

Volume 2, Issue 2 — January — June — 2018

Journal-Labor and Demographic economics

ISSN-On line 2524-2067

RINOE[®]

RINOE-Bolivia

Chief Editor

RAMOS-ESCAMILLA, María. PhD

Senior Editor

SERRUDO-GONZALES, Javier. BsC

Senior Editorial Assistant

ROSALES-BORBOR, Eleana. BsC

SORIANO-VELASCO, Jesús. BsC

Editorial Director

PERALTA-CASTRO, Enrique. MsC

Executive Editor

IGLESIAS-SUAREZ, Fernando. BsC

Production Editors

ESCAMILLA-BOUCHAN, Imelda. PhD

LUNA-SOTO, Vladimir. PhD

Administration Manager

REYES-VILLO, Angélica. BsC

Production Controllers

RAMOS-ARANCIBIA, Alejandra. BsC

DÍAZ-OCAMPO, Javier. BsC

RINOE Journal-Labor and Demographic

economics, Volume 2, Issue 2, January – June 2018, is a journal edited semestral by ECORFAN-Bolivia. Loa 1179, Cd. Sucre. Chuquisaca, Bolivia. WEB: www.ecorfan.org, revista@ecorfan.org. Editora en Jefe: RAMOS-ESCAMILLA, María. PhD, Co-Editor: IGLESIAS-SUAREZ, Fernando. BsC. ISSN-On line 2524-2067. Responsible for the latest update of this number ECORFAN Computer Unit. ESCAMILLA-BOUCHÁN, Imelda. PhD, LUNA SOTO-Vladimir. PhD. Loa 1179, Cd. Sucre. Chuquisaca, Bolivia, last updated June 30, 2018.

The opinions expressed by the authors do not necessarily reflect the views of the editor of the publication.

It is strictly forbidden to reproduce any part of the contents and images of the publication without permission of the National Institute of Copyright.

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.

RINOE® is a Scientific and Technological Company in contribution to the Human Resource training focused on the continuity in the critical analysis of International Research and is attached to CONACYT-RENIECYT number 1702902, its commitment is to disseminate research and contributions of the International Scientific Community, academic institutions, agencies and entities of the public and private sectors and contribute to the linking of researchers who carry out scientific activities, technological developments and training of specialized human resources with governments, companies and social organizations.

Encourage the interlocution of the International Scientific Community with other Study Centers in Mexico and abroad and promote a wide incorporation of academics, specialists and researchers to the publication in Science Structures of Autonomous Universities - State Public Universities - Federal IES - Polytechnic Universities - Technological Universities - Federal Technological Institutes - Normal Schools - Decentralized Technological Institutes - Intercultural Universities - S & T Councils - CONACYT Research Centers.

Scope, Coverage and Audience

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.

Editorial Board

ANGELES - CASTRO, Gerardo. PhD
University of Kent

BUJARI - ALLI, Ali. PhD
Instituto Politécnico Nacional

MIRANDA - GARCÍA, Marta. PhD
Universidad Complutense de Madrid

VARGAS - DELGADO, Oscar René. PhD
Universidad de Santiago de Compostela

MIRANDA - TORRADO, Fernando. PhD
Universidad de Santiago de Compostela

SUYO - CRUZ, Gabriel. PhD
Universidad de Santiago de Compostela

CAMPOS - QUIROGA, Peter. PhD
Universidad Real y Pontifica de San Francisco Xavier de Chuquisaca

GARCIA - ESPINOZA, Lupe Cecilia. PhD
Universidad de Santiago de Compostela

AZIZ - POSWAL, Bilal. PhD.
University of the Punjab-Pakistan

BANERJEE, Bidisha. PhD
Amity University

GUZMÁN - HURTADO, Juan Luis. PhD
Universidad de Santiago de Compostela

BARRERO - ROSALES, José Luis. PhD
Universidad Rey Juan Carlos III

ALIAGA - LORDEMANN, Francisco Javier. PhD
Universidad de Zaragoza

GUZMAN - SALA, Andrés. PhD
University of California

PEREIRA - LÓPEZ, Xesús. PhD
Universidad de Santiago de Compostela

BARDEY, David. PhD
University of Besançon

GÓMEZ - MONGE, Rodrigo. PhD
Universidad de Santiago de Compostela

HIRA, Anil. PhD
Claremont Graduate School

FELDMAN, German. PhD
Johann Wolfgang Goethe Universität

IBARRA - ZAVALA, Darío Guadalupe. PhD
New School for Social Research

GARCÍA Y MOISES, Enrique. PhD
Boston University

CHAPARRO, Germán Raúl. PhD
Universidad Nacional de Colombia

VARGAS - HERNANDEZ, José G. PhD
Keele University

BELTRÁN - MORALES, Luis Felipe. PhD
Universidad de Concepción

VILLASANTE, Sebastián. PhD
Universidad de Santiago de Compostela

BLANCO - GARCÍA, Susana. PhD
Universidad Complutense de Madrid

VALDIVIA - ALTAMIRANO, William Fernando. PhD
Universidad Nacional Agraria La Molina

DE AZEVEDO - JUNIOR, Wladimir Colman. PhD
Universidade Federal do Amazonas

LUO, Yongli. PhD
Universidad de Chongqing

PALACIO, Juan. PhD
University of St. Gallen

DANTE - SUAREZ, Eugenio. PhD
Arizona State University

D. EVANS, Richard. PhD
University of Greenwich

NIEVA - ROJAS Jefferson. PhD
Universidad Autónoma de Occidente

MANRÍQUEZ - CAMPOS, Irma. PhD
Instituto de Investigaciones Económicas – UNAM

Arbitration Committee

OLIVES - MALDONADO, Carlos. PhD
Universidad Nacional de Cuyo

GALICIA - PALACIOS, Alexander. PhD
Instituto Politécnico Nacional

SAENZ - OZAETTA, Carlos. PhD
Universidad Técnica de Babahoyo

QUISPE, Jimmy. PhD
Universidad Superior Politécnica del Litoral

SOLORZANO - MENDEZ, Víctor. PhD
Universidad Agraria la Molina

HERNÁNDEZ, Carmen Guadalupe. PhD
Instituto Politécnico Nacional

LUIS - PINEDA, Octavio. PhD
Instituto Politécnico Nacional

CAICHE - ROSALES, Willian. PhD
Universidad Tecnológica Empresarial de Guayaquil

GIRÓN, Alicia. PhD
Universidad Nacional Autónoma de México

GARCÍA - ELIZALDE, Maribel. PhD
Universidad Nacional Autónoma de México

HUERTA - QUINTANILLA, Rogelio. PhD
Universidad Nacional Autónoma de México

ORDÓÑEZ - GUTIÉRREZ, Sergio Adrián. PhD.
Universidad Nacional Autónoma de México

MORÁN - CHIQUITO, Diana María. PhD
Universidad Autónoma Metropolitana

PELAYO - MACIEL, Jorge. PhD
Universidad de Guadalajara

CAMELO - AVEDOY, José Octavio. PhD
Universidad de Guadalajara

ACEVEDO - VALERIO, Víctor Antonio. PhD.
Universidad Michoacana de San Nicolás de Hidalgo

SANCHEZ - CANO, Julieta Evangelina. PhD
Universidad Juárez del Estado de Durango

TAVERA - CORTÉS, María Elena. PhD
Colegio de Postgraduados

CONTRERAS - ÁLVAREZ, Isaí. PhD
Universidad Autónoma Metropolitana

VILLALBA - PADILLA, Fátima Irina. PhD
Instituto Politécnico Nacional

SÁNCHEZ - TRUJILLO, Magda Gabriela. PhD
Universidad de Celaya

FERNÁNDEZ - GARCÍA, Oscar. PhD
Instituto Politécnico Nacional

SALAMANCA - COTS, María Rosa. PhD
Universidad Nacional Autónoma de México

MALDONADO - SANCHEZ, Marisol. PhD
Universidad Autónoma de Tlaxcala

PERALES - SALVADOR, Arturo. PhD
Universidad Autónoma de Chapingo

CAMPOS - RANGEL, Cuauhtémoc Crisanto. PhD
Universidad Autónoma de Tlaxcala

NOVELO - URDANIVIA, Federico Jesús. PhD
Universidad Autónoma Metropolitana

GÓMEZ - CHIÑAS, Carlos. PhD
Instituto Politécnico Nacional

VARGAS - SANCHEZ, Gustavo. PhD
Universidad Autónoma Metropolitana

TREJO - GARCÍA, José Carlos. PhD
Instituto Politécnico Nacional

MANJARREZ - LÓPEZ, Juan Carlos. PhD
El Colegio de Tlaxcala

MARTÍNEZ - SÁNCHEZ, José Francisco. PhD
Instituto Politécnico Nacional

COTA - YAÑEZ, María del Rosario. PhD
Universidad de Guadalajara

MARTÍNEZ - GARCÍA, Miguel Ángel. PhD
Instituto Politécnico Nacional

GAVIRA - DURÓN, Nora. PhD
Instituto Politécnico Nacional

BECERRIL - TORRES, Osvaldo U. PhD
Universidad Autónoma del Estado de México

CAPRARO - RODRÍGUEZ, Santiago Gabriel Manuel. PhD
Universidad Nacional Autónoma de México

ISLAS - RIVERA, Víctor Manuel. PhD
Instituto Politécnico Nacional

OLIVO - ESTRADA, José Ramón. PhD
Instituto Pedagógico de Estudios de Posgrado

RUIZ - MARTINEZ, Julio César. PhD
Instituto Politécnico Nacional

PÉREZ - SOTO, Francisco. PhD
Colegio de Postgraduados

SALDAÑA - CARRO, Cesar. PhD
Colegio de Tlaxcala

GARCÍA - ROJAS, Jesús Alberto. PhD
Universidad de Puebla

Assignment of Rights

The sending of an Article to RINOE Journal-Labor and Demographic economics emanates the commitment of the author not to submit it simultaneously to the consideration of other series publications for it must complement the Originality Format for its Article.

The authors sign the Format of Authorization for their Article to be disseminated by means that RINOE® In its Holding Bolivia considers pertinent for disclosure and diffusion of its Article its Rights of Work.

Declaration of Authorship

Indicate the Name of Author and Coauthors at most in the participation of the Article and indicate in extensive the Institutional Affiliation indicating the Department.

Identify the Name of Author and Coauthors at most with the CVU Scholarship Number-PNPC or SNI-CONACYT- Indicating the Researcher Level and their Google Scholar Profile to verify their Citation Level and H index.

Identify the Name of Author and Coauthors at most in the Science and Technology Profiles widely accepted by the International Scientific Community ORC ID - Researcher ID Thomson - arXiv Author ID - PubMed Author ID - Open ID respectively.

Indicate the contact for correspondence to the Author (Mail and Telephone) and indicate the Researcher who contributes as the first Author of the Article.

Plagiarism Detection

All Articles will be tested by plagiarism software PLAGSCAN if a plagiarism level is detected Positive will not be sent to arbitration and will be rescinded of the reception of the Article notifying the Authors responsible, claiming that academic plagiarism is criminalized in the Penal Code.

Arbitration Process

All Articles will be evaluated by academic peers by the Double Blind method, the Arbitration Approval is a requirement for the Editorial Board to make a final decision that will be final in all cases. MARVID® is a derivative brand of ECORFAN® specialized in providing the expert evaluators all of them with Doctorate degree and distinction of International Researchers in the respective Councils of Science and Technology the counterpart of CONACYT for the chapters of America-Europe-Asia-Africa and Oceania. The identification of the authorship should only appear on a first removable page, in order to ensure that the Arbitration process is anonymous and covers the following stages: Identification of the Journal with its author occupation rate - Identification of Authors and Coauthors - Detection of plagiarism PLAGSCAN - Review of Formats of Authorization and Originality-Allocation to the Editorial Board- Allocation of the pair of Expert Arbitrators-Notification of Arbitration - Declaration of observations to the Author-Verification of Article Modified for Editing-Publication.

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 the Content

In the first chapter we present, *Influence of gender in the choice of professional career among university students*, by CABRERA-IGNACIO, Elisa, CUPUL-ROSADO, Carlos Alberto and CRUZ-DIAZ, Olga Libia, with affiliation at the Universidad Tecnológica Metropolitana, as a second article we present, *Market aspects that affect the closing of the micro and small business in Mérida*, by SÁNCHEZ-PACHO, José Enrique, NEGRÓN-HOH, José Jesús Hernán and GÓMEZ-GALAZ, Karla Gabriela, with affiliation at the Universidad Tecnológica Metropolitana, the following article we present, *Measurement of sex discrimination among teachers of the Universidad Tecnológica Metropolitana*, by ZAPATA-AGUILAR, José Apolinar, MOO-NOVELO, Carlos Antonio and MARTÍNEZ MORALES, Javier, with affiliation at the Universidad Tecnológica Metropolitana & Universidad Autónoma de Chihuahua, the following article we present *Alternatives of production and economic development for the small productive units of the first valley of the Selva region of the Municipality of Ocosingo, Chiapas*, by AGUILAR-FLORES, Miguel Ángel, LOPEZ-OCAÑA, José Elías and DOMÍNGUEZ-MUÑOZ, Mario Alberto, with affiliation at the Universidad Tecnológica de la Selva.

Content

Article	Page
Influence of gender in the choice of professional career among university students CABRERA-IGNACIO, Elisa, CUPUL-ROSADO, Carlos Alberto and CRUZ-DIAZ, Olga Libia <i>Universidad Tecnológica Metropolitana</i>	1-9
Market aspects that affect the closing of the micro and small business in Mérida SÁNCHEZ-PACHO, José Enrique, NEGRÓN-HOH, José Jesús Hernán and GÓMEZ-GALAZ, Karla Gabriela <i>Universidad Tecnológica Metropolitana</i>	10-17
Measurement of sex discrimination among teachers of the Universidad Tecnológica Metropolitana ZAPATA-AGUILAR, José Apolinar, MOO-NOVELO, Carlos Antonio and MARTÍNEZ MORALES, Javier <i>Universidad Tecnológica Metropolitana</i> <i>Universidad Autónoma de Chihuahua</i>	18-26
Alternatives of production and economic development for the small productive units of the first valley of the Selva region of the Municipality of Ocosingo, Chiapas AGUILAR-FLORES, Miguel Ángel, LOPEZ-OCAÑA, José Elías and DOMÍNGUEZ-MUÑOZ, Mario Alberto <i>Universidad Tecnológica de la Selva</i>	27-35

Influence of gender in the choice of professional career among university students

Influencia del género en la elección de carrera profesional entre alumnos universitarios

CABRERA-IGNACIO, Elisa†*, CUPUL-ROSADO, Carlos Alberto and CRUZ-DIAZ, Olga Libia

Universidad Tecnológica Metropolitana. Calle 115 (Circuito Colonias Sur) No. 404 por Calle 50, Santa Rosa, Mérida, Yucatán

ID 1st Author: *Elisa, Cabrera-Ignacio* / ORC ID: 0000-0001-8615-4542, Researcher ID Thomson: Q-9670-2018, CVU CONACYT ID: 601399

ID 1st Coauthor: *Carlos Alberto, Cupul-Rosado* / ORC ID: 0000-0002-1913-2631, arXiv Author ID: 336P9Y-8O79GR, CVU CONACYT ID: 429598

ID 2nd Coauthor: *Olga Libia, Cruz-Díaz* / ORC ID: 0000-0002-6353-0346, arXiv Author ID: SIGXSJ-PNFTO6, CVU CONACYT ID: 940904

Received January 20, 2018; Accepted March 15, 2018

Abstract

The choice of a University career has always been a very difficult and complicated decision for young people because it represents their future job. Since it is important to choose it correctly, they must be aware of the factors that influence and the weight it have on that choice. The present study examines the influence of gender in the choice of a career in the students of the Metropolitan Technological University, through a descriptive research with a quantitative approach. A survey was applied to a sample of 420 students, which are distributed in the four divisions of the University that offer their different careers: Administration, Industrial, Innovation and Strategic Development and Information and Communication Technologies. It was identified that, despite the fact that students openly stated that their gender did not influence their career choice, the analysis of the distribution of men and women in the different careers offered by the University, exposes inequality because careers related to exact sciences continue to be dominated by men.

