The Evolution of Women Entrepreneurs

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ABSTRACT

The chapter explores the utility of neuroeconomics in decision making and behavior. Scientific knowledge will be advanced in the need for the application of neuroeconomics focused on one of the services of the information and communication technologies (ICT) of companies, e-commerce of exponential artisanal SMEs of women entrepreneurs, by developing a proposal for a business model to increase the possibility of growth of their companies at the national and international levels. The methodology used was deductive, exploratory, descriptive, correlational, and documentary. Neuroeconomics have the potential to explain the phenomena that are considered as a deviation from the prediction or behavioral bias of decision-making models in economic theory. The study up to this point is quantitative using primary and secondary sources for research.

KEYWORDS

Behavioral Economics, Decision Making, E-Commerce, Neuroeconomics

INTRODUCTION

Neuroeconomics is an emerging discipline that combines the findings and modeling tools of neuroscience, psychology and economics to explain the behavior of human choice (Glimcher, 2003).

The aspects in neuroeconomics that propose a new significant episode of change, according to Glimcher and Rustichini (2004) are:

- Integration of behavioral work carried out by economists, psychologists and neuroscientists, for the development of a unified theory of the choice of behavior.
- Technological advances that allow us to look at the brain will eventually replace the simple mathematical ideas of economics with more detailed neuronal descriptions.

Within the framework of the above considerations, SMEs in Mexico constitute 95% of established companies and contribute 23% to Gross Internal Product, but they have a series of problems that cause 75% to close their operations after 2 years in the market (INEGI, 2010), and its chance of success is on average from 25% to 30% below the world average that is 40% (Fernández, 2010). It is appropriate to highlight that 47% directed by the female gender, contributing 37% of GIP, also contribute 70% of GIP and allocate 70% of their income to the community and family (González, 2016). Despite this, Latin America has the highest rate of business failure run by women. In Mexico alone, 2.2 million

formal companies 17.63% are directed by the female gender, in addition, that 50% have a profit of less than $ 50,000 USD compared to 25% of the companies that operate men (Power & Magnoni, 2010).

According to the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2001), it states that the artisanal sector has a predominant role in economic development and the fight against poverty, but they lack a long way to go to achieve its maximum potential in generating employment and income to achieve greater economic growth in developing countries. The artisanal sector has great untapped potential in e-commerce that can generate a greater amount of income and jobs that produce a social and economic impact on entrepreneurs worldwide and especially women (Foote, 2015).

The objective in the research using neuroeconomics, a model proposal focused on understanding consumer decision-making on one of the services of the information and communication technologies of companies focus in electronic commerce of exponential artisanal SMEs of women entrepreneurs will be developed.

BACKGROUND

Statement of the Problem

According to the International Telecommunication Union (2015), internet is used by 43.3% of the world's population, which corresponds to 3,200 million Internet users. Companies use ICT as a new channel for the dissemination of products and/or services, appearing a second group of ICT services formed by the electronic commerce which is a mode of remote purchases through a network of telecommunication's that has increased its potential by adapting people with new technologies. The way in which internet has increased its penetration in the online market has caused changes in the way in which business interacts with consumers, developing e-commerce causing companies to increase the total number of sales and an increase in online retail interactions of consumers (VanderMeer, et al, 2001). The number of digital buyers worldwide is rapidly expanding from 1,32 billion in 2014 to 1,66 billion in 2017 and is expected to increase to 2,14 billion in 2021 (Statista, 2018). What translates into an increase in electronic sales of retailers globally from 2014 in 1.336 billion dollars to 2,290 billion dollars in 2017 and an increase in 4,479 billion dollars is forecast for 2021 (Statistica, 2018). With a participation in retail e-commerce 2016 in the Asia and the Pacific regions with 12.1%, Eastern Europe with 8.3%, North America with 8.1%, Central and Eastern Europe with 3.4% and Latin America with 1.9% (Statista, 2018).

The increase in online shopping has transformed the internet into a powerful force, being a tool that has a great influence on consumer behavior (McGaughey & Mason, 1998), modified the way the individual acquires a product by the large amount of information that it provides, making it easier for the potential client to evaluate the products and services of different suppliers, which modifies the traditional buying behavior (Koufaris, 2003). Because it allows the purchase through crossed channels, this together with the development of technological characteristics such as the search for information, the evaluation of the different alternatives offered and the realization of the purchase (Constantinides, 2004).

