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RINOE Journal-Labor and Demographic economics

Definition of the Journal

Scientific Objectives

Support the international scientific community in its written production Science, Technology and Innovation in the Field of Social Sciences, in Subdisciplines of Demographic economics: Demographic trends and forecasts, Marriage, Marital dissolution, Family structure, Fertility, Family planning, Child care, Children, Youth, Economics of the elderly, Economics of minorities and races, Economics of gender, Value of life, Foregone income; Time allocation, Work behavior, Employment determination and creation: Labor force and employment, Size, and Structure, Time allocation and labor supply, Employment determination, Demand for labor, Self-employment, Human capital, Skills, Occupational choice, Labor productivity, Retirement, Retirement policies, Safety, Accidents, Industrial health, Job satisfaction, Related public policy; Wages, Compensation, and Labor costs: Wage level and structure, Wage differentials by skill, Training, Occupation, etc., Nonwage labor costs and benefits, Private pensions, Compensation packages, Payment methods; Particular labor markets: Contracts: Specific human capital, Matching models, Efficiency wage models, and Internal labor markets, Monopsony, Segmented labor markets, Agricultural labor markets, Professional labor markets and Occupations firm behavior, Public sector labor markets, Particular labor markets; Labor-Management relations, Trade unions, and Collective bargaining: Trade unions, Dispute resolution, Labor-Management relations, Industrial jurisprudence, Producer cooperatives, Labor managed firms; Mobility, Unemployment, and Vacancies: Geographic labor mobility, Immigrant workers, Occupational and intergenerational mobility, Turnover, Vacancies, Layoffs, Unemployment, Unemployment insurance, Severance Pay, Plant closings; Discrimination; Labor standards: National and International; Working conditions, Labor force composition, Workers' Rights.

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RINOE Journal-Labor and Demographic economics is a Journal edited by RINOE® in its Holding with repository in Bolivia, is a scientific publication arbitrated and indexed with semester periods. It supports a wide range of contents that are evaluated by academic peers by the Double-Blind method, around subjects related to the theory and practice of Demographic economics: Demographic trends and forecasts, Marriage, Marital dissolution, Family structure, Fertility, Family planning, Child care, Children, Youth, Economics of the elderly, Economics of minorities and races, Economics of gender, Value of life, Foregone income; Time allocation, Work behavior, Employment determination and creation: Labor force and employment, Size, and Structure, Time allocation and labor supply, Employment determination, Demand for labor, Self-employment, Human capital, Skills, Occupational choice, Labor productivity, Retirement, Retirement policies, Safety, Accidents, Industrial health, Job satisfaction, Related public policy; Wages, Compensation, and Labor costs: Wage level and structure, Wage differentials by skill, Training, Occupation, etc., Nonwage labor costs and benefits, Private pensions, Compensation packages, Payment methods; Particular labor markets: Contracts: Specific human capital, Matching models, Efficiency wage models, and Internal labor markets, Monopsony, Segmented labor markets, Agricultural labor markets.

Professional labor markets and Occupations firm behavior, Public sector labor markets, Particular labor markets; Labor-Management relations, Trade unions, and Collective bargaining: Trade unions, Dispute resolution, Labor-Management relations, Industrial jurisprudence, Producer cooperatives, Labor managed firms; Mobility, Unemployment, and Vacancies: Geographic labor mobility, Immigrant workers, Occupational and intergenerational mobility, Turnover, Vacancies, Layoffs, Unemployment, Unemployment insurance, Severance Pay, Plant closings; Discrimination; Labor standards: National and International; Working conditions, Labor force composition, Workers' Rights with diverse approaches and perspectives, That contribute to the diffusion of the development of Science Technology and Innovation that allow the arguments related to the decision making and influence in the formulation of international policies in the Field of Social Sciences. The editorial horizon of RINOE[®] extends beyond the academy and integrates other segments of research and analysis outside the scope, as long as they meet the requirements of rigorous argumentative and scientific, as well as addressing issues of general and current interest of the International Scientific Society.

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Instructions for Scientific, Technological and Innovation Publication

Knowledge Area

The works must be unpublished and refer to topics of Demographic economics: Demographic trends and forecasts, Marriage, Marital dissolution, Family structure, Fertility, Family planning, Child care, Children, Youth, Economics of the elderly, Economics of minorities and races, Economics of gender, Value of life, Foregone income; Time allocation, Work behavior, Employment determination and creation: Labor force and employment, Size, and Structure, Time allocation and labor supply, Employment determination, Demand for labor, Self-employment, Human capital, Skills, Occupational choice, Labor productivity, Retirement, Retirement policies, Safety, Accidents, Industrial health, Job satisfaction, Related public policy; Wages, Compensation, and Labor costs: Wage level and structure, Wage differentials by skill, Training, Occupation, etc., Nonwage labor costs and benefits, Private pensions, Compensation packages, Payment methods; Particular labor markets: Contracts: Specific

human capital, Matching models, Efficiency wage models, and Internal labor markets, Monopsony, Segmented labor markets, Agricultural labor markets, Professional labor markets and Occupations firm behavior, Public sector labor markets, Particular labor markets; Labor-Management relations, Trade unions, and Collective bargaining: Trade unions, Dispute resolution, Labor-Management relations, Industrial jurisprudence, Producer cooperatives, Labor managed firms; Mobility, Unemployment, and Vacancies: Geographic labor mobility, Immigrant workers, Occupational and intergenerational mobility, Turnover, Vacancies, Layoffs, Unemployment, Unemployment insurance, Severance Pay, Plant closings; Discrimination; Labor standards: National and International; Working conditions, Labor force composition, Workers' Rights and other topics related to Social Sciences.

Presentation of Content

As a first article we present, *Analysis of scientific production on Social Empowerment and Sustainable Development in the Social Sciences* by CRUZ-CABRERA, Blasa Celerina, RÍOS-CASTILLO, Maricela, ENRIQUEZ-VALENCIA, Raúl and GONZALES-TORRES, Xochitl, with adscription at the Instituto Tecnológico de Oaxaca, in the next article we present, *Proposal of a logistics model for a furniture manufacturing company in the municipality of Nacajuca, Tabasco, Mexico* by DE LEÓN-DE LOS SANTOS, Brissa Roxana, MOREJÓN-SÁNCHEZ, Juana María, ELISEO-DANTÉS, Hortensia and GARCÍA-REYES, David Antonio, with adscription at the Instituto Tecnológico de Villahermosa, in the next article we present, *Employment and COVID-19 in rural communities* by PÉREZ-CASTILLO, América Nohemi & JIMÉNEZ-GARCÍA, Martha, with adscription at the Instituto Politécnico Nacional, in the last article we present, *Rurality, tourism and strategic management for sustainability in the El Zapotal Restaurant-Spa, Tierra Colorada, Mexico* by NIÑO-GUTIÉRREZ, Naú Silverio, with adscription at the Universidad Autónoma de Guerrero.

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Analysis of scientific production on Social Empowerment and Sustainable Development in the Social Sciences**Análisis de la producción científica sobre Empoderamiento Social y Desarrollo Sostenible en Ciencias Sociales**

CRUZ-CABRERA, Blasa Celerina†, RÍOS-CASTILLO, Maricela*, ENRIQUEZ-VALENCIA, Raúl and GONZALES-TORRES, Xochitl

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Abstract

Sustainable Development is a process where the active participation of its members is essential to promote the proper management of their resources through the recognition of their territory, generating a balanced economic exchange. The emergence of social enterprises for the achievement of these objectives in the different territories, responds to social needs, mainly to reduce the gaps of social and economic inequality, therefore, generating development strategies in the processes of Social Empowerment in these communities is necessary for their development. The objective of this article is to analyze the scientific production of Social Empowerment and Sustainable Development, therefore, the proposed methodology responds to the statistical and mathematical analysis of production of the study variables.

Analysis, Empowerment, Sustainable**Resumen**

El Desarrollo Sostenible es un proceso donde la participación activa de sus miembros es indispensable para propiciar el manejo adecuado de sus recursos a través del reconocimiento de su territorio generando un intercambio económico equilibrado. El surgimiento de empresas sociales para el logro de estos objetivos en los diversos territorios, responde a las necesidades sociales, principalmente a disminuir las brechas de desigualdad social y económica, por lo tanto, generar estrategias de desarrollo en los procesos del Empoderamiento Social en dichas comunidades es necesario para su desarrollo. El objetivo del presente artículo es analizar la producción científica del Empoderamiento Social y el Desarrollo Sustentable, por lo tanto, la metodología propuesta responde al análisis estadístico y matemático de producción de las variables de estudio.

Análisis, Empoderamiento, Sostenible

Citation: CRUZ-CABRERA, Blasa Celerina, RÍOS-CASTILLO, Maricela, ENRIQUEZ-VALENCIA, Raúl and GONZALES-TORRES, Xochitl. Analysis of scientific production on Social Empowerment and Sustainable Development in the Social Sciences. Journal-Labor and Demographic economics. 2022. 6-11: 1-8

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Introduction

Following the publication of the Brundtland Report by the World Commission on Environment and Development in 1987, the concept of Sustainable Development was established as "that which meets the needs of the present without compromising the ability of future generations to meet their own needs". Subsequently, with the agreements proposed in Agenda 21, it was established that the creation of indicators on sustainability at spatial and temporal levels is indispensable.

Thus, in order to have greater knowledge of the sociocultural, economic, political, territorial and environmental reality of regions and communities, it is necessary and useful to build indicators with the participation of their inhabitants that allow measuring and analyzing the behavior of such variables and the interactions they generate. (Galván Martínez et al., 2016)

Sustainable Development (SD) occupies an important place in the role of communities as it is considered a process where the active participation of its inhabitants is indispensable for the common good, authors such as Velázquez-sánchez et al.(2017) refer that the integral relationship of the human being with nature represents an alternative of sustainability for the community, as long as the adaptation between development and communality is achieved.

In addition, it is recognized that sustainable development is consolidated as a tool to leverage the quality of life of people as they allow the implementation of public policies oriented to this (Herrera Ortiz & Zarco, 2022).

Hence, the importance of recognizing the capabilities, strengths and competencies of society as a fundamental way for the development and transformation of communities, Avelino et al. (2019) emphasizes that the importance generated by society when facing structural problems fosters innovation that provide immediate solutions to these.