Career, Choice, Gender, University

Resumen

La elección de carreras universitarias siempre ha sido una decisión muy difícil y complicada para los jóvenes ya que representa su futuro laboral, dado que es importante elegir correctamente deben ser conscientes de los factores que influyen y el peso que tienen estos sobre dicha elección. El presente estudio examina la influencia que tiene el género en la elección de carreras universitarias en los alumnos de la Universidad Tecnológica Metropolitana, a través de una investigación descriptiva con un enfoque cuantitativo. Se aplicó una encuesta a una muestra de 420 alumnos, los cuales se encuentran distribuidos en las en las cuatros divisiones de la Universidad que ofertan sus diferentes carreras: Administración, Industrial, Innovación y Desarrollo Estratégico y por último Tecnologías de la Información y Comunicación. Se identificó que a pesar de que los jóvenes manifiestan abiertamente que su género no influyó en la elección de su carrera y fue por gusto al hacer el análisis de la distribución de los hombres y las mujeres en las diferentes carreras que oferta la Universidad existe desigualdad ya que las carreras relacionadas con las ciencias exactas continúan estando dominadas por los hombres.

Carrera, Elección, Género, Universitarios

Citation: CABRERA-IGNACIO, Elisa, CUPUL-ROSADO, Carlos Alberto and CRUZ-DIAZ, Olga Libia. Influence of gender in the choice of professional career among university students. Journal-Labor and Demographic economics. 2018. 2-2: 1-9

* Correspondence to Author (Email: elisa.cabrera@utmetropolitana.edu.mx)

† Researcher contributing first author.

Introduction

Choosing a university career is one of the most important decisions that a person has to make, since it is very likely that this depends on the path that the rest of his life will take. The present study that was carried out in the Metropolitan Technological University, tries to identify if the gender influences in the taking of that important and difficult decision.

The World Health Organization (WHO, 2015) indicates that gender refers to:

The characteristics of women and men defined by society, such as the norms, roles and relationships that exist between them. What is expected from one gender to another varies from one culture to another and may change over time.

This concept is transcendent to establish and define the different roles and roles that men and women occupy in the family, work and very important educational areas, especially when selecting a career to study, since in this election there is the future of the same.

In a study conducted in Honduras Universia (2015), published on the website La Prensa, about the preferences that young people have when choosing a university career, mentions that out of a total of 34,125 young people surveyed, it was observed that careers related to the administration are the most preferred by Hondurans, with 13%., of which prefer the business management.

In relation to engineering, they are the last in the preference of respondents with 6%, and it is men who are more inclined for this type of careers, in their preferences are the systems, industrial, civil or architecture, while women prefer, pedagogy, psychology, business management, medicine, surgery, marketing or law.

Another important factor when selecting the race is the payment they will receive in this, it is a reality that the remuneration they will have depends largely on the company we are talking about, since each one establishes their tabulators according to the activities to be carried out and the payment capacity that they have.

According to a study by occ. mundial.com in 2018 the ten highest paid careers are: Chemistry, Transportation Service, Physics, Mining and Extraction, Finance, Banking and Insurance, Statistics, Public Health, Pharmacy, Environmental Sciences and Medicine. These data were taken as a point of reference to enrich this article.

Hypothesis

The reason why they choose the career to study is influenced by gender.

Objective

Determine if gender influences the choice of professional careers in students of the Metropolitan Technological University, through a descriptive investigation that allows identifying the factors that motivate young people in their decision making process to propose actions that favor the balanced presence of men and women in the different professions offered by this house of studies.

Theoretical framework

At present we find a society formed by a group of people who have different interests and customs as mentioned in the Encyclopedic dictionary, op. Cit cited by Duran (2000) society is:

cGroup of men gathered in a single community because of the nature of the laws or a pact. State of the men thus grouped. Entity formed by two or more people who through a contract decide to put something in common, in order to distribute the benefits that may result. (p.85)

In it changes are experienced in their uses and customs; this is totally normal since it must always be open to improve and use various resources that emerge from it.

Among the trends that have emerged are the opportunities and spaces that women have occupied, we find an independent, determined female sex, occupying previously exclusive work spaces for men, concerned not only be a pillar in their home but that can grow in an academic level, studying higher academic degrees than those established as basic education.

However, there are certain decisions and behavior that society is taking based on gender, as mentioned by Ayales (1996) when defining it as:

Social characteristics defined by a specific society to regulate the behavior, aptitudes, roles and functions of women and men and the way they should relate and interact. That is, it refers to the social definition of the feminine and the masculine. "(P.14).

This concept becomes transcendent to establish and define the different roles and roles played in the family, work and very important educational especially at the time of selecting the race to study because in this election is the future of them, According to the Dictionary Larousse Basic Dictionary the word career is defined as "the set of studies that enables to perform a function". (p.116)

The Organization of the United Nations for Education, Science and Culture (UNESCO, 2012) cited by Ordorika (2015) mentions that the gender parity index (GPI) in tertiary education enrollment worldwide went from 0.74 to favor of men in 1970, to 1.08 - which is in the parity range, although it favors women slightly - in 2009. In 1970 only in Central and Eastern Europe there were more women than men in higher education. For 2009, in four regions (North America and Western Europe, Central and Eastern Europe, Latin America and the Caribbean, and Central Asia), the IPG was favorable to women. Most of Asia, the Arab countries and Sub-Saharan Africa still remained below parity in 2009. (p.7).

UNESCO (2012) cited by Ordorika (2015), mentions that female representation in tertiary education is higher than that reached at the basic level and in secondary level, points out that the greatest growth in female coverage in this period corresponded to Latin America and the Caribbean, which went from an IPG of 0.62 in 1970 to 1.21 in 2009. With respect to the distribution of enrollment by academic discipline or profession, in 2009 the percentage of women enrolled in Latin America by discipline was 41% in science (67% of health and life, 51% in physics, 53% in mathematics and statistics and 31% in computing), and 57% in social sciences, business and law (70% social and behavioral sciences, 61% journalism and information, 56% administration and business, and 52% laws).

In this distribution are not contained engineering, manufacturing and construction, largely dominated by men in all countries. (p.8)

After knowing these data, it is identified that the role that women occupy in an academic level has evolved considerably, as has already been mentioned, women worry about occupying different roles and roles in society, in which they have a more active and dynamic participation.

It identifies the tendency of women to study careers of a social nature considering that they may have more employment opportunity, it is notorious and it is almost a fact that women in the future will decide and study careers of a different nature to those of today.

Camarena, Saavedra and Duclox (2014), mention that in the six most attended courses in Mexico by the population of 18 years and over, there is that of every 100 people with at least an approved degree in Mechanical Engineering, 94 are men and 6, women; in Industrial Engineering the ratio is 75 men and 25 women; in Architecture there are 70 and 30, respectively, and in Computer and Computer Engineering there are 67 men and 33 women. On the opposite side is Psychology with more than three quarters of women and the rest of men; Education Sciences in primary school follows with almost two thirds of them and a third of them.

Burin (2001) Indicates that males are assured of permanence in the educational system at least up to the level at which their family can support it economically and considers it essential with a view to their subsequent insertion in the labor market; while girls are soon faced with the threat of being disconnected from the educational system to remain in the domestic sphere. This means going to the labor market with fewer educational credentials and supporting lower-paying jobs. Other studies reveal, on the contrary, that young people would be the most exposed to interrupting their studies due to the imperative need to enter the labor market, while girls would have more access to educational opportunities because their financial urgencies would be covered by third parties, their parents, husbands, etc. Quoted by Miranda (2007) (p.297)

With these data it was identified that there are still certain careers in which the influence of gender is notorious for selecting them, women still have a certain fear of selecting educational offers dominated by men, this occurs above all in the areas of engineering. It is important to continue disclosing the contents of the educational offers to achieve the selection regardless of the sex you have.

With regard to the gender gap in employment, the authors Cebrián and Moreno (2018) indicate that women are concentrated in low-skilled occupations, adding another factor such as the glass ceiling, as are social and cultural barriers, that prevent them from accessing a better paid position and greater responsibility, adding that in many cases they have to combine work, with their role as mother in the family, which also limits their job growth; They earn 15% less by doing the same activities.

Materials and methods

The research that was carried out is descriptive, a quantitative approach was determined and the design was non-experimental transversal, since the data collected from the study subjects that make up the sample was carried out at a specific time, sharing all the same temporality.

The data was collected through the application of an instrument to a given sample, for which a simple random probabilistic sampling was carried out on a finite population. The Metropolitan Technological University currently has an enrollment of 2,661 students which are distributed in the four divisions that offer their different careers, these are: Innovation and Strategic Development Division, Administration Division, Industrial Division, and the Division of Information and Communication Technologies.

To calculate the sample size the following formula was used:

$$n = \frac{Z^2 pq N}{NE^2 + Z^2 pq} \quad (1)$$

Where:

n = is the sample size

Z = is the level of confidence

p = is the positive variability

q = is the negative variability

N = is the size of the population

E = is the precision or the error

A value was applied for Z = 97% confidence, p = 0.50, N = population size by stratum and E = 0.05, obtaining a minimum sample of 400 students. It was decided to apply 420 surveys to try to minimize the errors or null answers by the study subjects in order to have in each section a response according to the minimum required for the sample.

As already mentioned, the study was applied to 420 students of the Metropolitan Technological University who study the third, fourth, eighth, ninth or tenth four-month period of the different races of the 4 divisions for which the university's enrollment is composed. The survey was carried out randomly, both for women and men, with the purpose that perception gives us results about the position of both sexes.

An instrument was designed to collect the information from this study. The instrument is made up of 35 items divided into four sections, the first section was general data, in which we can find their gender, age, marital status, academic training of their parents and if they understand or speak any indigenous language. The second section is about school aspects, such as the career you are studying, why you chose, if you have any type of scholarship, if you work, your seniority, your salary and the amount of money you have to support yourself. The third section addressed is the family-school environment, with questions about whether you have children, how much time you spend with them, etc. and finally in the fourth section that covers the school environment, you have questions such as whether you have had unequal treatment, if he has felt discriminated against, etc.

In order for the investigation to be carried out, each of the directors of the four divisions was asked for authorization to carry out this investigation, once this authorization was obtained, the coordinators of the different careers were informed to access to the students so that the survey may be applied during the school hours. Once organized as the program would be with schedules and groups authorized for the application of the instrument was carried out favorably.

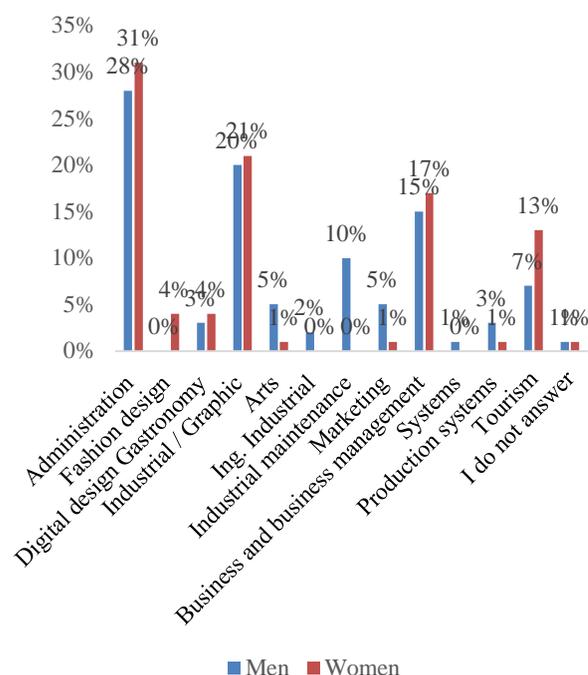
For the process of filling the instrument, we entered the classroom where the students were instructed to respond objectively, without consulting anyone and anonymously, the instrument was self-filled by each participant. It was indicated that there were questions that could have more than one answer and any doubts that arose at the time were clarified. At the end of the filling each of the instruments was lifted and after that the capture was made to generate the database with Excel spreadsheet support.

With the database of proceeded to perform the statistical analysis of descriptive nature, in which the responses of the different categories were summarized according to frequency counts and percentages.

Results

The results found from the application of the research instrument to four hundred and twenty students are the following, 48% of the respondents are men and 52% are women, the ages of the students are between 18 and 33 years, and the 76% of students are between 19 and 22 years old.

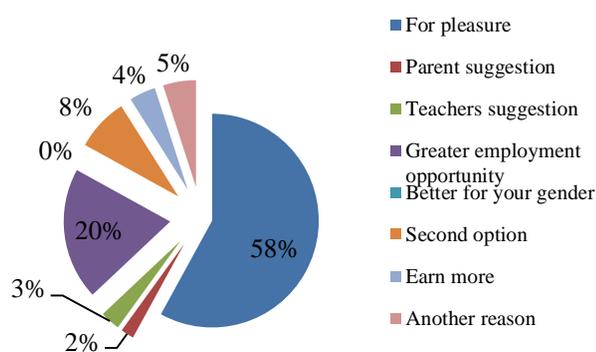
The analysis was made regarding the career they study according to gender and the results indicate that 49% of women study careers related to administration, this percentage is divided by 31% that specifically studies administration plus 17% studying business and business management and 1% studying marketing, 21% of the students surveyed study gastronomy and 13% tourism, careers in which they have a smaller participation representing 4% of the respondents in each of them are: Fashion design, digital design, Industrial / arts and production systems, 1% of respondents did not answer. The careers in which the women surveyed have no participation are industrial engineering, industrial maintenance and systems. The above is seen in graphic 1.



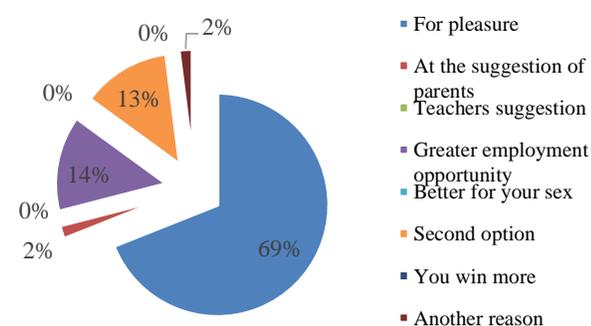
Graphic 1 Participation of men and women according to the careers they study at the Metropolitan Technological University
Source: Self Made

In contrast, men have a presence in all careers, however when analyzing the percentages per race, 48% of men surveyed study careers related to administration, of these 28% study specifically administration plus 15% study business and business management and 5% study marketing, when comparing these percentages with women who study the same careers it was observed that they are very similar, the same happens in the gastronomy degree, since 20% of men surveyed study this race, on the contrary in the tourism career if there is a difference since only 7% of men study this race compared to 13% that women represented. Another comparison that is important to analyze is that 10% of men study the career of industrial maintenance, career in which women have no participation, 5% of men study Industrial / Arts, 3% study digital design, 3% study productive systems, 1% study systems and also 2% study industrial engineering, 1% of students did not answer.

The students were also asked the reasons why they chose the career they are currently studying, the answers were analyzed according to gender with the intention of differentiating the motives of men and women, the results can be seen in the following Graphics.



Graphic 2 Reasons for men to choose a university career
Source: *Self Made*



Graphic 3 Reasons for women to choose a university degree
Source: *Self Made*

As seen in the graphics, the main reason why young university students choose a career, both men and women, is for pleasure, since 58% of men answered that and 69% of women, the second cause most important for both is the employment opportunity, 20% of the students surveyed chose this motive and 14% of the women said the same, the third important reason is that the career they are currently studying was their second option, this was the reason for 8% of men and 13% of women.

As for choosing the race at the suggestion of parents represents only 2% in both men and women, 4% of men said they chose the race because they earn more, in contrast to women this is not a reason to choose the race 3% of men took into account the suggestions of their teachers to choose a career; on the contrary, women do not consider this a reason. 5% of men said they had other reasons and 2% of women said the same.

A specific cause or reason related to gender was included in the research instrument because they were asked if they had chosen the race because it was better for their sex, which neither men nor women said they had taken into account this reason.

Discussion

Given the need for specialization required by the current labor market, choosing a university degree to study is not easy, it is a complicated task because the decision is influenced by a series of factors, be they extrinsic, intrinsic or a combination of both. It has been proven that the intrinsic factors that affect decision-making with respect to the career being studied include the individual personality, the interest in the subjects, the self-concept, attitudes and cultural identity.

