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# DEVELOPMENT AND INNOVATION OF UTILITY HANDCRAFT: HUMAN CAPITAL BASED APPROACH

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## ABSTRACT:

Currently, in Tonalá Jalisco, innovative and traditional artisanal pieces are produced, but what substantial part of the business is what makes the innovative thinking of the business possible?, the objective of this study is to analyze the relationship between innovation and human capital, the relationship of human capital with respect to artisanal innovation was analyzed, it was obtained through the chi-square technique that if there is a positive dependence on human capital and innovation.

*Keywords: Competitive Advantage, Craft, Human capital and Innovation*

## 1. INTRODUCTION:

The lack of innovative designs, lack of use of new technology, scarce access to information and communication technologies, adding a lack of knowledge of the market, are problems faced by artisan economic units, preventing the development of products with innovative characteristics that could satisfy the needs of the consumer, there are more problems that originate from the lack of business training, highlighting that most artisanal businesses are started spontaneously and by tradition, companies that are started by grandparents, are passed from generation to generation (Pérez, 2015).



Fig.1: Sale of cantaritos of canelo clay in Rosario Tonalá Jalisco

When you go through Tonalá, Jalisco, you can see colorful crafts that are distinguished by their beautiful colors, styles and cultural belonging to the region, unfortunately there are no unique designs, it can be observed that some artisans sell novel pieces, but if you continue visiting Several establishments can be found with very similar pieces.

### 1) Difference between craft and craft

The present study takes handicrafts as an object of investigation, therefore it is essential to distinguish between a handicraft and a handicraft, according to the National Fund for the Promotion of Handicrafts, handicrafts are an object or product of community cultural identity, made by manual processes continuous, aided by rudimentary implements and some of mechanical function that lighten certain tasks, and a craft is that object or product that is the result of a manual or semi-industrialized transformation process, from a processed or pre-manufactured raw material (National Fund for the Promotion of Crafts, 2016).



Fig.2: Examples of crafts

### 2) Industry

#### a) Size of artisan companies

In order to classify the companies into micro, small or medium, the criterion of the number of employees is used, in table 1, the number of employees can be differentiated between the different economic units of the commercial sector.

Table1- Stratification of companies

Size	Sector	
	Industry	Commerce
Micro	from 0 to 10	from 0 to 10
Little	from 11 to 50	from 11 to 30
Median	from 51 to 250	from 31 to 100

Source: Official Gazette of the Federation (2002)

It is time to classify the artisan economic Units, the DOF stratification criterion is used, published on December 30, 2002, it is denoted that most of the artisan companies are classified as micro-enterprises. Based on this criterion, approximately 97.33% of the industrial artisanal economic units are classified as microenterprises, while 96.48% of the commercial artisanal economic units are microenterprises.

### 3) Craft businesses in Tonalá

Peoples as well as people have characteristics that allow them to distinguish each other from others. Tonalá has been privileged due to the nature of the quality of its land, and due to the craftsmanship qualities due to the unique stamp that its authors print on each utilitarian or artistic piece. Pottery talent is a heritage that has been passed from generation to generation for hundreds of years, clay art is not only manual skill, but an expression of the talent with which each potter was born (Tonalá City Council, 2015).

Traditional techniques continue today in the manufacture of ceramic products, highlighting the technique of burnished clay, flag clay, cinnamon clay, Betus clay, petatillo clay, sgraffito black clay, natural clay, polychrome clay, high temperature ceramic and contemporary clay.



Fig.3: Plaster handicrafts workshop in Tonalá Jalisco

### 5) Competitive Advantage

The valuation of the company is important, and it should not be based exclusively on its financial and economic indicators, since such valuation must fall especially on its intellectual capital (Sánchez, Melián, Hormiga 2007). The correct use of competitive advantages will make the economic unit in question stand out among the existing ones in the same sector.



