



## AN INVESTIGATION ON THE FACTORS INFLUENCING ORGANIC FOOD PURCHASE INTENTION IN WUHAN

*Uma investigação sobre os fatores que influenciam a intenção de compra de alimentos orgânicos em Wuhan*

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**Abstract:** This paper aims to investigate the factors influencing the purchase intention of organic food in the mid-sized city of Wuhan (China). After reviewing relevant literature, the research method was developed based on five hypotheses and a handed survey online have been conducted with a total of 162 valid responses. The finding of this study revealed that purchase intention in Wuhan is influenced by similar factors as larger cities. Indeed, despite a lack of knowledge and trust, very few experiences with organic food products, high prices and lack of distribution channels, it does not stop consumers to intend purchasing organic food products.

**Key words:** Organic food; Purchase intention; Mid-sized city; Convenience

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## UMA INVESTIGAÇÃO SOBRE OS FATORES QUE INFLUENCIAM A INTENÇÃO DE COMPRA DE ALIMENTOS ORGÂNICOS EM WUHAN

*An investigation on the factors influencing organic food purchase intention in Wuhan*

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**Resumo:** Este artigo tem como objetivo investigar os fatores que influenciam a intenção de compra de alimentos orgânicos na cidade de médio porte de Wuhan (China). Após a revisão da literatura relevante, o método de pesquisa foi desenvolvido com base em cinco hipóteses e uma pesquisa online foi realizada com um total de 162 respostas válidas. A descoberta deste estudo revelou que a intenção de compra em Wuhan é influenciada por fatores semelhantes às grandes cidades. De fato, apesar da falta de conhecimento e confiança, pouquíssimas experiências com produtos orgânicos, preços altos e falta de canais de distribuição, isso não impede que os consumidores pretendam comprar produtos orgânicos.

**Palavras-chave:** Alimentos orgânicos; Intenção de compra; Cidade de tamanho médio; Conveniência

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## 1 Introduction

With a population over 1.3 billion people, China is the fourth largest country in the world by land size. Its continuous growth in economy and society leads to an emerging middle and high income class, more and more concerned to live a healthy lifestyle (Li, 2006). But for decades, China has been facing the problem of a seriously contaminated environment, especially in the food industry. Associated with an increasing disposable income, the recurrent food scandals allow the organic industry to grow and expand in China, creating potential consumers emerging from mid and big-sized cities (Yin et al, 2010). This paper intends to review the factors influencing the purchase of organic food and to analyze them to the mid-sized city of Wuhan. With more than 10 million inhabitants, Wuhan is considered to have an excellent growth prospect city despite a slow adoption of trends, and lower income factor than bigger cities.

Moreover, previous studies on organic food consumption mainly focus on consumer behavior, purchase intention and demand for organic food in Europe and western countries. Since related studies in China have been only led in big and major cities, it is essential to study the factors influencing Chinese consumer's purchase intention towards organic food in developing cities where the approach about culture and knowledge of organic products is less developed in order to reach a better understanding on a larger scale of population.

## 2 Literature Review

### 2.1 Organic food consumer

International publications on organic consumers mainly research on a consumer profile or try to understand the attitudes towards purchase intention in the field (Harper et al, 2002; Padel et al, 2005). Literature can also be found about the main drivers of organic consumption through different approaches such as demographic variables, attitudes, motivations, personal factors, willingness to pay and beliefs. Most of studies describe organic food buyers in China to be a middle to high income consumer, educated females, from 28 to 50, married, pregnant or with infants; or to be senior population, or with health issues (Magnusson et al, 2001; Giannini et al. 2014; Thompson et al. 1998 (Li et al, 2015). Official reports and market overviews add other profiles having different consumption behavior and preferences: white collar families, overseas returnees, government officials, young people, foreigners living in China, and corporations.

### 2.2 Factors influencing consumer purchase intention towards organic food

With the expansion of organic food in China, demographics barriers and cultural differences influence the intention to buy, even though similar factors and attitudes can be found in different countries. Indeed, most of studies led in different countries show the same concerns for health motivation issues, food quality and the environment (Pearson et al, 2007).

#### 2.2.1 Health and environmental awareness

A large amount of literature covers the relationship between health and organic food. Most of findings defines health as the main factor for consumers to buy organic food because of its positive association (Zanoli and Naspetti, 2002; Kyriakopoulos and Van Dijks, 1997); but other researches suggest otherwise. Michaelidou et al. (Michaelidou et al., 2008) and Tarkianen and Sundqvist (Tarkianen and Sundqvist, 2005) demonstrate that food safety and ethical concerns are the most important factors when purchasing organic food. Regarding environmental awareness, Chen (Chen, 2007) states that consumers involved in an environmental behavior are more likely to have strong intention to purchase organic food products.