On the other hand, the main extrinsic factors include role models that determine the society, friends or social contacts you have, the availability of resources such as financial, globalization, ethnic origin, differences in the characteristics of the work. (Kerka, 2000)

Hewitt (2010) says that, in terms of the choice of university career, most people are highly influenced by either professionals or their parents, there are also those whose educational achievements have opened another panorama, other individuals are influenced for professional careers that offer high benefits, including salary, allowances and vacations. However, there are also those who choose a career because of the passion they have towards it regardless of the benefits they may have. (Quoted by Nyamwange, 2016)

Young people usually choose the career to study when they are in their last year of high school. Before making this decision they are generally informed about the different careers that are offered so that they can choose correctly.

The universities are given the task of organizing fairs, visiting high schools to invite them to know their facilities, in Yucatan, even a University Expo-fair is organized by the State Government, in which universities are invited to Participate and show the careers they offer so that young people who are interested can go and inform themselves and clarify any doubts they may have, in order to support them in their decision process.

Despite the various ways they have to inform themselves, many young people lack the necessary and sufficient information to choose the university career to study.

When analyzing the reasons that the students of the Metropolitan Technological University had for the decision making of professional career factors were considered as the taste that they had for the race, that is to say, the interest, the suggestion of parents and teachers, the perception of a greater opportunity of employment, the perception that they earn more, that is to say the perception of higher salaries, they were also asked if they considered that the career they study is better according to their gender (sex), or if they had some other reason.

The results of the study coincide with Kerka (2000) and Hewitt (2010), since both men and women said that some of the reasons they had correspond to intrinsic and other extrinsic reasons; since the main reasons to choose a career are, on the part of men, 58% said it was for pleasure, which can be attributed to the interest they have in careers (intrinsic factor) and 20% said it was because there is a greater employment opportunity in the studied career (extrinsic factor), women had a similar pattern 69% said they chose their career for pleasure and 14% because it represents a greater employment opportunity. It is gratifying to see that most of the young people were not influenced in their decision by their parents or teachers, which means they made the decision for themselves.

The distribution of students according to gender in different careers drew the attention of the study, since it was observed that 49% of women study careers related to administration, they also have no representation in careers such as industrial engineering, industrial maintenance and systems, in this regard (Geyfman, Force and David, 2015) comment that although there are several authors who have done various studies trying to determine the factors that determine the choice of university careers, these decision factors will vary depending on the group studied, however no study explains why women study business careers.

Several studies have identified that interest is a very important factor for students in the career selection of the different disciplines (Beggs et al., 2008; Kim, Markham, & Cangelosi, 2002; Malagwi et al., 2005; Roach, et al., 2011; Wiswall & Zafar, 2011; Wiswall & Zafar, 2014), cited by (Geyman et al., 2015).

The results obtained coincide with this statement, since 58% of men and 69% of women said that the reason for choosing the race is for pleasure, this can be interpreted as choosing the race because of the interest it arouses in them.

c According to (Kumar and Kumar, 2013) women tend to be more influenced by the family and vocational counselors of the baccalaureate, while men tend to give more value to the opinion of friends and teachers than to the family. The results found do not coincide with Kurman and Kurman in that women tend to be more influenced by the family, since men and women, only 2% of both, said that they felt influenced by their parents in the decision of the career to study. However, if the authors agree with the fact that men tend to be more influenced by their teachers, since 3% of male students declared this option as a decisive factor of choice, while for women teachers did not they had no influence.

Another factor that is important in the choice of careers is salary, according to (Malgwi et al., 2005, Wiswall & Zafar, 2011), cited by (Geyman et al., 2015), the salary that is expected to be received the professional career studied is a more important factor for men than for women, this is confirmed by the results obtained since in the survey that was applied one of the factors considered is more earned, to which 4% of the men said that this reason is the reason why they are studying the university career, while no woman said she considered this reason as a decision factor. According to these authors mentioned, the perception of opportunities is a decision factor that influences both men and women, the results show that for men, students of the Metropolitan Technological University this is a more important factor than for women, since 20% of men said that the reason for career choice is greater employment opportunity, for 14% of women this factor was decisive.

However, the gap in relation to the salary that men receive in relation to women in Mexico, is still significant, which presumes that improvements have to be made to achieve that economic equality. Pérez (2018) indicates that in Mexico a professional woman earns on average 3 thousand pesos less than a man in the same job and in management positions the difference can reach up to five thousand pesos.

Conclusions

With the results obtained from this research it is concluded that there are several factors that affect the decision making regarding the university career to be studied, these factors can be internal (intrinsic) or external (extrinsic), for example, as part of the factors of internal motivation are the interest or taste they may have for a certain career, one of the external factors is the influence that young people could have on the part of their family, teachers or friends, there is also the perception they may have of a future salary and the job opportunity offered by the studied career. The young people surveyed from the Metropolitan Technological University, men and women, said that the main reason why they chose the professional career is the interest or taste for it, as the second factor is the perception of greater employment opportunity. No young person said that he chose the race because it is the best one according to his sex or gender, reason for which it is concluded that gender by itself is not a determining factor in the choice of professional career among university students, nevertheless the motives of choice if they vary between men and women.

The influence exerted by the family, in this case the parents, affects men and women equally, while men are more influenced by teachers than women. The expected salary with the professional career is a more important factor for men than for women, while the perception of greater employment opportunity is an equally important reason for choice for men and women. It is suggested to carry out a study on an annual basis with new women to analyze the reasons why they are more inclined for careers of an administrative nature.

Similarly, it is recommended to carry out an analysis of pertinence in the business sector, to identify which careers they request according to the needs they present in their different organizations; According to a study prepared by OCC Mundial and the Universidad Tecnológica Latinoamericana en Línea (UTEL) (2018).

Graduates in Administration, Accounting and Industrial Engineers are the most requested employees by Mexican companies, according to the Trends in Employability 2018 study, prepared by OCC Mundial.

The fourth place is occupied by Systems Engineering or Computer Science, followed by Marketing and Psychology.

Graduates in Finance, Law, International Trade and Human Resources are also included in the top ten of the most requested employees.

The positions for graduates in International Trade have the highest average monthly salary in the list, with an amount in labor perception of between 27,000 and 41,000 pesos per month, according to the study and data from the Mercer Salary Index.

It is followed by vacancies offered to graduates in Human Resources with perceptions of between 23,000 and 34,000 pesos; the graduates of Marketing, with an average monthly salary of between 23,000 and 30,000 pesos and Industrial Engineering between 18,000 and 27,000 pesos; and the engineers in Systems, Electronics or IT perceive on average 17,000 to 27,000 pesos.

Graduates in Business Administration, who earn on average from 14,000 to 18,000 pesos; accountants, with perceptions of between 16,000 and 21,000 pesos; the psychologists, with salaries of between 16,000 and 19,000 pesos; who study finance, between 18,000 to 24,000 pesos; and Law, with 19,000 and 25,000 pesos.

Universities have the challenge of increasing the competitiveness of professionals by designing curricula that respond to the needs of labor competition.

References

Ayales I., Benitez M., Fevrier S., Ramírez I. (1996) *Género Comunicación y Desarrollo Sostenible Aportes Conceptos y Metodológicos*. Serie Publicaciones misceláneas San José Costa Rica. Recuperado el 24 de enero de 2018 de: https://books.google.com.mx/books?id=sxnWckTJq0C&pg=PA14&dq=definici%C3%B3n+de+la+palabra+genero&hl=es419&sa=X&ved=0ahUKEwiDrJep5_DYAhVJ52MKHeEIDPMQ6AEIMjAC#v=onepage&q=definici%C3%B3n%20de%20a%20palabra%20genero&f=false

Camarena Adame M., Saavedra García M, Ducloux Saldívar D. (2014). *El género en México situación actual*. México, D.F. Ciudad Universitaria Recuperado el 19 de enero de 2018 de: <http://congreso.investiga.fca.unam.mx/docs/xix/docs/13.05.pdf>

Cebrián Inmaculada y Moreno Gloria (2018), *La brecha de género en el empleo*. Contexto Económico. España. Recuperado el 7 de noviembre de 2018 de: <http://agendapublica.elperiodico.com/la-brecha-genero-empleo/>

Duran C., Sam Y ano M., Gómez G. (2000). *Hacia una fundamentación teórica de la costumbre jurídica India*. Recuperado el 3 de enero de 2018 de: https://books.google.com.mx/books?id=_WXS0K0ICXcC&pg=PA85&lpg=PA85&dq=Grupo+de+hombres+reunidos+en+un+a+sola+comunidad+por+la+naturaleza+de+las+leyes+o+un+pacto.+Estado+de+los+hombres+a+s%3%AD+agrupados.+Entidad+formada+por+dos+o+m%3%A1s+personas&source=bl&ots=4KU2p6uOEx&sig=qizyaKvKTLNkgY0G7kW6Vy8izYA&hl=es-419&sa=X&ved=0ahUK EwiQ1M3h2_DYAhVB3WMKHcrBCSoQ6AEIJzAA#v=onepage&q=Grupo%20de%20hombres%20reunidos%20en%20una%20sola%20comunidad%20por%20la%20naturaleza%20de%20as%20leyes%20o%20un%20pacto.%20Estado%20de%20los%20hombres%20as%3%AD%20agrupados.%20Entidad%20formada%20por%20dos%20o%20m%3%A1s%20personas&f=false

Geyfman, V., Force, C., y Davis, L. (2015). *Women in Business: Influences on the Undergraduate Major Choice*. Recuperado el 06 de febrero de 2018 de: <https://dc.swosu.edu/cgi/viewcontent.cgi?article=1117&context=ajj>

Kerka, S. (2000). *Career choice, gender, race and class*. Eric cleaning house on adult career and vocational education Columbus. ED 421641.

Kumar, A., & Kumar, P. (2013). *An examination of factors influencing students selection of business majors using TRA framework*. Decision Sciences Journal of Innovative Education, 11(1), 77-105.

Miranda Guerrero R. (2007). *Mujeres, educación e igualdad de género*. Revista de educación educativa 4. Xalapa, Veracruz. Instituto de Investigaciones en Educación, Universidad Veracruzana. Recuperado el 03 de febrero de 2018 de: https://www.uv.mx/cpue/num4/critica/completos/miranda_mujeres_educacion_igualdad.html

Nyamwange, J. (2016). *Influence of Student's Interest on Career Choice among First Year University Students in Public and Private Universities in Kisii County, Kenya*. Recuperado el 06 de febrero de 2018 de: <https://files.eric.ed.gov/fulltext/EJ1092415.pdf>

OCC (2018) Mundial y la Universidad Tecnológica Latinoamericana en Línea (UTEL) Recuperado el 09 de Noviembre de: <https://www.forbes.com.mx/estas-son-las-carreras-mas-solicitadas-por-empresas-mexicanas/>

OMS, (2015). *Género*. Recuperado el 4 de febrero de 2018 de Recuperado el 08 de Noviembre <http://www.who.int/mediacentre/factsheets/fs403/es/>

Ordorika I. (2015). *Equidad de género en la Educación Superior*. Revista de la Educación Superior. Versión impresa ISSN 0185-2760. México, D.F. Recuperado el 03 de febrero de: <http://www.redalyc.org/pdf/604/60439229001.pdf>

Pérez Diego (2018) *¿Cuánto ganan los hombres y las mujeres en México?*. Recuperado el 7 de noviembre de: <https://www.dineroenimagen.com/economia/cuanto-ganan-los-hombres-y-las-mujeres-en-mexico/99422>

Universia (2015). *Conoce las carreras con mayor matriculación universitaria en Honduras*. Recuperado el 6 de febrero de 2018 de: <http://noticias.universia.hn/educacion/noticia/2015/07/24/1128861/conoce-carreras-mayor-matriculacion-universitaria-honduras.html>

Market aspects that affect the closing of the micro and small business in Mérida

Aspectos de mercado que inciden en el cierre de la micro y pequeña empresa en Mérida

SÁNCHEZ-PACHO, José Enrique†*, NEGRÓN-HOH, José Jesús Hernán and GÓMEZ-GALAZ, Karla Gabriela

Universidad Tecnológica Metropolitana, Calle 111 No.315 por 46 y 48 Col. Santa Rosa, C.P. 97279, Mérida, Yucatán

ID 1st Author: *José Enrique, Sánchez-Pacho* / ORC ID: 0000-0001-7017-4928, Researcher ID Thomson: Q-9707-2018, CVU CONACYT ID: 346120

ID 1st Coauthor: *José Jesús Hernán, Negrón-Noh* / ORC ID: 0000-0002-9216-6061, Researcher ID Thomson: Q-9825-2018, CVU CONACYT ID: 431661

ID 2nd Coauthor: *Karla Gabriela, Gómez-Galaz* / ORC ID: 0000-0002-0640-0756, Researcher ID Thomson: Q-9852-2018, CVU CONACYT ID: 942603

Received January 25, 2018; Accepted March 27, 2018

Abstract

In the present work the object of the research is to analyze the variables of internal and external market aspects that are associated with the causes of closure of the micro and small business of the city of Merida, which will allow to propose proposals for action aimed at the orientation or guidance of the market aspects of the companies subject to study in the city of Merida, providing better tools to deal with more knowledge, improving the quality of products and services offered, as well as more control in their operations and consequently to plan and correctly analyze the results, contributing with this to the decision making that allows the micro and small companies the longest durability and permanence in the market. The variables to be analyzed are the location of the company, the existing competition and the use of marketing and advertising in Mypes.

Location, Competition, Advertising

Resumen

En el presente trabajo el objeto de la investigación es analizar las variables de mercado internas y externas que se asocian a las causas de cierre de la micro y pequeña empresa de la ciudad de Mérida, lo que permitirá plantear propuestas de acción encaminadas a la orientación o guía del escenario de aspectos de mercado de las empresas sujetas de estudio en la ciudad de Mérida, brindando mejores herramientas para enfrentar con mayor conocimiento, mejorando la calidad de los productos y servicios que se ofrecen, así como también más control en sus operaciones y por lo consiguiente a planificar y analizar correctamente los resultados, contribuyendo con esto a la toma de decisiones que permitan a las micro y pequeñas empresas la mayor durabilidad y permanencia en el mercado. Las variables a analizar son la ubicación de la empresa la competencia existente y la utilización de la mercadotecnia y publicidad en las Mypes.

Ubicación, Competencia, Publicidad

Citation: SÁNCHEZ-PACHO, José Enrique, NEGRÓN-HOH, José Jesús Hernán and GÓMEZ-GALAZ, Karla Gabriela. Market aspects that affect the closing of the micro and small business in Mérida. Journal-Labor and Demographic economics. 2018. 2-2: 10-17

* Correspondence to Author (Email: jose.sanchez@utmetropolitana.edu.mx)

† Researcher contributing first author.

Introduction

In the research work, some endogenous and exogenous variables of the micro and small enterprise market aspect are analyzed in the current environment of the City of Mérida, Yucatán, causing their closure. The microenterprise in the state of Yucatan occupies 48.73% of the employed personnel and represents 95.15% of the economic units. This is the reason to study the reason for the closure. In Mexico there are approximately 4 million 15 thousand business units, of which 99.8% are MSMEs that generate 52% of the Gross Domestic Product (GDP) and 72% of employment in the country; 97.9% of the units correspond to the Manufacturing Industry, Trade and Services; 87.2% of the employed personnel correspond to the same sectors (Proméxico, 2017). According to the INEGI (2014) cited by (Peña, Aguilar and Posada, 2017), the life expectancy of companies in Mexico at birth is 7.8 years, the state of Yucatan is above the national average with 9.1 years, the municipalities of Kanasín, Ucu, Conkal, Mérida, Umán and Progreso are above the state average with 9.4 years, in the state the manufacturing sector has an average of 8.4 years, the trade sector of 6.6 years and the sector private non-financial 8.3 years.

Literature Review

At present, micro and small enterprises (SMEs) play an important role in the economy, "Micro, small and medium enterprises represent the vast majority of existing international, national and regional, also generating more than 50% of the jobs and the Gross Domestic Product "(Obregon, Gutierrez, Moreno and Valenciana, 2014, p.468)" These are considered the main generator of jobs, the best income distributor among the population and between the regions, they are indispensable for the Large companies exist and are a central factor for social cohesion and economic mobility of people (Urias, Cota and Aguilar, 2013, p.83) cited by (Cruz, Padilla Velderráin, 2014).

