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# Journal of Social Researches

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The works must be unpublished and refer to topics of history, economics, geography, tourism, history, anthropology and sociology and other topics related to Social Sciences.

## Presentation of Content

In the fist article we present *Quality in the transport service* by SÁNCHEZ-TRINIDAD, Rosa del Carmen, SÁNCHEZ-CRUZ, Samantha, CASTILLO-MÉNDEZ, Rocío del Carmen and SÁNCHEZ-TRINIDAD, Adriana del Carmen, with adscription in the Universidad Popular de la Chontalpa, in the netx article we present *Sustainable or Sustainability?* by HIGUERA-ZIMBRÓN, Alejandro & RIVERA-GUTIÉRREZ, Erika, with adscription in the Universidad Autónoma del Estado de México, in the netx article we present *The economic policy cycle and public debt in México. A retrospective analysis of 2012-2016 period* by PÉREZ-CRUZ, Omar Alejandro, NANDE-VÁZQUEZ, Edgard Alfredo and MARTÍNEZ-VERDUGO, Juan Carlos, in the netx article we present *Sustainability the remittances received in Puebla and Guerrero, Mexico* by HARO-ZEA, Karla Liliana & CONTRERAS-ALCÁNTARA, Karla, with adscription in the Benemérita Universidad Autónoma de Puebla.

## Content

Article

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# Quality in the transport service

# Calidad en el servicio de transporte

SÁNCHEZ-TRINIDAD, Rosa del Carmen, SÁNCHEZ-CRUZ, Samantha, CASTILLO-MÉNDEZ, Rocío del Carmen and SÁNCHEZ-TRINIDAD, Adriana del Carmen

*Universidad Popular de la Chontalpa*

ID 1st Author: *Rosa del Carmen, Sánchez-Trinidad* / **ORC ID:** 0000-0002-6614-0685, **Researcher ID:** AAG-7258-2020, **CVU CONACYT ID:** 390897

ID 1st Coauthor: *Samantha, Sánchez-Cruz*

ID 2nd Coauthor: *Rocío del Carmen, Castillo-Méndez*

ID 3rd Coauthor: *Adriana del Carmen, Sánchez-Trinidad*

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**Abstract**

Due to the geographical location in which the municipality of H. Cárdenas Tabasco is located, it is considered the second most important city in the state, becoming the hub and strategic collection center of the Chontalpa area; It borders strategic cities that provide constant activity in the state economy, however, according to the Municipal Development Plan of H. Cárdenas Tabasco (2013-2015), it is determined that the problems of the study area are extensive and the Municipality must solve them in a strategic way, some of these problems are; population growth, the creation of health campaigns that provide for the reproduction of children at an early age in young people and adolescents, this leads to rapid urbanization; in which there is a transport traffic in which the roads and streets must be suitable, have their respective signs and a constant road flow; in matters of security, strict measures are needed, focused on the protection of citizens and their belongings; The lack of interest in the professional education of the reside nts and the aforementioned factors creates a hostile environment for the commercialization companies, continuous transformations must be generated to strengthen the business sector that will contribute to the development of the municipality.

**Quality, Service, Transport, Tailoring**

**Resumen**

Debido a la ubicación geográfica en la que se encuentra el municipio de H. Cárdenas Tabasco, es considerada la segunda ciudad más importante del estado, convirtiéndose en el centro y centro estratégico de recolección de la zona de Chontalpa; Limita con ciudades estratégicas que proporcionan actividad constante en la economía del Estado, sin embargo, según el Plan de Desarrollo Municipal de H. Cárdenas Tabasco (2013-2015), se determina que los problemas del área de estudio son extensos y el Municipio debe resolverlos de manera estratégica, algunos de estos problemas son; crecimiento de la población, la creación de campañas sanitarias que prevén la reproducción de niños a una edad temprana en jóvenes y adolescentes, lo que conduce a una rápida urbanización; en el que hay un tráfico de transporte en el que las carreteras y calles deben ser adecuadas, tener sus respectivas señales y un flujo de carretera constante; en materia de seguridad, se necesitan medidas estrictas, centradas en la protección de los ciudadanos y sus pertenencias; La falta de interés en la educación profesional de la nts y los factores antes mencionados crean un ambiente hostil para las empresas de comercialización, se deben generar continuas transformaciones para fortalecer el sector empresarial que contribuirá al desarrollo del municipio.

**Calidad, Servicio, Transporte, Sastrería**

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* Correspondence to Author (Email: rosa.sanchez@upch.mx)

† Researcher contributing as first author.

## Introduction

In Mexico, the regulator of public transport services is the Ministry of Communication and Transportation [SCT] through laws and controls exclusive to carriers; according to its law, a public passenger and / or freight transport service, is one that is carried out continuously, uniformly, regularly and permanently on the public land communication roads of the State, to meet the demand of users, through the use of appropriate vehicles for each type of service, and in which the users as consideration, make a payment in the cash register, in accordance with the previously approved rates. The service provider may be a state entity, individual or legal entity with lucrative fines, authorized to provide the service (Transportation Law for the State of Tabasco, 2015; article 22, page 7).

The Transportation Law (2015) classifies passenger, cargo and mixed transport services (Page 8), each of these accounts with its statutes which controls and regulates its functions and activities, Tabasco has each of these services which facilitate the mobility or the transfer of citizens from one place to another to carry out the activities of a society.

The city of Cárdenas, Tabasco has an exclusive Union of workers who own taxis, radio taxis, similar and related, whose motto is "For the greatness of our Union and the solidarity of the workers at the wheel, with a spirit of service". The taxi in many cities is considered a luxury product, in Cárdenas Tabasco this concept is lacking because the same union does not consider it as such, for this organization the taxis are classified into four areas that are: special service, collective service, service for people with different abilities, and radio taxi service. Then describe each of them.

A special service is one that is carried out in a personalized way, with a fixed destination, its cost is variable, it depends on the sector you wish to reach.

A collective service is one in which more than two users are transferred with a different destination, its cost is defined by the organization and cannot suffer any alteration.

A service for people with different abilities, is one that is performed with a special unit which is modified for the transportation of users with some physical motor impairment, this service becomes personalized and it can be said that until special, its cost is the variable .

A radio taxi service is one that the user can request by means of a telephone call, this is personalized and considered as special, its cost is variable this depends on the sector where it is requested.

Knowing and identifying this classification allows to have a broad and concrete overview of the service that the taxi union offers to its users, each of these services has its specifications which will be cleared during the investigation. The service offered by the driver is considered the main factor for this to have a constant demand in the market, therefore this research work is focused on determining the perception of the quality of the service that is offered to the user by the taxi union mentioned above.

## Methodology to develop

Systematic quantification of the quality that the client perceives of a service is not an easy task. Tools are needed to help companies better understand the meaning of customer value, as well as the degree to which their efforts are meeting their needs and expectations. The constant change in the behavior of markets and consumers, forces companies to have updated information on which their decision-making will depend, this information is compiled and interpreted in a consistent way allowing to identify and define the problem and skills that a company has ; Organizations identify this function as market research. For the development of this research work, an exhaustive literary review was first made regarding issues such as marketing, services, service marketing, quality of services; the main primary sources such as books, specialized journals, research articles, the instrument used for the collection and organization of information was consulted through the use of bibliographic records, this instrument was used to sort, classify the information collected, all this in order to obtain data that support and support the scientific theories applied to this research project.

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Subsequently, an analysis of the current situation of the municipality of H. Cárdenas Tabasco was carried out to have an informed diagnosis, through the consultation of official information portals such as INEGI, the municipal development plan, town hall, and sedesol; The instrument to be implemented will be the collection and organization of catalogs, databases, search engines and web sites on the Internet. Knowing and investigating the study universe allows us to have a broader picture of the needs or advantages that can be obtained in the performance of a service

The services have special characteristics, which are taken into consideration by the clients to form a judgment regarding their quality, which is why an accurate investigation of the study area was then carried out, through an interview (see appendix 1) with the general secretary of the taxi union Mr. Miguel Ángel Pérez López; The instrument used a semi-structured questionnaire, data collection sheets (see Appendix 2) to know the conditions of each of the transport units, a general inventory of resources available to the company. For the identification of the facilities a personal visit was made and through the observation it was possible to identify the conditions of their facilities. Through the visit, general data of the facilities, personnel and the service offered to the aforementioned municipality were obtained. Finally, the SERVQUAL measuring instrument was applied to the end users of the service, this field investigation was quantitative, since the final results will be expressed completely numerically by means of scatter plots, on the other hand according to the research perspective This is completely descriptive because it is intended to know how satisfied customers are with the service provided by the taxi union of the city of Cárdenas Tabasco, in regard to the design of the study, this is of a non-experimental transactional cut because data will be collected in A single moment of time.

## Results

A service is not an intangible element in its entirety, it has tangible elements such as physical facilities, equipment, personnel and communication material, the sum of all of them is the result of activities generated by the supplier to satisfy the customer.

The intangible part of a service causes its quality measurement to be empirical, based on perceptions that customers have experienced.

To achieve the quantification of the service and determine its quality, the authors ZEITMAN, BITNER and GREMLER (2009) present a practical practical measuring instrument Servqual; which is used and adapted to this research, the aforementioned instrument not only focuses on measuring the perceived perceptions of the client, but also measures the quality of the company, the measurement is carried out with a semi-structured questionnaire of 22 reagents proposed by the authors (see appendix ---), divided into five fundamental dimensions that are; reliability, sensitivity, security, empathy and tangible elements, which allow defining the quality offered to the client.

The analysis of the data obtained was carried out through frequency distribution, allows to know the frequency of the observations or occurrences with which the same value is presented in a sample; Therefore, this research presents the frequencies obtained (see table 2) of the survey conducted to our study group with reference to the perception of the quality that the union of workers who own car taxis, radio taxis, similar and related offers to citizens of the municipality of H. Cárdenas Tabasco.

| | | | | | |
|---|---|---|---|---|---|
| *Dimension 1.- reliability.* | | | | | |
| Affirmations | Never | Hardly ever | Sometimes | Always always | Always |
| 1 | 31 | 13 | 59 | 27 | 50 |
| 2 | 9 | 18 | 62 | 27 | 64 |
| 3 | 61 | 35 | 46 | 14 | 24 |
| Total affirmations 540 | 101 | 66 | 167 | 68 | 138 |
| *Dimension 2.- sensitivity* | | | | | |
| 4 | 68 | 26 | 25 | 17 | 44 |
| 5 | 14 | 21 | 60 | 25 | 60 |
| 6 | 76 | 19 | 55 | 12 | 18 |
| Total affirmations 540 | 158 | 66 | 140 | 54 | 122 |
| *Dimension 3.- security* | | | | | |
| 7 | 23 | 19 | 71 | 27 | 40 |
| 8 | 32 | 25 | 53 | 26 | 44 |
| 9 | 77 | 31 | 30 | 16 | 26 |
| Total affirmations 540 | 132 | 75 | 154 | 69 | 110 |
| *Dimension 4.- empatia* | | | | | |
| 10 | 40 | 30 | 46 | 15 | 49 |
| 11 | 24 | 32 | 60 | 22 | 42 |
| 12 | 28 | 29 | 54 | 30 | 39 |
| 13 | 20 | 14 | 34 | 23 | 89 |
| 14 | 123 | 18 | 17 | 11 | 11 |
| Total affirmations 900 | 235 | 123 | 211 | 101 | 230 |
| Dimension 5.- tangibility | | | | | |
| 15 | 84 | 25 | 35 | 14 | 22 |
| 16 | 60 | 31 | 54 | 15 | 20 |
| 17 | 22 | 16 | 83 | 27 | 32 |
| 18 | 147 | 14 | 12 | 5 | 2 |
| Total affirmations 720 | 313 | 86 | 184 | 61 | 76 |

**Table 1** Frequency by affirmation
*Source: self made*

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Once the data was analyzed using descriptive statistics, a scatter plot was made that quantifies the degree to which the data tends to be grouped around an average value, this type of graph was used to visualize the results because it is what they suggest the authors Parsu Parasuman, Valarie Zeithaml and Leonard Berry; This allows us to analyze a representative subset called a sample, selected from the population under study.

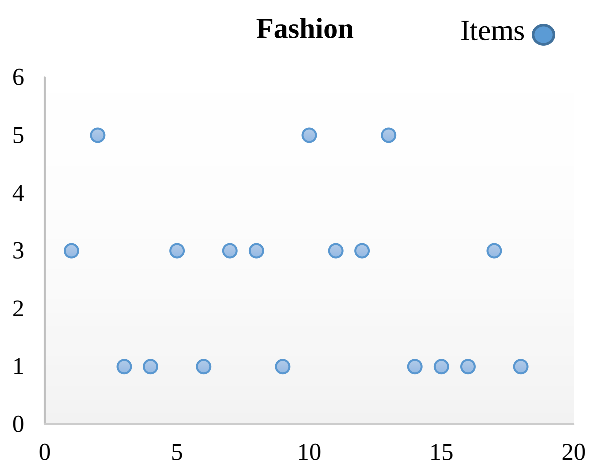


**Figure 1** Scatter plot by Items
*Source: self made*

The relevant factors that the service quality model mentions are considered the main part of this investigation, these factors determine the user's perception of the service offered; For the above mentioned our variables that in this case have been listed from 1 to 5, where 1 is never, 2 is almost never, 3 is sometimes, 4 is almost always and 5 is always; these have a constant variation that was quantified in a relative way and is assigned the frequency name, with which the constant frequency with which the variables have been selected by the users is demonstrated allowing also to know the cumulative frequency that exists between the dimensions of the model used.

Even when the frequency with which the users determined the position of the variables of this investigation is counted, the decision has been made to have descriptive parameters or measures that summarize the tendency, distribution and / or repetition of the set of data obtained; Just like the well-known central tendency, this is selected because it allows us to locate the central point of a set of data, these are the mean, median and mode.

| Affirmations | Half | Median | Fashion |
|---|---|---|---|
| 1 | 3.3167 | 3 | 3 |
| 2 | 3.661 | 4 | 5 |
| 3 | 2.472 | 2 | 1 |
| 4 | 2.667 | 2 | 1 |
| 5 | 3.522 | 3 | 3 |
| 6 | 2.311 | 2 | 1 |
| 7 | 3.222 | 3 | 3 |
| 8 | 3.139 | 3 | 3 |
| 9 | 2.328 | 2 | 1 |
| 10 | 3.01 | 3 | 5 |
| 11 | 3.133 | 3 | 3 |
| 12 | 3.128 | 3 | 3 |
| 13 | 3.81667 | 4 | 5 |
| 14 | 1.739 | 1 | 1 |
| 15 | 2.244 | 2 | 1 |
| 16 | 2.483 | 2.5 | 1 |
| 17 | 3.1722 | 3 | 3 |
| 18 | 1.3389 | 1 | 1 |

**Table 2** Scatter plot by Items
Source: self made

## Gratitude

Popular University of Chontalpa.