2.2.2 Economic development For some authors, the factor *'price'* negatively affect organic food purchase and its frequency (Hughner, 2005; Shepherd et al., 2005) because of its high value on everyday products (Briz and Ward, 2009) ; when others explain that consumers who already have purchased organic food at least once do not consider price as an essential factor (Zanoli and Naspetti, 2002). Moreover, Krystallis and Chryssohoidis (Krystallis and Chryssohoidis, 2005) state that willingness to pay is driven by food quality, food safety and trust in certifications; more than price. However, studies show that *'availability'* (or convenience) has a negative impact on

organic food purchase, as product varieties and places to shop are often limited (Zanoli and Naspetti, 2002; Dettmann and Dimitri, 2010).

### 2.2.3 Demographics

Regarding demographic variable, most of studies show the correlation between consumers with middle to high income and higher educational background; and organic food purchase (Tsakiridou et al.,2008; Thompson,1998; Magnusson et al. 2001, Li and Xin, 2015).

### 2.2.4 Standards and regulations

Padel (Padel, 2005) found the absence of trust in organic labelling and certification to be the most significant barrier to purchase. According to the author, governments should enforce and intervene in the food supply chain through laws and regulations. Magnusson et al., 2003 defend the organic label as a sign of higher quality for consumers.

### 2.2.5 Transparency of production process

Food safety is considered as primordial when purchasing organic food, and composition and methods of production are important factors (Michaelidou et al.,2001). The trust in quality standards and integrity influence organic food intention (Lockie et al.,2004; Thompson, 1998); while a brand reputation and positive corporate image promoting common values towards the environment and health concerns can influence a consumer purchase intention in accordance (Onyango et al.,2007). Based on extant literature, the following hypotheses have been developed, affecting (positively, neutrally or negatively) the organic food purchase intention in Wuhan.

**Table 1 Hypotheses**

Hypotheses	Factors	Influence
1	Health and environmental awareness	Positive - <b>Main driver</b>
2	Transparency of production process	None
3	Standards and regulations	None
4	Economics development	Negative
5	Demographics	Positive

## 3 Methodology

A survey has been designed using 25 items relevant to the consumer's purchase intention towards organic food, and then conducted in the city of Wuhan. These questionnaire statements have already been conducted in previous researches from different countries, and are based on relevant literature. Moreover, they are divided into four variables containing on average 4 items, and demographic variables: Health and Environmental Awareness, Transparency of Production Process, Standard and Regulations, and Economics Development. A five points Likert scale going from [1] I strongly disagree to [5] I strongly agree, where [3] indicates neutrality has been used (Bryman and Bell, 2007). Regarding quality criteria, each concept has been tested with Cronbach's alpha test, revealing positive results with a minimum value of 0,602 and maximum value of 0,838; 0,60 considered as an accepted level of internal reliability (Bryman and Bell, 2007). Regarding data analysis methods, this study used frequencies, descriptive analysis, Chi-square test, and Phi&Cramer's V values.

During 60 days, 200 questionnaires have been administrated online through social communication tools (wechat, qq) with snowball sampling, and then reached randomly through convenience sampling with QR codes and links to the survey. The questions were first written in English and then translated in Chinese by a native expert, before conducting a successful pilot testing. Finally, over 162 respondents, 162 valid questionnaires were collected.

## 4 Hypotheses Results and Discussion

### **H1: Health and environmental awareness are the main driver and positively affect organic food purchase intention in Wuhan**

Five items have been included in Health and Environmental awareness concept, but item 2 (Health is important to my lifestyle) has been removed based on the Skewness and Kurtosis criteria. The author will remind the reader that the Likert scale is going from [1] I strongly disagree to [5] I strongly agree.

H1 is rejected. The results for this concept show that 69,8% of respondents are concerned about food safety and believe that organic food is better for their health (53,1%). The respondents show a little knowledge when 32,7% strongly believe in organic food produced without chemicals. Even though 27,8% remain neutral, this score can be explained by the skepticism people can have towards organic food products and its production process. Only 0,6% of respondents declared to not pay attention to the environment when 61,7% do pay attention to the environment. Regarding the last item, 56,2% of respondents believe that organic food support the environment protection when only 4,9% disagree. The statistics results get along with previous theories suggesting that health awareness has the least strong influence on driving consumers to purchase organic food and that food safety and ethical concerns are the main drivers (Tarkianen and Sundqvist, 2005; Michaelidou et al., 2008). H1 is rejected.

### **H2: Transparency of production process have a neutral influence on organic food purchase intention in Wuhan**

H2 is partially supported. 25,3% of respondents have already experienced organic food in the past, with 14,2% never did. This result can be explained by the fact that organic food can be experienced in different ways such as reading in magazines, or watching an ad. As an experience is personal to one, the author does believe that the respondents choosing the neutral item (24,7%) have by deduction, never experienced organic food before as they are not able to make a clear statement. Regarding the role of public administration and ecological organizations on organic food advertisement, 26,5% of respondents strongly disagree and 24,1% have a neutral opinion which can reflect an absence of interest/knowledge in this area. 60,5% strongly agree to have information access to the food they buy, supporting the theory that composition of products is an important factor in the purchase intention (Tarkianen and Sundqvist, 2005; Michaelidou et al, 2001; Lockie et al, 2002). The interest of respondents to know the reputation of the brand (56,2%) also supports another theory stating that brand reputation has a positive influence by reflecting the quality of a product. To conclude, neither a previous organic experience nor an organic food advertisement positively or negatively affects the purchase intention. But information access and brand reputation do have a positive influence on purchase intention.