In our country has grown considerably the number of small and medium enterprises therefore in income, jobs and profits but with a minimum of employees equivalent to two compared to other countries which indicates that the entrepreneur himself is the employee, ie auto employs.

But as new small businesses are created there are also a large number of companies that disappear in very small times because their market share deteriorates (Arriaga, López and Olivares, 2013) derived from different factors (internal and external) that they prevent to be competitive in the market, in spite of the support and stimuli on the part of the government so much at national and state level their level of survival is very short.

There are different studies that mention what are the internal and external factors that can become problems of different nature for its operation and permanence in the market, internally lack of business management, market aspects such as lack of publicity, factors related to the company that causes the closing of the MYPE from a market analysis are the location, not knowing the competition, the advertising and marketing applied in the company, and the low sales.

Among the different variables that contribute to deciding the ultimate success or failure of a business, choosing a correct location is undoubtedly the most important. This decision is the one that usually takes most of the investment, and is also the most difficult to correct in case of having been confused. (Sánchez-Bayton, 2018).

Also, if the chosen location is especially bad, the business may never be successful, even if it has adequate financing and superior managerial skills. National chains recognize so clearly the importance of the location that thousands of dollars spend on researching places before establishing new stores. The choice of a good location is much more vital for some companies than for others.

There are five factors that determine the optimal location of a company: The accessibility of the client, availability of resources, personal preference of the entrepreneur, availability and costs of the place, and the conditions of the business environment. (Molina, 2018). Consumers will buy their products in those establishments that are closest to them. That is, distance influences the formation of preferences by consumers and, therefore, in the location decisions of the entrepreneurs.

(Kotler and Armstrong, 2014), authors of the book "Fundamentals of Marketing", define advertising as "any paid form of presentation and non-personal promotion of ideas, goods or services by an identified sponsor".

Advertising is not only the solution to the low sales that a company may be generating, but it is also a great opportunity to find potential customers willing to buy. (González, 2018). Advertising in the world of small and medium-sized companies has focused on one objective: to sell more and obtain greater benefits.

Advertising investment and especially in this era, in which sophisticated communication systems proliferate, requires a prior effort of situation, reflection and decision to face the challenge. Advertising must be an effective investment. (Rivera, 2018).

The sale can be defined as the operation by which a person transmits to another person the property that they have over an asset or right, in exchange for a certain price. It can also be said that the sale is the transfer of ownership of a product in exchange for compensation in money, service or species (Arthur Andersen, 2018). It is a dynamic process and obeys a cycle, which requires time, planning and tactics to achieve optimal results.

Marketing has a great impact on the reputation of our company. The greater the reputation of a company, the greater the effect on sales.

Internal factors	External factors
- Sales and market issues (advertising)	- Excessive red tape and bureaucratization
- Delegation of responsibilities and decision making	- Competition between the same MSMEs and large companies
- Inefficiency problems in production and inventories (Inventories of immobilized and obsolete inventories).	- High financing costs
- Irregularities in collections	- Lack of accessibility to specialized financing programs in MSMEs
- Succession and problems between generations	- Lack of fiscal incentives
- Poor general management	- Lack of sharing financial risks with the entrepreneur,
- Personnel management and poor hiring.	- Lack of ethics
	- Piracy in the market
	- The increase in the general price level
	- Opening of large companies
	- Disadvantages in commercial treaties
	- The exchange rate
	- Tax Reform

Table 1 Internal and external factors that affect the growth and permanence of Micro and small companies in the market

Source: Own elaboration based on information from (Anzola, 2010) cited by (Corral, Bravo, Carrillo and Bustamante, 2014) and (Domenge and Belausteguigoitia (2010), cited by (Cruz, Padilla Velderráin, 2014)

As can be seen, nowadays it is a challenge for these companies to achieve their growth and permanence in the market and be competitive. The MSMEs have great advantages of knowledge of their economic environment as well as their facility to be managed since their activities and operations are not complex.

However, it also has great disadvantages since not having sufficient economic resources, can not sometimes plan to grow, putting their existence at risk (Anzola 2010) cited by (Corral, et al., 2014).

Methodology

The present investigation was made based on the quantitative research approach, whose data analysis allows to quantify in a descriptive way the information generated with the valuation of the instruments applied in the inactive micro and small enterprises of the city of Mérida, Yucatán (Hernández, Fernández and Baptista, 2010).

General instrument

The questionnaire used, consists of forty-eight items, composed of the following segments: the first part integrates the characteristics of the company, which is composed of fifteen items; the second part considers the recording of the general data of the director, or of the person who provided information with eight items; the third part is made up of information associated with the inputs of the system with four items; the fourth part integrates the processes of the system with six items; the fifth part registers the results of the system with seven items; the sixth part contains the organizational structure with two items and the seventh part contains the causes of the closing of the MYPE with six items.

With respect to the instrument, the item associated with the factors related to the closing of the company, located in the seventh part of the instrument, is considered for the analysis of the information, considering the aspect of the analysis and description of the information market.

Sample and sampling

To select the sample of managers and representatives of the Mypes, to determine the study subjects to whom the instrument was applied, which consists of forty-eight items, the questionnaire was designed to study the "Factors that determine or put at risk the closure of micro and small businesses in Latin America", series B (Peña, Aguilar and Posada, 2017); the instrument was filled by the managers or representatives, owners of the companies subject to study.

The mechanism for stratifying the data to determine the sample established by Hernández, Fernández and Baptista (2010) was considered for the calculation, see table 2, with a confidence level of 95% with a variability of 0.5 and an estimated error of 5%.

	Micro companies			Small companies			Total	Proportion	Total Sample
	Micro	Proportion	Sample	Little	Proportion	Sample			
Conkal	358	0.00651917	2	17	0.0039489	1	375	0.00633232	3
Kanasín	2469	0.04496039	16	124	0.02880372	1	2593	0.04378588	17
Mérida	46456	0.84596194	299	3761	0.87363531	24	50217	0.84797366	324
Progreso	3519	0.06408085	23	241	0.05598142	2	3760	0.06349206	25
Ucú	96	0.00174816	1	4	0.00092915	1	100	0.00168862	2
Umán	2017	0.03672949	13	158	0.03670151	1	2175	0.03672746	14
Total	54915		354.381153	4305		29.8634146	59220		385

Table 2 Stratification for the calculation of the sample according to the municipality of the Yucatan study
Source: Own elaboration based on information from INEGI (2014)

A sample of 385 companies was determined, of which a total of 391 questionnaires were applied. For the present investigation the total sample was considered to inactive companies (a total of 132 questionnaires were applied to inactive companies), which is why for Mérida 108 inactive companies are considered object of the present study and the rest to municipalities of Yucatan.

Results

The results that were obtained with respect to the inactive companies and the linking of the factors related to the company (market aspects). The way of locating the owners was first to identify the closed business by means of observation, through advertising in the business, later researching to locate it. This document uses an analysis of the variables that make up the first segment of the market item, in a descriptive way, considering internal and external factors for its interpretation (see table 3).

Internal	External
The location where my company was located.	The products and / or services of the competition were better.
Marketing and advertising were not sufficient or effective.	Low or no sales

Table 3 Internal and external factors related to the company

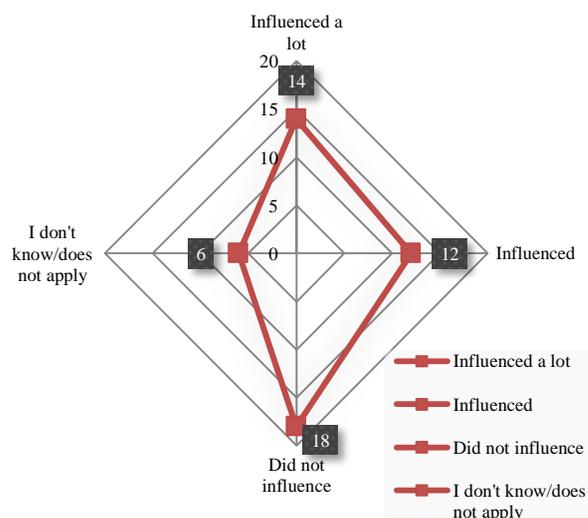
Source: Own elaboration based on the instrument designed by (Peña, Aguilar and Posada, 2017)

The previous classification allows knowing, the level of impact that the management of the company's own resources presents with respect to external influence.

1 Internal factors

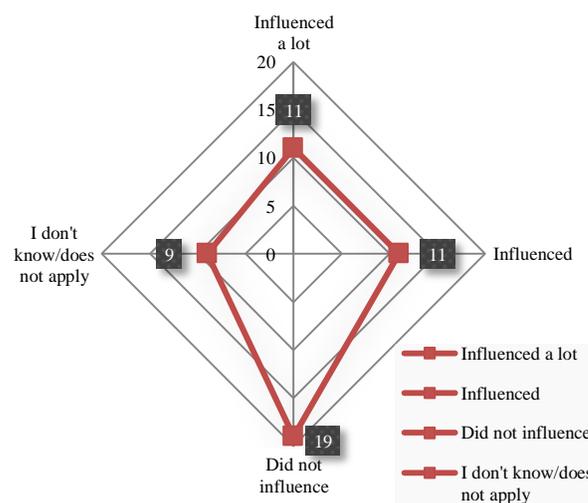
The first aspect of the market "The location where my company was located" showed information that indicates with respect to the location where the company was, 28.0% and 24.0% indicated that it had a great influence and included the location, due to the above, more than the arithmetic mean, it took the decision to close considering the location (52.0%), as can be seen, the location has a weight in the closing of the Mype companies.

The Nobel prize for economics Leonid Vitaliyevich Kantorovich (1975) Theory of the optimal location of resources, is applicable to maximize the effectiveness of economic variables such as productivity, raw materials and labor (see graph 1).



Graphic 1 The location where my company was located
Source: Self Made

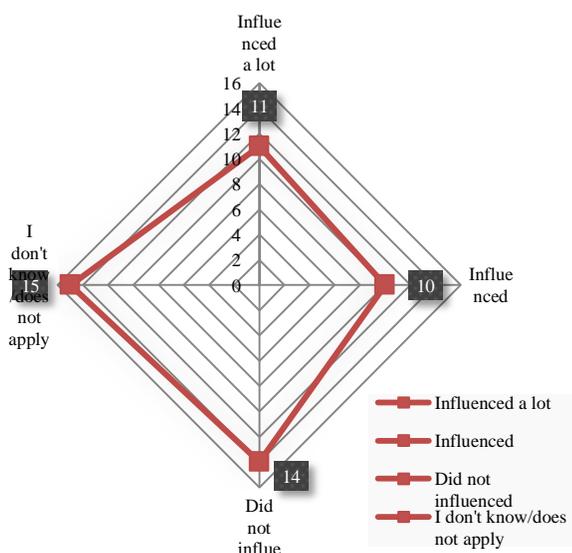
In relation marketing and advertising were not sufficient or effective. The 22.0% and the 20.0% mentioned that it influenced a lot and influenced the lack of marketing and publicity, 28.0% indicated that the lack of marketing and publicity did not influence, 30% of study subjects do not know the information. The lack of marketing and publicity to invest in most of the time depends on the economic sector to which the business belongs, since it is not the same as it is required to acquire the industrial sector than in the commercial sector; One of the disadvantages that micro and small businesses have is the lack of advertising investment. This variable was not enough to survive and determines why companies close in the market. Entrepreneurs do not give due importance because they are immersed in other problems. (See graphic 2)



Graphic 2 Marketing and advertising were not sufficient or effective
Source: Self Made

2 External factors

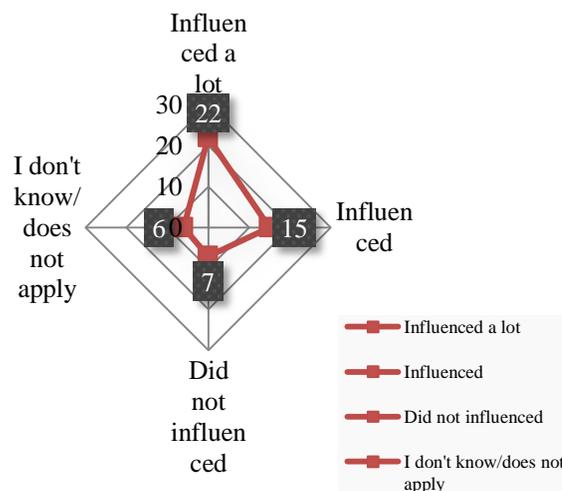
With regard to the products and / or services of the competition were better, 22.0% and 22.0% indicated that it influenced a lot and included respectively that the competition were better, for the previous thing. 39.0% mentioned that the competition did not influence, the remaining percentage indicated that they do not know or do not know. Competition is a common variable in micro and small companies given that another disadvantage they have is ignorance of the market for decision making, they also do not have a methodology to analyze the competition in their market (See graphic 3).



Graphic 3 The products and / or services of the competition were better

Source: Self Made

On the other hand at the time of being questionable the associated variable low or zero sales. The 44.0% and the 30.0 mentioned that it influenced a lot and influenced the low sales, therefore, more than the arithmetic average made the closing decision considering the sales (74.0%), 14.0% indicated that it did not influence the low sales and finally 6.0% answered that they do not know. Derived from the foregoing, it can be mentioned that the entrepreneurs subject to the study consider low sales to be a factor in the closure of micro and small businesses. (see graphic 4).



Graphic 4 Low or no sales

Source: Self Made

The correlation coefficient of the level (very influenced and influenced) of the internal variables is equal to 0.52000, that is, there is a positive correlation in the internal factors, related to the causes of the closure of the company. The identified kurtosis is positive with a value of 1.81315, called kurtosis leptocurtica, since the values that are generated are higher than the average (with respect to the values of positive influence, nevertheless when considering and integrating the negative values and of ignorance to the positive kurtosis is symmetric with a value of -0.04637).

Discussion

The final results of the market aspects of the micro and small companies that lead to the closing of the market, has that 52.0% influenced that the location where the company was located, 74.0% the low and zero sales influenced for the closing. Making the comparative status of secondary information of other authors is in a study published by the PyME Observatory (2002) it is noted that 36.4% of SMEs have less than 9 years of operation, while 18.6% have between 9 and 12 years of being in the market and that 45% of them have more than 12 years of operation (Maturano, 2014).

Although it can be seen that most of the small Mexican companies have more than 10 years of operation, the recently created ones have high mortality rates: according to ECLAC (2003) in the underdeveloped countries between 50% and 75% of the Newly created SMEs cease to exist during the first three years.

In the case of Mexico, 90% of these newly created companies go bankrupt five years after starting operations (Hernández & Martínez, 2011). The consulting firm KPMG (2009) points out that 70% of the newly created companies do not last more than three years in operation. For Centro Crece (2010), 75% of the new Mexican companies must close their operations just after two years in the market, while degerencia.com site indicates that 50% of the companies go bankrupt during the first year of activity, and not less than 90% before five years cited by (Maturano, 2014). As can be seen the study of financial variables as a determinant of the closure of the MSEs, its study is of the utmost importance given that it can provide an overview of why the MSEs are closing and preventive or corrective measures can be taken to reduce this situation.

Conclusions

It is concluded that the MyPE are the job generators for this reason are important for the nation, contribute more than 90% of GDP in the state of Yucatan. The results are overwhelming the lack of sales and location are the two variables that cause the greatest closure within the market; For this reason, it is advisable to make known the different instruments, techniques and existing theories that are successful in their application for the location and increase sales, analyze in an operative and evaluative way according to what the company needs. Finally, look for external personnel to advise on market issues for the best decision making.