## Conclusions

The collection of data and information is simple if you talk about the quality of products, however in the quality of services this function is not an easy task, since this depends entirely on the subjectivity of the consumer; There are many measurement models that determine the quality of a company, but the one that most adapted to this research is the service quality model that allowed us to analyze the general objective of this research which is to determine the perception of the quality offered by the union of workers who own cars, taxis, radio taxis, similar and related of the municipality of H. Cárdenas Tabasco.

The conclusions derived from this research allow us to verify that the specific silver objectives have been theoretically and statistically based, giving credibility to what is expressed here. Such is the case of the first objective in which you can find the theoretical concepts related to marketing where it is clarified that this concept not only handles advertising issues of a company as the vast majority of people think; This is a more complex concept that controls, gives alternatives and prevents essential movements in a company.

This concept is adapted both to the commercialization of products and services, such is the case of this research where services is the main variable, which has allowed the quantification of the perception that the user has of the company; Theoretically, services are actions that a person offers to another, their heterogeneity is their main advantage, this can give a high value to others if it is well directed.

For a company to be a leader in its union, it must remain in constant demand and this can only be possible exceeding the expectations of its users; To be able to keep on this record, the administrators manage a fundamental concept that allows to create, restructure and innovate the strategies that govern your company, said concept is quality; Through the control and mediation of this, the perception and expectations that the user has of the product or service that is being marketed are known. Once the research theory was founded, a diagnosis of the municipality of Cárdenas Tabasco was necessary, where the history, demography, and economic sectors that make up the municipality can be found; This allowed us to clear objective number two, which presents a broad overview of the social and economic structure of this municipality. The findings of this diagnosis allow us to see the deficit that exists in each of the sectors, this caused by the lack of interest of the same inhabitants; citizens have lost the sense of belonging and overcoming, labor apathy leads them to abandon their lands, their crops, their businesses without realizing that it is the only thing that allows them to survive economically and maintain an optimal standard of living. The government creates options and provides investment for each of the economic sectors of the municipality, it is a matter of the citizen having their own aspiration and initiative, which does not intend to divert their qualities in activities that are unknown; that is to say that the farmer does not turn on leaving his land for an office, or that the clerk stops performing his duties pretending to be the owner of the company for which he works, if each person specializes or is guided in the activity he wishes to perform This achieves eminent success, in which not only one is the beneficiary, because in every activity there is an economic interaction that allows it to achieve its objectives.

This makes it clear that for the existence of an economic balance in the municipality, both the human factor and the government are needed, since these are the constant in a productive society.

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# Sustainable or Sustainability?

# ¿Sostenibilidad o Sustentabilidad?

HIGUERA-ZIMBRÓN, Alejandro †* & RIVERA-GUTIÉRREZ, Erika

*Universidad Autónoma del Estado de México, Centro de Investigación en Arquitectura y Diseño.*

ID 1st Author: *Alejandro, Higuera-Zimbrón* / **ORC ID:** 0000-0002-7851-7531, **Researcher ID Thomson:** AAJ-7550-2020, **SNI CONACYT ID:** 226412

ID 1st Coauthor: *Erika, Rivera-Gutiérrez* / **ORC ID:** 0000-0001-6966-2721, **Researcher ID Thomson:** AAJ-7948-2020, **SNI CONACYT ID:** 247442

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**Abstract**

The goal of this study discusses the frequency of use the term sustainable or sustainability translated in Spanish as *sustentable or sostenible*. Also, it is necessary to say that the problem is just regarding to the writing of this expression, but not the semantic meaning. It is important to clarify that, during this time has been a huge controversy, especially when this concept is writing in the spanish langue. In fact, there is a duality when authors write down in spanish *sostenible* or *sustentable*, because dictionaries argue that the word *sustentable* does not exist. So, in order to accomplish this goal, the first part is explained the origins of this word, then has been made a literature review based on the cooper taxonomy (1998). Also, the systematic review (Cochran Manual) analyzed the documents from many digital sources particularly those from government, institutions and plans or projects to comprehend the most practical use of these words. Finally, the results shown that there is no perfect use; the term is applied according to the context, but the semantic meaning represent the description of the study object.

**Sustainable or Sustainability**

**Resumen**

Actualmente la palabra sostenibilidad o sustentabilidad es utilizada de forma permanente en múltiples sistemas comunicación. Empero, ¿cuál debería ser el término correcto para su aplicación? En consecuencia, este estudio se enfoca en esta interrogante; de ahí que se describieron los orígenes del término, se realizó una revisión de la literatura identificando estudios recientes, además se analizó el estado actual de las investigaciones entorno a estos constructos; complementado por algunos documentos oficiales de gobierno, instituciones o planes o programas, que hacen referencia a esta temática. Finalmente, posterior a un análisis de contenido de la información referida, se llegó a la conclusión de que impera más su semántica que su escritura. Los términos son usados indistintamente en algunos países; sin embargo, en la mayoría de las naciones se emplea la palabra sostenibilidad según sea el contexto.

**Sostenible o Sustentable**

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* Correspondence to Author (Email: ahigueraz@uaemex.mx)

† Researcher contributing as first author.

## Introduction

*Man has lost his ability to anticipate and anticipate.*
*It will end by destroying the earth*
*Albert Schweitzer*

The issue of sustainability or sustainability are part of the discussions in different social areas. Its analysis from multiple perspectives has been caused by the circumstances of everyday use. However, the semantic denomination has been a controversy in Spanish-speaking countries, especially from linguistic aspects to literary aspects. Element that could not be stopped analyzing and perhaps establishing a better argument for its use. For this reason, a variety of authors such as Álvarez et al (2020), Roldán-Guzman (2020), Cedeño et al (2020), Lacherre (2018), Higuera et al (2016), Méndez (2012), Celi (2007), Fraume (2008), among others, share some perspectives and do the exercise of investigating the meaning based on some research; both historical and current.

Therefore, this document aims to establish a referential framework, based on various approaches, on which is the most frequent semantic use of the term sustainable or sustainable. Therefore, first, the background will be described, based on empirical evidence as a starting point to understand the origin of the term. Next, an analysis of the state of the art is made, using some leading authors in the field, without losing sight of the validity of the matter. Subsequently, from a case study, the most common uses from various spheres are shown; institutional, academic and social. The goal is to establish better arguments for its pertinent use in the different areas.

To achieve the purpose of this document, a systematic review of information was made. A documentary sample with the following structure was chosen; documents that come from scientific articles, plans, programs and projects, with a validity of no more than ten years to date, that came from reliable sources. The instrument that helped to collect the information arises from the Cochrane systematic reviews that classify and typify features that the documents must incorporate in each axis. The analysis of the information is done under a content technique. And the results are exposed during the development of the document. Finally some of the ideas were contrasted.

## Background

As a result of deforestation that was exacerbating throughout Europe, Hans Carl von Carlowitz published in 1713 Silvicultura Económica (Sylvicultura Oeconnomica). Otero (2010), verifies that in the document the concept of sustainability (Nachhaltigkeit) was raised in the German language. The publication broadly enacted the cultivation, use and conservation of wood in a stable and sustainable manner. According to Schmithüsen (2013), the writing is evidence of the German term that designates sustainability, especially when referring to forest sustainability. It should be noted that the author's paraphrase, of German origin, is a member of the World Forestry Center (WFC), which does not refer to sustainability, but literally to the term Nachhaltigkeit, literally translated as sustainability in the Spanish language.

Bosselmann (2008) in Otero (2010), add that this term sustainability was isolated from forest schools in Germany, but curiously defined with all its meaning in countries such as Austria-Hungary, Switzerland, France, Russia, Scandinavia, the United Kingdom and the United States. United of North America. However, the author confirms that there was a need to search for a word that was ideal for use in different languages. In 1837, Fracoise Parade, director of the Forest School of Nancy in France, translated it into French by production sustenau. Some time later it was adapted by the English to sustainable yield, which means sustainable production (Ulrich, 2010: 2). It is perhaps in this adaptation that the duality in the writing of the term arises, it was probably easier to write sustainable, because of the way the French and English translated it, than to write sustainable.

As appreciated by the interpretation of a variety of authors, the concept focuses its writing on ecology and society. For example; Sieferle (2003), considers that the ecological problems of society were oriented in the overexploitation of forests and their derivatives, based on the nature of agrarian civilizations and the industrial revolution. To quote Marquardt (2006) when the land was used to the limits of its ecological carrying capacity, there was systematic pressure to create lasting sustainability and standardize a system of standards for the use of the environment (p.172).

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In the previous section, the authors refer to two interrelated components, ecology and lasting sustainability, a correlation of terms relative to the long-term preservation, maintenance or maintenance of biodiversity is perceived. Variables that Escobar (2015) confirms when he clarifies that in praxis he refers to sustainable livelihoods, livelihoods of individuals or groups that allows them to improve their socioeconomic situation on a lasting basis, resisting possible crises and without damaging opportunities for future generations.

In this sense, regarding future generations, the United Nations (UN) report Our Common Future (1984) was considered by many to be the first document to mention generational justice; However, when reviewing what Georg-Ludwig Hartig (1795) exposes in his book Anweisung zur Taxation der Forste oder zur Bestimmung des Holzertrags der Wälder, taken up by Schmithüsen (2013), it can be seen that for some centuries it had been raised, the perspective of sustainability from different dimensions; one of them intergenerational; because in light of the text he quoted:

It is not possible to develop ideas about sustainable forest exploitation… Consequently, wise forest management must proceed by imposing taxes… but aiming to use them in such a way that “Future generations can get at least the same advantages as the present ones” (p.6).

## Theoretical approach

### Sustainable or sustainable construct

In this literature review, it is stated that the topic, at least in Spanish-speaking countries, is interesting to generate some discussions in various academic settings. The authors decompose the term as necessary in order to provide arguments that validate its use par excellence. For this, an important range of scientific leaders make connections through linguistic or philological, conceptual and even theoretical perspectives, some others of uses and customs. For example, Márquez (2010) linguistically decomposes the terms sustainable and sustainable. Affirms that they are verbal or postverbal adjectives, because they derive from the same verbs, that is, the verbs to sustain and sustain, are mutual.

In addition, they belong to the type of adjectives that are formed by the, added to the root of the verb of the suffix able or ible, as denoted by the idea of passive possibility. However, the discussion is not about the suffix, but about the prefix sos or sus, which comes from Greek prefixes. From this the word sustain is derived, a verb that according to the Dictionary of the Spanish Language (DRAE), means that which is capable of sustaining. However, DRAE defines sustainability as what is capable of sustaining, especially “something” that can be defended with ideas or reasons (DRAE, 2014).

In any case, if those observations of the DRAE are applied to the sentence, it can be said that the word sustainable is what is capable of sustaining itself, and sustainable is what can be sustained. Now, it could be considered that both verbs from the semantic sense are synonyms. It should be noted that, in this deduction, the scientific scope of the term is not taken into account. But, a contradiction of the first approach is that on many occasions something that is sustained is not always something that is sustained, or conversely something that is sustained is not always sustained.

Bifani (1993), argues that the expressions sustainable or sustainable come from English words that have been integrated into the Spanish language (Anglicism), these words come from the construct sustainable development. It is imperative that every day countless English words are incorporated into the Spanish language, however, this does not mean that they mean the same thing. Although Tudela (1992) already warned about the possibility that this matter would become semantic difficulty. This author suggested an operational definition of the concept, whose characteristics could be defined as systematic networks of relationships were established (Tudela, 1992). Under this order of ideas, interpretations of Pepper (1998), Stathiendrakumar (1996), cited by Martins et al (2006), consider that the terms sustainability or sustainable development have been constantly used in the literature, however, the debate has been focused on the political application, from its uses and meanings, but not necessarily on the subject of the term. Although it must be specified, from the operational point of view, it seems that the term is constituted by a dichotomy focused on development or progress.

In this sense, Fraume (2008) affirms that the sustainable tends to maintain conservation characteristics over economic means. In other words, there is a strong inclination of the balance on the macro and microeconomic aspects of production systems. However, for the term of sustainability it emphasizes maintaining the social and ecological elements with the aim of maintaining a long-term quality of life. The author considers that the purpose of a society will be to maintain in a balanced way the management of natural resources as long as it is constantly improved. By contrast, Torres (1992) cited by Gudynas (1992), recalls that, sustainable and sustainable are interpretations made during the Rio de Janeiro Brazil conference in 1992. The author states that each of the words was used and is used, depending on the focus and context, especially due to some ideological environmental trends in Latin America.

For example: Those individuals with anthropocentric perception, where they consider the human being as a central element of analysis, are only inclined to use the term sustainable, and those who consider everything inherent in life, from a biocentric perspective, use the term sustainable. (Gudynas, 1992: 104). The positions already note its semantic complexity, although the end, in any case, differs from the aforementioned development or progress position, rather, there is one more tendency to connote the social and environmental aspects of the matter.

These arguments are confirmed by Celi (2007), who not only clarifies that in the report of the conference in Rio de Janeiro in 1992 the term sustainable development was delimited, but also maintains that it was there where the confusion about the correct use of the word sustainable or sustainable (Celi, 2007).

Perhaps more recently, what Méndez (2012) explains is confusing: Sustainability and sustainability are, in principle, equal in their operation. The author makes a clarification: The application of the term will depend on the space and time in which it is used, that is, the place matters and the moment matters. Undoubtedly, it can be considered that said argument is not intended to conflict the user semantically, but quite the contrary, it can be interpreted that the use of both is allowed regardless of the context in which it is used.