In order to increase the number of consumers and their conversion rate, it is necessary to understand online consumer behavior to improve their shopping experience and satisfaction (Zhang, et al, 2011). Consumer behavior in the traditional market is different from its purchasing behavior in electronic commerce, with the information of this limited and poorly studied (Denis, et al, 2009) in terms of making the purchase decision (Brynjolfsson, et al, 2010) being the void of literature that focuses on this research. Increasing theoretical knowledge in the decision-making process in this area is crucial, and this can be explored by developing a new behavior model (Rickwood & White, 2009).

Electronic commerce offers great potential for the expansion of companes to international markets by intensifying the sales power by creating a new distribution channel to reach new customers,

develop their own marketing strategies and produce new business opportunities (Colvee 2013). In addition, e-commerce is a powerful tool that allows SMEs to move faster in the development phases by positioning the company in the world market (Hussain, 2013). The proper management of electronic commerce will allow artisanal SMEs to increase their competitiveness (Aragon & Rubio, 2005) in a sector where, despite their significant participation and their annual growth rate of over 4%, they have not been able to increase it (FONART, 2009).

One of the big problems for the integration of SMEs in e-commerce is to achieve efficiency in electronic platforms due to ignorance of customer behavior in decision making (Sacristan, 2013).

In the context of the above considerations, SMEs in Mexico constitute 95% of established companies and contribute 23% to GIP, but they have a series of problems that cause 75% to close their operations after 2 years in the market (INEGI, 2009), and its chance of success is on average from 25% to 30% below the world average which is 40% (Fernández, 2010). At the international level, the percentage of survival and the half-life of SMEs is similar in countries such as Spain, where more than 70% does not exceed 4 years of life and 80% of SMEs fail within the first 5 years, in the United States of America 30% of SMEs do not reach the third year and have an average life of 6 years and in the underdeveloped countries only the first 3 years of life survive between 50% and 75%.

Artisanal SMEs are a great engine of the economy where 47% are directed by the female gender, contributing 37% of GIP, they also allocate 70% of their income to the community and the family unlike men who contribute only between 30% and 40% (González, 2016). Despite this, Latin America has the highest rate of business failures managed by women. In Mexico, only 2,2 million formal companies 17.63% are directed by the female gender, in addition, that 50% have a profit of less than $ 50,000 USD against 25% of the companies that operate men (Power & Magnoni, 2010) .

The artisanal sector is a global creative economy, which represents what can be exemplified as a country that would symbolize the fourth largest economy and labor force in the world according to the Inter-American Development Bank (IDB). It is a global industry that generates revenues of $ 34 billion per year, and only developing countries provide 64% of global exports. According to the United Nations Organization for Education, Science and Culture (UNESCO, 2001), it states that the artisanal sector has a predominant role in economic development and in the fight against poverty. In addition, preferences in market consumption are changing because they care about the origin of the product, which they produce and how it was manufactured, changing their preferences for mass-produced products at hand, the only one of its kind and independent design (INDEGO Africa, 2016). They have a long way to go to achieve their full potential in employment and income generation to achieve greater economic growth in developing countries.

Justification

The artisanal sector has great untapped potential in electronic commerce that can generate a greater amount of income and jobs that produce a social and economic impact on entrepreneurs around the world and especially women (Foote, 2015). This can be achieved through the use of neuroeconomics, which is an emerging discipline that combines the findings and tools of modeling neuroscience, psychology and economics to explain the behavior of human choice; neuroscience provides tools to answer questions of economic models that cannot be explained; and economics contributes to neuroscience decision models to examine the mechanisms of communication between brain circuits (Glimcher, 2003).

Scientific knowledge will be advanced in the need for the application of neuroeconomics in the e-commerce of exponential artisanal SMEs of women entrepreneurs, having the potential to explain the phenomena that are considered as deviation from the prediction or behavioral bias of the models of decision making to achieve the increase of its market on a larger scale and its growth regardless of its size and location.

The study will be designed with the theme of women entrepreneurs of exponential artisanal SMEs certified internationally by the NGO "Women Owned". First, it will conduct a survey of young

millennials that are 80% of the people who buy in e-commerce. The results will allow to improve electronic commerce through neuroeconomics techniques to increase the possibility of growing their businesses nationally and internationally.

The variables of the research were formed by the review of literature based on PhD thesis and an article focused on neuro-correlation in decision-making, the online consumer decision-making process, the intention to purchase the consumer in the online purchasing environment, neuroeconomic studies in decision-making and the role of emotions in decision-making through a cognitive approach to neuroeconomics.