Therefore, the participation of the community in the establishment of productive organizations that work in coalition for the improvement of the quality of life of the community and the design and implementation of development strategies translated into innovation, constitutes a process of teamwork; hence social enterprises, by their characteristics of constitution, guidelines and productive objectives, are economic units where people are organized preferably for the pursuit of a common good rather than profit and accumulation of individual capital.

Thus, Social Empowerment can be experienced by individuals alone or in groups, by organizations and by entire geographic communities (Silva & Loreto, 2004). In the present research, reference will be made to these three levels of organization, since an entire community is integrated to generate synergy in the search for a better quality of life.

Given the above, it is important to know the development and evolution of scientific productivity that frames the study of Social Empowerment and Sustainable Development, which aligned to the Development Goals of the 2030 Agenda represent the theoretical field for the analysis of community sustainability. Thus, in order to adequately shape the scientific frame of reference, the search for production that addresses Social Empowerment and Sustainable Development during the period from 1994 to 2022 is proposed.

The following research work is divided into the following sections:

Methodology. The following are identified:

1. Logical search indicators.
2. Determination of the search engine according to the results obtained.
3. Inclusion and exclusion criteria
4. Program and extension to be used

Results. It contains the following information:

1. Years with the highest scientific production.
2. Productivity by type of document
3. Productivity by area of study
4. Cooccurrence of topics addressed by authors
5. Citation of authors

6. Countries with the highest productivity
7. Funding organizations
8. Top 10, most cited articles

Methodology

The quantitative analysis of this research is carried out through bibliographic analysis in relation to the object of study (Meza Mejía et al., 2022).

Therefore, it starts with the identification of logical search operators (see Table 1), searches are performed in Scopus and Web Of Science (WOS) to determine the ideal search engine to obtain and refine the information.

Variable	Indicator	Scopus result	WoS Result
Empowerment	Empower*	124,803	75,017
Social Empowerment	Empower* social*	37,185	27,611
Development Development	Develop* sustainab*	191,191	389,133
Social empowerment and sustainable development	empower* social* and develop* sustain*	3,180	2143

Table 1 Logical search operators

Source of Consultation: Own elaboration based on integration and search criteria

We proceeded to filter the information (see Table 1.2) with emphasis on the social sciences, since this is part of the topic addressed, and to obtain a database that will be indispensable for using the VOSwier version 1.6.16 program and thus obtain the analysis of:

1. The years with the highest scientific production
2. Productivity by type of document
3. Productivity by area of study
4. Co occurrence of topics addressed by authors
5. Citation of authors
6. Countries with the highest productivity
7. Main financing entities
8. Top 10, most cited articles

Once the search engine has been identified, we proceed to filter according to the integration criteria, i.e., we will proceed to locate the scientific contributions in the field of Social Sciences, considering only articles, notes, reviews and letters, as shown in Table 2.

Criteria	Concept	Result
Exclude	Año 2023	3,178
Include	Review, Letter, note, article	2335
Include	Social Sciences	1204

Table 2 Filtering criteria

Source: Own elaboration based on exclusion and inclusion criteria

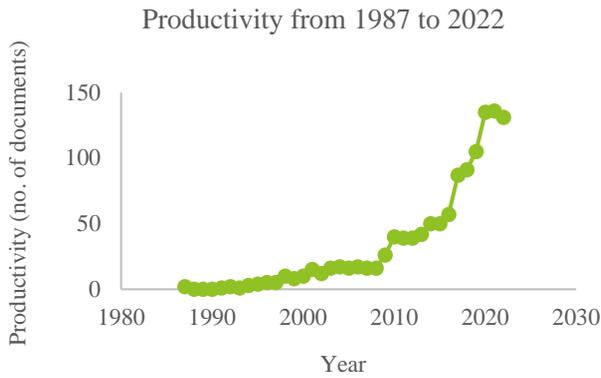
Once this result is obtained in the area corresponding to the social sciences, a database is generated in csv format in order to process it through the VOSvier program version 1.6.16.

In summary, the methodological part is based on the identification, search, filtering and obtaining of a series of indicators that are located in the body of the documents, the indicators referred to in Table 1.1, which allow the corresponding analysis to be carried out in order to obtain the results.

Results

According to the methodology used, the results obtained were as follows:

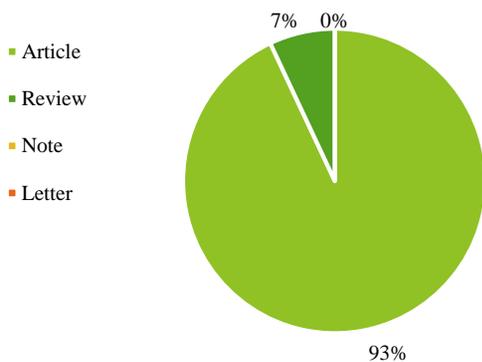
The first documents published in this database date from 1987, the efforts made by other researchers whose contribution to scientific knowledge on sustainability refer to the analysis of the creation of Non-Governmental Organizations (NGOs) in the framework of necessary public policies in territories wishing to implement a sustainable development model at community level (Brodhead, 1987). The second article analyzes the theory of social empowerment of community action, finding two variables, one related to social elements and the second to psychological elements that integrated exert a type of conditioning at the community level (Glidewell, 1987). Between 2000 and 2010 there was a considerable increase in scientific production as can be seen in Graph 1.



Graph 1 Productivity of Social Empowerment and Sustainable Development between 1987-2022
Source: Scopus, 2022

According to the information obtained, it can be said that from 2010 to 2020 the increase in scientific production in relation to these analyzed variables goes from 40 to 140 documents, i.e. an increase of 350 percent with respect to the previous decade.

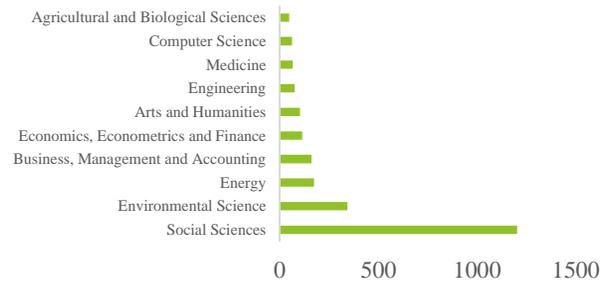
With regard to productivity by type of document, 93 percent is made up of articles, only .075 percent represents notes and .075 percent corresponds to letters (see Figure 2).



Graph 2 Productivity by document type
Source of reference: Scopus, 2022

With regard to productivity by area of study, the social sciences have a greater influence (with a total of 1204 documents) related to the indicators of Social Empowerment and Sustainable Development (See Graph 1.3), it is important to note that these indicators are closely related to other areas such as environmental sciences, business, economics and econometrics, finance, arts and humanities, medicine, computer science and biology-agriculture.

Documents by area of study



Graph 3 Productivity (documents) by area of study
Source: Scopus, 2022

Based on this information, we can state that the area of study related to the variables addressed is wide since each of these areas, although they have topics in common, each of them is analyzed from different perspectives.

The analysis of the co-occurrence of topics addressed by the various authors, points out six areas of study, the first and most representative with the topic of:

1. Empowerment
2. Sustainability
3. Humanities
4. Innovation
5. Society

Although there is a total of 5307 keywords, the program groups them according to the number of frequencies with which they are repeated (processed at 13 frequencies per word), therefore, there is a total of 424 entries represented in Figure 1.

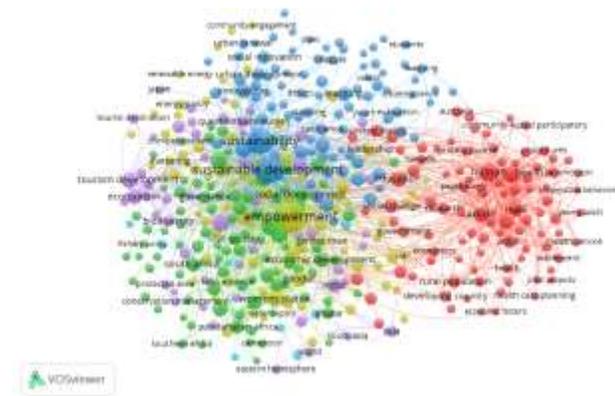


Figure 1 Co-occurrence of addressed topics
Source: Scopus, 2022, VOSwier program version 1.6.16

Identifying and relating each of these topics in the different areas undoubtedly represents a set of possible particular analyses that contribute to the generation of knowledge.

In the case of author citation, it is important to highlight that it is done according to the number of citation frequencies located in the body of the documents analyzed and processed.

Obtaining from the generated database a total of 69101 authors, whose citations have a range of 193 citations, the grouping is given as shown in Figure 2.

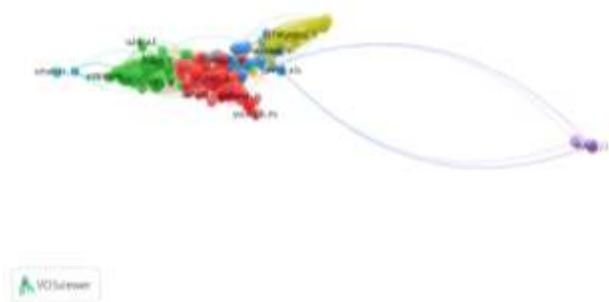


Figure 2 Co-citation of authors
Source of Consultation: Scopus, 2022. VOSwier program version 1.6.16

It should be mentioned that the filtering of the information referring to the co-citation of authors whose total result is 69101 whose frequency of repetition is processed 193 times, results in an approximate of 400 representative authors (see Figure 2). It is important to clarify that these authors are grouped according to the five areas analyzed and referred to in Figure 1.

Now, analyzing the countries that appear in the scientific productivity of the variables of Social Empowerment and Sustainable Development, we can begin by highlighting the number of productivity (greater than 200 documents) United States and United Kingdom, (less than 100 and greater than or equal to 50 documents) Australia, South Africa, Canada, Spain, Indonesia, (less than or equal to 20 documents) Nigeria, New Zealand, France, Pakistan, Portugal, Taiwan, Japan, Austria, South Korea, Denmark (see Figure 3).