The author agrees that there are no differences in applicability, in the strict sense of development or progress. His hypothesis affects that everything will depend on where the word is used. However, it clarifies that the only thing that is intended is what the United Nations (UN) points out, meeting the needs of the present generation without compromising the needs of future generations (Méndez, 2012). However, from a rational perspective, this position is irrelevant, the expression is indifferent for the purposes in which it was established regardless of the place and time where it is used. The expression in its applicability is more presumptuous than active.

Other authors such as Vare and Scott (2007), incorporate other elements in this analysis. He argues that the importance of the term is not only semantics, but its definition. They consider sustainability to be a continuous learning process whose purpose is to keep the human species in a healthy and livable environment. Everything, through the improvement of the human condition, based on a system that lasts indefinitely and without exhausting itself. The authors demonstrate that sustainability is not an end in itself, but is a continuous learning process where the purpose is the maintenance of life on the planet.

Meanwhile, another author like Solow (1993), although he does not question the terms set out, defines sustainability as more than a slogan or the expression of an emotion, he promotes the preservation of productive capacity on an indefinite horizon. In other words, it raises the idea of maintaining natural capital for the future. The author does not discuss the semantic delimitation of the word, but rather accepts its natural name with its meaning and the characteristics that accompany it; the idea of maintenance, the man-nature correlation and especially justice between generations.

In this sense, it is worth noting what Folch (2008) supposes, this author expresses that sustainability is not yet a theory, nor a paradigm, but rather, a manifestation of a rational illusion based on the own need for progress in humanity. It considers that in the matter of sustainability it should be governed by an ideal of preservation during a lifetime, perhaps based on an anthropogenic vision. In any case, the purpose of the term emphasizes values that must be sufficient reason to disperse the essence of humanity within a system of life.

By way of reflection, the argumentation between authors on the semantics of the terms is not in itself a discussion that reveals elements of a debate, but rather, the approaches deal with the purpose of the expressions. Perhaps sustainability, unlike sustainability, denotes a more complete vision when it comes to biocentric issues, which are the core of life within a system based on interrelated behavioral mechanisms. It is de facto a requirement for life to continue indefinitely and for human culture to develop over many centuries. For that reason, the impacts of human activities must remain within certain limits. In order that the diversity, complexity and functions of the system that support planetary life are not destroyed.

The idea of sustainability, beyond sustainability, requires assuming a versatile behavior based on ethical and moral principles, capable of including quantifiable and qualitatively indispensable variables for the formation of new lifestyle patterns. It is confirmed that biocentric systems must be sustained indefinitely.

**The praxis of sustainability or sustainability.**

In this case, the research is supported by international forums, international public policies and strategies, as a mechanism for the practical continuity or application of the sustainable or sustainable expression, whose evidence is shown in the background of the environmental crisis of the last century. and of this century. Although the environmental issue is not new, it has been confirmed, based on existing data, that in the past some physiocrats recommended carefully conserving land as the only true source of real wealth. However, in the early 1960s, scientific reports began to be produced that characterized the outbreak of the environmental crisis.

International forums.

Everything arises when one of the first reports, the silent spring by Rachel Carson (1962), denounced the repercussion of the use of pesticides such as DDT (Dichloro diphenyl trichloroethane) used in agriculture that was dispersed in the environment, and this could being the cause of multiple diseases not only in humans, but would also cause countless negative impacts on biodiversity.

For this reason, soon after, in 1971, the report by Meadows and the Club of Rome (1972), The limits of growth based on the results of a mathematical model (World 3), in which the alarm is activated, was presented. contemporary environmental for the following reasons; environmental degradation; uncontrollable urban expansion; job insecurity; alienation of youth; rejection of the value system of society; population increase; economic shocks; among others.

Consequently, the results reached by the group of scientists generated controversy in the world. In sum, if trends in world population growth, industrialization, environmental pollution, food production, and the depletion of natural resources were maintained, this planet would reach the limits of growth in the course of a hundred years after the publication of the study, is say, around the year 2072.

In response to these data, the political sector decided to strengthen decision-making to benefit the maintenance and conservation of the environment in order to reverse the relentless prognosis. In other words, work on the elaboration of laws, regulations and norms, that promulgate policies to develop plans or projects, that direct actions, among others. At the same time, design summits, forums, conferences and meetings, with the goal of disseminating and establishing measures to mitigate this scenario.

Faced with the worrying prospects posed by The Limits to Growth, the United Nations (UN) commissioned a group of experts coordinated by Ignacy Sachs to define a reference term that would be compatible with the notions of development and conservation of the environment. Consequently, for 1974 in the Declaration of Cocoyoc Mexico, the term ecodevelopment was born, as an alternative to the consumption model of the industrial and commercial system of developed countries. However, Henry Kissinger (national security adviser in the United States of America) expressed his disapproval to the United Nations Environment Program (UNEP) and demanded to “touch up” that word. In such a way that the members of the UN were forced to look for a new term that easily adapted to the economic model of the industrial countries.

According to Naredo (1996) in Rivera Hernández (2017), the word ecodevelopment was replaced by sustainable development, an ideal term for more conventional economists to accept it, due to its meaning, probably more oriented to exalt the issues of neoliberalism.

Shortly thereafter, in 1987, the World Commission on Development and Environment (WCED) published the report under the title Our Common Future. This report reveals the term of sustainable development, which has been coined by a countless authors from various disciplines, Gil (2020), Tomasini et al (2020), Boada Ortiz., et al (2017), Martín-López, et al (2017), Comenarejo (2016), Austermühle (2015), Vilches and Gil (2015), RBG de Segura (2014), Novo (2009), Miller (2007), Aguilar (2007), Gallopín (2003), Nebel (1999), Jiménez (1997), Daly (1997), Jacobs (1995), among others. However, for the year 1992, said construct was consolidated at the so-called Earth Summit in Rio de Janeiro Brazil. It is in this event that the actors complement the term of sustainable development, incorporating the issue of improvement in the quality of human life without exceeding the carrying capacity of the ecosystems that support it. It is argued that a sustainable economy aims to maintain the natural resource base, but developing through the adaptation of knowledge, organization and technical efficiency. Therefore, sustained growth was renamed as sustainable development. However, a contradiction arose between the ecological system subject to physical limits, and the economic system promoting growth in perpetuity, the so-called holy grail of the economy according to the French Sergei Latouche.

Subsequently, in the year 2002 in the Declaration of Johannesburg South Africa, politicians defined sustainable development as the process by which socioeconomic needs, cultural diversity and a healthy environment are met, without jeopardizing their satisfaction. needs in future generations. In this forum, an ideological formula was also generalized, with which technocrats, industrialists and academics continue, at least in the discourse with their capitalist productivism.

Everything, according to the actors, after having made the ecological corrections of the industrial system, seen as essential, but that in operation has left many doubts.

The magic formula was considered to be sustained growth under sustainable development. Of course very debatable in terms of results, although there are always those who have another opinion. For example: As of 2018, according to Al Gore, former vice president of the United States of America in the government of President Bill Clinton, he affirms that the issue of climate change has improved substantially.

Political approach to sustainability.

To determine the use of the term sustainability or sustainability, a frequency analysis was carried out in the application from the political point of view. Some of the official documents and government policy positions were simply reviewed. From an international perspective in the documents of the United Nations, the Action Plan Agenda 21 and the National Strategies by some Sectors.

Policies promoted by the United Nations Organization.

The United Nations Sustainable Development Division is part of the New York-based Department of Economic and Social Affairs. The Division promotes sustainable development by providing substantive secretariat services to the United Nations Commission on Sustainable Development (CSD) and carrying out technical cooperation and capacity-building activities at the international, regional and national levels (UN, 2010).

The Commission on Sustainable Development is a high-level forum on sustainable development that reviews and monitors progress made at the national, regional and international levels in the implementation of Agenda 21, the Barbados Program of Action and the Plan of Implementation of the Johannesburg Decisions and reports thereon. The Commission meets every year in New York, and its work is organized into biennial cycles consisting of one review session and one policy-making session.

Annex 1 shows that in forums from 1992 to 2005, there are a number of approaches without contradiction of the term. In most events, there is a clear reference to the term sustainability.

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In the features characterized by events, goals and declarations, the issue of sustainability is specifically mentioned as that which distinguishes issues of temporality and above all progress. There are no controversial arguments between the description of sustainability or sustainability, each of the periods considered, they are mostly approaches based on important acts, without mentioning the objective of each of the precepts of sustainability.

Action plan agenda 21

Agenda 21 or Agenda 21 is a Global Action Plan whose final objective has been to promote sustainable development and preservation of the environment, through the participation of various sectors. Above all, it aims to involve the inhabitants of some place through the design of a way of life that can be sustainable; in any case, it pursues the quality of future generations, it aspires to the social, environmental and economic integration of some community. Therefore, it requires local administration and the community to work on the design and operation of action plans to achieve sustainable development.

In this sense, (see annex 2) some of the networks of cities towards sustainability are exposed, as a strategy to establish a working mechanism between different places, whose purpose is to establish intra and inter-institutional agreements for the solution of common problems. This annex shows some networks that by importance have been established over the years through links on topics of similar importance. Some of them established in Latin American and Latin American cities, particularly in Spain, Brazil, Colombia and Mexico. Each of the networks provides information that enriches nations in the search for common best practices. It should be noted, in terms of sustainability and sustainability, it is only the Mexican network of cities for sustainability that makes a different name about sustainability. Otherwise, that is, the other networks do not see the term in any other way than networks for sustainability. The spirit of the object is the same, there are no elements that distinguish one from the other with respect to the other networks. They all obey very similar actions and goals, but they are applied in different contexts.

National strategies by sector.

Now, in relation to the term sustainability or sustainability, it is used permanently in the strategic plans of some sectors, particularly in Mexico. The national strategy as it refers, is focused on energy, social, environmental and tourist issues as examples in this case. In the energy part, the discourse frames the sustainability of the resource over the years, especially as it is a non-renewable natural resource. At the same time, there is a correlation between the part of the natural resource and consumption or with social aspects. In both cases, it is confirmed that use by society must always have the attitude of sustainability, since conscious consumption is an obligation as it is a strategic area in all nations.

Similarly, other strategies designed in Europe argue the importance of making the sustainable use, management and protection of natural capital compatible with the well-being of citizens, in addition to establishing cooperation priorities based on the needs of the countries, promoting of the environment within the framework of sustainable development, and on the basis of these priorities, the strategy document presents the actions to be carried out, according to the modalities of their execution. However, regarding the situation of this issue, there are no elements that contravene the question of sustainability and sustainability; The term sustainability is used naturally.

Therefore, the questions that arise are: What is the frequency of use of the term sustainable or sustainable among authors? What is the most common use in Latin America or Latin America? Is the way of writing the term implausible or is its meaning more important?

**Methodology**

Once the research problem has been identified through the description of its supported elements from a scientific literary review, it is up to this section to limit the selection criteria to determine the studies that support the research. These elements correspond to: Type of study, approach, design, methodology, instruments, procedures, data collection and analysis, among others (Hernández, Fernández-Collado, and Baptista, 2008).

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**Method, Population and Sample**

The purpose of this study was to identify the frequency of use of the word sustainable or sustainable. To achieve this objective, we worked under the systematic reviews (SR) method. SRs are defined as a scientific investigation with which the literature on a topic is reviewed starting from one or several clear and objective formulated questions, through different systematic methods to identify, select and critically evaluate the investigations that address the questions (Gisbert and Bonfill, 2004). In addition, according to the authors who consider that they are scientific investigations that use a method to synthesize the results of the original studies. It is clarified that an intentional sampling was determined. In this case, SR was characterized by: a) synthesis and analysis of information with a practical approach, b) was based on the best available scientific evidence, c) clearly defined questions were asked, and d) systematic and explicit methods were used. to identify and select studies, critically evaluate them, extract the data of interest to analyze.

**Instrument**

This research used the Cochrane Handbook of Systematic Reviews for Interventions to guide researchers in preparing systematic reviews under the Cochrane Intervention Methodology. The complete manual is published on the Internet (cochrane.org). In this case, the instruments of the Cochrane protocol were used (see annex 1-2). They include precise information on each of the sections that are completed on a mandatory basis and must be approved to be considered a systematic review.

**Procedure**

To achieve the purpose and answer the research questions, the following activities were carried out in the order specified. The steps for conducting a systematic review are listed below and are adapted from the Cochrane Collaborative Reviewers Manual. The sections are as follows:

1. Formulation of the problem based on scientific evidence.

2. Location and selection of studies. Identification of studies by searching for references. It was determined to do an intentional sampling on those studies that addressed any research question, inclusion and exclusion criteria related to language and time range. At the same time, the following characteristics were considered: (a) investigations that propose concepts, regulations, policies, forums, plans and strategies, (b) that include the participation of leading authors on the subject, (c) studies carried out in the Spanish language , (d) those that were made 10 years ago. Consequently, we searched for references as wide as possible in formal and informal sources. Among the formal ones they consulted specialized databases such as ERIC, ProQuest, Scopus, Latinindex and Redalyc, as well as specialized magazines on issues of sustainable development. Unpublished studies, conference proceedings, some international forums, plans and programs of some government institutions, electronic media magazines without indexing were considered in informal sources.

3. The quality of the information was evaluated. For this, the following criteria were considered, (a) referent, (b) conceptualization of the construct, (c) argumentation, (d) characterization of the construct, (e) temporality, (f) written in Spanish.

4. Data extraction was based on content analysis and synthesis, considering the background, state of the art, methods, results, discussion and conclusion.

5. The results are presented for discussion and graphic displays.

**Results**

In this section it is essential to remember the purpose of the research: (1) What is the frequency of use of the term sustainable or sustainable among authors? (2) What is the most common use in Latin America or Latin America? (3) Is the way of writing the term implausible or is its meaning more important? Therefore, the following results were obtained:

The search for information in the previously commented databases, based on the location and selection of information, in addition to the criteria indicated above, before the following sample: (a) 40 articles, (b) International Summits from 1992 to 2013, (c) Networks of Cities towards Sustainability made up of more than 30 members, and (d) National strategies including the 28 countries of the European Union. Therefore, the results are broken down in a particular way:

**Answer question 1: Journal articles by keyword**

Information from 40 magazines that represent the total of a sample.

| General Articles (40) | | No | % |
|---|---|---|---|
| Word Frequency | Sustainable | 35 | 90 |
| | Sustainable | 5 | 10 |
| Definition | Sustainable | 30 | 80 |
| | Sustainable | 10 | 20 |
| Application | Sustainable | 38 | 95 |
| | Sustainable | 2 | 5 |

**Table 1** Frequency of the word sustainable or sustainable
*Source: self made*

The result of Table 1, shows the number of magazines in which the word sustainable is present and the rest that refer to the word sustainable.

