

# Marketing Mix Influencing Organic Foods Purchase of Mexican Consumers<sup>\*</sup>

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The company to sensitize environmentally to its potential market can use price, product, distribution, and communication. This study provides market-evidence on how to approach Mexican consumers, regarding marketing mix and its effects on organic foods purchase. The main goal is to contribute to an analysis of causes-effects on consumer perceptions based on the Structural Equations Model (SEM). In order to contrast the hypothesis, data were obtained using a structured questionnaire based on a five-point Likert scale ( $n = 383$ ). We rejected hypothesis 1, the price has a positive and significant effect on organic foods purchase ( $-0.23, p < 0.002$ ).

*Keywords:* organic food purchase, marketing mix, Mexican consumers, structural equations model

## Introduction

The demand for organic foods, defined as those who do not use synthetic chemicals instead they are natural origin that is readily biodegradable, low-impact or can be recycled (e.g., packaging, packaging and labeling) began to expand dramatically in developed countries in the late eighties. In Mexico, development of organic agriculture started in the 1960s, through foreign agents, connecting to different Mexican operators (Schwentenius, Nelson, & Gómez-Cruz, 2010, p. 1). At present, the organic sector has grown dynamically, despite the economic crisis. For example, organic area between 1996 and 2008 reached an annual growth above 3% and employment in the sector increased 26% per year (Gómez-Cruz et al., 2009, p. 12).

Environmental awareness has spread to businesses, institutions, and society in general, but although these efforts, the situation of the environment on a global scale cannot be said to have improved, consumers have not left their traditional brands and only a segment of people are consistent in their interests on the environment

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(Salgado-Beltrán, Subirá-Lobera, & Beltrán-Morales, 2011, p. 4). So, company can sensitize environmentally to its potential market using price, product, distribution, and communication strategies. These factors have been investigated as influences of the purchase decision: price strategies (Bhate & Lawler, 1997; L. K. Mathur, & I. Mathur, 2000; Moon et al., 2002; Tung et al., 2012), product strategies (Martinsons et al., 1997; Chen, 2001; Handfield et al., 2001; Pujari, Wright, & Peattie, 2003; De Caluwe, 2004; Bhaskaran et al., 2006; Jansen & Stevels, 2006; De Ferran & Grunert, 2007), distribution strategies (Handfield et al., 2001) and communication strategies (Carlson, Grove, & Kangun, 1993; Banerjee, Gulas, & Iyer, 1995; Carlson & Grove, 1996; Mohr, Eroglu, & Ellen, 1998; Wagner & Hansen, 2002; Lankard & McLaughlin, 2003) but not altogether in cause-effect analysis.

This study provides market-evidence on how to approach Mexican consumers, regarding marketing mix and its effects on organic foods purchase. This paper is organized as follows. In section two we are briefly revising the elements of the theoretical model. Section three presents a design research of the relationship between marketing mix and organic foods purchase. Section four presents the investigation results and section five summarizes the main conclusions.

### Literature Review

In this section, we briefly define some basic concepts to be used throughout the paper and we present theoretical model (see Figure 1). There have been numerous publications related to organic foods purchase (Montoro-Rios et al., 2006), specifically in the early 90's increases their strength (Schahn & Holzer, 1990; W. E. Stead, J. G. Stead, & Worrell, 1991; Banerjee, Gulas, & Iyer, 1995; Govindnasamy & Italia, 1999) to keep growing since then (De Ferran & Grunert, 2007; Chen, 2007, Bansal, 2008; Grundey & Zaharia, 2008; Hartmann, Apaolaza-Ibáñez, & Forcada-Sainz, 2005; Ojala, 2008; Gifford & Bernard, 2011; Tung et al., 2012).