References

- Arthur Andersen, I. (2018). *Diccionario Espasa: Economía y Negocios*. Madrid, : Espasa Calpe. Obtenido de Diccionario Espasa: Economía y Negocios.: Diccionario Espasa: Economía y Negocios, Madrid, Editorial Espasa Calpe. Recuperado el 07 de febrero del 2018 en: https://www.ucema.edu.ar/cimeibase/download/research/59_Vasquez.pdf
- Arriaga, L. López, C. & Olivares, E. (2013). Pymes: Contribuciones a la economía y competitividad En México. Observatorio de la Economía Latinoamericana. 186 <http://www.eumed.net/cursecon/ecolat/mx/2013/economia.html> (Consultado el 3 de Noviembre de 2017)
- Banco de México. Informe trimestral Enero-Marzo (2017). <http://www.banxico.org.mx/publicaciones-y-discursos/publicaciones/informes-periodicos/trimestral-inflacion/%7BD635C08B-66E7-C821-CFDC-9794598E201A%7D.pdf> (Consultado el 02 de Noviembre de 2017)
- Banco de México. Informe trimestral Abril-Junio (2017). <http://www.banxico.org.mx/publicaciones-y-discursos/publicaciones/informes-periodicos/trimestral-inflacion/%7B8F602246-A656-53BB-E4EE-B03686CF54F1%7D.PDF> (Consultado el 02 de Noviembre de 2017)
- Chávez, A., Peña, M. & Hernández, M. (2015). Impacto de la reforma fiscal en las microempresas. *Revista Global de Negocios* 3 (2), (1-12) <ftp://ftp.repec.org/opt/ReDIF/RePEc/ibf/rnego/rgn-v3n2-2015/RGN-V3N2-2015-1.pdf> (Consultado el 5 de Noviembre de 2017)
- Corral, E., Bravo, L., Carrillo, S. & Bustamante, A. (2014). El control interno en los inventarios de las microempresas. *Global Conference on Business and Finance Proceedings* 9 (2), (1039-1045) <http://skat.ihmc.us/rid=1NS857JF1-1JK2L06-2C5N/ContentServer.pdf> (consultado el 08 de Noviembre de 2017)
- Cruz, M., Padilla, H. & Velderráin, F. (2014). Factores que inciden en el desarrollo y permanencia de la micro, pequeña y mediana empresa en el País: Caso de estudio Navjoa. *Global Conference on Business and Finance Proceedings*. 9 (2), (1425-1433)
- González, J. G. (10 de Febrero de 2018). *merca20*. Obtenido de *merca20*: <https://www.merca20.com/3-ventajas-que-le-otorga-la-publicidad-a-las-pymes/>
- Maturano, J. G. (1 de Octubre de 2014). Propuesta de un modelo de planeación del proceso de sucesión generacional en empresas familiares. *Propuesta de un modelo de planeación del proceso de sucesión generacional en empresas familiares*. CDMX, CDMX, Mexico: UNAM.
- Molina Itzel. (10 de Febrero de 2018). */biblioteca.utma.edu*. Obtenido de */biblioteca.utma.edu*: <http://biblioteca.utma.edu.pe/sites/default/files/Administraci%C3%B3n%20de%20peque%C3%B1as%20empresas%20-%20Longenecker%20Moore%20Petty%20%26%20Palich%20-14ed.pdf>
- SÁNCHEZ-PACHO, José Enrique, NEGRÓN-HOH, José Jesús Hernán and GÓMEZ-GALAZ, Karla Gabriela. Market aspects that affect the closing of the micro and small business in Mérida *Journal-Labor and Demographic economics*. 2018

Hernández, R., Fernández, C., y Baptista, P. (2010). *Metodología de la investigación*. J. Mares (ed.) (5a. ed.). México: McGraw-Hill.

Instituto Nacional de Estadística y Geografía (Inegi). (2012). *Encuesta Nacional de Micronegocios*. Disponible en http://buscador.inegi.org.mx/search?tx=enamin&q=enamin&site=sitioINEGI_collection&client=INEGI_Default&proxystylesheet=INEGI_Default&getfields=*&entsp=a__inegi_politica&lr=lang_es%257Clang_en&lr=lang_es%257Clang_en&filter=1 (Consultado el 15 de mayo de 2017).

Instituto Nacional de Estadística y Geografía (Inegi). (2014). *Esperanza de vida de los negocios en México*. Disponible en <http://www.inegi.org.mx/inegi/contenidos/Investigacion/Experimentales/esperanza/default.aspx> (Consultado el 17 de mayo de 2017).

Instituto Nacional de Estadística y Geografía (Inegi). (2016). *Directorio Estadístico Nacional de Unidades Económicas*. Disponible en <http://www.beta.inegi.org.mx/app/mapa/denue/>

Núñez, J., Peñaloza, V. & Armijos, E. (2015). Principales causas de mortalidad de las compañías de comercio en la región central de Ecuador. *Revista E-Mercatoria* 14(2), (67-87) <http://revistas.uexternado.edu.co/index.php/emerc/article/view/5051/6048> (Consultado el 25 de Octubre de 2017)

Obregón, M., Gutiérrez, A., Moreno, J. & Valenciana, P. (2014). Efectos administrativos y financieros por el esquema vigente de los comprobantes fiscales para las micro, pequeñas y medianas empresas del Estado de Baja California. *Global Conference on Business and Finance Proceedings*. 9 (2), (466-475) https://www.researchgate.net/profile/Jorge_Restrepo_Morales/publication/262831683_Customer_Services_Multichannel_Model_a_Discrete_Simulations_Case_Study/links/56d0dace08ae4d8d64a3971a/Customer-Services-Multichannel-Model-a-Discrete-Simulations-Case-Study.pdf#page=467(Consultado el 05 de Noviembre de 2017)

Peña, N., Aguilar, O. y Posada, R. (2017). Factores que determinan el cierre de la micro y pequeña empresa. comparativo entre empresas activas e inactivas en México y Colombia. México. Editorial Mc GrawHill.

Philip Kotler y Gary Armstrong, P. 4. (2014). *Fundamentos de Marketing, Sexta Edición*. Madrid: Prentice Hall.

Proméxico. (16 de Noviembre de 2017). *PYMES, ESLABÓN FUNDAMENTAL PARA EL CRECIMIENTO EN MÉXICO*. Obtenido de PYMES, ESLABÓN FUNDAMENTAL PARA EL CRECIMIENTO EN MÉXICO: <http://www.promexico.gob.mx/negocios-internacionales/pymes-eslabon-fundamental-para-el-crecimiento-en-mexico.html>

Measurement of sex discrimination among teachers of the Universidad Tecnológica Metropolitana

Medición de discriminación por sexo entre docentes de la Universidad Tecnológica Metropolitana

ZAPATA-AGUILAR, José Apolinar†*, MOO-NOVELO, Carlos Antonio and MARTÍNEZ-MORALES, Javier

Universidad Tecnológica Metropolitana. Calle 111 No 315 x 46 y 48. Col. Santa Rosa. C.P. 97279

Universidad Autónoma de Chihuahua. Facultad de Economía Internacional. General Jesús Lozoya Solís S/N Kilómetro 1 Col. Almanceña. C.P. 33825

ID 1st Author: *José Apolinar, Zapata-Aguilar* / ORC ID: 0000-0002-1596-4916, Researcher ID Thomson: Q-7516-2018, CVU CONACYT ID: 601306

ID 1st Coauthor: *Carlos Antonio, Moo-Novelo* / ORC ID: 0000-0002-0538-1944, Researcher ID Thomson: Q-8333-2018, CVU CONACYT ID: 941786

ID 2nd Coauthor: *Javier, Martínez-Morales* / ORC ID: 0000-0003-1207-6865, Researcher ID Thomson: Q-9153-2018, CVU CONACYT ID: 203634

Received January 12, 2018; Accepted March 23, 2018

Abstract

The research study presents a bivariate logit econometric model that allows us to estimate the probability of being discriminated against based on the characteristics of the teachers of the Metropolitan Technological University. The information that served as the basis for the construction of the model was compiled through a survey of male and female teachers of the UTM, where the sample was chosen by simple random probabilistic sampling, in two categories: professors of subject and full-time professors. The designed equation allows evaluating the probability that a new teacher who joins the aforementioned university will be discriminated against based on age, sex, education, seniority, income and marital status, as well as identifying areas of opportunity in terms of gender equity, that prevent discrimination and lay the foundations for a harmonious, fair and egalitarian work among the teaching staff of this important house of studies. Gender equity is an issue that every human should be interested.

Discrimination, Equity, Gender

Resumen

El presente estudio de investigación presenta un modelo econométrico logit bivariado que permite estimar la probabilidad de ser discriminado a partir de las características de los docentes de la Universidad Tecnológica Metropolitana. La información que sirvió de base para la construcción del modelo fue tomada de una encuesta practicada a personal docente tanto del sexo masculino como del sexo femenino de la UTM, en donde la muestra fue elegida por muestreo probabilístico aleatorio simple, en dos categorías: profesores de asignatura y profesores de tiempo completo. La ecuación diseñada permite valorar la probabilidad de que un nuevo profesor que se incorpora a la universidad antes mencionada, sea discriminado por su edad, sexo, escolaridad, antigüedad, ingreso y estado civil así como identificar áreas de oportunidad en materia de equidad de género, que prevengan la discriminación y sienten las bases para un trabajo armónico, justo e igualitario entre el personal docente de esta importante casa de estudios.

Discriminación, Equidad, Género

Citation: ZAPATA-AGUILAR, José Apolinar, MOO-NOVELO, Carlos Antonio and MARTÍNEZ-MORALES, Javier. Measurement of sex discrimination among teachers of the Universidad Tecnológica Metropolitana. Journal-Labor and Demographic economics. 2018. 2-2: 18-26

* Correspondence to Author (email: jose.zapata@utmetropolitana.edu.mx)

† Researcher contributing first author.

Introduction

Gender discrimination is a topic of great relevance for every human being, because regardless of their sex, each individual has universal human rights, which have and must be respected in all corners of the planet. The right to equality, freedom, property and security, becomes an imperative that every person aspires to enjoy throughout his life. The female sex, throughout history, has been at a disadvantage compared to the male sex that is culturally considered the strong sex. What has led many nations of the world to create public policies in favor of gender equality.

This process for the pursuit of equity in Mexico has gone a long way since 1945, when the member countries of the United Nations sign the Charter of the United Nations in San Francisco California, United States of America where it is established in Article 1 " Carry out international cooperation in the solution of international economic, social, cultural or humanitarian problems, and in the development and encouragement of respect for human rights and the fundamental freedoms of all, without distinction for reasons of religion, race and sex color "(UN, 2018). This article marks the beginning of the search for gender equity throughout the world, since it guarantees that no distinction of any kind should be made between people based on sex, religion, race or any other reason, as a fundamental principle of human rights.

In accordance with the Political Constitution of the United Mexican States in its article 1 "All discrimination based on ethnic or national origin, gender, age, disabilities, social condition, health conditions, religion, opinions is prohibited. , sexual preferences, marital status or any other that violates human dignity and aims to nullify or impair the rights and freedoms of individuals. " In 2010, the United Nations Entity for Gender Equality and the Empowerment of Women, UN Women, emerged at the same time that Mexico has adopted and signed international instruments for the protection of human rights applicable to the right to equality and the right to equality non-discrimination of both the international human rights system of the United Nations Organization and the inter-American system, made up of the Organization of American States (OAS) (National Survey on Discrimination in Mexico, 2010, p.12).

In the present investigation, we propose to propose a bivariate logit-type econometric model based on the results obtained from the application of a survey to teaching staff, from the Universidad Tecnológica Metropolitana in 2017, to estimate the probability of discrimination by sex, in hiring new teachers. The work is structured in three sections in the first section, the research questions, the general objective and the specific objectives, the hypotheses that are intended to prove, as well as the justification of the work, specifying its importance, are presented in the second section the materials and methods that give support to the study are mentioned, as well as the mathematical model that will be used to obtain the required information, in the third section the results of the research and the conclusions are reflected.

Approach of the problematic

The discrimination that occurs within society towards certain groups of people is an evil that prevents the achievement of equality in all areas, this also reduces the chances of achieving real and sustainable economic growth and development within the environment that really make it possible to increase the welfare of the population. Discrimination has affected groups that are considered vulnerable, such as those made up of boys and girls, the elderly, women and people with disabilities, among others. In the workplace, there is also discrimination when an employee is underestimated because of their physical appearance or sex without knowing their knowledge and skills; De la Madrid (2012, p.36) mentions that there is a 30 percent gap between the income of women and men in Mexico; Thus, 3 out of 10 women workers are discriminated against because of their sex, paying less for being married or having children, the same author based on data from CONAPRED mentions that after an economic recession, women are less likely than men to find a job of the same level and same conditions as before, in the face of these realities we must add that women need a higher level of education to have job opportunities similar to those of men. Before this arise the following research questions that will guide the development of work:

1. Are the teachers of the Metropolitan Technological University more discriminated by their sex than the teachers?
2. Are the teachers of the Metropolitan Technological University with a bachelor's degree more discriminated than the professors who hold a postgraduate degree?

General objective

Estimate the probability of discrimination by sex between teachers of the Universidad Tecnológica Metropolitana, through a bivariate logit-type econometric model, to propose actions in the labor and academic fields that promote equality among the professors of this Institution of Higher Education.

Specific objectives

1. Elaborate a bivariate logit type econometric model that allows to estimate the probability of discrimination by sex among teachers of the Metropolitan Technological University.
2. Identify among the professors of the Metropolitan Technological University which sex suffers the most discrimination.
3. Identify among the professors of the Metropolitan Technological University, if those who have only a bachelor's degree are discriminated against in comparison to those who have postgraduate studies.

Hypothesis

H₁: The teachers of the Metropolitan Technological University are more prone to suffer discrimination by sex than teachers.

H₂: Teachers with a bachelor's degree are more likely to be discriminated against than those with a graduate degree.

The importance of the study lies in developing a bivariate logit type econometric model, with which the probability of discrimination by sex can be estimated, in the future entrance of professors at the Metropolitan Technological University; Similarly according to Parkin (2007) with the new theory of economic growth, achieving more and better opportunities for all, can trigger a multiplier effect on the welfare of people, achieving fair and equitable treatment in all areas is beneficial in every sense. The study is relevant because it contributes to the theory that has been developed in this regard, in a subject as significant as discrimination is.

Justification

Reducing the discrimination of the vulnerable population is of the utmost importance to achieve an environment with equity, since one can not speak of equality if acts of discrimination persist in all areas in which people operate. "Women face other forms of discrimination: because of their origin and culture (Afro-descendants, belonging to indigenous peoples), migrant or refugee status, age, political opinion, religious belief, socioeconomic level, place of residence and origin. These reasons of discrimination that vary according to times and cultures also affect men, but the status of women empowers them and multiplies vulnerabilities "(Bujan, 2016 pp. 26-27).

The relevance of carrying out this study is based on the fact that it will allow designing an equation that will serve to estimate possible gender discrimination in the future hiring of professors at the Metropolitan Technological University.

Previous studies have been carried out to try to measure the perception of discrimination by sex, one of these was the one developed by Becker cited by (Martínez and Acevedo, 2004, p 67) where the ratio of male-female wages observed was analyzed equal to the ratio of male-female salaries in the absence of discrimination and which in turn represents the marginal products of men and women, reaching the conclusion that rural women receive a significantly lower salary than men without meaning that the woman is less productive or capable.

Theoretical framework

To achieve a truly democratic society it is necessary to reduce gaps between people, this in order to achieve equity between men and women, while leaving behind the processes of discrimination that occur in the social, economic, labor, and school environment. Since a human being is born, a gender is assigned, without considering the mental, social and psychological maturity of each subject that will constitute their identity. From the binary perspective about sexuality, broad diversity is not considered. Therefore, social or political exclusion of individuals who do not recognize their anatomical or biological sex is generated. In this dynamic, the right to equal opportunities and fair treatment that all individuals in a society must receive is violated. Those who do not agree with the sex of their body suffer discrimination or exclusion. In addition, they are conditioned for free participation in most social organizations, which are based on identity fundamentalism (Escobar, 2007).

Gender is an emerging category to account for the social construction that has transformed the differences between the sexes in social, economic and political inequalities. The concept of gender not only designates what in each society is attributed to each of the sexes but also denounces this cultural conversion of difference in inequality (Cobo, cited in UNESCO, 2007).

Discrimination is a process that takes place in society between a person or persons who submit to another, by their way of being, manner of dress or social status, this occurs in the workplace, and is equally by racial conditional or gender difference, discrimination is an evil that needs to be eradicated in society, because this does not allow true equity among people, so it also becomes a brake on the growth and economic development of the regions; in accordance with the Convention on the Elimination of All Forms of Discrimination against Women cited by Rodríguez (2006 p 26), "discrimination against women is defined as any distinction, exclusion or restriction based on sex that has as its object or result of undermining or nullifying the recognition of enjoyment or exercise by women, regardless of their marital status on the basis of equality between men and women, of fundamental rights and freedoms in the political, economic, social, cultural and civil spheres".