**Answer question 2: International Summits**

The results of Table 2 (see Annex 1), which refers to the Common use in Latin America and Latin America, confirms that all the documents prepared at the summits. Particularly on policies, the term sustainability is used. Adapted from: United Nations Organization. Various documents.

In general, Table 2 presents data from the year 1992 to the year 2017 where events are defined, plans, programs or strategies are established and evidence is shown from the text that confirms the frequent use of the word sustainable. In particular, said Table shows a series of characteristics with names about sustainability, it does not refer to the word sustainable.

**Answer question 3: City networks towards sustainability**

Table 3 (see annex 2), Denomination. Comparative of city networks towards sustainability argues that there are countless networks that combine the theme of urban, regional and metropolitan, and the term of sustainability. In most networks, the use of the term sustainability of cities or urban sustainability is stated in the main objective. The only case that is called different is the one that occurs in Mexico, a Mexican network of cities towards sustainability.

Information was obtained from more than 200 networks located on various continents. Of these, it was found that most of them have a general denomination of sustainability.

**Answer question 4: National Strategies**

The results of Table 4 (see annex 3), Name: Comparison of national strategies by sector, in the case of Mexico, maintain that based on the strategies used by sector that will be or are developed from the vision of sustainability, In other words, it is detected that there are political variables that allow us to understand that work will be carried out everywhere under the concept of preserving or maintaining. Not the opposite, what must be sustained, however, it is stated that it has been a habitual use in Mexico without there being.

**General conclusion**

In summary, it is worth remembering that the objective of this document was to understand what is the most frequent semantic use of the term sustainable or sustainable. Therefore, to achieve this, a referential framework of the term was established, contemplating various sections: The origins of the term, the literature review and the most frequent praxis.

For all the above, it could be verified that the Saxon Hans Carl von Carlowitz introduced the expression nachhaltendes wirtschaften, which means: Sustainable administration, for its translation into German. It is confirmed that the English translated it by sustainable yield which means sustainable production and is probably the origin of this divergence from sustainable or sustainable use, as evidenced by the various positions presented.

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Likewise, various authors warn that the expression "sustainable development" or "sustainable development" is a mistranslated Anglicism, but increasingly used and accepted not for its frequent use but for its semantics.

It is confirmed that the word sustainable has been erroneously translated into Spanish as "sustainable". There is evidence that this interpretation was made at the Rio de Janeiro Brazil conference in 1992 by environmentalists from Latin America with anthropocentric (sustainable) perception, who consider the human being only, and not with due perception, such as biocentric (sustainable) ) that considers everything inherent in life.

From the practical sphere, that is, politically and institutionally, sustainable development, first refers to the improvement in the quality of human life without exceeding the carrying capacity of the ecosystems that support it. Second, achieving this purpose requires a “sustainable economy” construct that is clearly defined but in practice is still ignored. Regarding the term, there is no evidence, due to the systematic review that was carried out, that the sustainable denomination is used in the documents presented, it is only confirmed that its use is more frequent in Mexico. In Latin America and Latin America the most common use is the word "sustainable".

Finally, it is emphasized that the term sustainability denotes a semantic and grammatical, theoretical and political congruence. In contrast, the word sustainability is used in Mexico more frequently, however, it is recognized for its meaning, it is understood that every day it is applied in different contexts without breaking with the spirit of the meaning of the word.

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## Annex 1
## International Summits. (Answer question 2)

| Year | Event | Plan / program / strategy | Textual statement (evidence) |
|---|---|---|---|
| 1992 | Earth Summit held in Rio de Janeiro (Brazil) | Commission on Sustainable Development (DS) | PRINCIPLE 4. To achieve sustainable development, the protection of the environment shall constitute an integral part of the development process. |
| 1994 | Sustainable Development of Small Island Developing States. Bridgetown B. | Barbados Action Program, in which specific actions and measures are proposed to promote sustainable development. | PART 2-1. Small island developing States, in accordance with their own priorities, should seek to achieve the objectives of the SD. |
| 1997 | Earth Summit + 5) held in New York (United States of America) | Plan for further implementation of Agenda 21, work program of the Commission on Sustainable Development. | REITERATING sustainable development in its economic, social and environmental aspects is a fundamental element of the United Nations ... |
| 2002 | The World Summit on Sustainable Development, held in Johannesburg, South Africa. | Johannesburg Decisions Implementation Plan, containing an approach with concrete measures. | STATEMENT NO 26. Sustainable development requires a long-term perspective and broad participation in policy formulation ... |
| 2005 | Barbados Program of Action for the Sustainable Development of Small Island States ... | Mauritius strategy for the further implementation of the Barbados Program of Action. Port Louis (Mauritius). | DECLARATION 3. Incorporate national principles, strategies, strengthen political commitments and awareness of sustainable development ... |
| 2006 | • High Level Dialogue on International Migration and Development. | Millennium Development Goals Mexico. | STATEMENT. The government's main objective is to implement social public policies with sustainability criteria ... |
| 2008 | • Monterrey Consensus. Meeting on the Millennium Development Goals. | Doha Declaration of the Follow-up International Conference on Financing for Development. | DECLARATION 1. Commitment is made to eradicate poverty, achieve sustained economic growth and promote sustainable development ... |
| 2009 | • United Nations Conference. World Financial and Economic Crisis and its Effects on Development. | Plan to analyze the worst economic crisis in the world since the Great Depression. | STATEMENT: Miguel d'Escoto Brockmann. 63rd session of the General Assembly. Maintains: The historical opportunity and the collective responsibility to give a new stability and sustainability ... |
| 2010 | United Nations Summit on the Millennium Development Goals | Action plan to achieve eight poverty targets by 2015 as well as new targets for women's and children's health, hunger and disease. | DECLARATION 65/1. Point 11. Governance and the rule of law are recognized at the national and international levels, essential for sustained, inclusive and equitable economic growth, sustainable development ... |
| 2011 | United Nations Conference on the Least Developed Countries | Program of Action for the Least Developed Countries for the Decade 2011-2020 | DECLARATION POINT 5. Strategic, broad and sustained approach to achieve in them a structural transformation that promotes accelerated, sustained, inclusive and equitable economic growth and sustainable development ... |
| 2012 | United Nations Conference on Sustainable Development (Rio +20) | Plan. Green economy and lifting people out of poverty, and international coordination for sustainable development. | DECLARATION 66/288. Point 1. We renew our commitment to sustainable development and a sustainable future ... |
| 2013 | United Nations Forest Forum 10. | Strategy: Central nucleus of the DAES in forestry policy and in relation to sustainable development issues ... | ACTIVITIES. Sustainable forest management. United Nations Instrument on Forests, the Global Forest Goals |
| 2014 | Third International Conference on Small Island Developing States. | It was held in Apia, Samoa, encouraging these countries to share their successful experiences in mitigating the effects of climate change. | STATEMENT POINT 5. States are a special case, due to their particular vulnerabilities, they continue to have problems achieving their objectives in the three dimensions of sustainable development. |
| 2015 | 2030 Agenda | 17 Sustainable Development Goals (SDGs) | Achim Steiner. "The Agenda offers a unique opportunity to put the world on a path to more prosperous and sustainable development. |
| 2016 | World conference on sustainable transport. | 70/197. Towards broad cooperation among all modes of transport to promote sustainable multimodal transit corridors. | DECLARATION 70/1. Extreme poverty is the greatest challenge facing the world and constitutes an indispensable requirement for sustainable development ... |
| 2017 | Oceans Conference | 71/312. Our oceans, our future: call to action. | DECLARATION: Goal DS 14: Conserve and sustainably use the oceans, seas and marine resources. |

**Table 2** Common use in Latin America and Latin America
*Source: Own elaboration with information from https://www.un.org/development/desa/es/about/conferences.html*

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## Annex 2

### Cities Networks to Sustainability. (Answer question 3)

| No | Region | Country | Objective description |
|---|---|---|---|
| 1 | Mur 21 Network: The Network of Sustainable Municipalities of the Region of Murcia, from its purpose, was created to promote the following general objectives. | Spain | Develop the application of the European principles of the Aalborg Plus 10 Commitment of 2004 and the objectives of the Murcia Charter for Sustainability of 2007. |
| 2 | Emerging and sustainable cities | Colombia | Promote the building of ties, alliances, exchange of experiences and good practices between local leaders and other organizations linked to the issue of sustainability in the region. |
| 3 | The Mexican Network of Cities towards Sustainability - RMCS | Mexico | It is a space to improve public policy and develop social action, which seeks to facilitate the exchange of successful experiences and knowledge among people and organizations at the local, state and national level, involved in promoting sustainable urban development for Mexico. |
| 4 | Sustainable Cities Program (PCS) | Brazil | The networks of "Sustainable Cities in Latin America" seek to encourage citizen participation around the city's public policies. The PCS, an initiative promoted by the Nossa Sao Paulo Network, the Brazilian Social Network of Fair and Sustainable Cities, and the Ethos Institute, aims to raise awareness, mobilize and offer tools for cities to develop economically, socially and environmentally sustainable. The challenges are great and, to be successful in actions that contribute to sustainability, the involvement of citizens, social organizations, companies and governments will be necessary. |
| 5 | World Association of Major Metropolises | 22 members | Metropolis is the global association of local and regional governments of large cities and metropolitan regions to promote urban sustainability. |
| 6 | From emerging cities to sustainable cities | Europe, North and South America, Asia and Africa | Sustainable Cities Network. Aim to have a platform to share knowledge between cities and also best practices on issues related to improving the quality of life, always with an emphasis on achieving sustainable cities. Among the topics that have been discussed in previous seminars, courses and exchanges are the renovation of sea and river port areas, recovery of bays, solid waste management and project management. |
| 7 | The Sustainable Development Goals in 100 Spanish cities ”, | 77 cities | The document provides a state of the question on sustainable development at the local level for all the provincial capitals of Spain, cities with more than 80,000 inhabitants and the twelve main metropolitan areas in our country. As a whole, the 100 cities analyzed make up almost 50% of the Spanish population. |

**Table 3** Denomination. Comparative city networks towards sustainability
*Source: own elaboration with information from https://www.un.org/development/desa/es/about/conferences.html*

## Annex 3

### National Strategies. (Answer question 4)

| No | Country | Draft | Sector | Strategy |
|---|---|---|---|---|
| 1 | Mexico | Energy 2013-2027 | Energetic | Strategic theme 4. The population's access to energy services brings great benefits in terms of quality of life and social inclusion. Through the supply of drinking water, efficient lighting, heating, food cooking, refrigeration, transport and telecommunications, energy has effects that lead to better education, health, safety, gender equality and sustainability of the environment and the environment. |
| 2 | Mexico | Energy 2013-2027 | | Strategic theme 13. To achieve the sustainability of oil resources, one of the critical elements in the definition of the portfolio must be the potential of the projects to increase the rate of restitution of reserves. |

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| | | | | |
|---|---|---|---|---|
| 3 | Finland | National Strategy for Sustainable Development | Energetic | Strategic theme. Make the sustainable use and management and protection of natural capital compatible with the well-being of citizens, as well as ensure the integrity of society in such a way that the result allows Finland to use its strengths in a sustainable way. |
| 4 | European Union-Brazil | Strategy for Brazil 2007-2013 | | Strategic theme. Two cooperation priorities are defined according to the country's needs, namely, the intensification of EU-Brazil relations and the promotion of the environment within the framework of sustainable development. Based on these two priorities, the strategy document presents the actions to be carried out and their modalities of execution. |
| 5 | Spain | Sustainable tourism development | Social | Strategic theme. Contribute to the development of sustainable tourism through supply development policies and strategies. Development of the regional tourism sustainability policy. |

**Table 4** Denomination: Comparative of national strategies by sector
*Source: Adapted from: United Nations Organization, 2018*

## Annex 4

A Systematic Review Protocol

| | |
|---|---|
| Title | Brief description of the intervention to assess, health condition and target population |
| Protocol information | Basic information on authors, contact person, date of performing the protocol, updates |
| Background and justification of the study topic | Description of the scope of the investigation, health condition to assess, the intervention assessed, main effects, areas of controversy, reasons that justify performing the review |
| Aims | Description of the primary and specific aims, based on the research question |
| Selection criteria of the studies (inclusion and exclusion) | Definition of the eligibility criteria of studies according to type of participants, the intervention, the comparator (if there is one), the outcomes, the study design, setting... |
| Search strategy and sources of information to identify the studies | Process that describes the method to carry out the search strategy (keywords, limits of the search...), sources of information that will be consulted (electronic databases, hand searches, contact with authors of interest...) |
| Evaluation of the risk of bias (or methodological quality) | Process on how the critical appraisal of studies will be carried out, assessment of risk of bias (or methodological quality) at the level of the studies or results Process of collection the most relevant data for each study, from previously designed templates that collect information on their main characteristics, methodological quality, assessment of the risk of bias, outcomes |
| Analysis and synthesis of scientific evidence | Process on how the information will be synthesised and analysed. Qualitative or quantitative synthesis (meta-analysis) |
| References | Relevant references related to the review and other published versions of the review (if there are any) |
| Conflict of interest statement | Notification of any source of conflict of interest (financial benefit, personal or professional prestige or promotion) |
| Sources of financing | Description of external and internal sources of financial support |

**Figure 1**

## Annex 5

Sections for the Publication of a Systematic Review

- Title
- Review information (authors, contact data, acknowledgements, funding, conflict of interests)
- Summary(background, aims, search strategy, data extraction and analysis, results, author conclusions)
- Introduction(background, justification, aims)
- Method (protocol and registry, selection criteria for the studies –types of studies, types of participant, type of intervention, type of comparators, type of outcomes, type of designs, search methods to identify the studies – sources of information and search strategy, process of selecting studies, assessment of risk of bias (or methodological quality), data analysis and synthesis)
- Results (studies included, description of the study characteristics, risk of bias of the studies included, main effects of the interventions)
- Discussion (summary of the evidence, quality of the evidence, potential bias during the review process, agreements and disagreements with other studies and reviews, applicability)
- Conclusions of the reviewers (implications for practice and research)
- Contribution of theauthors
- References (studiesincluded)
- Other references – optional (studies excluded, ongoing studies, additional references)
- Tables and figures (flow chart of the studies, characteristics of the studies included, tables and figures with the synthesis of results)
- Other tables and figures – optional (characteristics of the studies excluded, pending evaluation, ongoing studies) - Annexes (additional information, notes for professionals, etc.)