MAIN FOCUS OF THE CHAPTER

LITERATURE REVIEW

1.1. Artisanal SMEs in the Economic Context of The Countries

According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), artisanal products have characteristics that define them as their usefulness, esthetic a, artistic, creative, link to culture, decoration, functionality, traditional, symbolic and significantly social (Etienne-Nugue, 2009).

1.1.1. Artisanal SMEs in Developing Countries

After agriculture, the artisanal sector is the second employer in developing countries, mostly made up of women who perform traditional handicrafts to obtain economic resources. These countries have a competitive advantage because of their cultural traditions, artisanal skills and specialized raw materials (Foote, 2015).

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1.1.2. Handcrafts SMEs in Mexico

In Mexico, handicrafts are the main economic-cultural item in terms of production, the generation of renumbered work with 43% dedicated to the manufacture of handicrafts, and a total cultural expenditure of 37.7%, is an industry which generates 122 million pesos, which is represented in terms of a GIP 1.3 higher than that of agriculture (INEGI, 2012).

In the current economic context caused by the economic crisis and unemployment, the relevance of artisanal SMEs that produce garments, household goods and objects with various uses has increased (Sandoval & Guerra, 2010). These productions are integrated by the various fields of human, cultural, social, educational and economic development, the latter being the development of a business (Hernández-Girón, et al, 2007).

Table 1. Matrix of Operationalization of the Variables

Theme	General objective	General research question	Specific objectives	Research questions	Variables	Hypothesis	Methodological analysis
The evolution of women entrepreneur	Develop a proposal for a theoretical model that evaluated the behavior in the decision making of the consumer in e-commerce of exponential Mexican artisanal SMEs directed by women entrepreneurs	How can we develop a theoretical model that evaluated the behavior in the decision making of the consumer in the e -Commerce of exponential Mexican artisanal SMEs run by women entrepreneurs?	Examine the factors that expose the relationship between decision making and consumer behavior in e-commerce	What are the factors that expose the relationship between decision making and consumer behavior in e-commerce?	Characteristics of the website	The characteristics of the website have a positive relationship with the intention to purchase	Descriptive and inferential statistics
			Expose the economic context of artisanal SMEs and the challenges of gender equity in developing countries	How is the economic context of artisanal SMEs and the challenges of gender equity in developing countries?	Consumer Consumer	characteristicscharacteristics have a positive relationship with the intention to purchase	Descriptive and inferential statistics
			Analyze from a quantitative perspective the point of view of millennial consumer, their behavior for decision-making in the e-commerce of exponential Mexican artisanal SMEs directed by enterprising women	How is a millennial consumer point of view from a quantitative perspective, their behavior for decision making in the e-commerce of exponential Mexican artisanal SMEs directed by enterprising women?	Characteristics of the brand	The characteristics of the brand have a positive relationship with the intention to purchase	Descriptive and inferential statistics
				Purchase intention			Statistics inferential

Source: Own elaboration

1.2. Challenges of Gender Equity in The Business World

Companies that have greater gender equity increase their results causing higher levels of growth and performance; this paradigm shift according to the report on the Principles of Empowerment of Women in Businesses published by the UN Women (2016) are:

- Women are key economic agents that produce prosperity, employment, innovation and are an engine of development. The greater the number of women belonging to the Economically Active Population (EAP) the economy increases because it leads to greater social mobility with benefit in the family, community and society.
- There is a positive correlation between business activity and GIP growth. Productivity in Latin America and the Caribbean could increase by 25% if female entrepreneurship is supported.
- The use of female talent would produce benefits for companies such as creativity, efficiency and business efficiency, and improvement of business management.
- Companies with a greater presence of women tend to develop corporate social responsibility and diversity schemes in philanthropic work, which leads to an improvement in the brand image, customer loyalty, recruitment of professional talent, and increased productivity.

In countries where there is a greater number of women entrepreneurs there is greater economic growth, in contrast to countries where it is restricted there is a stagnant economy, there is also an

impact on the social environment (UNIDO, 2011). In spite of this, there are currently twice as much male as female entrepreneurship (Reynolds, et al, 2002).

The female gender decides to undertake to obtain their own income, develop an innovative idea, move up in their work careers, flexibility between work, family (Heller, 2010) and by necessity this being a factor that has a direct relationship between the level of development and the business development rate generating a correlation between the developing countries that have a higher rate as opposed to the more developed countries have a lower rate showing a concordance between the levels of low economic remuneration and the creation of a company developed by women (ECLAC, 2004).