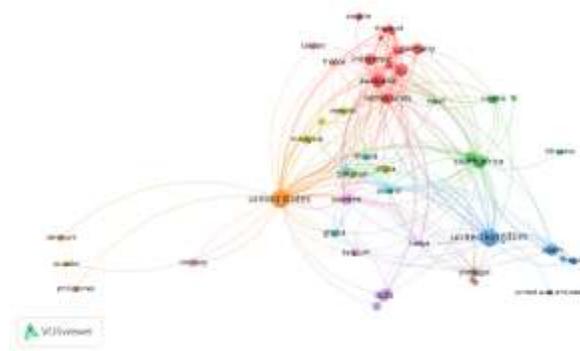
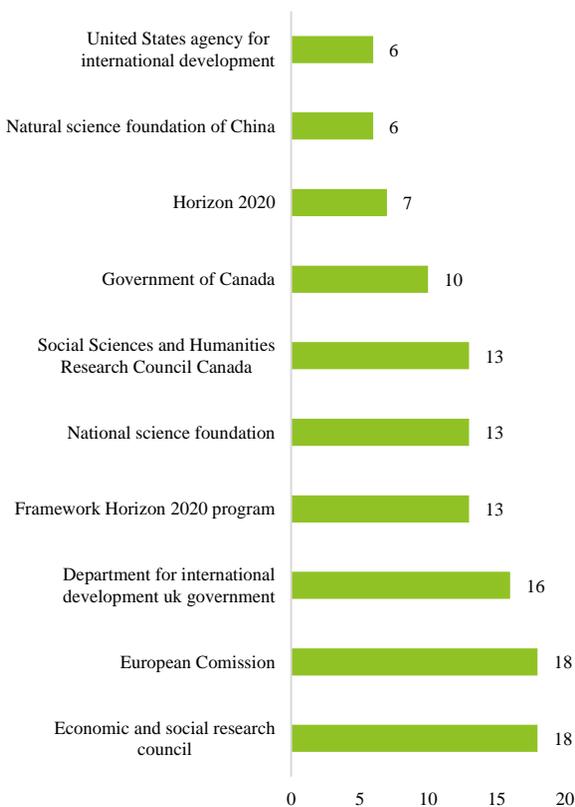


Figure 3 Countries with the highest productivity
Source of Consultation: Scopus, 2022. VOSwier program version 1.6.16

It is necessary to mention that there are funding organizations that help researchers to identify areas of opportunity for the development of scientific knowledge. According to the database generated from the search, a record of 2345 organizations is obtained, the frequency used for this analysis is 30 entries leaving a total of 390 organizations, for representation purposes the Top 10 of the main organizations is shown (see Graph 1.4).



Graph 4 Top 10, main financing organizations
Source of reference: Scopus, 2022

In the case of the most cited articles, Table 1.3 shows the most cited articles related to Social Empowerment and Sustainable Development.

CRUZ-CABRERA, Blasa Celerina, RÍOS-CASTILLO, Maricela, ENRIQUEZ-VALENCIA, Raúl and GONZALES-TORRES, Xochitl. Analysis of scientific production on Social Empowerment and Sustainable Development in the Social Sciences. Journal-Labor and Demographic economics. 2022

R	C	DN
1	(Santos, 2012)	A Positive Theory of Social Entrepreneurship
2	(Mansuri & Rao, 2004)	Community-based and -driven development: A critical review
3	(Lovell & Taylor, 2013)	Supplying urban ecosystem services through multifunctional green infrastructure in the United States
4	(Jana et al., 2004)	The Sonagachi Project: A sustainable community intervention program
5	(Raco, 2005)	Sustainable development, rolled-out neoliberalism and sustainable communities
6	(Brown, 2002)	Innovations for conservation and development
7	(Cammack, 2004)	What the World Bank means by poverty reduction, and why it matters
8	(Holland, 2004)	Diversity and connections in community gardens: A contribution to local sustainability.
9	(Gadema & Oglethorpe, 2011)	The use and usefulness of carbon labelling food: A policy perspective from a survey of UK supermarket shoppers
10	(Sin, 2010)	Who are we responsible to? Locals' tales of volunteer tourism

Table 3 Top 10, most cited articles

Source of reference: Own elaboration obtained from Scopus, 2022. R: rank, C: cite, DN: document name

While it is true that the analysis of scientific production is essential to determine the progress in knowledge generation, it is necessary to mention the interrelation between Social Empowerment and Sustainable Development, therefore, an analysis is made from the identified dimensions. The social dimension of Sustainable Development plays a decisive role in the participation and hybridization of knowledge by providing the community with the way to exercise their rights, Cardoso-Ruiz et al. (2016) describes these forms as participatory and community representation called democracy, in addition, it incorporates elements such as transparency and social control when shaping their ways of organizing themselves.

Up to this point it is important to refer to particular elements such is the case of the cultural and political-territorial dimension as marked by Toledo & Ortiz (2014) when they state that sustainable communities are those that identify a specific territorial demarcation where the group of people work under a cultural synergy that makes them part of an identity.

Thus, for all of the above, its relationship with Social Empowerment is close, when talking about society, its economic processes, the identification of its territory, the formation of social enterprises to address structural problems that the same current system has caused around the world. Faced with certain deficiencies and social inequalities, communities seek to face this series of challenges of the globalized world using Social Empowerment as a tool to combat poverty and inequality.

In this order of ideas, the analyzed levels of social empowerment, as pointed out by Zimmerman (2000, Apud Silva and Loreto, 2004), are: 1) The social aggregate. -social. - It is the one where organizations promote opportunities for people, serving as contexts to develop and exercise social power, 2) As a unit of analysis. - This implies the strengthening of the organization as a whole to achieve its social objectives. From this perspective, it is said that social enterprises are integrated for the good of their communities, as they have social objectives and their conformation addresses socioeconomic problems based on values.

Consequently, Villacrés Montesdeoca & Lascano Aimacaña, (2014) point out the importance of social enterprises, since they are subject to the conditions and demands of the capitalist market, where operational efficiency is a key element to ensure the benefit of their partners by establishing, capturing and placing productive assets that generate their profitability and with it, the capabilities translated into the empowerment of organizations and their members, i.e. to the Social Empowerment necessary to continue operating. It is important at this point to mention that the analyzed dimensions of Social Empowerment from a communal perspective are seen from two perspectives, namely communal is seen from two perspectives, a) as an empowering community and b) as an empowered community, in this regard, Silva & Loreto (2014) refer that this process is the result of the empowerment that has been achieved individually to work as part of a whole and with this, provide the entire community with the resources for all its members, therefore, including elements such as local processes for decision making includes a system of open government whose leadership is in favor of the same community.

Not leaving aside the innovation processes referred to by Avelino et al. (2019) when indicating that in the processes of Social Cobbling is shaped by organizations and networks working through initiatives that operate at the local scale.

Acknowledgements

To CONACYT for granting scholarships to PNPC graduate students and to the Tecnológico Nacional de México for funding the research project.

Conclusions

By focusing on the analysis of scientific production in the area of social sciences, it can be said that it is in an embryonic stage, therefore, future studies taking up the co-occurrences established within the search will contribute to the generation of new knowledge.

It is concluded that the search engine with the highest number of documents related to Social Empowerment and Sustainable Development is Scopus. The articles represent 93 percent of the documents that contribute to science, the values and results within the body of this research are data that rapidly changes according to the production of knowledge in the various areas of study. The areas of greatest analysis are: empowerment, sustainability, humanities, innovation and society.

The countries whose productivity is higher than 200 documents are the United States and the United Kingdom. The three representative organizations taken from the Top 10 indicated in the results are: Economic and Social Research Council, European Commission and Department for International Development, UK Government.

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Proposal of a logistics model for a furniture manufacturing company in the municipality of Nacajuca, Tabasco, Mexico

Propuesta de un modelo logístico de una empresa manufacturera de mobiliario, en el municipio de Nacajuca, Tabasco, México

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Abstract

It is a fact that strategic logistics helps an organization to understand, evaluate, control, optimize and develop operations with an integral approach, taking into account all the factors that influence both internally and externally the system, in order to increase competitive advantages, attracting and retaining customers and generating an increase in the economic benefits obtained from the marketing and production of goods and services, through the interaction of the activities of physical distribution, supply of raw materials, information management, response times, inventory level control, study of demand, customer service, etc. Therefore, in this work we intend to carry out a study in the business context with the objective of measuring the level of efficiency and effectiveness of its current logistics, by means of an instrument that allows visualizing the organization in an integral way, to later analyze and interpret the results and propose solutions, improvement projects or systems that improve the results obtained in the diagnosis.

Strategic logistics, Factors, Integral approach

Resumen

Es un hecho que la logística estratégica, ayuda a una organización a comprender, evaluar, controlar, optimizar y desarrollar operaciones con un enfoque integral, tomando en cuenta todos los factores que influyen tanto de manera interna como de manera externa en el sistema, con la finalidad de aumentar las ventajas competitivas, captando y reteniendo clientes y generando un incremento en los beneficios económicos obtenidos por la comercialización y producción de los bienes y servicios, mediante la interacción de las actividades de distribución física, aprovisionamiento de materias primas, manejo de información, tiempos de respuesta, control del nivel de inventarios, estudio de la demanda, servicio al cliente, etc. Por lo que en el presente trabajo se pretenden realizar un estudio en el contexto empresarial con el objetivo de medir el nivel de eficiencia y eficacia de su logística actual, mediante un instrumento que permita visualizar a la organización de manera integral, para posteriormente analizar e interpretar los resultados y proponer soluciones, proyectos de mejora o sistemas que mejoren los resultados obtenidos en el diagnóstico.

Logística estratégica, Factores, Enfoque integral

Citation: DE LEÓN-DE LOS SANTOS, Brissa Roxana, MOREJÓN-SÁNCHEZ, Juana María, ELISEO-DANTÉS, Hortensia and GARCÍA-REYES, David Antonio. Proposal of a logistics model for a furniture manufacturing company in the municipality of Nacajuca, Tabasco, Mexico. Journal-Labor and Demographic economic. 2022. 6-11: 9-14

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Introduction

For the purposes of the study, a furniture manufacturing company located in the municipality of Nacajuca, Tabasco is taken. Tabasco company with more than 30 years of experience in the architectural furniture manufacturing industry.