**Figure 2**

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# The economic policy cycle and public debt in México. A retrospective analysis of 2012-2016 period

# El ciclo de política económica y la deuda pública en México. Un análisis retrospectivo del período 2012-2016

PÉREZ-CRUZ, Omar Alejandro*†, NANDE-VÁZQUEZ, Edgard Alfredo and MARTÍNEZ-VERDUGO, Juan Carlos

ID 1st Author: *Omar Alejandro, Pérez-Cruz* / **ORC ID:** 0000-0003-3367-8259

ID 1st Coauthor: *Edgard Alfredo, Nande-Vázquez* / **ORC ID:** 0000-0001-6029-2242

ID 2nd Coauthor: *Juan Carlos, Martínez-Verdugo* / **ORC ID:** 0000-0003-2181-1868

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**Abstract**

The objective of this research is to measure the effects of intellectual capital (human, organizational and technological) on financial performance. The data belong to the economic censuses of the years 2009 and 2014 in the field of tourism, with information on hotel activities in the 32 states of the Mexican Republic. The least squares methodology was applied with adjusted panel-type errors, analyzing the human, organizational and technological influence on financial performance. The results suggest that in the first place there is the technological dimension, as it is significant in its two indicators in relation to financial performance. Second, there is the human, with two of two significant indicators. Finally, the organizational one, with one of three significant indicators in relation to the dependent variable. According to the hypotheses, technological capitals and the human capital establish a significant and positive effect with financial performance. However, intellectual capital, jointly, does strengthen finances. This work contributes, with empirical evidence, to establishing links between the different types of intangibles and financial performance, as well as helping to understand the drivers of financial performance and therefore a sustainable competitive advantage.

**Public spending, Public debt, Economic political cycle, Panel data**

**Resumen**

El endeudamiento componente del gasto público estatal en México, se encuadra en el ciclo político presupuestal (CPP) como parte de la teoría general del ciclo político económico (CEP). El objetivo de esta investigación fue analizar de manera retrospectiva, los determinantes del endeudamiento público de las entidades federativas de México en el periodo de 2012-2016. Lo cual permitirá conocer a los gobiernos de los diferentes estados, conocer las variables económicas que inciden en las decisiones electorales y mantener el poder. Las variables utilizadas fueron relativas a la información presupuestaria: gasto en inversión, gasto de inversión presupuestaria, transferencias de capital, producto interior bruto per cápita, autonomía financiera, ahorro bruto per cápita, demografía poblacional y año electoral. Para lo cual, se estimaron modelos autorregresivos extendidos que incorporan variables (dicótomas) electorales y se controlan mediante los efectos del ciclo económico. Los resultados muestran la presencia del CEP en el gasto público estatal, en el rubro de los gastos de capital, lo que permite explicar que el endeudamiento es un recurso que financia obra pública en los estados de México.

**Gasto público, Deuda pública, Ciclo político económico, Datos panel**

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* Correspondence to Author (email: omar_perez@ucol.mx)
† Researcher contributing as first author.

## Introduction

Financial performance is a key indicator of business performance, and one of the strategies to generate a competitive advantage (Manju, Kashiramka, & Jain, 2018). In this context, knowledge is an even more critical element than traditional resources such as tangible assets, to achieve sustainable competitive advantage (Amiri, Shirkavand, Chalak, & Rezaeei, 2017). Intellectual capital (CI) integrates the intangible assets of companies, helping them compare their performance and the achievement of sustainable success (Dinh, Kang, Morris, & Schultze, 2018). This research considers three aspects of intellectual capital: human, organizational and technological, each with its own characteristics (Papageorgiadis, Xu, & Alexiou, 2019). For example, human capital refers to company personnel, who apply the knowledge, skills and abilities to develop work activities (Antoni, Maug, & Obernberger, 2019). Organizational capital refers to experience and tacit knowledge in the organization; It is presented in the form of manuals of procedures, processes, structures and databases with information about the company's operations (Sun & Xiolan, 2019). For its part, technological capital explains the degree of systematization of processes in the organization; it is expressed in the form of a PC, office equipment and other peripheral elements for the company's operations (Badinger, Egger, & von Ehrlich, 2019).

Although intellectual capital has been labeled as one of the factors that drive the success and competitiveness of the company, the existing literature has not been able to differentiate the direct influence between each of the different elements of intellectual capital in financial performance. (Sharabati, Nour, Shamari, Durra, & Moghrabi, 2016). According to Xu & Li (2019) the impact of intellectual capital on financial performance is a widely accepted relationship, however, there is still a need to expand the empirical evidence of this impact. For example, research on financial performance management has been oriented to different sizes (small and medium versus large companies), sectors (high technology versus low technology) and sources (income vs. indebtedness).

Each size, sector or source, has different contexts, and each of these studies leads to different results.

Thus, research on financial performance has not been consistent in the results regarding the impact of each component of intellectual capital (Shou, Prester, & Li, 2018). To expand the consistency of the results, Garanina & Dumay (2018) indicate that new research should be carried out that measures the impact of each element of intellectual capital, individually, on its contribution to financial performance.

Performance, however, financial performance has different results for the organization. For example, performance can lead to raising the quality of its products, expanding the company's activities or improving its competitiveness. So that the analysis of financial performance helps companies to reduce performance deficiencies and explore new market opportunities. This is critical for the separate understanding of the different elements of intellectual capital and its impact on financial performance. In this sense, Ginesti, Caldarelli & Zampella (2018) point out that this is critical for the following reasons: first, because it is necessary to know the different effects that the elements of intellectual capital cause in financial performance. Second, because financial performance strengthens sustainable competitive advantage; therefore, a better understanding is obtained on how companies capitalize and obtain sustainable competitive advantages. Therefore, this research analyzes separately the impact that each of the elements of intellectual capital has on the financial performance of companies in the tourism sector in Mexico.

## Literature Review

### Human capital

Of the elements that integrate intellectual capital, human capital is the most important because of its reference to the capitalization of the organization's knowledge. By integrating the skills, abilities and skills of its staff, it is essential to perform the other activities of the company (Overstreet, Skipper, Huscroft, Cherry, & Cooper, 2019). This capital includes management skills and entrepreneurial experiences, knowledge, academic levels, academic achievements, training, training, individual experience, age, as well as the household income related to the company (Badinger, Egger, & von Ehrlich, 2019).

The existing literature on human capital establishes different characteristics about it, all in accordance with the specific human capital of the person, and the specific human capital of the company, which can traditionally refer to the enrichment of knowledge and skills that are highly valued in a specific sector.

For example, in the case of the specific human capital of the person, some research has shown a positive association between the entrepreneur's human capital and the knowledge related to the company and its level of success (Ma, Zhu, Meng, & Teng, 2019). Regarding the specific human capital of the company, this is the result of years of work, building specific skills and abilities learned by the work done in a particular company or business sector, and is applicable to a wide range of companies and industries. Thus, the efficient use of these skills and abilities of the staff, results in the generation of competitive advantages (Liu, Chang, & Fang, 2019).

Different investigations have identified the association between the specific human capital of the company and its economic growth (Pelinescu, 2015). It is also suggested that this capital becomes more important for industrial innovation when the main actors in that industry are inclined to exchange knowledge (Buenechea-Elberdin, Sáenz, & Kianto, 2018). This specific knowledge of the business sector is often of a tangible nature, therefore it is easy to identify for the specialists in the sector.

Therefore, this research focuses on the specific human capital of the company, which focuses on the individual knowledge, skills and abilities that are carried out in it. This capital is traceable to a specific spectrum of companies and industrial sectors (Osei, Agyapong, & Owusu Kwateng, 2019). According to Felli & Harris (2018), the distinctive indicators of this entrepreneurial human capital are the creativity, intelligence and skills of employees, all of whom have developed as a product of their experience in certain positions and functions throughout Your career This capital contributes to the generation of new ideas and knowledge in their organizations and, consequently, to the generation of profits.

In this way, our work maintains that the specific human capital of the company enables the generation of income, since the most skilled and experienced employees are better prepared to face challenges and solve problems, which leads to developing sustainable competitive advantages (Osei, Agyapong, & Owusu Kwateng, 2019). Finally, here the specific human capital of the company is understood as those workers with specialized knowledge in the tourism sector, which allows them to capture knowledge, skills and abilities of the tourism industry to generate greater profits.

**Organizational capital**

Stucki & Wochner (2018) define organizational capital as the sum of repeated activities and behaviors in an organizational context. These activities are not entirely tangible, they also include intangibles that are created, codified and preserved per se. According to Kmieciak (2019) these activities are preserved in the form of procedural manuals, financial statements, organizational structures, databases, among other documents. In such a way, that anyone who has permission or interest in acquiring knowledge of the company can access this information. This organizational report contains historical information about the organization, which guarantees the availability of knowledge for proper decision making (Stucki & Wochner, 2018).

The organizational capital is maintained in the structures and processes of an organization, which strives to preserve, use and retrieve the information of the company, for which these entities need specific knowledge, skills and abilities to be able to integrate and generate the utilities (Lee, Kim, & Joshi, 2017). Werr & Runsten (2013) point out that, in order for this knowledge integration process to take place, it is necessary to store information and daily experiences, so that they are part of the daily reports of the organizational processes. By socializing all this collective knowledge, it becomes clear that the mistakes that have been incurred before, will no longer be repeated, and managers will be in more favorable conditions to capitalize on this knowledge.

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When organizational capital is conceived as an organizational memory, it is more understandable to use this capital as another resource to mobilize knowledge in the organization, which persists even when people no longer collaborate in the organization. Thus, in this work organizational capital is understood as the set of tangible elements such as machinery, real estate and transport equipment; as well as the intangibles involved in repeated activities and behaviors in an organizational context.

**Technological capital**

It is commonly based on the idea that organizations have limited resources from which they establish their competition strategies, while the missing resources are acquired from external, subcontracted and technology transfer providers. However, with the simple acquisition of technology one falls into a unilateral process, where the knowledge generated by this commercial relationship is wasted. When requesting a specific service or product, the supplier acquires in tangible or intangible forms, knowledge and learning, which constitutes a transfer of technological capital (Kum-Sik & Anchor, 2017).

Thus, recent literature demonstrates that commercial exchange is one of the transfer paths for knowledge and technology. This transfer between countries represents an advantage for the more developed economies, since having greater economic capital, they have the capacity to acquire better technology and, consequently, to progress technologically. In this way, the acquisition of knowledge is exemplified with a wide range of materials, devices, peripherals and equipment that induce technological progress through the improvement of productive efficiency (Villasalero, 2014). In this regard, Wang, Su, Wang & Zou (2019) and Tovar & Tavares (2015), show that by incorporating the best quality technological products in the productive systems of the host country, they impact on one of the indicators of productive efficiency at the level country, which is the total factor productivity (TFP).

It is through the transmission of technology from the most advanced countries that trade occurs between nations and increases growth in less developed countries (Garechana, Rio-Belver, Zarrabeitia, & Alvarez-Meaza, 2019).

However, according to Hye-Young (2018), these collateral benefits on the development of the recipient country are subject to their technological absorption capacity (Benini, 2016). In turn, this technological absorption capacity is related to the formation of specialized human capital of the recipient country (Jung & López-Baso, 2017).

When considering transfer as another element of technological capital, Wood, Coe & Wrigley (2016) highlight the role of multinationals in generating new knowledge for retail companies, which generate adaptable and multiscale strategies to respond to differences of national markets. In their research, the authors generate evidence of the influence exerted by foreign direct investment on the transfer of technological capital and the expansion of trade.

Thus, in this work, technological capital is understood as the set of office equipment (personal computers and desks; telephones, copiers, scanners, among others) and peripheral components (accessories and performance improvement equipment), involved in the activities in a technological context.

**Financial performance**

All private companies arise to generate economic value (Kum-Sik & Anchor, 2017). These companies are characterized by limitations in their resources and by making decisions for the allocation of these resources cautiously. Having sufficient resources (especially financial resources) is vital for companies, since the application of these resources must be maximized for operations and the achievement of the organization's objectives (Kogan, Papanikolaou, Seru, & Stoffman, 2017). However, empirical evidence on financial performance in hotel organizations is scarce.

Financial performance is a key indicator for the success of an organization, since its proper management is essential for the financial health of the company and for maintaining the competitive advantage in the market (Prawitz & Cohart, 2016). However, the current literature shows dispersed, inconsistent results that are generalized by particularities of size or productive sector (Sardo & Serrasqueiro, 2018).

Thus, some authors suggest that financial performance is positively associated with intellectual capital, because finances mitigate the ups and downs of the market and strengthen competitive advantage (Xu & Li, 2019) and (Sardo & Serrasqueiro, 2018). On the other hand, other authors explain that financial performance maintains a moderating effect with operating costs and with the increase and decrease of sales in the medium and long term, which makes it difficult to adjust intellectual capital to maintain adaptation to the challenges posed by the market (Argilés-Bosch, García-Blandón, Ravenda, Valencia-Silva, & Somoza, 2017). Thus, the inconsistency and dispersion of the results demand greater empirical evidence to show the internal relations between the mediating effects of intellectual capital and financial performance (Carnes, Xu, Sirmon & Karadag, 2019).

That is why the following hypotheses were established:

H1: Intellectual capital has a significant and positive effect on financial performance.

As explained above, the IC includes three components: technological capital, human capital and organizational capital. Because there can be different significant effects on each of the three components of the IC, it was interesting to analyze the effect of each of these elements separately. Such an analysis would increase the power of explanation of the conceptual framework. Therefore, the following hypotheses were raised:

H2: Human capital has a significant and positive effect on financial performance.

H3: Organizational capital has a significant and positive effect on financial performance.

H4: Technological capital has a significant and positive effect on financial performance.

**Methodology**

To test the hypotheses raised in this work, this research gathered information about the companies involved in the hotel industry in Mexico.