### **H3: Standards and regulations have a neutral influence on organic food purchase intention in Wuhan**

H3 is partially supported. 30,9% of respondents are neutral about the food standards and regulations awareness when buying food, and only 13,6% strongly agree to be aware. This result shows that the majority of respondents are not aware of any food standards and thus, are blind to food dangers when shopping. Respectively 29,6% (neutral,) 19,8% (agree) and 16% (strongly agree) do not possess the knowledge to identify labels and names of organic food products. Therefore it can be concluded that this factor appears to be a personal knowledge most of respondents in Wuhan do not have. Regarding the trust in organic food standards and regulations, respondents are most likely to trust them, even though 21,6% of respondents do not have an opinion about it. This results falls in line with Aryal et al (2009) findings claiming that Chinese consumers experience a lack of trust when certifying organic food products. As a result, respondents do not seem to be aware about the authenticity or organic food products, and its standards and regulations. Therefore it does not influence their purchase intention.

### **H4: Economic development factors negatively affect organic food purchase intention in Wuhan**

H4 is partially supported. The majority of respondents tend to agree that organic food is more expensive (51,9% - strongly agree; 23,5% - agree) and therefore support the literature review stating that price negatively affect organic food purchase and its frequency (Sheperd et al, 2005). Indeed, the frequency results indicates that 17,9% never buy organic food 26,5% - sometimes, and 28,4% - usually. This result can be explained by the fact that some organic food products are less expensive than others, or represent a necessity which can lead to a usual purchase (ex: health concerns). Moreover, price is not the only factor to consider during purchase process. Indeed

convenience factor respectively shows 21,6% and 24,7% of respondents strongly disagree and disagree about easily finding and buying food in Wuhan. This finding supports Li and Xin (2015) research claiming that consumers who have the least access to organic food tend to go to organic farms and organic food specialty stores more often. Finally, respondents show positive results about willingness to pay (agree 32,1%, strongly agree 19,8%), even though they think that price is expensive.

#### **H5: Demographic factors positively affect organic food purchase intention in Wuhan**

H5 is rejected. Demographics analysis showed that 61,1% of respondents were female, and 38,3% were male. This result might be biased as an equal number of men of women would have been more representative of the population. Age of correspondents ranged between 26-35 years old (53.1%), followed by 25,2% (18-25), 18,2% (36-45) and 2,5% (46-55): with 54,3% being undergraduate and 30,9% postgraduate. The highest range of income was found between 3,000-6,000 yuan/month (23,5%), followed by 6001-9000 yuan/month (21%), with 26,5% of respondents working as Company staff/clerical, and 21,1% as ‘other’. Regarding the family situation, 51,2% chose the item ‘not married’ and ‘no children’ (57,4%). These demographic results found in Wuhan seems to match to the organic food consumer profile already analyzed by previous studies as: ‘a middle to high income consumer, educated females, from 28 to 50’. The absence marital and children situation can be explained as most of respondents were undergraduate and postgraduate students, therefore may not be engaged in serious relationships yet and are committed to their careers. In addition, results from educational background support previous researches stating that high level of education is important when purchasing organic food products (Zhu et al. 2013).

## **5 Conclusion**

The findings of this paper have revealed that purchase intention in Wuhan is influenced by similar factors found in large cities’ studies (e.g Beijing, Guangzhou etc.). However, it can be noticed that some aspects diverge. This study reflects that higher educated and higher income profiles are more concerned about their health as well as environmental issues. Therefore, they intend to buy organic food products, despite not having the knowledge to identify it. An important point to notice is that people show an interest in the information process about a product, as well as the brand reputation. If this issue could be solved, their trust in organic food certification would be restored, leading to purchase and not only intention to buy. Regarding purchase habits, more expensive prices do not stop the respondents when considering buying organic food products, even though there is a serious problem of product availability to solve. These findings support a previous research led in Wuhan stating that the reason why people do not buy organic food is because of a poor knowledge, channels to buy are few, and consumer willingness to pay is low (Wang, 2014).

### **5.1 Managerial limitations**

Many marketers of organic food can benefit from this research study, especially as the organic food market is yet to be fully developed and covered in China. The author encourages marketers to educate their target audience, and better promote organic food products. This study provides enough data and information to assist strategic management with decision-making process.

### **5.2 Limitations and future research**

Future research should be conducted narrowing the range of demographic factors, and researching deeper into each factor to better understand the choices of respondents. Because the final sample was quite small, it would be interesting to reach a larger sample in order to be more representative of Wuhan population.

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