The organization to be studied belongs to the SMEs (as 99.8% of the establishments in Mexico according to the economic census conducted by INEGI in 2019) so it is interesting and attractive to conduct the present study, since its current logistics processes are not formally established or developed, which prevents projects from being carried out efficiently.

The following is the organization chart of the furniture company, which has 7 main areas or departments, after which the activities that are commonly performed in them are briefly described:

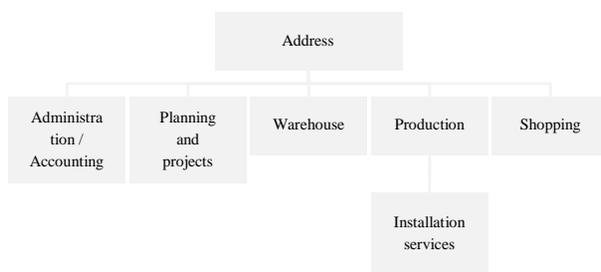


Figure 1 Organization chart of the furniture manufacturing company

Source: Author's perception

- Management: Activities that encompass all the rest of the organization, such as: Establishing company goals, exercising leadership, improving communication.
- Administration / Accounting: Functions such as resource planning (material, human and computer), organization, representation, accounting accountability.
- Planning and projects: Its main activity is to plan the activities to be carried out to carry out a project effectively. Planning labor, material and time required.
- Warehouse: Activities of reception, control, conservation, custody and dispatch of goods and products.

- Production: All activities for the manufacture of furniture, wood processing, assembling, varnishing, packaging, etc.
- Purchasing: Supplier analysis, purchase request, receipt of materials and supplies.
- Installation services: Product (furniture) installation activities.

Measurement of the organization

After knowing the main structure and the actors that make it up, the study starts by measuring the organization, where the current state of the organization is known, and thus, have a solid base from which to start and identify the key points that need help to significantly improve it.

In the present work a tool is designed to evaluate the current logistic state, this measurement instrument will allow to detect strategic points of which to pay more attention in order to subsequently propose improvement alternatives.

The instrument will be answered based on the Likert Scale, with the objective of evaluating the opinion and attitudes of the actors.

Measurement instrument

The following instrument will be answered based on the Likert scale, taking into account that:

- 1 = Never
- 2 = Almost never
- 3 = Sometimes
- 4 = Almost always
- 5 = Always

Survey to evaluate the logistics of the before						
N°	Questions	1	2	3	4	5
Top management						
1	How often do you hold meetings with other departments?					
2	Do departments wait for orders from top management before performing an activity?					
3	Are the links and relationships between departments clear and communicated?					
Administration and accounting						
4	Is the name and objectives of the project made known to senior management?					
5	How often are staff trained?					
6	Before starting a new project, is the accounting for the past period up to date?					
Planning and projects						
7	Is a master production plan carried out?					
8	Is software used to assist in project control?					
9	Are product designs accepted by customers from the start?					
Warehouse						
10	Are there any intelligent systems for product storage, such as ABC, FIFO, LIFO, etc.?					
11	Are personnel trained on the proper storage of chemicals?					
12	Is the most suitable space for the material to be placed in the warehouse created before the material is put into the warehouse?					
Production						
13	Before starting any project, are specifications such as project objective, delivery date, target audience, etc. communicated to them?					
14	Are tasks divided and assigned to personnel prior to the start of production?					
15	Is the material and machinery available just prior to the start of production operations?					
Installation services						
16	Are measurements taken, dimensions of the area where the installation will take place?					
17	Were adequate drawings provided for proper installation?					
18	Does the material or product arrive at the site in good condition?					
Purchasing						
19	Is the purchase order well executed?					
20	At least 2 supplier alternatives are available					
21	The purchasing manager has full autonomy over the orders.					
Total						
Percentage						

Table 1 Measuring instrument (Logistics before)
Source: Author's perception

Survey to evaluate the logistics of the during						
N°	Questions	1	2	3	4	5
Top management						
1	How often is production monitored when it is in process?					
2	Do you consider that the working day is used correctly?					
3	How often are meetings held with representatives from each area during the implementation of a project?					
Administration and accounting						
4	How well are resources optimized? Be they material, human and/or IT?					
5	Are purchases invoiced and debts paid in a timely manner?					
6	How well do you coordinate actions between departments?					
Planning and projects						
7	Is the project controlled by means of IT tools?					
8	Are design modifications made during project execution?					
9	The daily progress target is met.					
Warehouse						
10	The correct material handling device is used.					
11	Inventory is updated as products enter the warehouse.					
12	The requested material is distributed to production with sufficient time in advance.					
Production						
13	Are there any manufacturing systems that help create quality products such as Kanban, TPM, Lean Manufacturing, six sigma?					
14	They perform quality inspection during the processing of their products.					
15	They follow the production plan previously outlined.					
Installation services						
16	There are problems in the installation due to poor measurement of the furniture.					
17	The material and tools necessary for the installation are provided.					
18	How often an inspector's installation is monitored.					
Purchasing						
19	How much traceability do you have on the purchase?					
20	Is the time to receive the purchase adequate?					
21	A control is kept to determine when it is correct to make the purchase of materials					
Total						
Percentage						

Table 2 Measuring instrument (Logistics during)
Source: Author's perception

Survey to evaluate the logistics of the after						
N°	Questions	1	2	3	4	5
Top Management						
1	How often are meetings held with other departments or areas to recognize the efforts of employees after the completion of a project?					
2	The project is completed on schedule					
3	Does the organization perform process feedback to make known possible points of improvement?					
Administration And Accounting						
4	How likely is it that there are resources in excess of what was projected or forecast?					
5	The accounting at the end of the period is complied with in due time and form.					
6	Feedback and communication of possible improvements and processes carried out					
Planning And Projects						
7	Feedback and improvement of the planning process is provided after each project					
8	Is the project on schedule?					
Cenalma						
9	Material is requested to the purchasing area in advance.					
10	Do you feed back to improve the storage process?					
11	New alternatives for material handling devices are analyzed.					
Production						
12	Is the product or project delivered on time?					
13	There is feedback to improve manufacturing processes.					
14	Final quality inspection is performed.					
Installation Services						
15	The service was obtained according to the calendar and schedule that was established.					
16	A customer survey is conducted to evaluate the service and its quality.					
17	It provides feedback to improve installation service processes.					
Purchasing						
18	The packaging used completes purchases in an efficient manner.					
19	Purchases are confirmed upon delivery to the plant.					
20	Do you have inventory control and purchase history?					
Total						
Percentage						

Table 3 Measuring instrument (Logistics after)

Source: Author's perception

Description of the measurement procedure

Knowing that the objective of applying the instrument is to evaluate the company's current logistics, the procedure followed to achieve it is explained below:

1. Questions are formulated for each stage of logistics, taking into account that there are 3, logistics before, during and after.
2. 3 questions were asked to evaluate the before, 3 for the during and 3 for the after, this for each of the departments or areas of the company.
3. The instrument containing the questions analyzed and posed is integrated.
4. It is applied to the representatives of each area or department, which are 7 (Management, administration and accounting, planning and projects, warehouse, production, installation services and purchasing).
5. The responses are analyzed by means of Microsoft Forms, and then plotted in Microsoft Excel.

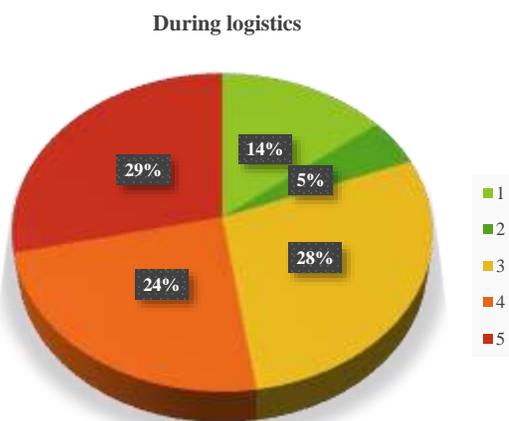
Results

After applying the survey to the representatives of each of the 7 areas and/or departments of the company, the answers are analyzed by means of Microsoft Excel software and the following results are obtained.



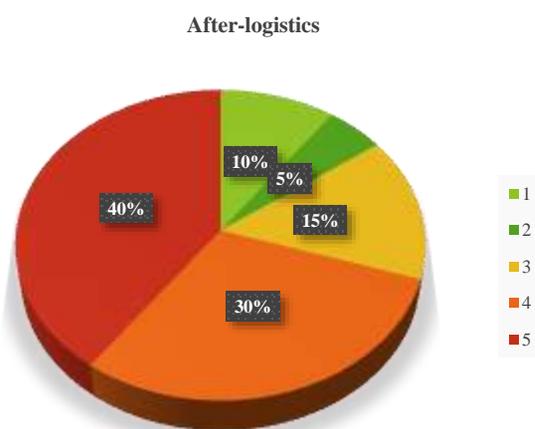
Graph 1 Percentages obtained after the instrument (Logistics of the before)

Source: Author's perception



Graph 2 Percentages obtained after the instrument (Logistics during)

Source: Author's perception



Graph 3 Percentages obtained after the instrument (after-logistics)

Source: Author's perception

Improvement proposal

The improvement proposals in the logistic aspect help to put in context what is intended to be achieved with it, giving rise to the improvement, which is why it is one of the most important parts when proposing.

For this reason, in order to improve the logistics applied to the company studied, the PDCA continuous improvement model was implemented.

Finally, once the current situation of the company has been evaluated, and the strategic points where it can be improved have been analyzed, a logistics improvement model is proposed in which the main objective is to create an integral, united logistics, where the synergy in the work can be noticed, in this way the biggest problem of the company, which is the lack of communication, could be reduced.