1.2.1. Entrepreneurs From Developing Countries

Research in emerging countries by the National Foundation for Women Business Owners (NFWBO) found that women who own business have common characteristics regardless of the business, its establishment, administration, operation, and goals differs from that of the male gender since they are aimed at owning small businesses, making decisions based on diverse criteria, higher priority to quality of life instead of increasing business income, investments controlled by the lack of support for part of the institutions to obtain credit, limited capital, and mainly seek to reconcile the different aspects of their life; in contrast to their counterparts that focus on financial and economic aspects oriented towards profitability. They have similar problems for the growth of their companies, having common needs to achieve this as access to information, training, technological assistance and access to national and international markets.

The contribution of women in the economy of Latin America and the Caribbean had an increase of 35% in 1980 to 53% in 2007 promoting economic growth, financial security in the family, increase in consumption capacity and reduction in poverty of the region (Pages & Piras, 2010).

Despite the increase in female labor participation, this continues to have several problems, according to the World Economic Forum (WEF) according to the report on the Global Gender Gap 2016 that gender equality in economic activity and Labor will be possible in 170 years (Hernández, 2016). Similarly, the 2009 report indicates that the gender gaps with the greatest degree of relevance in Latin America and the Caribbean are in the sub-indices of economic and political participation.

The gender gap in the business sector increases in developing countries, these being the majority of the countries in the Latin American and Caribbean region, where only 22% of women work independently (Hellen, 2010).

SMEs that are led by 51% by women entrepreneurs generate an important contribution to the economy representing 31% to 38%, which constitutes 8 to 10 million, in formal SMEs in developing countries. Female entrepreneurship is composed of micro-sized SMEs 32% to 39%, small size 30% to 36%, medium-sized 17% to 21% (Shukla, 2011).

Despite these figures, according to a study by McKinsey of the IFC (2011), women-led businesses are restricted in their growth path with a reduction in their per capita income growth rate by 0.1 - 0.3 percentage points.

1.2.2. Entrepreneurship in Mexico

Mexico where the economic participation of women is only 43% compared to 78% of men. Despite constituting 51.2% of people enrolled in postgraduates, only 29% have leadership positions in companies, 23% in intermediate positions and 5% in board of directors. They have a salary gap with respect to the same work performed by the male gender from 15% to 20% and in leadership positions up to 40% (UN Women, 2016).

According to the 2016 State Competitiveness Index composed of a statewide survey of 32,000 people, a sum was added to the weights of each indicator at the state level, defined as the normalized values from 2001 to 2014 multiplied by the weight of each indicator. The indicator that had an increase of 160 in its weight and has remained constant until 2014 was the index of labor informality between women and men. The indicator of economically active women only increased in their weight 60

staying relatively equal until 2014. The wage equity indicator had an increase of 30 in their weight and has only increased 30 until 2014.

Also, according to the World Economic Report Forum (2017) worldwide it can be seen that there was a stagnation in the progress of the global index of gender equity, but in contrast in Mexico this had a decrease

THEORETICAL FRAMEWORK

The success of a company in e-commerce depends on various factors that are classified in 3 main categories:

1. Characteristics of the website
2. Characteristics of the consumer
3. Characteristics of the brand

2.1. Characteristics of the Website

They are integrated by the attributes of the website that have an influence on the consumer's intention to purchase. These include:

Aesthetic appearance

In the online shopping environment, visual elements can be used through the use of images, videos and other interactive features (Kim, et al, 2005). Being considered aesthetic appearance as a positive sensory experience that being the element that has a greater influence on the emotional experience of the consumer (Nasermoadeli, et al, 2013).

The aesthetic appeal on websites directly influences the internal affective state causing a sense of connection through images (Wang, et al, 2011).

Experience flow

It is defined by Kim, Suh & Lee (2013) as consumer behavior in the interaction of man and computer. That is, your attention is totally focused on the activity you are doing online. This state of immersion is integrated by emotional and cognitive factors, and its interrelation with the flow components necessary to have skills and controls to interact with the website (Rose, et al, 2012).

2.2. Consumer Characteristics

In addition to the computer factors, the specific characteristics of the consumer also influence the decision of online purchases through the attitude towards the website (Hausman & Siekpe, 2009). Cowart & Goldsmith (2007) mention that the intention to participate in purchases through the internet is related to the styles in the decision making of consumers, where the objectives of the consumer are the drivers that allow him to experience the pleasure of acquired assets (Balaji, et al, 2007).

One of the factors that affect consumer decision-making is gender, this was demonstrated in a study conducted by Hui & Wan (2007) who evaluated the purchase of clothes online, discovering that in the female gender there is a certain degree of uncertainty due to the lack of satisfaction caused by the experience of buying the product that was generated physically by trying on clothes, generating a lower degree of cognitive and affective attitudes in the intention to buy online unlike men. For the male gender where interactivity has a positive impact, a friendly interface, and sufficient information in web design, which leads to a faster purchase decision (Ganguly, et al, 2010).