Fig.4: Acknowledgments to Tonalteca artisan

The intangible resources of economic units are the main source of sustainable competitive advantage, specifically the intellectual capital that generates value and increases the performance of companies (Bueno, Salmador and Merino, 2008), Human capital is the intangible resource that cannot be separated by Excellence, since it cannot be separated from its bearer, within the separable intangible resources, the following will stand out: organizational capital, technological capital and reputation (Fernández Sánchez, Montes Peón, and Vázquez Ordás, 1997).



Fig.5: Tonalteca craftsman in a casting process

## 2. LITERATURE REVIEW:

### 1) Human Capital

Human capital is defined as a generator of value and a source of innovation for the economic unit, it is from where the ideas of the organization come from (Viedma Martí, 2001), within human capital three components can be differentiated within this dimension: competences, attitude and intellectual agility, in turn creating new knowledge or discovery that allow improving products or services through ideas (Roos et al., 2001). Individual-centered assets include collective expertise, creative ability, problem-solving ability, and leadership (Brooking, 1997b). It is important to note that not all workers contribute creativity or new knowledge to the company, only those who are considered experts should be considered, that is, those who are specialists and represent the elite of the labor force (Sveiby, 1998). Human Capital for this model evokes knowledge, regardless of its nature that

people and groups possess, as well as the process to generate it, human capital is managed with a strategic purpose, significantly contributing to the mission and vision of the organization, knowledge is transmitted from person to person and in society it is of vital importance for the organization in order to learn and share information that will benefit the economic unit. Values are actions, human attributes or conditions linked to the well-doing and development of man, in harmony with his environment (Cardona, 2000), the main values highlight commitment, responsibility, tolerance, respect, search for truth and identity, freedom among others. Bueno (2011), mentions that values and attitudes are a synergy of being, being and wanting of each person. The aptitude in the Intellectus model is synonymous with the knowledge that people have to achieve a certain performance, highlighting the norms of conduct or organizational, specialized knowledge, internally improved knowledge and of course the experience is an aptitude that is obtained by the staff of the economic unit. The ability is known as know-how, which refers to the set of abilities, skills and talent that the person develops as a result of experience, learning is the ability to respond to the dynamics of change (Bueno, 2011), a capacity that Every human being possesses is communication, which according to Díez Freijeiro (2005) is the capacity that every animated being has to relate to its environment. Human capital refers to the knowledge acquired by a person that increases their productivity and the value of their contribution to the economic unit, includes relationships with other employees, contacts, individual qualities (Fernández Sánchez, et al. 1997).



Fig.6: Tonalteca artisan

### 1) Intellectual Capital

The main objective of knowledge management is to evaluate the competences (knowledge, skills and attitudes) of human capital, it is a strategic tool in the decision-making of an organization (Sarur, 2013), on the one hand, intellectual capital is defined as the combination of intangible assets that enable a business to function (Brooking, 1997a). The intellectual capital within a company represents beneficial results to the economic unit transferred to financial capital, so that financial accounting is transformed and adopts new concepts, this generates a competitive advantage in the market, that is, in correlation with the possession of knowledge, relationships with clients, suppliers, experience, organizational technology, professional skills, etc. (Sarur, 2013). The Skandia company, in 1991,

proposed the Skandia value scheme, considering that the intellectual capital is made up of: human capital and structural capital (Sarur, 2013), the Balanced Scorecard was developed by Kaplan and Norton in 1996, applied in: AT&T, Eastman, Kodak, American Express and Taco Bell, these organizations have as operations individuals with whom they interact to develop businesses, such as employees, clients and investors, with a view to balanced markers (Sarur, 2013). On the other hand, the main source of sustainable competitive advantage of organizations resides fundamentally in their assets of an intangible nature, reflected in their Intellectual Capital, (Bueno, Salmador, Merino, et al. 2008). Entrepreneurship receives particular attention among academics and those responsible for public policies because it is linked, explicitly or implicitly, with economic growth and the general well-being of society (Salas-Fumás and Sanchez-Asin, 2010).