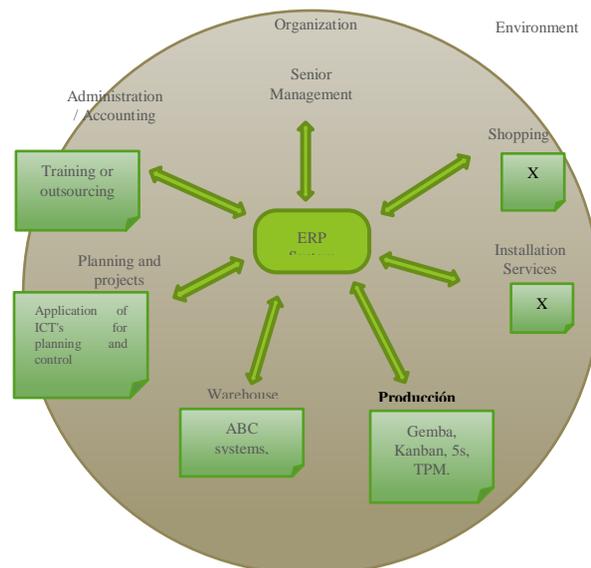


Figure 2 Proposed model for the improvement of integral logistics

Source: Author's perception

The model shows the new logistics system, which has a system) as a pillar for effective communication, addressing the main problem of the organization (lack of communication), since it is an Enterprise Resource Planning (ERP) system, a business software that allows a company to manage the efficient and effective use of resources (materials, human resources, finances, etc.), by providing a comprehensive and total solution to corporate information processing needs.

It should also be noted that ERP differs from other information technology systems because its implementations include technological, operational, administrative, strategic and organizational components.

Among the most important attributes is its ability to automate and integrate business processes within the company, share common data and practices across the enterprise, and produce and access information in a real-time environment.

Conclusions

We can highlight what we consider to be the key points of the work.

1. Whenever we seek to improve something, in any field, we must first verify that it is measurable.

2. There are multiple ways to evaluate the state of logistics in a company, the development of the questionnaire is one of the easiest to perform, however, it must be very precise when formulating the questions, so that the data obtained are as close to reality as possible.
3. The use of data processing tools such as Microsoft Excel and Microsoft Forms greatly streamlines the process of developing a project.
4. Improving logistics can be a complicated task if you do not have a good working team in your organization.
5. The implementation of Lean Manufacturing tools such as the 9s program, Kanban system, Gemba and others would greatly help the improvement process.

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Employment and COVID-19 in rural communities**Empleo y COVID-19 en comunidades rurales**

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Abstract

The objective of this research was to descriptively analyze employment, income and work performance in times of COVID-19 pandemic. The research was quantitative and descriptive, an analysis was conducted with a sample size of 300 employees residing in rural communities. In addition, a semi-structured survey with general and employment data sections was applied to collect the information. The fieldwork was conducted in the period from June to July 2022 in rural communities. The contribution is that it was an analysis of employment with emphasis on the loss of employment to people in rural communities. In the results it was found that the COVID-19 pandemic in Mexico in rural communities presented a 24% unemployment rate; likewise the monthly income of employees was affected by the pandemic, also the existence of support from the government was minimal in terms of employment.

Pandemic, Analysis, Rural**Resumen**

El objetivo de esta investigación fue analizar de forma descriptiva el empleo, el ingreso y su rendimiento laboral en tiempos de pandemia por COVID-19. La investigación fue de tipo cuantitativa y descriptiva, se realizó un análisis con un tamaño de muestra de 300 empleados que residen en comunidades rurales. Además, para recopilar la información se aplicó una encuesta semiestructurada con secciones de datos generales y de empleo. El trabajo de campo se realizó en el periodo de junio a julio del 2022 en comunidades rurales. La contribución es que fue un análisis del empleo con énfasis de la pérdida de empleo a personas de comunidades rurales. En los resultados se encontró que la pandemia por COVID-19 en México en comunidades rurales presentó un 24% de desempleo; de igual forma los ingresos mensuales de los empleados se vieron afectados por la pandemia, asimismo la existencia de apoyos fue mínima por parte del gobierno en cuanto a empleo.

Análisis, Pandemia, Rural

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Introduction

The COVID-19 pandemic caused health concerns worldwide (Olaimat et al., 2022). Due to its characteristics, containment measures were applied, such as: the use of masks, confinement, quarantine, social distancing, among others to avoid possible health risks (Lin et al., 2021). But rural communities rejected these care and prevention measures implemented by the government due to distrust (Muñoz Martínez, 2020).

The year 2020 became a turning point in everyone's life as the way we relate to each other inside and outside the workplace had to be modified (Costa & Castro, 2021). According to WHO (WHO, 2022), in Mexico, the number of accumulated deaths is currently 330,279 and the number of accumulated confirmed positive cases is 7,103,339.

The effects of COVID-19 in rural areas are more prominent due to the lack of health resources (Ruiz & Bombal, 2020). The Mexican government implemented COVID health centers and hospitals, but they are difficult to access for rural communities as they are located in cities (Muñoz Martínez, 2020).

Likewise, the labor world has been harmed (Lominchar, 2020), national and international trade was paralyzed (Sedano-Chiroque et al., 2020). In Mexico, the closure of non-essential businesses and companies (Ramirez et al., 2020) implied a high cost not only for workers but also for companies where they created unavoidable delays in processes (Larue, 2020).

The indigenous population was left unemployed since in Mexico they migrate to urban destinations where they occupy jobs and due to the pandemic this was impossible (Dahal et al., 2022). The hypothesis proposed is that the pandemic due to the covid-19 disease has generated labor-related effects in rural communities.

The objective was to descriptively analyze employment, income and labor performance in times of the COVID-19 pandemic. This paper presents literature related to employment in pandemic, labor performance in pandemic, as well as aspects of rural communities facing COVID-19, methodology, results, conclusions and references.

Pandemic Employment

During the COVID-19 pandemic, due to virus containment measures or also called non-pharmaceutical interventions (NPIs) such as closing businesses where social interactions take place, closing schools, ordering people to stay home, and banning large gatherings that involved reductions in economic activity, there is concern about the potential damage that NPIs could have caused to the economy and the labor market (Kong & Prinz, 2020). This has forced people to work from home (Jaspreet Singh, 2020), but in rural communities for employers the limited knowledge within workplaces on how to manage a partially or fully remote workforce is a barrier and for employees participation in remote work is almost zero (Davies, 2021). It is therefore important to analyze employment in rural communities in the face of a pandemic.

Job performance in pandemic

Isolation, duration of isolation, change in routine, particularly with less activity, and 3-5 people in the household, are associated with stress as a result of pandemic (Ramirez et al., 2020). In addition, many employees face extreme levels of work-related stress and anxiety due to COVID-19 (Kang et al., 2021).

On the other hand, high rates of depression, anxiety, fear, panic, anger and insomnia have been documented worldwide during the pandemic (Fiorillo et al., 2020) also worsening eating habits and sedentary lifestyle influenced seriously affecting health, employment and quality of life (Canello et al., 2020). Therefore, it is also important to minimize such stress.

Rural communities facing COVID-19

In rural communities there was a context of skepticism, so it was very common to hear the majority of the population say that the Coronavirus did not exist, that it was an invention of the government to keep them locked up; this caused people to have a perception of very low or no risk of the disease, which interfered in the practices of sanitary measures (FLORENTIN, 2020).

In addition, poverty in rural areas has historically been greater than in urban areas, which caused concern, since in the event of a positive case in the families of these communities, they would not have the necessary measures to isolate people with the COVID-19 virus, or the economic resources to receive timely medical care (Eisenkölbl Closs AR, 2021).

It should be added that the COVID-19 pandemic made clear the failures in the relationships between governments and rural communities, showing the governance gap that exists and continues to harm these communities (Iglesias-Osores et al., 2020).

Methodology

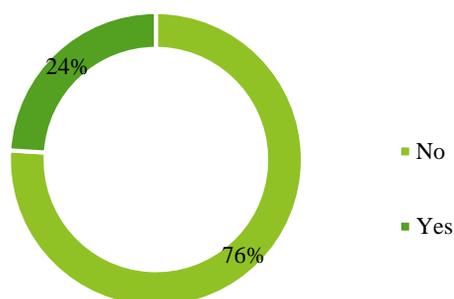
The research was quantitative and descriptive; an analysis of employment, income and labor performance in rural communities in Mexico was carried out.

A sample size of 300 employees was used.

A semi-structured survey was applied with a section of general data and another of employment and income in the COVID-19 pandemic in the period from June to July 2022. The survey was administered face-to-face to persons who were employed.

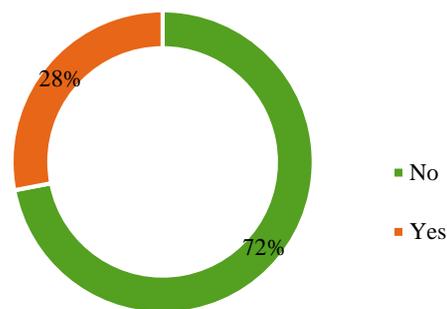
Results

Figure 1 shows that 24% of the employed lost their jobs due to the pandemic, while Figure 2 shows that 28% of the surveyed population lost their development opportunities in urban cities. lost their development opportunities in urban cities since they had to return to their rural communities of origin.



Graph 1 During the pandemic period did you lose your job?

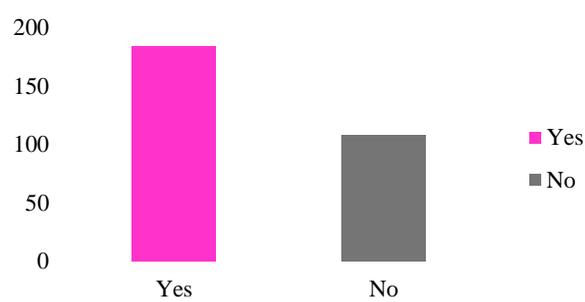
Source Own elaboration with survey data



Graph 2 Because of the pandemic, did you have to return to your community of origin?

Source Own elaboration with survey data

Graph 3 shows that most of them have seen their income, salary or monthly earnings decrease due to the pandemic, which has caused their work or academic performance to be affected as shown in Graph 4.



Graph 3 During the pandemic period did you reduce your monthly income level?

Source Own elaboration with survey data

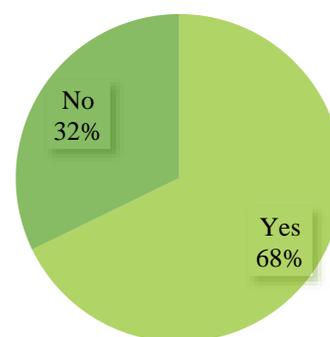


Figure 4 Do you consider that your work or academic performance has been affected by the pandemic?