Likewise, the consumer culture has a vital role in decision-making in e-commerce, for the mitigation of its effects the design of the website must allow simple navigation, greater interactivity

and have the necessary information to facilitate the purchase decision (Cowart & Goldsmith, 2007). For example, trust has a great value for the consumer in the West (Chen, et al, 2012).

Behavior

In consumer behavior, the emotional state related to enjoyment has a relationship similar to pleasure and excitement (Penz & Hogg, 2011). Enjoying purchases has an important impact on the flow status of buyers, generating an intention to revisit the websites (Kim, et al, 2013), exposing a direct relationship between flow and affection (Novak, et al, 2000) .

When a decision is made, the emotional and cognitive state of an individual guides him to the evaluation of the perceived risks and benefits of the decision that leads him to a final decision, later said process works as a feedback mechanism that will affect future decisions (Gutnik, et al, 2006).

Both emotional systems for decision making are integrated by:

- The analytical system is defined by Epstein (1994) as the involvement of conscious cognitive process that uses various algorithms and normative rules to generate logical behaviors that are oriented to reason.
- The experiential system being conceptualized by Slovic, Finucane, Peters & MacGregor (2004) as the use of past experiences, associations related to emotion when making decisions, taking into account to a greater extent the unconscious process than the conscious one.

Emotions have an influence on decision making, it also has indirect effects on the behavior of the individual through the implicit configuration of cognitive representations and this has positive or negative effects depending on the type of emotion such as anger, fear, happiness or the pleasure (Forgas, 2001).

2.3. Characteristics of the Brand

The intention to make an online purchase depends on the characteristics of the brand and the type of goods offered on the website, those that present a greater ease for sale online are the search products compared to the goods of experience (Moon, et al, 2008). The characteristics also influence the presentation in the former, which can lead to positive consumer participation in online purchases (Won Jeong, et al, 2009). In addition, offering sensory information generates pleasure and a positive perspective on consumers (Lian & Lin, 2008).

Products and attributes of the company

The purchase decision of consumers is faster when they have enough product and company information (Davidson, et al, 2000), showing a directly proportional relationship between the attitude of the buying behavior with the level of information of the good (Chiou, 2000).

In the purchase intention when a consumer acquires products via online, the predictive factor that has a greater relevance is the search for information, in addition to having an impact on the perceived risk of behavior, increasing their tendency to buy the product (Nowlis & McCabe, 2000; Phau & Poon, 2000).

Perceived Utility

Perceived utility is defined as the degree to which a person believes that using a particular system will accelerate their personal growth and improve performance in their work (Davis, 1989).

It is one of the factors with a greater degree of relevance in behavior when a decision is made and is related to convenience and ease of use (Davis, Bagozzi & Warshaw, 1989).

METHODOLOGY

Based on the needs of the study based on the information obtained from research files, the methodology used in the work was as follows:

- Documentary research. The research is documentary, depending on what was proposed by Pasteur (2013) uses documents, collects information, analyzes and presents results. It was used in the study in order to collect the documents that may be essential to understand and contextualize the study.
- Correlational Research. Allows to relate the variables of the problem in a particular context (Baptista, et al, 2010). One of its main characteristics is that it allows examining the relationship between the variables looking for their association but it is not necessary to find their causal relationships (Bernal, 2010).
- Quantitative Approach It is defined by Tamayo (2010) as the measurement of the variables and their relationship through a verification to test the hypothesis and validate their theories, offering the possibility of having a broader approach to women in developing countries.

Sample: Being that the study was carried out to a population with age specifications, in this case millennials, which are women and men born between 1989 to 2000, with an age range between 18 to 25 years at the time of data collection with a minimum level of undergraduate. They were chosen because in Mexico they represent the largest segment with a third of the population and more educated in recent decades, they also represent 45% of the working-age population in Mexico according to the National Survey of Occupation and Employment (ENOE). But despite the fact that millennials make 80% of online purchases, in Mexico it is just beginning compared to countries such as England, France and the United States of America, that is, due to the lack of understanding of e-commerce as a global solution to help the customer and the buyer discover the product and understand its differentiation (Notimex, 2016).

The instrument of the present investigation is a questionnaire, it is integrated by the variable characteristics of the web page, which was carried out through the information adapted from the thesis investigations of: Anen (2007), Karimi (2003) and Cheung (2015).