The information was obtained from the 2009 and 2014 economic censuses of the National Institute of Geography and Statistics (INEGI); This of the tourism sector, with information on hotel activities in the 32 states of the Mexican Republic.

The continuous growth of this sector in Mexico and its high competition drive this economic sector to seek financial efficiency. Thus, hotel companies tend to develop new strategies to seek a sustainable competitive advantage. These strategies arise from the application of existing knowledge in the industry, and on other occasions, they are completely new strategies in the market.

The data analysis of the relationship between intellectual capital and financial performance was carried out incorporating data from more than 300 thousand establishments dedicated to hotels. This sector, like others in the Mexican economy, is made up of 80% of small and medium-sized companies (SMEs) of the existing hotel offer in Mexico (Benítez, 2016). Thus, the research analysis units were SMEs that actively participate in the hotel industry and have at least constant returns on activities in this sector. This methodological strategy is consistent with other studies such as those of Pérez and Barragán (2018), and those of Rivera, Rivera and Reducindo (2016).

**Measurements**

Intellectual capital: human, organizational and technological.

The independent variable of intellectual capital is composed of three factors: human, organizational and technological capital. This research integrates these three factors of the intellectual capital of labor by Sardo & Serrasqueiro (2018). Human capital was measured by the number of administrative employees and the total number of staff employed in the hotels. These indicators reflect the amount of staff that the hotel sector has as a potential value of the organization's skills and knowledge. Organizational capital was measured through machinery and production equipment, real estate and transportation equipment units. Finally, technological capital includes office equipment and peripheral components.

Estimation model.

As a first step for the estimation of the econometric model, the presence of endogeneity was identified, for which the panel data methodology was applied, because the information analyzed was obtained transversally (in the 32 states of Mexico), as well as longitudinal (from 2009 and 2014).

In this way, the estimates are more reliable by having more observations, as well as a longer period of time.

For this purpose, the fixed effects (EF) and random effects (EA) models were applied to model the individual character of each state in the country. In this way, the applied model identifies financial performance as a strategic factor in the concept of intellectual capital, in addition to being correlated with the competitiveness of companies in the identified states. As independent variables, human capital (administrative employees and employed personnel of the hotel sector) were specified; organizational capital (machinery, real estate and transport equipment) and technological capital (office equipment and peripheral components). Thus, the linear equation of the model was as follows:

$$Rend_{Fin_{it}} = \alpha + \beta_1 empl_{admin_{it}} + \beta_2\, person_{ocup_{it}} + \beta_3\, maq\_eq\_prod_{it} + \beta_4\, bien\_inm_{it} + \beta_5\, uni\_eq\_trans_{it} + \beta_6\, equi\_of_{it} + \beta_7\, comp\_perif_{it} + \varepsilon_i$$

for i = 1,…, 2 and t = 2009,…, 2014 for all states.

Given the above, the standard error estimates corrected for panel (EECP) were applied.

## Results

The first hypothesis seeks to estimate the influence of human capital on financial performance. Table 1 shows the significance of the relationships found.

| Dependent variable | EEPC Model | |
|---|---|---|
| Financial Performance | Coefficient | Standard Error |
| Busy staff | 363.7042 * | 119.0669 |
| Machinery and production equipment | 1.65171 * | .4537879 |
| Constant | 1.09 | 1.80 |
| R- square | 0.9627 | |
| Observations | 64 | |
| Chi-square | 0.0000 | |
| Note: * significant at 1%; ** significant at 5%; *** significant at 10%. | | |

**Table 1** EEPC model of human capital and financial performance
*Source: self made*

From the previous table it can be seen that only human capital (employed personnel) and organizational capital (machinery and production equipment), maintain a significant and positive relationship in relation to the dependent. This partially complies with hypothesis 1, which sought to estimate the effect of IC on financial performance.

To perform a more robust analysis, we also sought to estimate the individual impact of the factors of intellectual capital on financial performance, so each factor was analyzed separately. All estimates were made with financial performance as a dependent variable. The first element estimate was that of human capital, and the results are shown in Table 2.

| Dependent variable | EEPC Model | |
|---|---|---|
| Financial Performance | Coefficient | Standard Error |
| Busy staff | 5377.597* | 532.9904 |
| Administrative employees | 121.6726*** | 75.7777 |
| **Constant** | 1.09 | 1.80 |
| **R- square** | 0.9433 | |
| **Observations** | 64 | |
| **Chi-square** | 0.0000 | |
| Note: * significant at 1%; ** significant at 5%; *** significant at 10%. | | |

**Table 2** EEPC model of intelectual capital and financial performance
*Source: self made*

The results show that the significant and positive trend variable was that of administrative employees. The employed staff found themselves at the 10% limit, also with a positive trend.

This explains that not only the staff that integrates the economic units of the hotel sector contributes to financial performance, but, the ones that contribute the most are the staff with administrative functions. This is due to the fact that the control of the resources exercised by administrative employees allows greater efficiency in financial performance. With this, hypothesis 2 is accepted. The second estimate was made with the organizational capital, and the results are shown in Table 3.

| **Dependent variable** | **EEPC Model** | |
|---|---|---|
| Financial Performance | Coefficient | Standard Error |
| Machinery and production equipment | 3.6265* | .6179 |
| Property | -.3681 | .4625 |
| Transportation Equipment Units | .3415 | .4904 |
| **Constant** | 5.74 * | 1.65 |
| **R- square** | 0.9317 | |
| **Observations** | 64 | |
| **Chi-square** | 0.0000 | |
| Note: * significant at 1%; ** significant at 5%; *** significant at 10%. | | |

**Table 3** EEPC model of organizational capital and financial performance
*Source: self made*

The results expose a significant and positive relationship between machinery, production equipment and financial performance. This is explained because the installed capacity to produce or serve (Gosende, 2016), in the specific case of tourism performance, positively influences finances. It does not happen in the same way with the variables of real estate or with the transport units, which are not related to the dependent. This partially assumes hypothesis 3. The third estimate was made with technological capital and the results are shown in Table 4.

| **Dependent variable** | **EEPC Model** | |
|---|---|---|
| Financial Performance | Coefficient | Standard Error |
| Office team | -18.6213 | 6.3712 |
| Peripheral components | 50.9787 | 16.8793 |
| **Constant** | 1.97 | 5.63 |
| **R- square** | 0.0619 | |
| **Observations** | 64 | |
| **Chi-square** | 0.0098 | |
| Note: * significant at 1%; ** significant at 5%; *** significant at 10%. | | |

**Table 4** EEPC model of technological capital and financial performance
*Source: self made*

This capital showed significant relationships between peripheral components, office equipment and financial performance. The peripheral components have a significant and positive relationship, which is explained because any accessory or equipment linked to the PC, generates greater financial performance. For example, scanners, printers, monitors, USB's, wireless chargers, mouse, keyboard, headphones, bluetooth, among other devices, are examples of this.

In the case of office equipment, the relationship is significant, but negative. This is explained because real estate is not significant in productivity, because digital businesses allow the reduction of operating costs, the efficiency of the processes and therefore the financial performance. Companies like Amazon, Airbnb, Uber, among others, do not need office equipment to develop their operations. The development of applications and software management allows these digital companies to reduce costs, be efficient and increase their financial performance. With this, hypothesis 4 is accepted.

## Conclusions

In recent decades, most companies have sought to identify and measure these assets, classifying them into different types of intellectual capital. However, the investigation of this capital has received little attention from academics. Due to this growing interest in the digital economy and knowledge management in the tourism industry, this research was oriented to the study of intangible assets in the tourism sector.

The analysis of the intellectual capital and the elements that integrate it, are projected as an exploration field for researchers and businessmen, since the results presented here show a significant relationship between this capital and the performance of companies, as was the case with The restaurant industry in Mexico.

This article contributes to generate empirical evidence in the analysis of intellectual capital on business performance, the results of this research partially support the fact that IC is an important strategic asset for financial performance.

The empirical results support hypotheses 2 and 4 on human and technological capital, respectively, only by verifying partial relations between organizational capital and financial performance. In this way, the human-technology interaction is evidenced as a sustainable competitive advantage for small and medium enterprises in the tourism sector in Mexico.

It is important to highlight that this research, particularly at the country level, did not seek to generalize the results obtained here, however, they can be considered as the basis for future research on the measurement of financial performance in the tourism industry.

From a business perspective, tourism managers are recommended to look at the analysis of intellectual capital and its influence on financial performance. Regarding the educational perspective, it is suggested that higher education institutions strengthen their training processes for the tourism industry with the purpose of increasing their presence and competitiveness in said industry, ensuring that human capital acquires the intangible elements demanded by this sector. Likewise, it is beneficial to address the human factor as an important element of the competitiveness of the tourism industry.

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Article
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# Sustainability the remittances received in Puebla and Guerrero, Mexico

# Sostenibilidad de las remesas recibidas en puebla y Guerrero, Mexico

HARO-ZEA, Karla Liliana†* & CONTRERAS-ALCÁNTARA, Karla

*Benemérita Universidad Autónoma de Puebla*

ID 1st Author: *Karla Liliana, Haro-Zea* / **ORC ID:** 0000-0002-7257-0673, **Researcher ID Thomson**: F-2404-2018**, CVU CONACYT ID:** 375380, **SNI CONACYT ID:** 68081

ID 1st Coauthor: *Karla, Contreras-Alcántara*

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**Abstract**

The purpose of this research is to study if there is sustainable development from remittances sent to families in Puebla and Guerrero, Mexico; since remittances represent a fundamental income for families in places with high migratory intensity, hence the importance of carrying out this research. In this research, income from remittances received by families from Puebla and Guerrero was studied, as well as the difference with respect to gender and place of origin. It is an exploratory, descriptive, explanatory and transversal research. The sample was not probabilistic by 50 people in each state, so the sample is a total of 100 people. To collect the data, an instrument was applied to measure the impact of the news received, its use and benefit. The results showed that 33% of relatives of migrants based in the United States of America managed to start a business based on remittances received in Puebla and Guerrero, and there was a greater entrepreneurial spirit on the part of women. Therefore, it can be said that for Mexican migrants and their families, a route to sustainability is the sending of remittances through investment.

**Sustainability, Migration, Entrepreneurship**

**Resumen**

Esta investigación tuvo como propósito estudiar si existe sostenibilidad a partir de las remesas enviadas a familias de Puebla y Guerrero, México; toda vez que las remesas representan un ingreso fundamental para las familias en localidades de alta intensidad migratoria, de ahí la importancia de llevar a cabo esta investigación. En el estudio se consideraron como ingreso las remesas percibidas por familias poblanas y guerrerenses, así como también se analizan las diferencias respecto al género y lugar de origen. Es una investigación de tipo exploratoria, descriptiva, explicativa y transversal. La muestra fue no probabilística por cuotas de 50 personas en cada estado, por lo que la muestra es un total de 100 personas. Para la recolección de los datos se aplicó una encuesta para medir el impacto de las remesas recibidas, su uso y beneficio. Los resultados mostraron que, el 33% de los familiares de migrantes radicados en Estados Unidos de América logró emprender un negocio a partir de las remesas recibidas en Puebla y Guerrero, existiendo mayor emprendimiento por parte de las mujeres. Por lo que se puede decir que para los migrantes mexicanos y sus familiares, una ruta hacia la sostenibilidad es el envío de remesas vía inversión.

**Sostenibilidad, Migración, Emprendimiento**

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* Correspondence to Author (email: kharozea@gmail.com)
† Researcher contributing as first author.

## Introduction

This study carried out an analysis on the economic sustainability of families living in Puebla and Guerrero, who receive remittances from the United States of America (USA), due to the importance of our country as a recipient of remittances. According to data from the migration and remittances yearbook published in 2017, Mexico ranked fourth in the world for remittances received with 4.8%. Said remittances sent to Mexico reached their historical maximum when reaching 26,970 million dollars in 2016, which represented a growth of 8.8% at annual rate. At the state level in 2016, 1,463 million dollars entered Puebla and 1,372 million dollars to Guerrero through remittances (Ministry of the Interior, National Population Council, & BBVA Bancomer Foundation, 2017, p. 124).

The Pew Research Center (2018) stated that the presence of Latin American migrants in the United States is so significant that, together with their descendants born in that country, they constitute the largest minority ethnic group, reaching a figure of 56.5 million people in 2018 (Pew Research Center, 2018, p. 1).

This study is mainly focused on remittances that originate in the United States because it is the country of origin of 94.75% of remittances that arrive in Mexico, followed by Canada with 1.2% (Economic Information System, 2017, p. 1). Of the total remittances, most are sent by electronic transfer (97.8%) and 64.7% are paid in Mexico through non-banking institutions (Ministry of the Interior, National Population Council, & BBVA Bancomer Foundation, 2017, p. 124 ). Among the Mexican migrant population residing in the United States, seven out of ten are economically active and among the activities in which they work in the US, they are mainly construction (17.7%), hospitality and recreation (15.3%) and services professionals and administrative (13.0%) (Ministry of the Interior, National Population Council, & BBVA Bancomer Foundation, 2017, page 58). In 2016, six out of ten Mexican migrants in the US worked between 35 and 44 hours a week and with this, nearly half of Mexicans had an annual salary between 10 and 30 thousand dollars (Ministry of the Interior, National Population Council, & BBVA Bancomer Foundation, 2017, page 58).

It is important to carry out a comparative study between the states of Guerrero and Puebla because both have similarities in their rates of migration, marginalization, poverty and social backwardness; according to data from the National Council for the Evaluation of Social Development Policy (2016, p. 10). In this order of ideas, regarding the degree of social backwardness, Guerrero is in second place in the national context and Puebla in fifth place. Regarding the population that is in poverty, the State of Guerrero presents 64.4%. Of this percentage, 41.4% are in moderate poverty and 23.0% in extreme poverty. As for Puebla, 59.4% are in poverty, of which 50.4% are in moderate poverty and 9.0% in extreme poverty. This means that more than half of its population is in a situation of poverty (National Population Council, 2010). According to what was indicated by the National Population Council (2010, p. 25), Guerrero is one of the entities with a very high degree of marginalization with 19.2% of the national total. For its part, Puebla is one of the states that is in a high degree of marginalization with 10.9% compared to the total national population.