So it could be argued that discriminating is effectively selecting who and what not to treat it differently, who can access a service and who does not, is to offer preferential treatment to certain groups and offer derogatory treatment to others. So it is important to reduce discrimination in the social and labor field, therefore discrimination is an unequal treatment that occurs between people, where one considers inferior to another, which becomes something negative when it is used to cause distinctions in society, give preference to certain groups and avoid others, these situations are experienced day by day in the environment or social reality, so it is necessary to generate educational processes capable of achieving changes in people and perceiving equality as a means to achieve economic development.

Discrimination is then an act that violates the fundamental rights of people in Article 7 of the Universal Declaration of Human Rights of 1948 states "All human beings are equal before the law and have without distinction the right to equal protection of the law. Everyone has the right to equal protection against any discrimination that violates this Declaration and against any provocation to such discrimination. "(Rodríguez, 2006, p.25).

Some figures on the perception of the problem of discrimination can be found in the National Survey on Discrimination in Mexico (2010), where it is established according to the question "personally have you ever felt that your rights have not been respected?" 26% said yes, for not having money, 19.8% for their age and 19.2% for being male or female, likewise for the color of skin can be seen that two out of ten people of very low socioeconomic status they have felt that their rights have not been respected for their skin color, compared to one in ten of medium high and high socioeconomic status. In the same way, 58.5% and 57.5% of the lesbian, gay and bisexual population group consider that discrimination is their main problem according to their socioeconomic level. Regarding ethnic groups, 19.2% consider that their main problem is discrimination, of this same group, four out of ten consider that they do not have the same opportunities as others to get a job. (CONAPRED, 2011, p 38-52)

Therefore, in order for a society to aspire to achieve equity, it must first reduce the discrimination gaps that exist among the members of society, since it is not only directed towards women, but also towards older adults, indigenous people, with disabilities, people with religious differences among others, that is why it is important to define public policies that aspire to build a State without discrimination and with equity.

The concept of equity is sometimes confused with that of equality, however. Equality would involve covering the area in a particular way, when deciding if you want equality in income, equality in access to health or equality in access to education, on the contrary the concept of equity would have to do with an unequal treatment Between people.

According to Rodríguez (2008, p.60), "for socialists, an equitable society is one that promotes economic equality, even at the expense of other fundamental freedoms, on the contrary for the liberals an equitable society is the one that guarantees the freedom and equal opportunities, even when their operation implies the unequal distribution of wealth".

According to the World Bank (2012), many more girls now attend school and have a longer and healthier life than even 10 years ago, but these improvements have not yet translated into widespread benefits, as women continue to being widely more excluded than men in economic terms.

Trends indicate that the participation of women in the labor force has stagnated in the last 20 years, decreasing from 57% to 55% worldwide, and remaining at around 25% in the Middle East and North of Africa, with the consequent direct impact on growth, also establishes that gender equality can have important effects on productivity since women now represent more than 40% of the global work force, 43% of the population agricultural labor and more than half of the university enrollment in the world (World Bank, 2012, p.3).

In accordance with the Political Constitution of the United Mexican States (2017), Article 1 raises the constitutional status of human rights recognized in ratified treaties and guarantees the broadest protection for individuals.

Obliges the authorities, within the scope of their powers to promote, respect, protect and guarantee human rights in accordance with the principles of universality, interdependence, indivisibility and progressivity, the same constitution of Mexico in its article 4 establishes the equality of the male and the woman before the law.

Respect and tolerance are fundamental elements to initiate the change of vision of academics in higher education. It is not with the ideological imposition that progress will be made in formative processes, but neither can it be insensitive to a reality that increasingly influences pedagogical practices in the university context (Paz, 2018).

In the present research study, we seek to create a model, in which, through an equation, we can estimate the probability of discrimination of a new university professor or professor. It is necessary in the first instance to define what is meant by the econometric model, which can be said to be an economic model with the necessary specifications where the variables to be measured and an element of error are established (Gujarati, 2010, p.4).

In the same way it is necessary to specify the logit model, which relates the endogenous variable Y, with the explanatory variables X, through a distribution function, it can be interpreted in probabilistic terms, that is, it serves to measure the probability of its occurrence the event under study ($Y_i = 1$). Regarding the interpretation of the parameters estimated in a logit model, the sign of them indicates the direction in which the probability moves when the corresponding explanatory variable increases, however, the amount of the parameter does not coincide with the magnitude of the variation in probability as it does in linear models.

In the case of logit models, by assuming a non-linear relationship between the explanatory variables and the probability of occurrence of the event, when the explanatory variable increases by one unit, increases in probability are not always the same as they depend on the original level of the same. (Medina 2003, p.10)

Some of the characteristics of the logit model that can be considered are:

1. Although the transformed model is linear in the variables, the probabilities are not linear.
2. The logit model assumes that the logarithm of the probability ratio is linearly related to the explanatory variables.
3. In the logit model the regression coefficients express the change in the logarithm of the probabilities, when one of the explanatory variables changes in a unit, remaining the others constant.

The logit model can be used for the analysis of questions with binary answers with two answer options yes and no, depending on: the amount of solid waste it estimates generates a week; of the amount of material recycled per week and depending on the social stratum and the type of user: 1. small generator; 2. medium generator and 3. large generator. By means of an example we can know the operation of the model where the variables are defined in the first instance, which are: x1: Type of user: 1. small generator; 2. Medium generator and 3. Large generator, x2: Authorizes to receive information about the recycling process: 0 (no); 1 (yes) x3: Amount of material recycled per week. x4: Amount of solid waste that estimates generates per week. x5: Social stratum. y: Performs separation of recyclable material at the source. The model obtained is of the form where: $X\beta = -1.4136 + 0.1346 x1 + 0.4834 x2 + 237.2332 x3 - 0.6263 x4 + 0.1789 x5$. (Moscote y Arley 2012, p. 131).

These mathematical models allow to give research greater certainty and certainty regarding the results obtained, since by replacing or changing certain variables related to the dependent variable changes the results of the equation which allows making predictions about possible behaviors.

Methodology

For the construction of the model, a database of the first gender survey applied to teachers of the Universidad Tecnológica Metropolitana in 2017 was taken as a reference, in two categories: subject teachers and full-time professors, a total of 141 teachers of the 224 who work in any of the three divisions that make up.

The survey was divided into 4 segments: general data among which highlight their gender, age, marital status and academic training, followed by the section on labor issues where the teacher is asked the name of the position he occupies, his seniority and the type of the contract he has, the third section addressed is the family environment, where the respondent is asked about the time he dedicates to his family and the activities of the household, and the fourth section that addresses the institutional environment that considers the perception of the Teachers on Gender Equity in the Division in which they Provide Professional Services. For the survey methodology, a simple random probabilistic sampling was used among the personnel that work in the three divisions of the Metropolitan Technological University, with a minimum age of one semester. Both men and women were surveyed, with the aim that the localized perception is integral, that is, that it shows the position of both sexes.

Theoretical model

To analyze the probability of gender discrimination, the bivariate logit model is considered. Since it is required to estimate the probability of discrimination $Y = 1$ when it is discriminated and $Y = 0$ when it is not. For this analysis, the following equation on gender discrimination can be proposed:

$$P_i = E(Y = 1 | X_i) = \frac{1}{1 + e^{-(\beta_1 + \beta X)}} \quad (1)$$

What can be written as:

$$P_i = \frac{1}{1 + e^{-t_i}} = \frac{e^{t_i}}{1 + e^{t_i}} \quad (2)$$

where $t_i = \beta_1 + \beta X$

Equation 2 is known as the logistic distribution function. As suggested by Gujarati (2009, pp. 554), it is easy to show that if the variable t is at a value of $-\infty$ to $+\infty$, then the variable P will oscillate between 0 and 1. Since the model is not linear neither in X nor in the Betas, then the ordinary least squares (OLS) procedure can not be used, although this problem can be solved by linearizing.

If P_i , the probability of being discriminated, is given by equation 2, then $(1 - P_i)$, is the probability of not being, this is:

$$1 - P_i = \frac{1}{1 + e^{t_i}}; \quad (3)$$

What can be rewritten in the following way:

$$\frac{P_i}{1 - P_i} = \frac{1 + e^{t_i}}{1 + e^{-t_i}} = e^{t_i} \quad (4)$$

Now $P_i/(1-P_i)$ is the coefficient of probabilities to discriminate. Now, if you take the natural logarithm of equation 4, you can get an important result:

$$L_i = \ln\left(\frac{P_i}{1 - P_i}\right) = t_i = \beta_1 + \beta X \quad (5)$$

What allows us to find that not only X is linear but also linear in the parameters.

Econometric Model

The following model allows to estimate the probability of being discriminated or not from the characteristics of the teachers of the Autonomous Metropolitan University.

$$\text{Discriminated}_i = \alpha_1 + \beta_2 \text{age} + \beta_3 \text{gender} + \beta_4 \text{scholarship} + \beta_5 \text{antiquity} + \beta_6 \text{entry} + \beta_7 \text{m_status} + \beta_8 \text{exclusion} + \text{error}$$

Where:

Age = Teacher's age

Gender = It is a dichotomous variable, where 0 "Man" and 1 "Woman"

Schooling = Years of schooling.

Antiquity = Years of work at the university.

Income = Level of income of teachers.

Ecivil = Marital status of the teacher 1 "Married" 0 "Other"

Exclusion = 1 "Person excluded by sex" 0 "For everything else"

Results

With the data obtained from the first gender survey applied to teachers of the Universidad Tecnológica Metropolitana in 2017, the econometric model proposed in the STATA software was substituted. The main results can be seen in Table 1.

$$Y = 0.14411326$$

Variable	dy/dx	P>z
Age	0.0047549	0.0000
Gender	-0.1572594	0.0200
Scholarship	-0.0013921	0.0010
Antiquity	-0.0074234	0.0001
Entry	2.87E-06	0.0000
Marital status	0.099877	0.0000
Exclusion	0.5524804	0.0000

Table 1 Marginal effects, robust.
Source: Self Made.

It was found that the probability of a teacher being discriminated against is 14.4%, regardless of their sex, low percentage, which allows observing what in the Metropolitan Technological University, there is a low level of discrimination.

However, when analyzing variable by variable, it can be seen that the higher the age of teachers the probability of being discriminated is just 0.47%, contrary to what is expected, being a woman reduces the probability of being discriminated against by 15%, to greater years of schooling and seniority in the university, unequal treatment is reduced, while higher income increases the probability of being discriminated against. An important result was that there is a high probability of receiving unequal treatment, about 56%, when people have already been excluded because they are men or women.

Discussion

According to Buján (2016, pp. 26-27) the reasons for discrimination vary according to times and cultures, but also affect males, but the condition of women enhances and multiplies vulnerabilities. Contrary to what was stated by Buján, according to the results obtained after testing the proposed econometric model with the responses of UTM teachers surveyed in 2017, it was found that female teachers are less discriminated against than male teachers, data that is significant, and makes the Institution of Higher Education an entity that respects the rights of academics, especially women.

According to the results obtained, since a teacher is excluded from his work group, be it man or woman, there is a high probability that he may be a victim of discrimination, derived from the differences he might have with his classmates work.

The proposed econometric model estimates the likelihood of occurrence of discrimination, yielding significant data that will allow the institution of Higher Education to reinforce measures that prevent the disintegration of personnel, and lead to discrimination between working groups.

Conclusions

In the Metropolitan Technological University, gender discrimination among teachers is minimal in general terms. This is confirmed by the existence of men and women in the different categories of teachers. Teachers are less discriminated against than teachers according to the results of the econometric model. It was also found that the higher the teacher's education, the lower the probability of discrimination, a favorable result that also becomes a source of motivation for the academy to continue its preparation.

The first H1 hypothesis is rejected because teachers are less prone to discrimination than teachers, based on the results of the econometric model. With regard to the second hypothesis H2 is also rejected, because schooling is not a factor of significant discrimination either, since currently to enter the Metropolitan Technological University as a teacher it is required to have a bachelor's degree and professional certificate at least, not However, more than 50% of candidates are presented with a master's level.

Recommendations

The great work of the Universidad Tecnológica Metropolitana will be to maintain and improve equality strategies that it has implemented among those that stand out:

- 1 Opposition contests to access full-time teaching positions.
- 2 Equal participation in academic events.
- 3 The facilities in terms of time to attend a postgraduate course.
- 4 The assertive communication of the authorities with the academy.
- 5 The dissemination of effective practices in gender equity (training).

References

Banco Mundial (2012) *Informe sobre el desarrollo mundial: igualdad de género y desarrollo*.

Bujan, J. (2016), *Discriminación hacia las mujeres basada en el género*, Buenos Aires Argentina, Instituto Nacional contra la Discriminación, la Xenofobia y el Racismo (INADI).

CONAPRED (2017) *Convención Americana sobre Derechos Humanos (1969)*, recuperado el 31/12/2017 en http://www.conapred.org.mx/leyes/convencion_americana_derechos_humanos.pdf

Constitución Política de los Estados Unidos Mexicanos (2017), publicada en el diario oficial de la federación recuperado el 20 de julio de 2017 en: www.diputados.gob.mx/leyesBiblio/pdf/1_240217.pdf

De la Madrid, R (2012) *Reporte sobre la discriminación en México 2012*, recuperado el 31/12/2017 de: http://www.conapred.org.mx/userfiles/files/Reporte_2012_Trabajo.pdf

Encuesta Nacional Sobre Discriminación en México (Enadis 2010). Recuperado el 29/12/2017 en: <http://www.conapred.org.mx/userfiles/files/Enadis-2010-RG-Accss-002.pdf>

Escobar, J. (2007) Diversidad sexual y exclusión. *Revista colombiana de bioética*, 2(2), pp.77-94.

Gujarati D, y Porter D (2010) *Econometría*, México, Quinta Edición, Ed: Mc Graw Hill.

Gujarati, D. (2003) *Basic Econometrics*, McGraw-Hill, New York, pp. 595-597

Martínez, I y Acevedo, G (2004) *La brecha salarial en México con enfoque de género: Capital humano, discriminación y selección muestral*, Ciencia UANL, enero-marzo, Vol. VII, Número 001, Universidad Autónoma de Nuevo León, Monterrey, México.

Medina E. (2003) *Modelos de elección discreta*, recuperado el 31/12/017 de http://www.uam.es/personal_pdi/economicas/eva/pdf/logit.pdf

Moscote, O y Arley, W (2012), *Modelo Logit y Probit: Un caso de aplicación*. Comunicación en estadística, vol.5 No. 2 Universidad Santo Tomás.

ONU (2018) Carta de las Naciones Unidas recuperado el 17 de enero de 2018 de <http://www.un.org/es/charter-united-nations/>

Parkin, M. (2007) *Macroeconomía. Versión para Latinoamérica*. Séptima Edición. Pearson Educación. México.

Paz, E. (2018) *Situación actual de la atención a la diversidad en la educación superior de honduras*. Revista Actualidades Investigativas en Educación. Vol.18, No 3, p. 1-32.

Rodríguez, J. (2006) *Un marco teórico para la discriminación*, CONAPRED, México.

Rodríguez, C. (2008) *Equidad de la educación en México: propuesta de un sistema de indicadores*, Revista Perspectivas Sociales, Vol. 10, N0. 2, p 55-79

UNESCO (2001) *Igualdad de género en la educación básica de América Latina y el Caribe*. UNESCO-Santiago.