The second variable characteristics of the consumer, was generated with the information adapted from the thesis research of: Anen (2007), Karimi (2003), Gutnik, Forogh, Yoskowitz & Patel (2005), and Rohan (2013).

The third variable characteristics of the brand, was carried out with the information adapted from the thesis research of: Anen (2007), Karimi (2003) and Leelayouthayotin (2004). (See figure 2)

ANALYSIS OF RESEARCH AND RESULTS

The reliability of the design of the data collection instrument was verified through a reliability analysis in the SPSS software calculating the Cronbach Alpha where the items measure the same construct and are highly correlated (Castañeda, at el, 2010). Of the elements analyzed, a reliability of 83.0% was obtained, which is considered high according to the classification of Anastasi & Urbina (1998) (See Annex 1).

In addition, the Kaiser-Meyer-Olkin (KMO) test was performed for the Analysis of the components with Varimax rotation that between closer to 1 has the value obtained implies that the relationship between the variables is high (Benavente, et al, 2011). The value of KMO is 0.807 which is considered remarkable. Likewise, the Bartlett sphericity test was carried out, where, if it is less than 0.05, it is accepted as a null hypothesis so that the factor analysis can be applied (ibid, 2011). Its significance is 0.000, so factor analysis can be applied. (See annex 2)

For the evaluation of the applicability of the questionnaire, it begins with the factor analysis with varimax rotation defined as the simplicity of a factor by the variance of the squares of its factor

Figure 1. Proposed Model
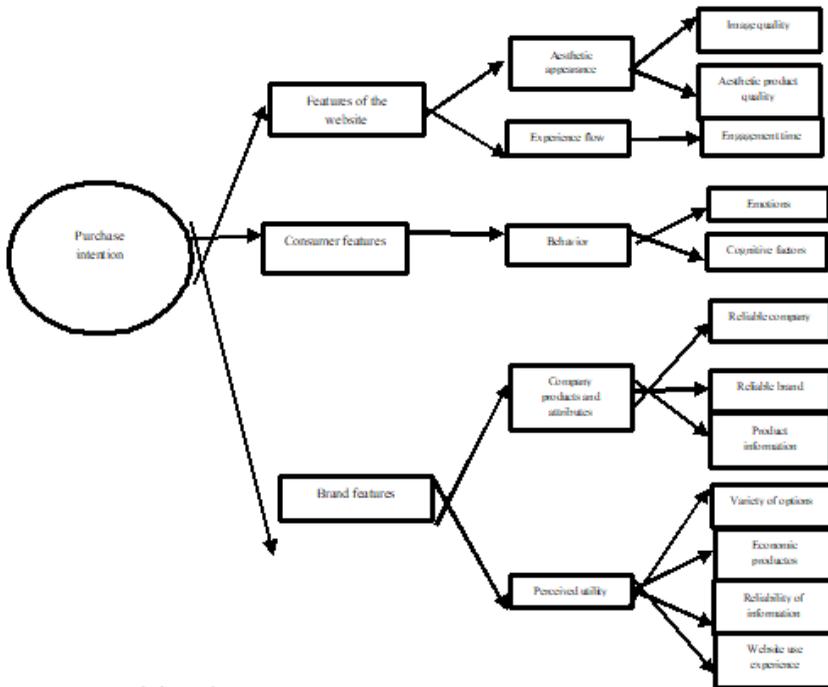
Source: Own elaboration

loads in the observable variables (Pérez, et al, 2004), this is for the interpretation of the factors in a faster way, because examining the characteristics of the variables of a group associated with a certain factor allows to find the common features that allow the identification of the factor and provide the denomination that respond to common features (Pérez, et al, 2004)

In addition, the ANOVA test was performed, this type of analysis will allow measuring the level of cause and effect that exists between an independent and a dependent variable, thus explaining which hypotheses are tested and which are rejected (Hernández, Fernández and Baptista, 2010). The F or F-test statistic is obtained from the estimation of the variation of the means between the groups of the independent variables and their division by the estimation of the variation of the means within the groups, if the means between the groups have a great variation and the average within a group varies little, that is, there is a heterogeneity between the groups and an internal similarity, the value of F will be high and the variables will be related; in terms of the ANOVA analysis of a factor that has a higher F will indicate a greater difference and therefore there is a stronger relationship between the variables, also the more the average of the dependent variable differs between the groups of the variables The higher the independent value will be the value of F. Following the 95% confidence level when its significance is less than 0.05 the two variables will be related (Cárdenas, 2015).