Fig.7: Person appreciating piece of black clay

## 2) Intellectus model

In order to achieve a better understanding of intellectual capital, it is necessary to point out the different synonyms that refer to the capital in question, throughout Lev B.'s work from 2001 called *Intangibles. Management, measurement and reporting*, these synonyms are: intangible assets and knowledge assets.

Intellectual capital is the synergy of all the knowledge that employees possess that gives the company a competitive advantage (Stewart, 1998), and the group of intangible assets can be identified and measured (Malhotra, 2000). Intellectual capital is based on knowledge, experience, skills, information systems, intellectual property, organizational structures, etc. (Robinson and Kleiner. 1996).

Intellectual capital is not only the talent of the employees' brain, it also encompasses brand names, product names, investments that have been made in the past, although they have not been revalued in the accounting, the market has done so (Edvinsson and Malone, 1999). It is suggested that the intellectual capital of an economic unit is the sum of the knowledge of its members and the practical interpretation of the intangible asset (Roos, Bainbridge and Jacobsen, 2001). The Intellectus Model of

measurement and management of intellectual capital was published in 2003 by Eduardo Bueno, the structured capital to be able to be measured, unlike the different measurement models, is divided by types of Capital.

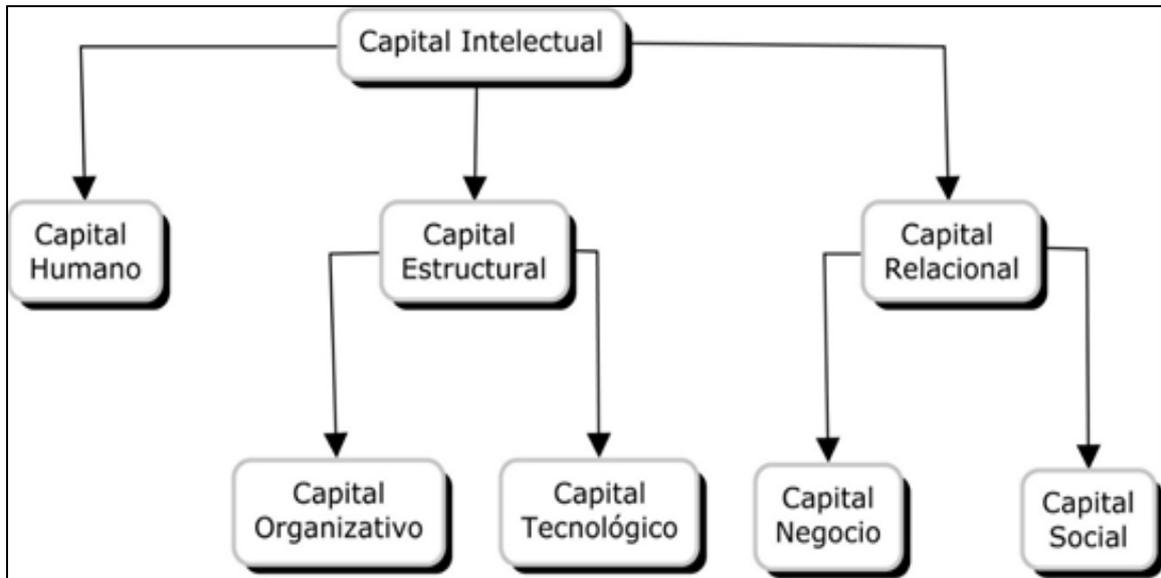


Fig.8: Model Understanding

Based on the Intellectus Measurement Model. Management and information of intellectual capital. Madrid: Autonomous University of Madrid. The Intellectus model of measurement and management of intellectual capital was published in 2011 by Bueno E. Its publication was after the international publication of the Skandia model in 1992 by Edvinson, the aforementioned models in synchrony seek the identification, definition of numerical indicators, establishment of management and design guidelines on the analysis of intangible assets and non-financial indicators.