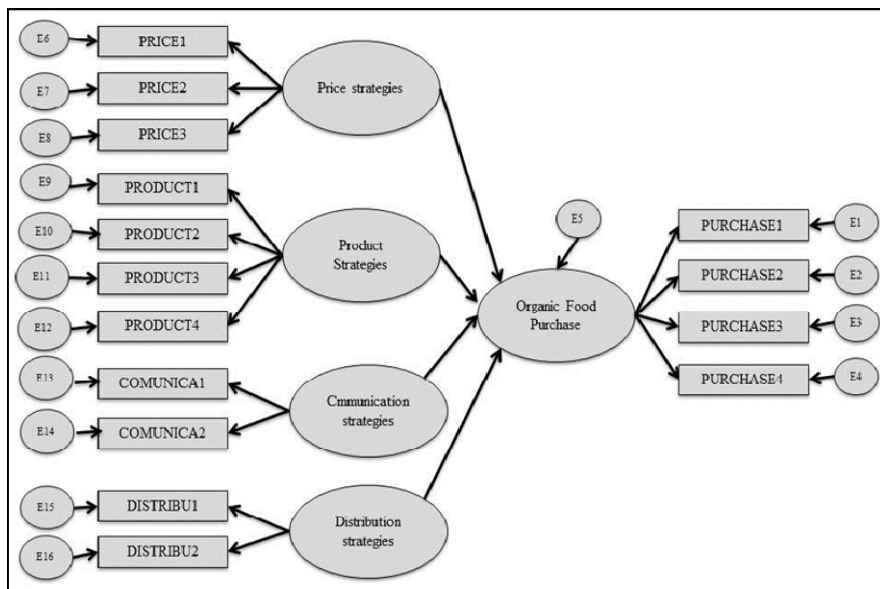


Figure 1. Theoretical model.

### Defining Price

Any product or service has a price, and conceptually, is defined as the expression of value that is assigned

to that product or service in monetary terms. The variable price is one of the most important and elemental variables in an organic foods purchase (Bhate & Lawler, 1997). In Mexico, organic foods price is very varied, between 10% and 200% (economy and premium price strategies) (Salgado-Beltrán, Subirá-Lobera, & Beltrán-Morales, 2009). Information plays an important role in willing to pay (WTP) (Hawken, 1993). Gifford and Bernard (2011) found out that the effects of presenting information prior purchase organic products increased by 50% of participants the WTP. Besides that those who were female, who had higher occupation prestige, who had college education levels, who were aged in their 40's, and who possessed an optimistic opinion toward the necessity of organic farming tend to pay a premium for and buy organic food (Tung et al., 2012, p. 1003). However, the likelihood of paying a premium for organic produce decreases with the number of individuals living in the household (Govindasamy & Italia, 1999).

### **Defining Product**

The basic rules of International Federation of Organic Agriculture Movements (IFOAM) use the terms ecologic products and organic as equivalent. As we can see an organic product is one that performs the same functions of the equivalent foods, but the damage to the environment is less to do over its life cycle (Martinsons et al., 1997; Chen, 2001; Handfield et al., 2001; Pujari, Wright, & Peattie, 2003; De Caluwe, 2004; Bhaskaran et al., 2006; Jansen & Stevels, 2006; De Ferran & Grunert, 2007). So the attributes of freshness and nutrition of ecologic product are highlighted by consumers and the greater propensity to buy organic products is between fresh and well-educated young women (Wier & Mørch, 2001). The certifications are another attributes; they have emerged as one of the main tools of green marketing. It must be credible process if: (1) it assures consumers that organic food is produced according to rules to protect environment; (2) the producers unscrupulous will not use the term organic; and (3) it makes that market more efficient in the marketing channel from producer to consumer (Lohr, 1998).

### **Defining Distribution**

This part would cover the environmental impacts related to packaging, transport, and distribution of good to its user (Azqueta, 2002). Nowadays the limited awareness and unavailability of organic foods and services inhibit the green consumerism (Martinsons et al., 1997; Handfield et al., 2001). Therefore, the distribution systems should be evaluated and designed according to a global result, not to the comparisons between the isolated parts for ecological benefit. As well as the implications for businesses and consumers that could originate, as they may affect the competitiveness as a whole.

### **Defining Communication**

It is important to inform consumers about the benefits of organic foods. If credible and verifiable, it can help consumers feel they are making a difference to buying the product. The environmental ads can be expressed as a relationship between a product or service and the environment, and can promote a green lifestyle (Wagner & Hansen, 2002, p. 20). Further communication and policy modification are needed to reinforce consumers' confidence in organic agriculture/food (Tung et al., 2012, p. 997).

### **Defining Organic Foods Purchase**

The organic foods purchase is understood to choose products based on their production process, content, packaging, recyclability, type of waste generated, and regulations (Calomarde, 2000, p. 15). That is, a purchase based on environmental awareness to reduce sources of waste, promote recycling, and take care about health.

## Methodology

In order to contrast the hypothesis, data were obtained using a structured questionnaire based on a five-point Likert scale. Sampling was performed at sale points of the supermarkets. We used the formula for infinite populations, segmenting the population aged 18 to 65 obtaining a sample size of 383 valid cases, with a sample error  $\pm 5\%$  and confidence level of 95.5%.

The organic food purchase can be observed directly, someone buys the product or not buys it. However, several studies have established marketing constructs on aspects that may explain why we buy a product (Stead et al., 1991; Tung et al., 2012). In this case we developed four constructs from a business management approach (price, product, communication, and distribution) to be related to the organic food purchase construct.