Subsequently, for the evaluation of the model, linear regression was used, being defined by Pérez (2011) as the explanatory determination of the functional that relates the variables. R^2 is an index that describes whether the data fit well in a straight line; Pearson r indicates the strength and direction of the relationship between two variables, varies between -1 (a perfectly negative relationship between the two variables) and 1 (a perfectly positive relationship between the two variables), a negative relationship, indicates that as that one variable increases and the other decreases. Its descriptive interpretation according to Gilford (1954) adapted according to Mejía (2009): (See table 2)

Table 2. Pearson's descriptive interpretation r

Value	Range	Descriptive interpretation of the correlation.
r	<20	Slightly insignificant
r	0.21 - 0.40	Low. Defined but low
r	0.41 - 0.70	Moderate, substantial
r	0.71 - 0.90	Marked, high
r	0.90 - 1.00	Very high, very significant

Source: Guilford (1954). Adaptation Mejía (2009)

In addition, the Beta coefficient (standardized) was analyzed, which indicates the explanatory hierarchy of the independent variables based on the explanatory weight in relation to the dependent variable. Having a significance of less than 0.05, it is assumed that 95% confidence of the independent variables contribute significantly to the model. The Beta coefficient (not standardized) indicates for each unit that the independent variable increases as the dependent variable increases (Santana, sf).

Finally, to analyze the relationship between the different variables for testing the hypothesis, a non-parametric analysis was carried out using the Kruskal Wallis test. It was used to test the hypotheses when exposing if there is a difference between the medians, when the value of the probability associated with the statistic is above the level of significance of 5% or 0.05 the null hypothesis is accepted when the theoretical value exceeds statistical. (Reidl, at el, 2010). (See table 3, 4 and 5)

FUTURE RESEARCH DIRECTIONS

In this article the use of any neuroscience technique was not involved, which cannot fully illustrate this particular aspect of the model regarding our current study.

Within the limitations of the thesis are that it is not a parametric statistic, because to perform a parametric analysis it must start from the following assumptions:

1. The population distribution of the dependent variable is normal: the universe has a normal distribution.
2. The level of measurement of the dependent variable is interval or ratio.
3. When two or more populations are studied, they have a homogeneous variance: the populations in question have a similar dispersion in their distributions.

Parametric statistics need to meet four requirements to apply:

1. The dependent variable must be distributed normally or very similar.
2. The homogeneity of the variances when comparing groups should have the same dispersion with respect to the average of the dependent variable.
3. Assignment and random selection of groups (completely random sampling)
4. The dependent variable is measured at the interval or ratio level (Reidl, et al, 2010).

CONCLUSION

Neuroeconomics can provide the enrichment of specific economic models with the option of neuro-psychological penetration.

Table 3. Independent variable analysis

Dimension	Confidence interval 95%	Cronbach's alpha	KMO	Barlett test
Web page characteristics	The intervals are represented by normal distribution. The confidence interval for the averages are quite robust and not very sensitive to the violation of the assumption	0.704	0.765	0.000
Consumer characteristics	The intervals are represented by normal distribution. The confidence interval for the averages are quite robust and not very sensitive to the violation of the assumption	0.828	0.781	0.000
Brand characteristics	The intervals are represented by normal distribution. The confidence interval for the averages are quite robust and not very sensitive to the violation of the assumption	0.753	0.803	0.000

Source: Own elaboration

Table 4. Simple

regression Simple regression			
	1	**2**	**3**
Tests	**Website**	**features Consumer**	**characteristics Brand characteristics**
Value P e 95% Confidence	Interval 95.0% confidence intervals for the average: 0.0 +/- 0.198422 [-0.198422.0.198422		
Constant	- 1.10	- 0.01	- 8.39
B	0.599 ***	0.351 ***	0.750 ***
ANOVA (F)	17,526 ***	16,082 ***	20,842 ***
R2	71.1%	94%	85.9%
Pearson r	0.843	0.969	0.927

Source: Own elaboration

Table 5. Multiple

regression Multiple regression			
	1	**2**	**3**
Tests	**Website**	**features Consumer**	**characteristicsbrand**
Constant	-1.51		
B	0.221 ***	0.154 ***	0.887 ***
ANOVA (F)	69.547 ***		
R2	77.1%		
Pearson r	0.878		
Kruskal Wallis	89.2%	90.4%	90.3%

Source: Own elaboration

It is necessary to implement in the e-commerce consumers of the exponential SMEs of the artisanal industry the knowledge of the discipline of neuroeconomics because the brain activity represents ¾ of the decisions taken, likewise each process involves the neurons that influence a particular behavior, In addition, the network of neural connections in the brain changes as the person acquires knowledge and experience. Therefore, neuroeconomics plays an important role in achieving the objective of better operational efficiency to accelerate market reactions and increase consumer expectations.