In 2011, in Madrid-Spain the Intellectus model was updated with one of the objectives which is to improve the logical structure of the model, the new model according to Bueno (2011) is systemic, open, flexible, adaptive and dynamic, it presents essentially five types of capital: Human Capital, Organizational Capital, Technological Capital, Business Capital and Social Capital, it is an open model since the economic unit interacts with its environment and is mainly dynamic, since the present value is directed to the business to reach a future value.

### 3. RESEARCH METHODS:

A survey was applied to 73 artisan economic units, since the number of artisans is not known; simple random sampling will be used for convenience. The Intellectus model was taken as a reference for measuring intellectual capital, as they are operationalized in the indicators and dimensions as shown in the following table 2-

Table 2 Human capital indicators

Indicators	Dimensions
Valores y actitudes (ser+estar)	<ul style="list-style-type: none"> <li>• Feeling of belonging and commitment</li> <li>• Self motivation</li> <li>• Satisfaction</li> <li>• Sociability and customer orientation</li> <li>• Flexibility and adaptability</li> <li>• Creativity</li> </ul>
Aptitudes (saber)	<ul style="list-style-type: none"> <li>• Regulated education</li> <li>• Specialized training</li> <li>• Internal training</li> <li>• Experience</li> <li>• Personal development</li> </ul>
Capabilities (know how)	<ul style="list-style-type: none"> <li>• Learning</li> <li>• Collaboration (teamwork)</li> <li>• Communication (knowledge exchange)</li> <li>• Reconciling work and family life</li> <li>• Leadership</li> </ul>

Source: Intellectus measurement model. management and information of intellectual capital. Madrid: Autonomous University of Madrid. (2011)

Using Pearson's chi-square technique, using the Statistical Package for the Social Sciences (SPSS) program, the qualitative relationship between innovation and human capital was analyzed.

#### 4. ANALYSIS OF RESULTS:

The Cronbach's Alpha statistic was performed in order to analyze the reliability of the information, obtaining 0.835 as Cronbach's Alpha index in the relationships between the indicators and the variables in general. Therefore, the results obtained are interpreted as having good reliability. Calculated the significance value (critical value observed)  $0.001 < 0.05$  rejects the null hypothesis (the variables are independent) and the alternative hypothesis is accepted, that is, human capital is significantly related to entrepreneurship and innovation capital at a level of 95 % reliability.

In the same way, a linear regression was carried out, to review only the signs of the explanatory variables and it was obtained that: Feeling of belonging and commitment, Self-motivation, Satisfaction, Flexibility and adaptability, Personal development, Collaboration (teamwork) and Communication (exchange knowledge). The general average of all the variables had a positive sign of 0.835 in their correlation coefficient. Therefore, in a qualitative way it is inferred that the aforementioned aspects of artisan economic units are positively correlated with artisanal innovation.

## 5. CONCLUSIONS AND RECOMMENDATIONS

This research proposes to artisan businesses a series of variables or aspects to take care of in the artisan business with the aim of improving or expanding entrepreneurship and artisan innovation, in order to in turn be able to create a greater number of artisanal businesses, with a focus of artisanal innovation, which will allow, improve the artisan productivity and be able to continue promoting the cultural value of the artisan pieces, which will give rise to a greater economic and social development of the artisan field.

Based on the results previously presented in the chapter on analysis of results, the conclusions that responded to the objectives and answers of this research can be obtained, as well as the verification of the proposed hypotheses. Remembering that the purpose of this study is to generate contributions that promote entrepreneurship and innovation in artisanal economic units. By analyzing the results, it is concluded that: The human capital of artisan businesses is positively related to artisan entrepreneurship.

It is recalled that this research project seeks to show the characteristics that positively influence craft entrepreneurship and innovation, but due to space and time limitations, each of the characteristics of the different capitals that make up intellectual capital was not considered in more detail.

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