Alternatives of production and economic development for the small productive units of the first valley of the Selva region of the Municipality of Ocosingo, Chiapas

Alternativas de producción y desarrollo económico para las pequeñas unidades productivas del primer valle de la región Selva del Municipio de Ocosingo, Chiapas

AGUILAR-FLORES, Miguel Ángel†*, LOPEZ-OCAÑA, José Elías and DOMÍNGUEZ-MUÑOZ, Mario Alberto

Universidad Tecnológica de la Selva, Carretera a Ocosingo, Altamirano, km 0.5 S/N, Predio Laltic, Ocosingo, Chiapas

ID 1st Author: *Miguel Ángel, Aguilar-Flores* / ORC ID: 0000-0003-0204-3023, Researcher ID Thomson: A-2156-2019, CVU CONACYT ID: 353401

ID 1st Coauthor: *José Elías López-Ocaña* / ORC ID: 0000-0001-5716-2834, Researcher ID Thomson: A-2283-2019, CVU CONACYT ID: 715485

ID 2nd Coauthor: *Mario Alberto, Dominguez-Muñoz* / ORC ID: 0000-0001-8263-8654, Researcher ID Thomson: A-2732-2019, CVU CONACYT ID: 695763

Received January 18, 2018; Accepted March 26, 2018

Abstract

The main purpose of the study and analysis of the production and economic development activities in the rural area of the Municipality of Ocosingo, Chiapas, is to identify existing opportunities for the diversification of production systems in the current productive units, thereby contributing to provide an answer to the existing economic, productive and environmental problems; where it is intended that the production units are self-sufficient and capable of generating a sustainable production where the food is obtained, considering that the surpluses can be marketed to generate direct income to the family; this as a consequence to reduce the dependence of the inputs that come from other places and that are used to satisfy the basic needs and the productive process in the region. For this, in this research its importance lies in conducting the tours and views directly to know what is the true productive vocation and work schemes for the sustainable use of the area and thus define the implementation of alternative activities to its time allows the generation of opportunities to improve the quality of life of producers, but at the same time contribute to the generation of direct and indirect benefits in the locality.

Units of Rural Production, Sustainable Production, Rural Producers, Production Alternatives

Resumen

El estudio y análisis de las actividades de producción y desarrollo económico en la zona rural del Municipio de Ocosingo, Chiapas, tiene como finalidad principal la identificación de oportunidades existentes para la diversificación de los sistemas de producción en las unidades productivas actuales, con ello contribuir para brindar respuesta a la problemática económica, productiva y ambiental existente; donde se pretende que las unidades de producción sean autosuficientes y capaces de generar una producción sustentable donde se obtengan los propios alimentos, considerando que los excedentes puedan ser comercializados para generar ingresos directos a la familia; esto como consecuencia para reducir la dependencia de los insumos que provienen de otros lugares y que se utilizan para satisfacer las necesidades básicas y el proceso de productivo en la región. Para ello, en esta investigación su importancia radica en realizar los recorridos y vistas de manera directa para conocer cuál es la verdadera vocación productiva y los esquemas de trabajo para el aprovechamiento sustentable de la zona y con ello definir la implementación de actividades alternas que a su vez permita la generación de oportunidades para mejorar la calidad de vida de los productores, pero que al mismo tiempo se contribuya a la generación de beneficios directos e indirectos en la localidad.

Unidades de Producción Rural, Producción Sustentable, Productores Rurales, Alternativas de Producción

Citation: AGUILAR-FLORES, Miguel Ángel, LOPEZ-OCAÑA, José Elías and DOMÍNGUEZ-MUÑOZ, Mario Alberto. Alternatives of production and economic development for the small productive units of the first valley of the Selva region of the Municipality of Ocosingo, Chiapas. *Journal-Labor and Demographic economics*. 2018. 2-2: 27-35

* Correspondence to Author (Email: utsmflores@hotmail.com)

† Researcher contributing first author.

Introduction

The purpose of this research was to carry out a study to identify and justify the impulse in the creation of Rural Production Units with alternative activities, in the Municipality of Ocosingo, Chiapas; and that they are capable of producing everything that allows their own territorial extension, considering the productive vocation, climates, soils, water, accessibility, potential for commercialization and basic services. Being self-sufficient will result in the generation of food security, energy production, rational use of water, seed production, breeding stock reproduction of animal species, care and conservation of ecosystems.

The purpose of this research was to identify the producers that have minimum land extensions, to carry out an inventory of activities they are currently carrying out and to determine the alternative productive activities that can be introduced as the production of organic fertilizers (lombri-compost, humus, biological conditioners), basic grains (corn, beans, peas), raising lesser species of animals (goats, rabbits, chickens), to provide not only food to the family, but through the sale of their surplus obtain income and welfare for the members; (*Martinez, 2010*)

This proposal consisted of taking advantage of small areas of land, through the use of intensive techniques and methods; that in the medium term it will be the life project for the families settled in the countryside, living in harmony with nature, preserving and enjoying the environment that surrounds it, breathing fresh air, avoiding the felling of forests, conserving the births of water and propitiating the improvement of lands and crops. Additionally, the use of appropriate technologies at low cost is encouraged, as well as the employment of many people, which will contribute to the well-being of the rural family, (*Nicholls, 2000*)

The Municipality of Ocosingo, Chiapas; about 30 years ago, it was the most important region for the production of livestock and other products related to agriculture, derived from the diversity of land uses that the region possesses; However, after the social movement of 1994, there was a severe reduction in the production of these species (*Haar, 2000*).

Likewise, the organization of basic crops and the provision of tourist services fell in the same proportion; productive activities that are important due to the economic spillover that has been maintained in this region, which provokes reactions, decrease in the labor supply, productive incapacity to cover in its entirety the basic needs and for the correct migration of people to other Municipalities and States of the Country (*Bobrow-Strain, 2009*)

The reduction of production in a region is incomprehensible, since this area has excellent conditions in climates, soils, sufficient water and productive capacity of the population for the development of different activities. This situation can only be explained by the constant conflicts that have occurred in the region, considered a gray area, where productive development is in crisis. (*Vazquez, 2007*)

In this sense, the need to identify and propose production alternatives in the rural production units of the Municipality of Ocosingo, Chiapas. Derived from this situation, it is possible if a greater productivity of the Rural Production Units is promoted, to develop the production alternatives looking for a better enough profitability and a very important growth in the demand of obtained products, without mentioning that its market value is much greater to be considered by the consumer as highly healthy, nutritious and obtained in conditions of protection to the environment (*Guzmán, 2014*)

The research project identifies the needs and areas of opportunity in relation to the productive activities existing within the demarcation chosen for the study, through the use of instruments and tools that allow analyzing the different production alternatives, seeking to contribute in this way. the improvement of the quality of life of the producers located in the rural area of the Municipality of Ocosingo, Chiapas.

General Objective

Know the feasibility, profitability and feasibility when implementing the diversification of its activities, in the production units located in the rural zone of the first valley of Ocosingo, Chiapas.

Purpose

1. Identification of the production and commercialization activities that are carried out in the different productive units of the rural area of the first valley of the Municipality of Ocosingo, Chiapas.
2. Quantification and enumeration of the organized producers of the rural area of the first valley Municipality of Ocosingo, Chiapas.
3. Conducting participatory planning workshops to learn about the productive vocation of the representative production units in the first valley of the Municipality of Ocosingo, Chiapas.
4. Design and delivery of courses for the development of capacities and improve the skills of the producers of the first valley to make them more competitive in the incursion of new production systems.
5. Development of alternative proposals in terms of production according to the needs of the sector, in order to meet the growing demands of raw materials, as well as the production of products, within the same production units of the first valley of the Municipality of Ocosingo, Chiapas
6. Guidance to the producers of the rural area of the first valley of the Municipality, to the management of economic resources in the different programs of public and private financing.

Goals

- Elaboration of a register of 50 producers dedicated to rural activities in the first valley of the Municipality of Ocosingo, Chiapas.
- Classification of the main productive activities of 50 producers located in the rural area of the first valley of the Municipality of Ocosingo, Chiapas.
- Realization of a diagnosis of training needs with the organized producers of the rural area of the first valley in the Municipality of Ocosingo, Chiapas.

- Design of a training program focused on the processes of organization, production and commercialization of the species cultivated by the producers of the rural area of the first valley of the Municipality of Ocosingo, Chiapas.
- Diagnosis and identification of types and / or turns of feasible projects to the needs and opportunities of the production units located in the rural area of the first valley of the Municipality of Ocosingo, Chiapas.
- Dissemination and promotion of information obtained in research in two media, to producers in other rural areas of the municipality, for the development of a model that allows through the demonstration of results, to lead them to this type of diversified production.

Materials and methods

For the realization of the present investigation it was necessary to use geo-referencing instruments, which allowed us to have the exact location and exact dimensions of the regions where the production units object of the present study is located, as well as the design of the logs. of records that accumulate information related to the main productive activities to which the organized producers of the communities are dedicated.

Likewise, participatory diagnostic workshops were conducted with the use of the Logical Framework method (Haugland, Gjos, Hagen, & Ronning, 2005), which allowed us to efficiently know the degree of involvement of local producers, regarding their participation in these productive activities; therefore visits were made to each group of organized producers, to know the characteristics and activities that are carried out in the territorial extension of each production unit and in this way said information was integrated for the design of the project, soil study and project execution.

Once the scope of our research was defined, different tools were used for the field study where all the information required and provided by the owners of each production unit visited will be collected; Such materials are described below:

Interviews tool, which allowed us to maintain direct communication with each of the producers, which guarantees the objectivity of the information provided during the study. (Sampieri, 2009)

Tool of the surveys through questionnaires, which were applied to the collaborators of the production units studied to complement the research information.

Observation tool, which allowed us to realize what is the infrastructure, facilities, tools, supplies and processes that each production unit has.

Also during the development of this research, it was necessary to use equipment, materials and supplies to obtain the information, its processing, interpretation and presentation of the results, and these are:

Laptop: equipment used to capture the information obtained from the rural production units that are considered in the development of the project, as well as the integration of the complete project

Printer: used to print documents (trades, work minutes, questionnaires, assembly minutes, routes, technical sheets) to be carried out during scheduled visits to rural production units, as well as the entire project.

Photographic camera: for the capture of images and photographs of the rural production units visited, with the aim of having a clearer and more detailed perspective of said activities.

Video camera: to record the dialogues and interviews that were made to the producers during the visits, where they explain the development of their activities and the importance of sustainable production.

Tablet: to carry the electronic agenda, maps, work routes; with the purpose of doing the practical activities with timely and necessary information in the explanation of the different topics, as well as videos that allow the producers to have perspectives of the activities they develop.

Projector: for the explanation of the project to rural producers, with the aim of adequately socializing the project and thereby achieve their participation.

GPS: for the correct location of the rural production units and the concrete visualization, which allowed us to obtain the geo-reference of each production unit.

Automobile: for the transfer and realization of the visits to the production units, it is indispensable the use of a vehicle that allowed to make the visits.

Stationery: during the execution of the project, stationery and necessary supplies were used to gather necessary information from the rural production units involved in said project.

Methodology

For the development of this research, we proceeded to collect the information through the following methodology:

The field work was carried out directly in the area of influence under study of this research, located in the rural area of the first valley of the Municipality of Ocosingo, Chiapas; where the logical framework methodology was used, participatory planning processes, work meetings, survey application, interviews, socialization in stays during the period of validity of the research, with the purpose of knowing directly the role played by producers in rural production units regarding the development of productive activities; likewise the realization of community assemblies to know the perception; finally the documentary research and the cabinet work.

The use of the different techniques for the investigation allowed obtaining information of the different activities that are developed in the rural production units; In this way, conducting interviews will help us to record evidence of producers' opinion about the project, suggestions, expectations and other points related to their activities, as well as the use of the direct observation tool, which allowed us to investigate the production processes in the activities developed by the different productive units and especially in those possible activities where it can be successful; likewise with this same tool, we identify the potentials of each of the rural production units.

On the other hand, the use of technical data sheets allows obtaining basic information of the rural production units visited, such as:

Name of the owners, location, main activities in the production units, number of hectares, potential for the development of alternatives of production to be developed in said surfaces, approximate annual production, among other records with a level of importance for the investigation. In order to have data that will help us to carry out the project with greater feasibility, another tool to use is the application of interviews, which is used to obtain more detailed information.

To provide adequate follow-up of the research methodology, we divided the study into three main sections.

1. Socioeconomic aspects of the Municipality of Ocosingo

- Socioeconomic characteristics: This section refers to the study of the total population by sex, density, annual growth rate, language, population occupied by sector and the productive activity of each rural production unit.
- Main economic activities: The information of the rural production units will be classified, according to the production of the primary, secondary and tertiary sectors.
- Agricultural Production: reference is made to the climatological factors, amount of land available per producer, labor force and the main basic products produced, area sown and harvested.
- Livestock Production: The main species of livestock produced in the region (cattle, sheep, pigs, poultry, etc.) are identified.
- Trade: At this point we know the different marketing channels and their viability with respect to family income.

2. Theoretical considerations about the importance of production units.

- Diversification of production: Active participation in the production units.
- Qualified labor: To know the level of performance of those who work in the activities of the production unit.

3. Analysis of the field study
 - Socioeconomic description of the rural production units of the Municipality of Ocosingo
 - Main economic activities, way of life, economically active population
 - Production process: The main basic products and the quantity of production, the sowing and harvesting times, the means used to produce, and the members of the families involved are identified.
 - Salaried work: In this aspect it is detected the amount of people that sell their work force and representation that it has in the Rural Production Units.
 - Activities that generate economic income in the families of the community: In this section, the main activities of the family nucleus are known, as well as those that have greater relevance and business perspective.
 - Way of life in the regions where the rural production units are located: It is important to highlight the situation in which each of the families currently live, the social stratum to which they belong and the number of people living in housing.

The study of this project consists in knowing directly the daily activities of the producers that at the moment were selected through the statistical sampling method, to identify the behavior related to the participation of the producers in field activities, taking into account The following criteria:

- Size of the Research Universe
- Representative sample for the realization of the study

In this way we know the data of the population under study, for which the following formula was applied:

$$n = \frac{Z^2 Npq}{e^2 (N - 1) + Z^2 pq} \quad (1)$$

Where:

e = Estimation error 5%

n = Sample size ¿ ?

p = Probability in favor 70%

q = Probability against 30%

Z = Confidence level 95% = $.95/2 = 0.475 = 1.96$ (Valor de Z)

N = Total Population or Universe 50 rural production units

$$n = \frac{(1.96)^2 (50) (0.70) (.30)}{(.05)^2 (50-1) + (1.96)^2 (0.70) (0.30)}$$

$$n = \frac{(3.8416) (50) (0.70) (.30)}{(.0025) (49) + (3.8416) (0.70) (0.30)}$$

$$n = \frac{40.3368}{0.9292}$$

$$n = 43.41$$

$$n = 43 \text{ Rural Production Units}$$

Sample size

In the cabinet work, the capture and analysis of the collected information was carried out, using for it the programs of the Office package, such as excel, word and publisher.

Infrastructure

For the development of this research project, it is important to mention that computer equipment was used (laptops, printers, projector cannon, scanner), photographic equipment (camera and video), communication equipment (cell phone), geography equipment. referencing (GPS). Likewise, the use of infrastructure, auditoriums of the Technological University of La Selva, for holding meetings, workshops, training and training for rural producers in the first valley of the Municipality of Ocosingo, Chiapas.

Incidence of the Project in the Institutional Strengthening

For the development of this research project, the participation of students, teaching staff and members of this Academic Body was very important; This being a team that was directly involved in the start-up of the aforementioned study.

The involvement of students focuses basically on the application of knowledge, skills, abilities, attitudes and skills acquired within the classroom, with the aim of encouraging initiative and desire for research, as well as compliance with academic studies, work of research through the development of practices focused on the provision of training services, technical assistance, advice, design and putting into operation of productive projects in rural production units.

On the other hand, the implementation of integrated projects advised by academics and researchers, in the formation of work groups and rural productive organizations of the Municipality of Ocosingo, Chiapas.

In the same way, the researchers, participating teachers and members of the Academic Body, have the possibility of publishing the results of the study, participating in congresses, academic forums, research spaces of a national and state nature.

The research project maintains institutional impact through the creation of adequate conditions for the provision of professional services, continuing education and technological services offered by the Technological University of La Selva. In the same way the creation of guides, manuals, reports and technical reports, for the increase of academic production.

In this way, the results of the research work allow us to build a methodology that is replicated to other scenarios of the different regions of the State and the Country, which have the same socio-economic characteristics and conditions, thus achieving a greater Linkage of our University, with the productive and social sector and thus the formation of collaboration networks between producers and members of Academic Bodies to share experiences focused on improving, updating and renewing production systems that are currently used.

Results of the investigation

The results of the present investigation, allow us to identify all the potential that exists in each of the areas traced for the study in the ranches and production units visited.