Source: Own elaboration with survey data

Graph 5 indicates that the majority of the population in rural communities did not receive employment support from the government during the pandemic.

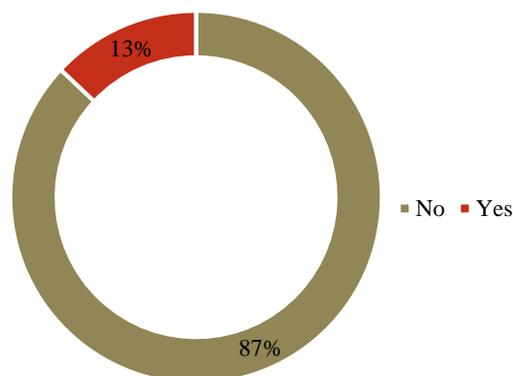


Figure 5 Does your community government provide employment support during the pandemic?"

Source Own elaboration with survey data

Acknowledgement

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Conclusions

With the analysis of the results presented it is concluded that: 1) The COVID-19 pandemic in Mexico presented 24% unemployment, 2) 28% of employees had to return to their rural community since they lost their jobs in urban communities, 3) The monthly income of employees was affected by the pandemic, 4) The pandemic also originated a low labor performance, 5) The government minimally supported employees with some support due to the pandemic.

Mexicans, as well as local, state, and federal governments, must work together with unprecedented efforts to dramatically change the course of this pandemic, which has already claimed thousands of vulnerable lives (Ibarra-Nava et al., 2020).

It is hoped that further quantitative research will be conducted in future research to predict the factors for higher labor productivity and employment in the face of any pandemic, perhaps with the inclusion of information technologies.

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Rurality, tourism and strategic management for sustainability in the El Zapotal Restaurant-Spa, Tierra Colorada, Mexico

Ruralidad, turismo y gestión estratégica para la sustentabilidad en el Restaurante-Balneario El Zapotal, Tierra Colorada, México

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Abstract

The global population faces the challenge of optimizing the positive actions they undertake in the elements of nature with the purpose of achieving sustainability in rural areas of the emerging countries of the world. Hence, the objective is to expose the tourist potential and management of the area under study a geographical approach. Methodology considered cabinet work for the selection of publications that address the topics: management, territory, tourism and sustainability, complemented with field work such as the three exploratory tours in the area of influence during the Easter holidays and summers of 2020-2022 at the El Zapotal Restaurant-Spa. The results were: *a)* optimal climate-water-soil-vegetation for the practice of national and international tourism; *b)* rational use of existing natural resources and *c)* the tourist experience is complemented by the existence of the Tehuacalco archeological zone, El Zoo Carry and Poza Pinta. Therefore, the conclusions were: 1) the elements of the environment are conserved; 2) regional tourist potential of the Restaurant-Spa El Zapotal and 3) it is important to formulate and apply a program for public use that allows greater dissemination of the site under study to increase the number of tourists who visit it.

Rurality, Sustainability, Tourism

Resumen

La población global afronta el reto de optimar las acciones positivas que emprenden en los elementos de la naturaleza con el propósito de alcanzar la sustentabilidad en sitios rurales de los países emergentes del mundo. De ahí que, el *objetivo* exponer la potencialidad turística y gestión del área en estudio bajo un enfoque geográfico. *Metodología* consideró trabajo de gabinete para la selección de las publicaciones que abordan los tópicos: gestión, territorio, turismo y sustentabilidad, complementado con trabajo de campo como los tres recorridos exploratorios en el área de influencia durante las vacaciones de semana santa y veranos del 2020-2022 en el Restaurante-Balneario El Zapotal. Los *resultados* fueron: *a)* clima-agua-suelo-vegetación óptimo para la práctica del turismo nacional e internacional; *b)* aprovechamiento racional de los recursos naturales existentes y *c)* la experiencia turística es complementada con la existencia de la zona arqueológica Tehuacalco, El Zoo-Carry y Poza Pinta. Por tanto, las *conclusiones* fueron: 1) Los elementos del medio ambiente se encuentran conservados; 2) potencialidad turística regional del restaurante-Balneario El Zapotal y 3) es importante la formulación y aplicación de un programa de uso público que permita mayor difusión del sitio para aumentar el número de turistas que lo visitan.

Ruralidad, Sustentabilidad, Turismo

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Introduction

The environmental paradigm, known as sustainable development and currently in vogue, is the result of the alteration of the elements of nature as a consequence of the economic development model based on fossil resources (IUCN-UNEP-WWF, 1980). Sustainable development applied at the local level, as in this case study, is where the best results are obtained, examples of which are observed in Colombia (Balanta, López and García, 2021); in Spain with the Natural Park "El Hondo" (Niño-Gutiérrez *et al.*, 2015); in insular spaces; in coastal areas such as the case of Bahías de Papanoa at the continental level in Guerrero.

In these times of pandemic crisis and at the socioeconomic level, the leaders of the tourism sector are fully convinced of the urgent participation of the people who make up the various sectors in the industry for the achievement of sustainable tourism with social responsibility in the context of crisis (Guma, 2022), where Mexico and its 32 states are examples of this, and where successful experiences can be seen throughout the national territory (INAFED, 2020). In the area of tourism, the three levels of government are increasingly closer to promote the optimal use of human talent in the different areas that influence economic interests. At the regional level, there are more and more successful cases of sustainable tourism products developed between Sector and local tourism management entities, who, in turn, have strengthened ties and created alliances with productive or potentially tourist communities such as the case under study (Government of the State of Guerrero-INEGI, 2017).

The Guerrero entity is multicultural where nature is also prodigal in climates, relief, hydrology and vegetation (INEGI, 2005). An example of this is also the municipality of Juan R. Escudero, which belongs to that federal entity. According to the National Institute of Statistics and Geography (INEGI) it is municipality 12039, located 260 meters above sea level (masl), northwest of the state capital, between the extreme geographic coordinates 17°01' 17" North Latitude and 17°15'08" South Latitude and between 99°18'27" East Longitude and 99°38'07" West Longitude with respect to the Greenwich meridian, altitude of 179 meters above sea level (masl), extension of 652.

It has an area of 652.6 km², which represents 1.02% of the state's total area and its municipal seat is Tierra Colorada. This municipality is bordered to the northeast by Quechultenango, to the north by Mochitlán, to the northwest by Chilpancingo de los Bravo, to the southeast by Tecoanapa, to the south by San Marcos and to the southwest by Acapulco de Juárez (INEGI, 2021).

The state of Guerrero is a multicultural entity where nature is also prodigal in climates, relief, hydrology and vegetation. An example of this is also the municipality of Juan R. Escudero, which belongs to this state (INEGI, 1998). The general objective of the essay is to expose the tourist potential and management of the area under study and as particular objectives: a) to explain the characteristics of the environment where the tourist product "El Zapotal Restaurant-Spa" is located and b) to contribute to the socioeconomic knowledge of the population involved in tourism in the area under study.

It is important to justify this research, since to date there are minimal publications that disseminate the landscape and tourism attributes of the study area, so this research is expected to contribute to the increase in the number of publications on the study site and thus contribute to the knowledge of this site (Google Earth, 2021). The integral parts of this essay include: introduction, methodology, results, conclusions and references.

Methodology

The methodological development has two implicit phases: the first one, through cabinet work comprised the reading and analysis of the published collection as well as the following activities: 1) Consultation of literature that is specialized in tourism and sustainable development; 2) Material complemented by promotional literature and research; 3) Search in different electronic libraries and statistical databases of the National Population Council and the National Institute of Geographic Statistics and Informatics, for example, the topographic chart of Acapulco E14C47 of 2005 in scale 1:50 000 of the National Institute of Statistics, Geography and Informatics (INEGI) and 4) Drafting of the text.

The second phase comprised field work that was carried out in September 2020, August 2021 and September 2022, where we had the opportunity to take photographs and observe *in situ*. The essay was carried out from a mixed geographical approach since it included the use of qualitative and quantitative techniques in an analytical and cross-sectional manner with emphasis on Tierra Colorada, Guerrero, Mexico.

Theoretical framework

The theory on which the research work is based is Morin's complexity, where he states that in order to find a solution to the problem it is through the analysis of various social, economic and environmental factors (Morin, 1991). The method of the work was based on the approach of the geography of tourism, through which it is possible to carry out an integral analysis of the elements of nature and their linkage with local socioeconomic indicators (Niño-Gutiérrez, 2021).

The approach to the geographies of tourism involves global phases: the first includes the literature and selection of printed and digital materials on tourism in the municipality of Juan R. Escudero, in addition to the search for statistical population information on the municipal capital known as Tierra Colorada, and the second phase that has to do with the analysis of documentary and statistical socioeconomic information that provides a greater dissemination of the characteristics of local nature.

The natural area where El Zapotal Restaurant-Spa is located boasts important attributes for planned ecotourism enjoyment, such as: Excellent climate, almost flat soils (SPP, 1981), diverse bodies of water, exuberant vegetation and abundant fauna that can be seen day and night. There are also excellent access routes, by land from Mexico City to the north and from the port of Acapulco to the south via the highway known as El Sol. Escudero (Figure 1). The town is located at an altitude of 100 meters above sea level, with a tropical climate and summer rains. The heaviest rainfall occurs in May and November, seasons in which there are even cyclones. All of this favors various agricultural activities in the rural zone of Omitlán, as well as in neighboring communities.

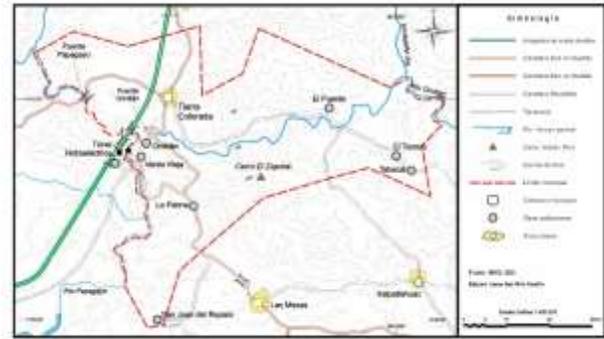


Figure 1. Geographical location
Source: INEGI, 2021

Conceptual framework

Sustainable tourism is the economic activity developed by the local population where the three pillars of sustainable development are addressed, which are: environmental, economic and social. In such a way that, the tourist exploitation lasts in space (Niño-Gutiérrez, 2018).