The Migration and Remittances Yearbook (2017) specifies that in what refers to returned migrants; Guerrero and Puebla are in fourth and sixth place respectively, which generates a decrease in remittances sent to high-intensity migratory towns. Considering these data, it is important to analyze whether migrant families have made investments from remittances during their stay in the US. Likewise, evaluating how they have impacted both the family economy and local development, since the possibility of ceasing to receive remittances is high due to the restrictive policy of the US government (Ministry of the Interior, National Population Council, & BBVA Bancomer Foundation, 2017, pages 157 and 166).

It should be noted that of the migrants returned in 2015 only 61% are working as follows: 56% as employees or workers, 22.2% as self-employed workers, 8.1% as day laborers or laborers and 4.3% as employers or employers. It is noteworthy that only 4.3% of returned Mexicans generate business and therefore jobs upon their return (Ministry of the Interior, National Population Council, & BBVA Bancomer Foundation, 2017, page 92).

A flow of 90 thousand men and 32 thousand women who returned to Mexico was estimated (National Institute of Statistics and Geography & Secretariat of Labor and Social Welfare, 2016, p. 1).

Derived from the above, this research is organized as follows: The literary review addresses sustainable development, economic sustainability, and sustainability from remittances in Puebla and Guerrero, explains the methodology, and then presents results and conclusions.

## Theoretical framework

### a) Sustainable development

It should be emphasized that the Commission for Environment and Development (WCED) adopted the term "Sustainable Development" as an informative concept in its report Our Common Future (World Commission on Environment and Development, 1987, p. 406).

Meanwhile, Pearce & Turner (1990) refers to sustainability as "maximizing the net benefits of economic development, subject to maintaining services and the quality of natural resources over time." The concept of sustainable development was described by the World Commission on Environment and Development report, Bruntland, 1987 as "development that meets current needs without compromising the ability of future generations to meet their own needs" (Organization of the United Nations for Education, Science and Culture, 2018, p. 6).

Therefore, sustainable development must keep balance in three basic dimensions: the social, the economic and the ecological or environmental, which would allow to fulfill the ethical and social purpose of development, and with a more efficient disposition and management of resources. , where social planning and the appropriate use of environmental resources would be applied (Haro-Martínez & Taddei-Bringas, 2014, p. 746). In this order of ideas, sustainability is the ability to achieve sustained economic prosperity over time, while protecting the planet's natural systems and providing a high quality of life for people (Calvente, 2007, p. 3).

In a sense, Van & Lebel's (2006, p. 448) approach points out that sustainable development is the process of ensuring that all people can achieve their aspirations while maintaining the critical ecological and biophysical conditions that are essential for our collective survival.

Similarly, Prugh, Robert & Herman (2000, p. 196). They propose a strong democracy based on the premise that the common good is greater than the sum of individual interests. Sustainability can be promoted through broader popular political participation, with dialogue at the community level.

From the above, it follows that sustainability does not only apply to natural resources. For a business to be sustainable it has to be economically sound, otherwise it is impossible to continue operations (Clegg, 2014, p. 15). In the words of Aguilar & Recaman, (2013, p. 129) the economic dimension of sustainability includes the entire set of human activities related to the production, distribution, consumption of goods and services. By contrast, Clark (1995, p. 227) stated that the evidence around us clearly indicates that people involved in economic development activities at the local, national and global levels are either indifferent or ignorant of the concept of sustainable development.

### b) Economic sustainability from remittances

The concept of sustainability became fashionable in the 1960s due to the rise of environmentalists, who gave priority to caring for the environment (Mokate, 2001).

Importantly, development also became, for a few decades, a hot topic in academic circles around the world: backward countries became underdeveloped, then less developed, and finally developing countries (Sachs, 2009, p. 8). At that starting point, economic growth served as an indicator of development. Then other dimensions were gradually added to the concept, leading to a litany of adjectives: economic, social, cultural, territorial, and, last but not least, political (Sachs, 2009, p. 8).

It is worth mentioning that the concept of sustainable development described above by the report of the World Commission on Environment and Development; it translates easily into economic terms: an increase in current well-being should not result in a reduction in well-being tomorrow (Barbier, 2016, p. 3). Consequently, today's economic development must ensure that future generations are no worse off than current generations. Or, as some economists put it in a nutshell, per capita welfare should not decline over time (Pezzey, 1989).

For Madero-Gómez & Zárate-Solís (2016, p. 14), economic sustainability, seen from a business aspect, is directly related to the investment capacity of a country or a certain region in sustainability projects, in addition, economic growth depends largely on it, for this reason it is important to know the strengths and weaknesses it is implying.

Likewise, in the macroeconomic debate, other criteria of economic sustainability are mentioned, such as innovation (Rennings, 2000), competitive advantage (Porter, 2016, p. 20); while criteria such as inflation or trade imbalances are politically important, but they are almost never in the context of sustainability in their broader perspective, as well as the need to balance different interests (Spangenberg, 2005, p. 49).

For his part, Coleman (1990) pointed out that an economic theory capable of addressing the challenge of sustainability must be based on weak comparability and incommensurability, and must overcome logical misperceptions, which result from a fairly static understanding of systems, in place of dynamics.

Interestingly, according to Sudhir & Amartya (2000) the development process requires an emphasis on what people get from development, not just what they put into it.

For the case that addresses us, economic sustainability is analyzed from the sending of remittances by Mexican migrants from the US to Mexico and the way in which these economic resources are invested.

Thus, remittances have become a flow of foreign currency that has reached a relative importance for the national economy, since it constitutes one of the main items in the line of current transfers in the balance of payments and represents a significant contribution of resources in specific sectors of regional and local economies. (De la Rosa Mendoza, Romero Amayo, & Pérez Servín, 2006).

Likewise, remittances represent a fairly stable income, unlike the resources received from the sale of oil and foreign direct investment, which have greater variations (De la Rosa Mendoza, Romero Amayo, & Pérez Servín, 2006). Remittances show a notoriously growing trend and have ended up surpassing income from tourism and agricultural exports (De la Rosa Mendoza, Romero Amayo, & Pérez Servín, 2006).

Although remittances are not sent for productive investment, they generate a movement in the local economy, first because these family units have a greater consumption of goods such as clothing, food, and the education of children outside the communities; The construction of houses requires materials, labor and services (López-Toxqui, Peña-Olvera, Méndez-Espinoza, Escobedo-Garrido, & Martínez-Saldaña, 2011).

For this reason, Paulson & Singer (2000) used information from Mexican migrants residing in the United States to prove that migrants with a greater probability of returning to Mexico save more due to the anticipated future decline in earnings. In fact, they tested the permanent income hypothesis and claim to have found the hypothesis to be valid as long as the migrant is above a "subsistence" threshold (Paulson & Singer, 2000, p. 5). Likewise, Haro-Zea (2018, p. 113) found that a third of the remittances sent to the State of Guanajuato were invested in the footwear industry, this confirms that there is an impact on said industry and therefore on local development. of the State.

**c) Receipt of remittances in Puebla and Guerrero**

Remittances have a strong impact in the receiving states, as is the case of Puebla and Guerrero, Mexico.

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The migration generated by population flows that move from their country of origin to another in search of better employment opportunities, causes at least two positive externalities in the sending country: it allows an important entry of remittances in favor of ascending and descending relatives of the immigrant, with positive effects on the family microeconomy (increased purchasing power of the beneficiary households); and in the country's macroeconomics (design of productive projects in the expelling communities); and it relaxes the existing pressures in the labor market, by demanding labor that cannot be used in the expelling country due to the precarious economic activity (Reyes Tépach & Morales Robles, 2015, p. 40).

It should be noted that Puebla has 217 municipalities of which, according to Banco de México data, 90 of them are not remittance recipients. Among the states that received the most remittances in 2017, Puebla is in fifth place with 1,559.28 million dollars. The municipalities with the highest incomes for this concept are Puebla, Atlixco and Tehuacán since they receive 412.10, 124.8, 96.22 million dollars respectively. (Banco de México, Sistema de Información Económica, 2017, p. 1), and has a 3.2% share in the national Gross Domestic Product (GDP) (National Institute of Statistics and Geography, 2010, p. 1). For his part, Guerrero is in seventh place with 1,424.33 million dollars received. Among the municipalities with the largest number of remittances received in 2017 are Acapulco de Juárez with 180.08 million dollars, followed by Tlapa de Comonfort with 147.55 million dollars and thirdly Iguala de la Independencia with 118.86 million dollars (Banco de México, Economic Information System, 2017, page 1). While Guerrero has a 1.5% participation in the national GDP. (National Institute of Statistics and Geography, 2010, p. 1).

Additionally, according to data from the research carried out by López-Toxqui, Peña-Olvera, Méndez-Espinoza, Escobedo-Garrido, and Martínez-Saldaña (2011, p. 207), in the region of Puebla and Veracruz, the needs covered by the Remittances were mainly of the basic type - food and clothing. After covering them, an amount of the remittances was directed to the purchase of land, construction of houses and acquisition of cars.

Shipments are also made in kind, such as clothing, which are not quantified but are important in the social reproduction of family units. It is through remittances in money and shipments in kind that the receiving families have a very important means of subsistence.

Consequently, the impact of income from collective remittances translates into basic infrastructure and service works in the communities of origin of Guerrero, while the impact of family remittances mainly affects the family within the people of Guerrero. For migrants, contributing resources for the benefit of their places of origin demonstrates their love for their land and the desire to maintain ties with their people. Their actions lack double claims (Díaz Garay & Juárez Gutiérrez, 2006, p. 129).

In sum, once a family begins receiving remittances, they can stop or reduce their work time in Mexico, they do so only to supplement household income, but it depends largely on money sent from the United States. Once remittances begin to flow in significant quantities along with gifts for children to compensate for the absence of the parent or both parents, the family experiences an increase in their standard of living and expectations and gets used to wearing American clothes and shoes that increase spending. So what started as a socially available strategy for family income diversification often ends in permanent or long-term migration, since once the family increases its level of spending it is difficult to return and maintain that standard of living with everyone. family members in Mexico (Castañeda, 2004).

In this regard, a migratory destination that calls the attention of the people of Guerrero is New York and according to (Castañeda, 2004) the migration from Guerrero to New York is seen by the migrants themselves as temporary and basically as an available strategy used by the male heads of families to increase family capital as proposed by the new economic theory of migration. Migrants plan to go to the US for a few years and save money, build a house, buy a taxi, or open a small business. But because their expenses in New York are high, their incomes are relatively low, and since their family depends on their remittances to survive, they have little money to save (Castañeda, 2004).

In the words of García Gómez, Peláez Herreros, and Fuentes Flores (2015, p. 185), the migratory tradition of a region favors the allocation of a greater proportion of remittances to business investment, for two reasons: the greater age of migrants and the consolidation of institutions. In the case of Mexico, there are businesses as varied as: shoe workshop, shoe factory, jam factory, carpentry, greenhouse, gardening, corner store, tortilla shop, restaurant, party room, aesthetics, among others. By gender, there is a greater tendency for men to own and for women to be lenders. Regarding the place of establishment of the business, those that correspond to owners are located in a much greater proportion in the United States; while those with the participation of partners and, especially, of lenders are located in Mexico. Many choose the option of acting as lenders, since they continue to reside in the United States and are not interested in having their own business in Mexico, since they cannot serve it (García Gómez, Peláez Herreros, & Fuentes Flores, 2015). Based on the aforementioned concepts, the purpose of this research work is to evaluate whether remittances sent from the United States of America by migrants to their relatives in Mexico, support the economic sustainability of both families and the locality.

## Methodology

This research is quantitative, descriptive, explanatory and transversal. For this research, a sample was selected for convenience to meet certain criteria. The instrument was applied to a non-probability sample by quotas of 50 people, 100 relatives of migrants were surveyed, 50 of them in Puebla, Mexico and 50 in Guerrero, Mexico, who met two criteria, which are: having migrant relatives in United States of America and receive remittances. The data was collected from January 1 to February 28, 2018 directly through a survey. It is important to mention that a form in Google Docs was used for the coding and the SPSS statistics 23 software was used for its analysis. Also, to carry out a more detailed analysis of the investment made in Puebla and Guerrero from remittances, Table 4 is excluding respondents who have received remittances for less than 4 years, assuming that during this time, families prioritize the payment of debts and the payment of basic services, in the same way those who They mentioned that they do not invest, but they do save in the bank.

It is worth mentioning that Puebla receives 5.4% of remittances from the country and Guerrero receives 5.2% of remittances from the country (Banco de México, Sistema de Información Económica, 2018, p. 1), which are located within the first ten states with high rates of receipt of remittances. The samples were taken in two states with the objective of evaluating if there are significant differences in the impact of remittances in two states with a migratory tradition and if there is economic sustainability in families from them.

For this research, the destination of remittances was taken into account as the dependent variable, since it is based on this to study the use that is made of the income received by this concept, either for expenditure or investment and as an independent variable, The economic sustainability of migrant families in Puebla and Guerrero is defined, since from this variable we study whether there is sustainable development through the creation of family businesses.

## Results

### a) Demographic data of the sample

60% of the total population are women and 40% are men. 29% of the people surveyed are in the range of 26 to 35 years, 20% are between 15 to 25 years, 19% from 46 to 55 years, 18% from 36 to 45 years, 10% from 56 to 65 years and only 4% of the surveyed population are older than 65 years.

Regarding marital status, married people are the majority within the surveyed community with 35%, followed by people who live in a free union with 29%, 23% are single, in lower percentages are people who were widowed with 6% , those who separated from their partners with 5% and the divorced with 2%.

It is noteworthy that of the total number of people surveyed, 66% are heads of the family and 21% of the sample speak some type of indigenous language and only 47% of the population can speak and write in Spanish, 49% report that they know little , and 4% do not know.

31% of those surveyed have a secondary school, 27% have a high school education, 18% have finished primary school, 10% have a technical education, 7% have a bachelor's degree and another 7% have no education at all.

### b) Contribution to family income

In 54% of households two people contribute, in 30% only one person contributes, 10% three people, in 5% of households four people contribute and in 1% five people contribute.

### c) Economic sustainability from remittances

Below are the global indicators, that is, they correspond to an average between Puebla and Guerrero.

- Average income in Mexico.

As for the average income per family member, 25% said they earn between 300 and 500 pesos a week, 8% between 501 and 700, 15% earn from 701 to 1,000 pesos, 5% from 1001 to 1500, 3% from 1501 As of 2000, 8% obtained more than 2,000 pesos, and 36% did not respond.