Data analysis was made by Structural Equation Models (SEM) that determined in the same analysis as relation between manifest and latent variables, so relationships between latent variables, and allows it to test a set of proposed relations—a theoretical model—against the manifest relations that is to say, the data (Bentler, 1995; Schumacker & Lomax, 1996; Bazán et al., 2006).

The inner model and the outer model confirm an SEM. First, it specifies the directional relationship between the latent variables, that is to say, equations that express relationships between factors, whose representation is:

$$\eta = B\eta + \Gamma\xi + \zeta$$

where:

- $\eta$ :  $m \times 1$  vector of endogenous latent variables;
- $B$ :  $m \times m$  coefficient matrix of the endogenous variables;
- $\Gamma$ :  $m \times k$  coefficient matrix of the exogenous variables;
- $\xi$ :  $k \times 1$  vector of exogenous latent variables;
- $\zeta$ :  $m \times 1$  vector of random disturbance terms.

Second, it specifies the relationships that keep the factors or latent variables with their respective indicators, as specified relationships between observable and latent variables in a confirmatory factor analysis, that is to say, measurement equations of these factors, whose representation in equation form is:

$$\begin{aligned} Y &= \Lambda_Y \eta + \varepsilon \\ X &= \Lambda_X \xi + \delta \end{aligned}$$

where:

- $\eta$ :  $m \times 1$  vector of endogenous latent variables;
- $\xi$ :  $k \times 1$  vector of exogenous latent variables;
- $\Lambda_X$ :  $q \times k$  coefficient matrix of the exogenous variables;
- $\Lambda_Y$ :  $p \times m$  coefficient matrix of the endogenous variables;
- $\delta$ :  $q \times 1$  measurement error vector for exogenous indicators;
- $\varepsilon$ :  $p \times 1$  measurement error vector for endogenous indicators.

## Hypotheses

Consumers are willing to pay (WTP) a premium price for organic foods but they are not sufficiently involved with environmental issues (Bhate & Lawler, 1997; Moon et al., 2002; Gifford & Bernard, 2011). We may thus propose the following hypotheses:

- H<sub>1</sub>: The price has a positive and significant effect on organic foods purchase.

H<sub>2</sub>: The product has a positive and significant effect on organic foods purchase.

To generate an organic foods purchase is necessary to use a tool of persuasion, communication, if companies do not report the environmental costs of production to consumers, is an effect of incomplete information (Hawken, 1993). Upon receiving this information completely, the propensity to change in attitude could be higher (Wagner & Hansen, 2002, p. 18). Thus, the following hypotheses are formulated:

H<sub>3</sub>: The communication has a positive and significant effect on organic foods purchase.

H<sub>4</sub>: The distribution has a positive and significant effect on organic foods purchase.

### Data Analysis and Finding

Subsequently, we estimated the structural equation model by Robust Maximum Likelihood method. We used the statistical software AMOS version 19.0.

#### Procedure

It evaluates the measurement model through analysis of reliability of the item by an Exploratory (EFA) and Confirmatory Factor Analysis (CFA), in the first, it deparates scales and its items preparing CFA (see Table 1). For example, for the first indicator PURCHASE1 represents a communality of  $\lambda^2 = 0.801$ , indicating that 80% of variance of manifest variable is connected with construct Organic Food Purchase (see Table 1).

Table 1

#### *Individual Item Reliability*

Organic food purchase	Communality $\lambda^2$	Price strategy	Communality $\lambda^2$	Product strategy	Communality $\lambda^2$
Item		Item		Item	
PURCHASE1	0.801	PRICE1	0.885	PRODUCT1	0.786
PURCHASE2	0.833	PRICE2	0.605	PRODUCT2	0.889
PURCHASE3	0.633	PRICE3	0.700	PRODUCT3	0.833
PURCHASE4	0.714			PRODUCT4	0.845
Communication strategy			Distribution strategy		
Item		Item		Item	
COMUNICA1	0.814			DISTRIBU1	0.856
COMUNICA2	0.838			DISTRIBU2	0.818

After internal consistency was obtained by Cronbach's Alpha, which is greater than 0.7 in all cases, this represents a good internal consistency according to the proposed by Nunnally (1967). As well as the convergent validity by average variance extracted (AVE) (see Table 2).

Table 2

#### *Cronbach's Alpha and Convergent Validity*

Construct	Cronbach's alpha ( $\alpha$ )	Average variance extracted (AVE)
Organic food purchase	0.858	0.756
Price strategies	0.910	0.560
Product strategies	0.834	0.704
Communication strategies	0.883	0.800
Distribution strategies	0.914	0.689

Discriminatory validity was also confirmed (see Table 3). In accordance with Fornell and Larcker (1981), a construct is equipped with discriminant validity if the average variance extracted a construct is greater than the squared correlations between this construct and others that make up the model and indicates that a construct is different from other. Indicators on the diagonal (in bold) represent the results of the square root of the AVE between constructs and measures. The indicators below the diagonal are correlations between constructs (Espejel & Fandos, 2012, p. 120). In this sense, in order to fulfill the discriminant validity, indicators on the diagonal must be greater than the indicators under the same (Sanchez & Roldan, 2005).