With sustainable tourism it is feasible to put into practice the Sustainable Development Goals approved at the Earth Summit held in Rio de Janeiro in 1992. This refers to the need for tourism to: i) ensure environmental protection; ii) contribute to the protection and conservation of planetary biodiversity; iii) ensure that local communities preserve their cultural heritage and values; and iv) to the extent possible, provide economic benefits to all stakeholders to reduce the number of people living in extreme poverty (UNDP-SEMARNAT-CONANP, 2013).

Tourism in general is an activity that combines several elements such as: information, actions and performances of the travel industry, indicators for economic development that serve as tools for government decision-making with data that support the proper use of tourism resources available at a given time and destination (Guerrero and Ramos, 2011).

The visitor (UNWTO, 2015), can go to El Zapotal Restaurant-Spa with the intention of enjoying the elements of nature (water-soil-vegetation), but in order to be considered as such, he/she must carry out a recreational activity of "public use" with the support of the existing infrastructure or equipment in the chosen destination, even if it is a totally contemplative activity related to the recreational and gastronomic space of El Zapotal Restaurant-Spa.

According to the above, the administration of El Zapotal Restaurant-Spa has classified visitors for statistical purposes into 40%, with individual visitors, the general public and organized groups, especially schoolchildren (Molina, 2007). The term "visitor" refers to the foreigner or resident who comes to the area of influence of El Zapotal Restaurant-Balneario (Contreras and Medina, 2021).

Tourists who visit El Zapotal Restaurant-Spa and stay at least one night in collective or private lodging. Residents are those people who live in the area of the restaurant and are potential recipients of the supply of tourist facilities, activities, services or providers of these. The local rural population considered as marginalized due to social backwardness and deficiencies in the components of the house-housing in general, refers to the residents of the Restaurant-Spa El Zapotal and is influenced by the tourist management developed by the owners of this recreational and gastronomic place (Fernando González Bernáldez Foundation, 2005).

Tourism-environmental management refers to the activities of restoration, monitoring and control of human activities in a given geographic space (Ceballos, 2006). Environmental management involves proper management of municipal solid waste (garbage) and reducing water consumption from the Cerro el Zapotal water table. The sustainable tourism management policy includes a commitment to comply with the guiding principles of current Mexican environmental legislation (LGEEPA, 1991) and communication to all people at the local and regional levels so that it is available to the general public.

Management must be permanently linked to owners, tourists, visitors, employees, municipal authorities and non-governmental organizations, in order to overcome the three stages of environmental tourism management: i) retrospective phase from 2000 to 2010; ii) reactive phase 2011 to 2020; and iii) active phase 2021 to 2030, where changes will be carried out among the various groups involved and mentioned above in order to design and implement appropriate strategies to build the current and immediate future scenario (SEMARNAP, 1996).

For the responsible management of a tourist destination such as the case under study, citizen participation is a key element. It is necessary to motivate the members of the Omitlán community to interact with national and foreign tourists so that they are incorporated into the development of the local landscape. It is only with effective participation (wanting+knowing+power) that actions can be undertaken that lead to true local development and not only of a sector of the private tourism business (Susano García, 2017).

In the study area, the participation of farmers, ejidatarios and communal farmers who can participate as operational personnel in the administration and management of the El Zapotal Restaurant-Spa is urgent. In order that, with the passage of time, it becomes a tourist case of social inclusion. Where the geographical location, its history, quiet rural landscapes, excellent climate, atmosphere, abundant wildlife and variety of nearby attractions, make the tourist potential of El Zapotal Restaurant-Spa a distinguished place (Facebook, 2021).

Ecotourism is understood as tourism where people (tourists) have contact with nature and their environment for their own use and enjoyment. Also, its practitioners have a high degree of ecological awareness and sustainability criteria, i.e., it pursues the purpose that ecological support prevails in the various social activities (Crespi and Planells, 2011).

Results

The main use of the Omitlán River is mainly for water catchment and even irrigation of rainfed crops, fishing for self-consumption and domestic use in accordance with the hydrological division of Mexico that places Guerrero as part of the Hydrological Regions RH18 (Balsas), RH19 (Costa Grande) and RH20 (Costa Chica-Río Verde) (CONAGUA, 2021). The climates for the municipality of Juan R. Escudero are: warm sub-humid with summer rains (Vidal, 2005), but the predominant climate where El Zapotal Restaurant-Spa is located is warm sub-humid with summer rains (Figure 2).

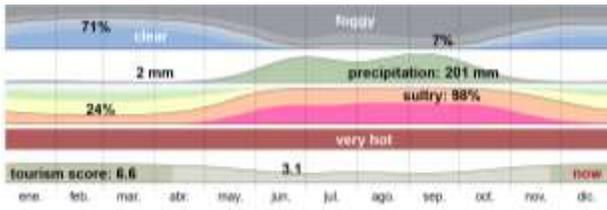


Figure 2 Tierra Colorada's climate
Source: Weather Spark, 2021

The best time of year for outdoor tourism activities is from late November to April 31 (DATAMéxico, 2020). The annual and monthly temperatures recorded for the period 1981-2010 are shown in Table 1. The hottest months are April and May; in contrast, the coldest months are December and January.

Station	Period	Normal maximum temperature	Normal average temperature	Normal minimum temperature
Land 00012039	1981-2010	33.4	25.9	18.5

Table 1 Annual temperature (°C)
Source: SMN-National Meteorological Service, climatological normals, period 1981-2010

The average annual precipitation is 1,400 mm, while the dry season occurs between February and April (Table 2).

Station	Period	Maximum normal precipitation	Minimum normal precipitation
Land 00012039	1981-2010	334.4	2.8

Table 2 Maximum and Minimum Precipitation (mm)
Source: SMN-National Meteorological Service, climatological normals period 1981-2010

In terms of socioeconomic characteristics, we can summarize that, for agriculture, beans, corn, sesame, hibiscus, rice, lime, coconut, vegetables such as watermelon, tomato, Chinese and Creole melon, among others, are grown. Livestock includes cattle, goats, sheep, pigs, horses, asses, mules, poultry and beehives. Hunting is subsistence and includes chalaca, iguana, rabbit, armadillo, squirrels, pigeons, among others (Gutiérrez-Santillán and Ruiz-Gutiérrez, 2019).

Traditional fishing is done on a canoe or directly on foot in the river. Fishing for prawns (Chacal) is carried out by means of hook, atarraya or nazas (Peña-Almaráz *et al.*, 2022). There are numerous bird species such as *Quiscalus mexicanus* (zanate), *Crotophaga sulcirostris* (picuyo) and *Myiozetetes similis* (luis); *Coragyps attratus* (zopilote).

The conditions of the natural landscape influence the wildlife, distribution, fixation and development of diverse activities by human groups. In the year 2020, the total population of the municipality of Juan R. Escudero was 26 093 people; 7 148 homes; 7.4 grades of schooling on average and 316 people who speak an indigenous language. Meanwhile, the municipal seat of Tierra Colorada had 21 311 people; 11 410 dwellings (México en cifras, 2021).

The town of Omitlán, meanwhile, had a total population of 1 033 people; 516 dwellings (INEGI, 2020). Where tourism is supported by sufficient infrastructure and equipment in the cases of the archaeological zone Tehuacalco, Zoocarry and Restaurant-Spa El Zapotal. There is a health center that treats dengue, chikungunya and zika diseases during the rainy season because the pools with murky, foul-smelling water are sites that favor the development and reproduction of insects that transfer these diseases to the inhabitants through bites.

Communications and transportation from the study area to the municipal capital are by federal highway (number 95) using pickup trucks and trucks that leave every hour from one place to another. Education is linked to recreation (Ávila Romero *et al.*, 2016). It is important to promote historical and geotourism knowledge in the study area and municipality. In terms of education, the Secretariat of Education Guerrero (SEG) has a great lag in relation to the advances obtained at the national level and Omitlán is a true reflection of this situation. The illiteracy rate is high among the adult population. The health situation in this town is unfavorable (INEGI, 2020).

The Zoocarry is located in Tierra Colorada, Guerrero, just 100 meters from the entrance to the archaeological zone of Tehuacalco, on the Acapulco-Mexico federal highway. Open to the public from Monday to Sunday from 9:00 am to 8:00 pm. Infrastructure and equipment includes: restaurant, exclusive bar area, gotcha, swimming pool, cabin style rooms (double, *king size* and VIP) and free camping area.

In all these sites that complement the area of influence of the Restaurant-Spa El Zapotal, it is urgent to conceptualize tourism within the transversality as a priority strategic activity that generates sustainable development at a local level, but with regional influence, to mitigate poverty, inequality, inequity and in the long term build a prosperous society with the help of all those directly or indirectly involved in the tourism industry.

The practice of tourism in the surroundings of the Restaurant-Balneario El Zapotal is supported by the following attributes: Beauty of the tropical jungle vegetation, which serves as a refuge for local wild birds Pato buzo (*Phalacrocorax brasilianus*), Garza blanca (*Ardea alba*), Garza tigre (*Tigrisoma mexicanum*), Luis bienteveo (*Pitangus sulphuratus*), Cerceta cejas blancas (*Spatula querquedula*), Colibríes (*Familia Trochilidae*), Paloma blanca (*Columba livia*), Paloma morada (*Patagioenas flavirostris*), Paloma andapie (*Leptotila verreauxi*) and Codorniz (*Coturnix coturnix*), although there are also migratory birds such as the Canadian duck and the local pigeon (Araujo, 2003).

Charales (*Familia Atherinopsidae*), blanquillos (*Familia Malacanthidae*), guabina (*Lebiasina bimaculata*), camarón (*Suborden Dendrobranchiata*) chacal (*Macrobrachium tenellum*), popoyote (*Profundulus hildebrandi*), mojarra (*Diplodus vulgaris*), carpas, chancletas, robalos y charras negras. In addition, there are some batrachians: frogs, toads, slugs, water snakes, and tequereque (*Ibidem*, 2003).

Among the dominant primary economic activities in the study area are agriculture and cattle ranching, but as a complement, people also earn their income from new constructions where tourism services are offered (Tehuacalco archeological zone), which is a plus for people who see tourism as another opportunity for family income.