- Remittances received.

20% say they receive from 1000 to 3000 pesos, 16% from 3001 to 5000, 4% from 5001 to 7000, 16% from 7001 to 10000, 6% from 10001 to 13000, 7% receive from 13001 to 15000, 5% of 15001 to 18000 another 5% receive from 18000 to 20,000, 1% receive from 20001 to 23000, another 1% from 230001 to 25000 pesos and 3% receive from 25001 to 30,000 monthly. In these results, it should be noted that 16% of the surveyed population preferred not to answer this question due to fear or mistrust of the use of information.

- How many benefit

Overall, 28% of the surveyed population says that only two people benefit from remittances, 18% indicate that it benefits three, 12% one person, 8% four people, 7% five people, another 7 % to six people, 6% to seven, 2% to eight, 1% to 12 people and 11% did not answer the number of beneficiaries. With these results, it can be deduced that most remittances reach small families or that the received transfers do not benefit more people.

### Comparative analysis (Puebla vs Guerrero)

| | Guerrero Frequency | Percentage | Puebla Frequency | Percentage |
|---|---|---|---|---|
| Men | 3 | 23.0 | 8 | 40.0 |
| Women | 10 | 77.0 | 12 | 60.0 |
| Total | 13 | 100.0 | 20 | 100.0 |

**Table 1** Business entrepreneurship by relatives of migrants

Table 1 shows the frequency with which the relatives of migrants carry out ventures, plus the percentage does not refer to the amount invested. Source: self made.

It is worth mentioning that Table 1 shows a notable difference in the state of Guerrero since people who dare to start a business represent 26% of the population surveyed in Guerrero, who are mostly women with 77%, while that the men who do it represent 23%. In Puebla 40% of the surveyed population is an entrepreneur and within these 40% are men and 60% women.

| What do you use the money for | Guerrero Frequency | Percentage | Puebla Frequency | Percentage |
|---|---|---|---|---|
| Feeding | 2 | 4.0 | 8 | 16.0 |
| Food and health | 2 | 4.0 | 10 | 20.0 |
| Food; Health; Education | 14 | 28.0 | 18 | 36.0 |
| Miscellaneous expenses | 17 | 34.0 | 3 | 6.0 |
| Miscellaneous expenses and payment of debts | 7 | 14.0 | 3 | 6.0 |
| Debt payment | 1 | 2.0 | 1 | 2.0 |
| Did not answer | 7 | 14.0 | 7 | 14.0 |
| Total | 50 | 100.0 | 50 | 100.0 |

**Table 2** Comparison of the expense of remittances

Table 2, represents the way in which the part of remittances that are destined to spending is distributed, since both the respondents in Guerrero and Puebla, have not clearly identified the percentage of remittances that are destined to spending. Source: self made.

In Table 2, we observe that 14% in Guerrero did not respond and the same percentage did not do so in Puebla, in both states 2% of the sample used their remittances to pay debts. In Guerrero, 14% is used for various expenses and debt payments, and in the state of Puebla, 6% use it in this same area, 34% in Guerrero and 6% in Puebla, they use it for various expenses, among which, in addition to food , health and education are transportation, clothing and appliances. For the heading of food, health and education; Guerrero and Puebla allocate 28% and 36% respectively. In Guerrero, 4% use it for food and health, while in Puebla it is 20%. And finally, what is used only for food represents 4% for Guerrero and 16% for Puebla.

In this regard, the migration and remittances yearbook (2016) indicates that the two main reasons why women and men send remittances to Mexico are food, clothing and debt payment. Compared to men, women indicate that a higher percentage of remittances they send goes to health, while men have priority for business and investment. Likewise, in a study carried out in the northern region of the state of Guerrero by (Díaz Garay & Juárez Gutiérrez, 2006, p. 127) of the total family remittances received, 91% is destined to the basic needs of the home, food and health , mainly; to a lesser extent, clothing and footwear, as well as home improvement. 4.5% goes to savings with the idea of spending more in the future and another 4.5% goes to invest in some business, generally miscellaneous. Regarding the impact that remittances have had on the family economy, 59% of those surveyed stated that they had improved their quality of life thanks to these incomes, 27.5% mentioned that very little and 13.5% said that their standard of living remains the same (Díaz Garay & Juárez Gutiérrez, 2006, p. 128).

| Assets | Guerrero Frequency | Percentage | Puebla Frequency | Percentage |
|---|---|---|---|---|
| Own house | 25 | 50.0 | 18 | 36.0 |
| Own house and automobile | 6 | 12.0 | 16 | 32.0 |
| Car | 1 | 2.0 | 0 | 0.0 |
| Household items | 17 | 34.0 | 16 | 32.0 |
| Did not answer | 1 | 2.0 | 0 | 0.0 |
| Total | 50 | 100.0 | 50 | 100.0 |

**Table 3** Comparative of the possession of goods

Table 3 represents the assets in which the relatives of migrants who receive remittances have invested in both Guerrero and Puebla, but does not imply an invested percentage. Source: self made

Table 3 shows a comparison of the states of Guerrero and Puebla in terms of possession of material assets, and we find that 50% of the sample in Guerrero have their own home and in Puebla 36%, complementing this we can note that in Guerrero 12% have their own house and car, while in Puebla 32% have it. As for the possession of household appliances, there is no significant difference since in Guerrero they represent 34% and in Puebla 32%, 2% of the Guerrero sample mentioned that they only have a car and another 2% did not respond.

| General analysis | Total in investments | | Real estate | | Business | | farming | |
|---|---|---|---|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| They receive from $ 4,000- $ 6,000 | 7 | 7.0 | 4 | 13.8 | 1 | 3.4 | 2 | 6.9 |
| Receive from $ 10,000- $ 30,000 | 14 | 14.0 | 8 | 27.6 | 4 | 13.8 | 2 | 6.9 |
| They did not respond the amount, but they invest | 8 | 8.0 | 8 | 27.6 | 0 | 0.0 | 0 | 0.0 |
| Total | 29 | 29.0 | 20 | 69.0 | 5 | 17.2 | 4 | 13.8 |

**Table 4** Investments based on the amount of remittances received

Table 4 seeks to show how remittance recipients invest, according to the amount received from the United States. Source: self made

Table 4 shows that of the people who receive from $ 4000 to $ 6000; 13.8% invest it in real estate, 3.4% in business and 6.9% in agriculture. Of those who receive from $ 10,000 to 30,000, 27% invest it in real estate, 13.8% in business, and 6.9% in agriculture. 27.6% of people did not answer the amount they receive, but they did mention that they invest it is in real estate.

Regarding investment, we can see that 29% of the total surveyed population mentions investing in one of the following items: real estate such as; house room, land or plots; business or agriculture, of this 29%; 16% correspond to Puebla and 13% to Guerrero.

| | Total in investments | | Real estate | | Deal | | farming | |
|---|---|---|---|---|---|---|---|---|
| Guerrero | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| They receive from $ 4,000- $ 6,000 | 5 | 10.0 | 4 | 30.8 | 1 | 7.7 | 0 | 0.0 |
| Receive from $ 10,000- $ 30,000 | 1 | 2.0 | 1 | 7.7 | 0 | 0.0 | 0 | 0.0 |
| They did not respond the amount, but they invest | 7 | 14.0 | 7 | 53.8 | 0 | 0.0 | 0 | 0.0 |
| Total | 13 | 26.0 | 12 | 92.3 | 1 | 7.7 | 0 | 0.0 |

**Table 5** Diversification of investments in Guerrero

Table 5 seeks to show how remittance recipients in Guerrero invest, according to the amount received from the United States. Source: self made.

Table 5 shows that 26% of the surveyed population in Guerrero mentioned investing. However, of the total number of respondents who invest, it stands out that nobody does it in the field, regardless of the amount they receive. Recipients of $ 4,000 to $ 6,000 separate their investment in real estate (30.8%) and business (7.7%).

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Recipients of $ 10,000 to $ 30,000 invest it in real estate and account for 7.7%. In these results, it is highlighted that 53.8% of those who invest do so in real estate but did not mention the amount of remittances they receive.

| | Total in investments | | Real estate | | Deal | | farming | |
|---|---|---|---|---|---|---|---|---|
| Puebla | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| They receive from $ 4,000- $ 6,000 | 2 | 4.0 | 0 | 0.0 | 0 | 0.0 | 2 | 12.5 |
| Receive from $ 10,000- $ 30,000 | 13 | 26.0 | 7 | 43.8 | 4 | 25.0 | 2 | 12.5 |
| They did not respond the amount, but they invest | 1 | 2.0 | 1 | 6.3 | 0 | 0.0 | 0 | 0.0 |
| Total | 16 | 32.0 | 8 | 50.0 | 4 | 25.0 | 4 | 25.0 |

**Table 6** Diversification of investments in Puebla

Table 5 seeks to show how remittance recipients in Puebla invest, according to the amount received from the United States. Source: self made

Table 6 details that 32% of the sample from the state of Puebla invests as follows: those who receive from $ 4,000 to $ 6,000 pesos per month represent 12.5% of the total and do so only in agriculture. Of those who receive from $ 10,000 to $ 30,000, 43.8% invest in real estate, 25% in business, and 12.5% in agriculture. Of the people who did not respond to the amount they receive on a monthly basis, 6.3% reported investing in real estate.

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## Conclusions

The majority of the population receiving remittances only reaches basic levels of education (59%), and some even have no academic training (7%), so it can be assumed that the majority did not have opportunities for academic improvement.

Regarding business entrepreneurship by the relatives of migrants, it should be noted that 33% of them manage to start a business (see Table 1). It highlights that women have more entrepreneurship in both states; Guerrero (60%) and Puebla (77%).

In this order of ideas, Puebla is at number 26 and Guerrero at number 32, both in income and expenditure by state with Urban-Rural characteristics (National Institute of Statistics and Geography, 2016).

Regarding the application of remittances destined to spending, it was found that 70% of the surveyed population in Guerrero use them for basic expenses such as: education, health and food, while in the state of Puebla it occupies 78% for them. purposes.

Contrary to this, we identify that even though not all remittance beneficiaries tend to invest, there is a higher percentage of investment in Puebla. For these purposes, the majority do so in real estate and others invest both in agriculture and in their own businesses, while Guerrero stands out for the investment in real estate purchases, minimal investment in business and no investment in agriculture, with a total in both states. 29% (see Table 4).

Well, it is true that the data generated in this research indicates that there is investment in different areas, but it is important to point out that of all the ways in which families usually invest their remittances, the creation of businesses, investment in real estate and agriculture These are the ones that could promote sustainable economic development in the municipalities with high migratory intensity in Puebla and Guerrero (see Table 2 and 4).

On the other hand, remittances sent to families in Puebla and Guerrero, Mexico, represent an outlet for the family economy; however, during the first years of receiving remittances they are used for spending and not for investment, so strategies designed to generate sustainable economic development in Mexico, they must first aim to close the inequality gaps in these states, that is, to positively impact the rates of poverty, extreme poverty and marginalization in which many families currently live in these states. It should be noted that among the main reasons for migration in the states under study are the high rates of poverty and marginalization in the living, Guerrero second place national level and Puebla fifth place nationally (National Population Council, 2010, p. 10).

Both in the literature review and in the present study, the results point out that migrants in the first years prioritize the payment of debts and cover basic services required by the family and in later years they allocate a part of remittances to investments that In the case of Puebla and Guerrero they are in agriculture, business and mainly in real estate. This is confirmed by Amuedo-Dorantes and Pozo (2002, p. 2), where they point out that remittances can be accumulated and transferred home to invest in physical capital by acquiring assets such as land, capital goods or housing. Alternatively, remittances can represent earnings sent altruistically to cover the daily consumption needs of the sender's home in the home country of origin.

As part of the limitations of the research work, we found the resistance of the respondents to respond and the fear of confidentiality of the data, this derived from the insecurity in the states under study. The aforementioned was more frequent in the state of Guerrero where a large percentage of the population that mentioned investing did not want to reveal the amount of remittances they receive. Also another difficulty encountered was the dialect because in the areas of migratory intensity there are still relatives of migrants who do not speak Spanish but Nahuatl, so they had to work with a translator.

Finally, for Mexican migrants living in the United States, one route to sustainability is the sending of remittances. Therefore, it is possible to affirm that in Puebla and Guerrero, remittances sent by migrants living in the United States to their relatives in Mexico, contribute to sustainability and economic development in states with high migratory intensity. However, it is only possible to see its effects after the families have managed to cover their basic needs and therefore have emerged from the poverty and marginalization that motivated migration.

Finally, it can be said that sustainability has to be a way of life, in such a way that if migrants invest a greater part of remittances and not only 50% as it turns out in the present study, this would impact more strongly on their quality. of life and opportunities for the next generations. In this regard, Aguilar Sanders & Recaman Mejía, (2013, p. 128) point out that a sustainable lifestyle is a part of the person's identity, social position, preferences in politics and the psychological demands of people.

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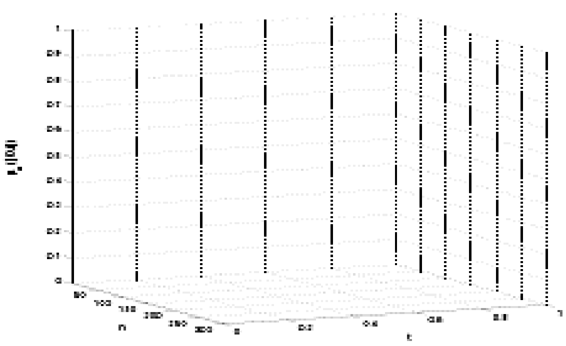

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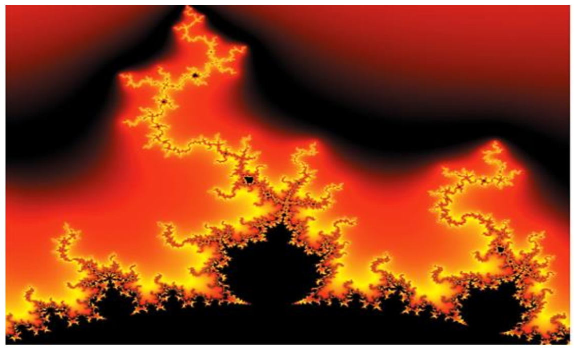

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