts consumers from buying them; and, with the finding of Apaolaza et al., (2018) and Choo et al., (2004) that convinced organic food consumers to keep buying organic foods. It can be said that once consumers decide to buy organic foods they are very stable on that decision, expansion of the organic food market demands to get new consumers, once they turn to organic food buyers they stayed as organic food consumers.

Nuttavuthisit and Thøgersen (2017) agree with this study that personal decision was a major driver to buy organic food; however, a positive social environment toward organic foods should also be worked out as a factor to increase organic foods consumers and then the expansion of organic foods market.

Thøgersen (2000) pointed out that organic food market stability and expansion depended on gaining the trust of consumers on all links of the organic food chain. Farmers, wholesale, and retail chain stores should work together to gain the trust of consumers

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(Janssen & Hamm, 2011), consumers' concerns were focused on product and process-based qualities (Holt & Reed, 2006). Consumer trust could be build-up by both: validated benefits from buying organic food and being sure that products really come from an organic supply chain (Daugbjerg et al., 2014).

German consumers based their trust in organic food on reading certification labels on the product and when such labels were from a known origin (Janssen & Hamm, 2014), Noblet and Teisl (2015) pointed out that consumer's trust was stronger when certification labels were issued by a third party or specialized government agencies. Close monitoring of labels was emphasized as labels could influence consumer´s perception of the quality and taste of the product (Apaolaza et al., 2018), and such influence of labels varied among consumers, the same label was understood differently among different consumers (Jensen, et al., 2018).

Proper certification labelling in organic products built consumer trust from the primary production phase and all along the food chain (Albersmeier et al., 2010; Moussa & Touzani, 2008). Organic food certification protocols and agencies are then important components in the organic food market as through them consumer´s trust could be gained. Janssen and Hamm (2011) found that organic food without an organic certification logo widely known by consumers was not taken as true organic food and/or that lax application of production and processing standards were applied, and foreign agencies were not as trusted as domestic ones. Thøgersen et al., (2019) indicated that domestic produce, availability in local markets, and national certification agencies were factors in favour of stronger consumer trust in the organic food chain.

5. Conclusions

Middle-income consumers of urban areas of the state of Mexico are very aware of the organic food availability at local markets, large proportion of consumers have a positive attitude and intention to buy organic food, based on the belief that organic food is a healthier choice than non-organic. Buying organic food was mainly dependent on consumer's own decisions rather than influence from other people's opinions; however, the expansion of the organic food market should incorporate strategies that promote a positive social environment towards buying organic food, this approach could reinforce the decision of consumers to buy organic foods.

A stronghold of the organic food market is that once a consumer decides to buy organic food, he/she keeps buying organic foods. Supermarkets and organic food dealers should work toward increasing the availability, diversity, and visibility of organic foods if they want to increase organic food retail sales.

All links of the organic food chain should work together to gain consumers' trust and then build a stronger organic food market in the urban areas of the state of Mexico.

Consumers demand clarification and transparency under a reliable traceability information system of organic food from the primary production stage up to the commercialization sites. Coordinated efforts are required, especially from Mexican federal and state agencies to promote organic food, strengthen consumers' trust in private and public certification agencies and protocols, and be aware of differences from ethnic, regional, and environmental concerns.

Conflict of interest

The authors declare no conflict of interest.

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