Rural natural landscapes such as the El Zapotal Restaurant-Spa, Poza la Pinta and Zoocarry provide identity and roots in the collective memory of the citizens who live in the towns and rural communities surrounding the study area.

It is true that it is difficult to achieve sustainable development in a free market economy (Segrelles, 2013), but it is also fortunate that the population itself introduces elements that raise their standard of living, which represents an opportunity for sustainability since it is an example of the economic viability of agriculture, livestock, hunting and fishing, and tourism contributes to environmental integrity, the preservation of ecosystems, the conservation of nature and biodiversity.

The territory comprising the El Zapotal Restaurant-Spa along with the elements of nature (climate, vegetation, water, soil and landscape) make agriculture possible in Tierra Colorada (Flores-Sánchez, *et al.*, 2022). Ornithological tourism comprising bird watching and ecotourism are two viable resident-driven activities (Nova Muñoz *et al.*, 2011).

El Zapotal Restaurant-Spa and its surroundings are productive spaces with high potential for the management of well-organized tourism whose purposes are: a) to give continuity to agricultural activities and b) to propose a specific program that contributes to local development. El Zapotal Restaurant-Spa is a recreational site with incipient tourism management. It is of great ecological and economic interest because the nearby bodies of water include: the Papagayo River, waterfalls such as Poza la Pinta and the General Ambrosio Figueroa Hydroelectric Dam (La Venta).

El Zapotal Restaurant-Spa located in Juan R. Escudero has as neighboring communities: La Venta, Puente Omitlán, Villa Omitlán and Nuevo Omitlán. These towns and villages are located on ejido, communal, private and, to a lesser degree, federal lands. The area under study has the nature of interrelating natural resources with agricultural activity, which is positive for the tourist experience of those who frequently visit this study area for gastronomic purposes. This zone serves as a multifunctional site since it is possible to carry out agricultural activities, hunting, fishing, and bird watching.

The landscape surrounding the study area represents an opportunity for local tourism, as it allows for a virtuous circuit by maintaining the ecological balance in the surrounding areas of Tierra Colorada. El Zapotal Restaurant-Spa and its area of influence present adequate characteristics for tourism use and management, even under difficult conditions such as the COVID-19 pandemic.

The basis of tourism management is carried out through a tourism unit that guarantees the conservation of the natural landscape and maintenance of the existing tourism infrastructure with tourism management through the use of anti-bacterial gel. The goal is the protection, conservation and recovery of the natural environment where thanks to tourism management the livelihood for the local social capital is fixed (Niño-Gutiérrez, 2021). Tourism is an activity that brings with it a high use of land near coastal areas. In such a way that, by the end of 2022, the territory of the coastline is a system that boasts transformation of the tourism industry due to the effect of COVID-19 and for that reason a growth in the real estate business (second home, Niño *et al.*, 2020).

Since 2015 in the case of El Zapotal Restaurant-Spa has been complemented with gastronomy (typical iguana dish), tranquility in the rural area, hiking, waterfall, rivers and even cultural tourism such as the city of Chilpancingo, Taxco de Alarcón, La Venta, Puente Omitlán, Villa Guerrero, Las Palmas, San Antonio, Chilpancingo de los Bravo and buses with passengers from Mexico City. This local project promotes the rooting of the population to the rural landscape, since employment can be obtained in the community, municipality or region. With this type of concrete actions, people will be able to create a virtuous circuit in their family's economic income that will contribute to improving their standard of living.

El Zapotal Restaurant-Spa focuses its local competitiveness on the observation of flora-fauna and the presence of fish fauna, such as Jackal Shrimp, Blanquillo, Popoyote, etcetera. According to tourism management in Mexico, in the first place, we have the most general public policy for the planning of the natural area in the study.

According to the Mexican Environmental Legislation, the natural resources program must be in accordance with the Master Plan of the El Zapotal Restaurant-Spa Management Unit, where the strategic objective, goals and actions of strategic tourism planning are set out.

Public use includes the set of recreational, social, educational and cultural activities that visitors and tourists generally carry out in the study area as they get to know, enjoy and support at the regional level. This approach by citizens and tourists guarantees the conservation of the environment in the local ecological balance and the dissemination of conservationist values of the landscape in the medium term. The programs that make up the Public Use Plan in the El Zapotal Restaurant-Spa are: a) carrying capacity; b) management and direction; c) environmental education; d) research; e) participation; f) training; g) quality; h) safety; i) monitoring and evaluation; and j) economic (Melo and Niño, 2003).

Therefore, awareness must be raised among all stakeholders in the tourism sector to understand that sustainable tourism management can only be achieved with everyone's participation. But, for this, it is essential the formation and work of a multidisciplinary team of academics, public sector, private initiative, non-governmental organizations and the rest of the communities to design successful tourism management strategies to achieve the desired sustainable development.

Contributions

The proposal for tourism management of El Zapotal Restaurant-Spa includes a public use program that reconciles three essential elements: 1) The natural attraction represented by the landscape of Selva Baja Caducifolia and 2) Participation of tourists and visitors in recreational and sports activities.

It is suggested to plan the intense and active recreation in the area of the spa where the slope of the land is five degrees, tropical climate, sub-humid, with rains in the summer and grassland soil. They comprise landscapes scarcely modified, in addition they harbor enough scenic attractions, vegetal cover and smooth reliefs. Large visitor groups are accepted there (Niño-Gutiérrez *et al.*, 2015).

The objective in the spa area is to achieve a combination of passive observation and activities that harmonize with the scenic beauty of the landscape, dense and controlled groups of visitors are tolerated, so it is essential to propose ecotourism activities that promote environmental education of an active or passive nature. Tourist services at the El Zapotal Restaurant-Spa consist of rustic infrastructure for picnics, picnics, and food and beverage sales. What is interesting in the study area is that it maintains the morphology of the site (Figure 2), protects the natural beauty, the owners contribute to the improvement of the area and promote the place as a tourist-recreational site, which is highly positive and even for its workers, since they obtain income for their families, which contributes to local development.

The ecotourism subprogram is a nodal point in the planned management of local ecotourism. The ecotourism use of water-soil-vegetation in the El Zapotal Restaurant-Spa is guided by the conservationist concept that the owners carry out in time and space of this geographic enclave. When the COVID-19 epidemiological traffic light is green, the study area is open to the public.

Tourism is at the core of El Zapotal Restaurant-Spa and to be in line with the digital demand for these services, the study area is on the social network Facebook and other social networks. Hence, this research proposes a tourism subprogram that takes up the existing infrastructure to ensure the success and impact on various people from other urban centers such as the cities of Acapulco, Chilpancingo, Taxco and Mexico City, which have excellent land communication routes that facilitate access to tourism at all times.

Conclusions

The El Zapotal Restaurant-Spa and its area of influence, by virtue of being based on the methodological development of the Geography of tourism, a discipline that enriches the planning of rural areas such as this case. In terms of the spatial dimension, the study contributes to the tourism management of a particular area. Also, the study contributes to the proposal of a public use program and its respective subprograms in order to minimize as much as possible negative impacts on the landscape.

The ecotourism use of the El Zapotal Restaurant-Spa is primarily through the landscape resources, which are directly linked to the family income of the people involved in this activity; the contributions of this research lie in its propositional character for the sustainable use of the resources: landscape and water, where the public use program is fundamental for the practice of ecotourism, whose landscape values and attractions are capable of maintaining and increasing the influx of visitors, tourists and residents.

The existence of focal and complementary gastronomic and recreational attractions such as the archaeological zone of Tehuacalco, Zoocarry and Poza Pinta together with the application of public use subprograms can generate the permanence of the natural landscape, diversification of employment sources for ejidatarios and community members, increased income from ecotourism activities and consequently an improvement in the local economy of those who participate in the area under study. As for the methodology used, it allowed a glimpse of the tourism potential and management of the El Zapotal Restaurant-Spa, Tierra Colorada, Guerrero, where the public use program and the proposal of seven subprograms for tourism management in the near future of the area under study were outlined.

Suggestions

As a result of the good access to El Zapotal Restaurant-Spa: i) develop a public use program focused on environmental education, due to the significant demand of visitors from elementary school children, as well as organized groups of higher education and families, given its proximity to Acapulco de Juarez, Chilpancingo de los Bravos and Buenavista.

1. Strengthen and intensify the regional tourism dynamics, so that the study area is increasingly visited by a growing number of visitors who come motivated by the attractiveness of natural resources: climate, water, soil, vegetation, fauna, etc., which are the basis of the public use activities that are developed: walking, hiking, passive observation of the scenic beauty, as well as active recreation as an attraction: hiking, camping, mountain biking and horseback riding.

2. Promote the regional influence of El Zapotal Restaurant-Spa since the recreational activities it offers are complemented by neighboring natural attractions such as Poza Pinta, El Zoocarry and the Tehuacalco archaeological zone; and iv) Plan low-impact activities in the area of influence of El Zapotal Restaurant-Spa such as hiking, detected as the main vocation of public use of the study area. At least two trails could be designed to maintain the traditional function of contemplation, observation, sighting, and physical and emotional events for visitors. In addition to conserving the network of roads and primary ways of terrestrial communication, for example: the dirt roads and cobblestones that intercommunicate people with the natural landscapes mentioned above (Zoocarry, Poza Pinta, and Tehuacalco Archeological Zone).

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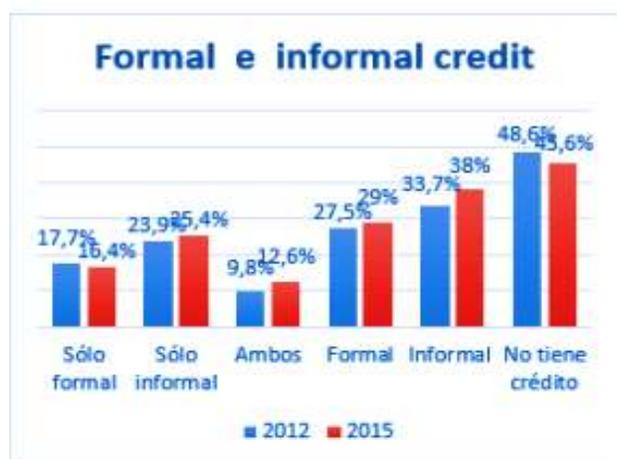
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