Table 3

Correlations

Construct	Organic food purchase	Price strategy	Product strategy	Communication strategy	Distribution strategy
Organic food purchase	<b>0.813</b>	-	-	-	-
Price strategies	0.647	<b>0.714</b>	-	-	-
Product strategies	0.521	0.588	<b>0.786</b>	-	-
Communication strategies	0.642	0.393	0.629	<b>0.824</b>	-
Distribution strategies	0.655	0.658	0.567	0.734	<b>0.814</b>

Note. Indicators on the diagonal (in bold) represent the results of the square root of AVE between constructs and measures. Coefficients are significant at a level of 95 percent.

As can be seen, it complies with the parameters described above. Finally we present the final model estimated (see Figure 2). The goodness of model fit is within the recommended limits (Goodness of Fit Index (GFI) = 0.961; Comparative Fit Index (CFI) = 0.85; Normed Fit Index (NFI) = 0.90; Root Mean Square Error of Approximation (RMSEA) = 0.07; Normed  $\chi^2 = 150.86$  (68 degrees of freedom) with a  $p < 0.002$ ).

Of the four constructs related to the organic food purchase, two of them have a significant negative effect (price and communication strategies). Therefore, we rejected hypotheses 1 and 3, “The price has a positive and significant effect on organic foods purchase” (-0.23,  $p < 0.002$ ); “The communication has a positive and significant effect on organic foods purchase” (-0.10,  $p < 0.002$ ).

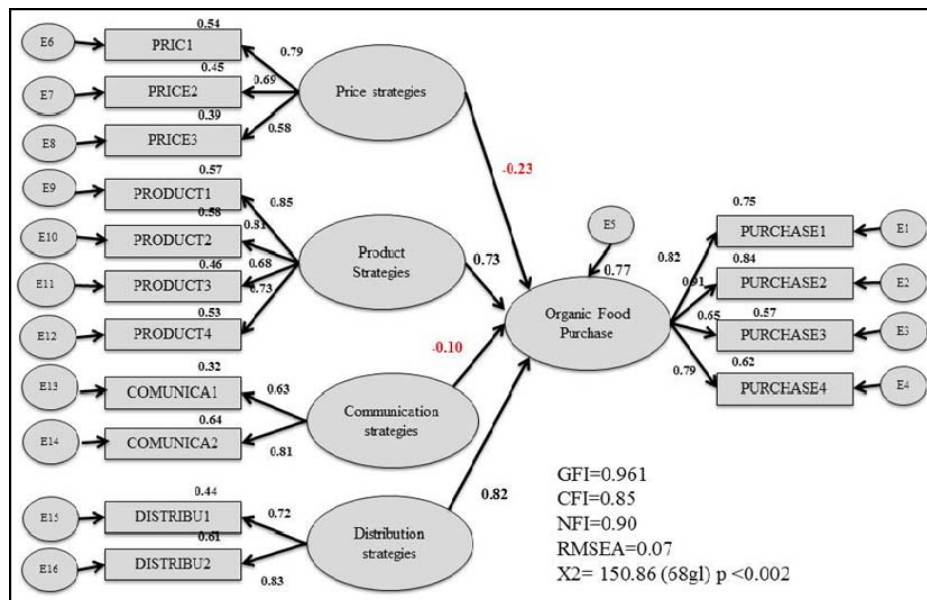


Figure 2. Estimated final structural model.

## Conclusions

This study provides market evidence on how to approach Mexican consumers, regarding marketing mix (price, product, and communication and distribution strategies) and its effects on organic food purchase.

Specifically, the results obtained in this study have shown a significant positive influence on product and distribution strategies towards organic food purchase. Mainly to evaluate product attributes such as health eight out of 10 Mexican consumers have purchased organic food by health similar as the results of the study of Horrigan et al. (2002).

The managerial implication of this study more relevant would focus on the importance for companies in Mexico to recognize that marketing strategy as noted Grundey and Zaharia (2008) are assets which have to invest more effort to accommodate them in the market for increasing organic foods purchase (p. 135). This requires strengthening the consumer perception in environmental communication, in all formats, be creative in expressing the relationship between a product/service and the environmental, presenting a corporate image of environmental responsibility, and promote an ecological lifestyle (Wagner & Hansen, 2002, p. 20).

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