DISCUSSION

The variable that has a greater explanatory weight in the model is: characteristics of the brand. So it shows the importance that the brand has in the mind of the consumer, to acquire a good.

The brand is the most important intangible of the company, because it generates an identity producing trust and a rapprochement, differentiates a company from its competitors because it highlights its own attributes, captivates the audience by creating an emotional bond, motivating the behavior of the potential customer in decision making (Jaén, 2019).

The way to sell the unconscious a greater amount of a good than the consenting is determined by the value that the human mind gives to the mark seducing it by considering it as a sign of status, rebellion, etc.; adapting not only to the market segment but also to the consumer's life cycle and the characteristics that define it (Klaric, 2014).

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ANNEXES

Annex 1

Cuadro 1: Cronbach's alpha

Cronbach's alpha	No. of elements
.870	55

Source: Own elaboration with SPSS

Annex 2

Cuadro 2: Cronbach's alpha

Kaiser-Meyer-Olkin measure of adequacy of Sampling		.807
Bartlett's sphericity test	Aprox. Chi-cuadrado	6885.926
	gl	1485
	Sig.	.000

Source: Own elaboration with SPSS

Annex 3. Questionnaire

	Alternatives				
	TA	**DA**	**NA / ND**	**ED**	**TD**
Dimension: Website characteristics					
Sub-dimension: Aesthetic appearance					
1.- Is the image of the product shown on the website clear?					
2.- Do I think that artisan products are visually attractive?					
3.- Do I think that artisan products are aesthetically striking?					
4.- Do artisan products attract my visual senses?					
5. Just seeing the products do I feel pleased?					
Sub-dimension: Flow of experience					
6.- Does the time I spend looking at artisan products pass me quickly?					
7.- Do I block external distractors when I am looking at artisan products?					
8.- Am I absorbed in seeing artisan products?					
Dimension: Consumer characteristics					
Sub-dimension: Behavior					
Rate your emotions according to how they make you feel when you see artisan products					
9.- Excited					
10.- Happy					
11.- Pleased					
12.- Satisfied					
13.- Happy					
14.- Relaxed					
15.- Bored					
16.- depressed					
17.- Annoying					
Rate your emotions according to the way they make you feel when you see artisan products					
18.- Inspired					
19.- Stimulated					
20.- Creative					
21.- Excited					
22.- Calm					
23.- How did your feelings affect your ability to find what you needed?					
Rate the alternatives that formed your belief about artisan products					
24.- Past experiences					
25.- Knowledge of the artisan product					
26.- Reputation of the artisan product					
27- Information obtained from family, friends or someone close to you					
28.- Information received from the internet, advertisements, blogs, etc.					
How important are the following characteristics that you assume when you buy artisan products					
29.- Rarity (not everyone has one)					

	Alternatives				
	TA	DA	NA / ND	ED	TD
30.- Quality					
31.- Price					
32.- Aesthetics (visually attractive)					
33.- Heritage behind the brand (history)					
34.- Status					
Rate the alternatives you perceive when you buy artisan products					
35.- Buying artisan products can help improve your own image					
36.- I buy handmade products to show other people that I am different					
37.- I like to show my personal uniqueness by buying artisan products					
38.- As a person, I like products that are rare and are not owned by a large number of people, that's why I prefer handmade products					
39.- I buy artisan products because I simply like their style					
40.- I will continue to buy artisan products in the future					
Dimension: Characteristics of the brand					
Sub-dimension: Products and attributes of the company					
41.- Is the brand name reliable?					
42.- Is there enough information available on the website to be able to judge the quality of the product?					
43.- Is it a popular brand name?					
44.- Is it a product that is only available for sale on the internet?					
45.- Is the product worth buying?					
46.- Is the product information difficult to find?					
Sub-dimension: Perceived utility					
47.- Is there a wide variety of artisan products to choose from?					
48.- Does the website provide a large amount of information?					
49.- Is the information displayed more reliable than that presented by a seller?					
50.- Are the prices of artisan products on the website lower than in conventional stores?					
51.- Do you offer a lot of discounts?					
52.- Is the company's website clear and easy to understand?					
Dimension: Purchasing intention					
53.- Would you consider buying the handmade product that I have observed on the website?					
54.- Is it likely that I will buy the handmade product that I have observed on the website?					
55.- Do I intend to buy the handmade product that I have observed on the website?					

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