The quality of the soils, the abundance of water, the unbeatable climate, the flat lands in their majority, all these elements very propitious for the establishment of any productive activity focused on agriculture, livestock, fishing, forestry, among others; But an asset that cannot be substituted without doubt is the commitment, will and wishes of the producers who are eager to undertake a project of this nature. Each and every one of the producers, owners, managers and administrators of the production units that were visited. They are aware of the need to increase and differentiate their productive activity by optimizing and taking advantage of each of the parts and space that makes up their property, 90% of the producers of this research universe are mainly engaged in the productive activity of livestock (livestock bovine). Scarcely 10% use their property for the development of activities in major livestock (pigs, sheep). This composition can be appreciated from the need to create integrated farms under a sustainability scheme that allows the greatest use of the spaces to generate higher and better incomes.

The additional and alternative productive activities proposed in this research are: Production of sheep, Production of pigs, Production of rabbits, Production of bees (hives), Production of backyard birds (chickens, turkey, duck), Production of timber species, Production of fruit species, Production of exotic fruits, Cheese making, Bread making, Products derived from honey (sweets, candies, syrups, candles and candles), Industrialization of fruits and vegetables, Meat workshops, Wood furniture factories, Production of earthworms (vermiculture), fish production, production of exotic species (iguana, deer), environmental management units (UMA), production of seasonal vegetables, implementation of nurseries.

Discussion

It is important to mention that each of these proposals are focused on each type of production unit, that is, according to the nature, size, available resources, location, accessibility, among other factors; the proposal is being made for the establishment of the activities, on the other hand the producers themselves have identified areas of opportunity to increase the supply of activities seeking greater increase of their capacities, knowledge and resources with which they have.

Each production unit has an innumerable list of assets that can be available for the use of these resources in the diversification of productive activities.

Main assets of the production units visited

Extensions of land suitable for the development of agricultural and livestock activities, Use and disposal of land for crops, livestock infrastructure (pens, feeders, fences), access and communication in good condition, water sufficiency, electric power, staff that works with availability to work.

The total number of production units visited has sufficient capacity to establish productive activities and convert them into ranches or integrated farms, which allow improving and increasing production, income and food security in the region where the project was developed. This research was necessary to identify a universe of study that included a total of 43 production units (ranches), located in the entire periphery of the municipal seat of Ocosingo, Chiapas; distributed in 11 routes; shaped as follows:

Route 1. Ocosingo - Palenque, a total of 6 production units

Route 2. Ocosingo - Barrio Octavio Albores, a total of 2 production units

Route 3. Ocosingo - Technical Sec. No. 16, a total of 4 production units

Route 4. Ocosingo - Campo del CBTA 91, a total of 3 production units

Route 5. Ocosingo - Colonia Magisterial, a total of 6 production units

Route 6. Ocosingo - San Pedro, San Pedro 5 production units

Route 7. Ocosingo - Ejido Balaxté, a total of 5 production units

Route 8. Ocosingo - Rio Jataté, a total of 4 production units

Route 9. Ocosingo - Pomarrosa, a total of 3 production units

Route 10. Ocosingo - San Cristóbal, a total of 4 production units

Route 11. Ocosingo - San Caralampio, a total of 1 production unit

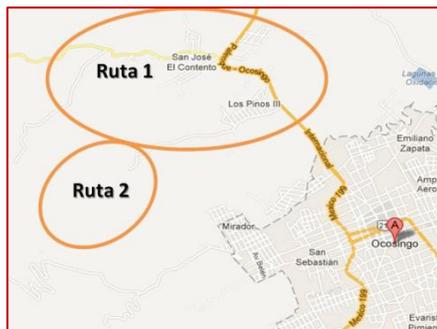


Figure 1 Route 1 y 2
Source: Self made

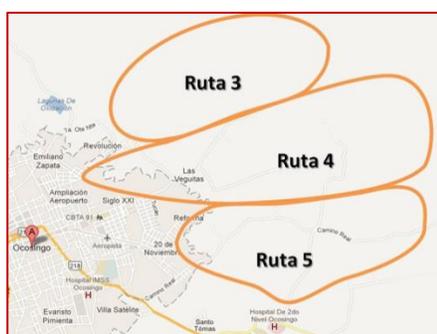


Figure 2 Route 3, 4 and 5
Source: Self made



Figure 3 Route 6
Source: Self made



Figure 4 Route 7
Source: Self made



Figure 5 Route 8
Source: Self made

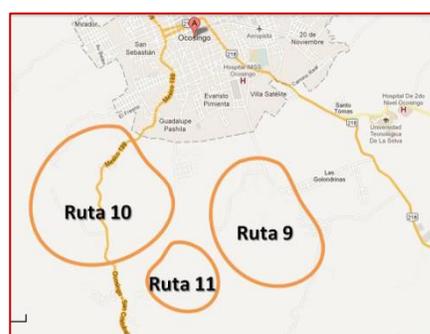


Figure 6 Route 9, 10 y 11 (Ranchos)
Source: Self made

In summary, a total of 43 production units (ranchos) were visited, where a range of opportunities is identified for the implementation of activities related to the field that can be used to give the category of integrated farms and ranches, such as:

Livestock and livestock activities:

- Larger livestock
- Livestock
- Backyard Livestock
- Livestock of exotic species

Agricultural activities:

- Crops of fruit species
- Species crops vegetables
- Vegetable crops
- Crops in greenhouses
- Nursery crops
- Productive reconversion

Piscicultural Activities:

- Production of tilapia mojarra
- Production of trout
- Production of river shrimp

Silvicultural Activities:

- Production of timber species
- Reforestation

Agroindustrial activities:

- Cheese and dairy factories
- Fruit and vegetable agribusiness
- Industrialization of honey
- Meat workshops

Other activities:

- Vermiculture production
- Carbon capture from excreta
- Wood workshops
- Handicrafts

Conclusions

In summary we can mention that there is feasibility and feasibility in the project of integrated farms for its implementation in this town, being part of a second stage of the project the study of profitability to ensure the success of this project.

During the research process of this project in the Ocosingo region, Chiapas; we could see that the agricultural activity is having less and less impact in this area, derived from the consequences that entailed the social and political problems that led to the beginning of the armed movement in the jungle zone of the State of Chiapas; the great extensions of land that were in few hands and that in turn were productive, at present these large farms and properties no longer generate the same dividends; faced with this situation that has generated slow economic and social growth in the municipality, viable, profitable and feasible alternatives have been sought that can significantly contribute to the development in the communities, with the ejidatarios and small owners of small extensions of land where they can diversify productive activities to satisfy self-consumption needs, trying that the surpluses are taken to the commercialization so that this activity and cash flow is generated in the Ocosinguenses families.

References

Altieri, M. y Nicholls, C; Agroecologica: Teoría y práctica, para la Agricultura Sustentable; 2012.

Faladori, G, 2005. "Campesinos y Proletarios.- la evolución del capitalismo en la agricultura mexicana y la polémica actual". Documento de difusión interna No. 5 UNAM. Facultad de economía. México, D.F.

Haugland, C.; Gjos, T.; Hagen, S., Ronning, A.; Samset, K; Sletten, S; Stoll, I y A. Strand; Enfoque del Marco Lógico como herramienta para planificación y gestión de proyectos orientados por objetivos El grupo de Trabajo Metodológico de La Agencia Noruega para la Cooperación y el Desarrollo (NORAD); 2005.

H. Camacho; L. Cámara; R. Cascante; y H. Sainz; El Enfoque del Marco Lógico: 10 casos prácticos. Cuaderno para la identificación y diseño de proyectos de desarrollo (Acciones de Desarrollo y Cooperación A.D.C); 2009.- Fundación CIDEAL Madrid. España.

Hernández Sampieri Roberto; Collado Fernández Carlos, Baptista I. Pilar; Metodología de la investigación; 2ª. Edición junio de 2009, McGrawHill.

Nash, June. 2005. "Producción Doméstica en el mercado mundial" En Esponda Jimeo et. at. Antropología mesoamericana. Serie nuestros pueblos. Primera edición. Talleres gráficos del Estado. Gobierno del Estado de Chiapas. Tuxtla Gutiérrez, Chiapas.

Parra, Vázquez Manuel. 2007. "El Subdesarrollo Agrícola en los Altos de Chiapas". Universidad Autónoma de Chapingo. Centro de Investigaciones Ecológicas del Sureste. Colección Cuadernos Universitarios. Serie Agronomía No. 18. México D.F.

Plan Municipal de Desarrollo, Ocosingo, Chiapas 2015 – 2018; Honorable Ayuntamiento Municipal de Ocosingo.

Salvarredy, J.R.; García Fronti, V.M.; Rodríguez, M. Y J. García Foni – 2013 – Gestión Económica y Financiera de Proyectos. Herramientas informáticas para la Pequeña y Mediana Empresa. Omicron System S.A. Buenos Aires. Argentina

Vaca Urbina Gabriel. 2010; Evaluación de Proyectos 5ª Edición; Editorial McGrawHill

Instructions for Scientific, Technological and Innovation Publication

[Title in Times New Roman and Bold No. 14 in English and Spanish]

Surname (IN UPPERCASE), Name 1st Author†*, Surname (IN UPPERCASE), Name 1st Coauthor, Surname (IN UPPERCASE), Name 2nd Coauthor and Surname (IN UPPERCASE), Name 3rd Coauthor

Institutional Affiliation of Author including Dependency (No.10 Times New Roman and Italic)

International Identification of Science - Technology and Innovation

ID 1st author: (ORC ID - Researcher ID Thomson, arXiv Author ID - PubMed Author ID - Open ID) and CVU 1st author: (Scholar-PNPC or SNI-CONACYT) (No.10 Times New Roman)

ID 1st coauthor: (ORC ID - Researcher ID Thomson, arXiv Author ID - PubMed Author ID - Open ID) and CVU 1st coauthor: (Scholar or SNI) (No.10 Times New Roman)

ID 2nd coauthor: (ORC ID - Researcher ID Thomson, arXiv Author ID - PubMed Author ID - Open ID) and CVU 2nd coauthor: (Scholar or SNI) (No.10 Times New Roman)

ID 3rd coauthor: (ORC ID - Researcher ID Thomson, arXiv Author ID - PubMed Author ID - Open ID) and CVU 3rd coauthor: (Scholar or SNI) (No.10 Times New Roman)

(Report Submission Date: Month, Day, and Year); Accepted (Insert date of Acceptance: Use Only RINOE)

Abstract (In English, 150-200 words)

Objectives
Methodology
Contribution

Keywords (In English)

Indicate 3 keywords in Times New Roman and Bold No. 10

Abstract (In Spanish, 150-200 words)

Objectives
Methodology
Contribution

Keywords (In Spanish)

Indicate 3 keywords in Times New Roman and Bold No. 10

Citation: Surname (IN UPPERCASE), Name 1st Author†*, Surname (IN UPPERCASE), Name 1st Coauthor, Surname (IN UPPERCASE), Name 2nd Coauthor and Surname (IN UPPERCASE), Name 3rd Coauthor. Paper Title. Journal-Labor and Demographic economics. Year 1-1: 1-11 [Times New Roman No.10]

* Correspondence to Author (example@example.org)

† Researcher contributing as first author.

Instructions for Scientific, Technological and Innovation Publication

© RINOE – Bolivia

www.rinoe.org/bolivia

Introduction

Text in Times New Roman No.12, single space.

General explanation of the subject and explain why it is important.

What is your added value with respect to other techniques?

Clearly focus each of its features

Clearly explain the problem to be solved and the central hypothesis.

Explanation of sections Article.

Development of headings and subheadings of the article with subsequent numbers

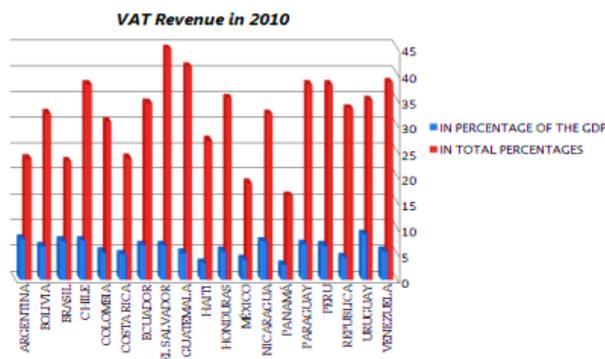
[Title No.12 in Times New Roman, single spaced and Bold]

Products in development No.12 Times New Roman, single spaced.

Including graphs, figures and tables-Editable

In the article content any graphic, table and figure should be editable formats that can change size, type and number of letter, for the purposes of edition, these must be high quality, not pixelated and should be noticeable even reducing image scale.

[Indicating the title at the bottom with No.10 and Times New Roman Bold]



Graphic 1 Title and Source (in italics).

Should not be images-everything must be editable.

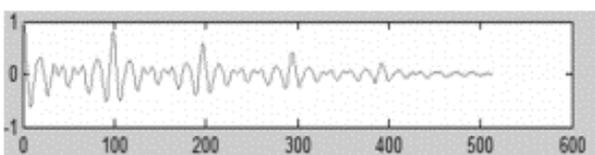


Figure 1 Title and Source (in italics).

Should not be images-everything must be editable

		Panel B. Normal Sentiments							
β_1	Momatum and Higher risk	0.600	0.163	0.083	0.095	1.940	0.365	0.583	0.474
		[0.068]	[0.594]	[0.739]	[0.829]	[0.153]	[0.668]	[0.814]	[0.365]
	Momatum and Lower risk	0.038	0.009	0.062	0.000	-0.082	-1.415	1.139	-7.365
		[0.717]	[0.848]	[0.096]	[0.990]	[0.942]	[0.261]	[0.501]	[0.028]
β_2	Reverse and Higher risk	0.299	-0.039	-0.002	-0.127	1.600	-2.338	1.745	-4.180
		[0.141]	[0.799]	[0.989]	[0.013]	[0.495]	[0.300]	[0.515]	[0.327]
	Reverse and Lower risk	0.681	0.134	0.125	-0.050	6.236	2.639	10.831	2.041
		[0.014]	[0.396]	[0.157]	[0.333]	[0.034]	[0.417]	[0.049]	[0.698]
β_3	Momatum and Higher risk	0.469	0.249	0.704	1.136	1.360	2.810	0.813	10.400
		[0.326]	[0.594]	[0.139]	[0.005]	[0.341]	[0.120]	[0.602]	[0.006]
	Momatum and Lower risk	0.041	0.002	0.093	0.036	-0.532	1.694	6.538	3.433
		[0.630]	[0.972]	[0.017]	[0.164]	[0.698]	[0.321]	[0.007]	[0.262]
β_4	Reverse and Higher risk	0.056	0.101	0.071	-0.001	-0.376	1.888	1.444	0.650
		[0.491]	[0.056]	[0.025]	[0.946]	[0.653]	[0.058]	[0.139]	[0.612]
	Reverse and Lower risk	0.031	0.120	0.134	0.041	1.297	1.184	6.422	2.660
		[0.776]	[0.079]	[0.000]	[0.036]	[0.430]	[0.402]	[0.038]	[0.420]

Table 1 Title and Source (in italics).

Should not be images-everything must be editable.

Each Article shall present separately in **3 folders**: a) Figures, b) Charts and c) Tables in .JPG format, indicating the number and sequential Bold Title.

For the use of equations, noted as follows:

$$Y_{ij} = \alpha + \sum_{h=1}^r \beta_h X_{hij} + u_j + e_{ij} \quad (1)$$

They must be editable and number aligned on the right side.

Methodology

Develop give the meaning of the variables in linear writing and important is the comparison of the used criteria.

Results

The results shall be by section of the Article.

Annexes

Tables and adequate sources

Thanks

Indicate if they were funded by any institution, University or company.

Conclusions

Explain clearly the results and possibilities of improvement.

Instructions for Scientific, Technological and Innovation Publication

References

Use APA system. Should not be numbered, nor with bullets, however if necessary numbering will be because reference or mention is made somewhere in the Article.

Use Roman Alphabet, all references you have used must be in the Roman Alphabet, even if you have quoted an Article, book in any of the official languages of the United Nations (English, French, German, Chinese, Russian, Portuguese, Italian, Spanish, Arabic), you must write the reference in Roman script and not in any of the official languages.

Technical Specifications

Each Article must submit your dates into a Word document (.docx):

Journal Name

Article title

Abstract

Keywords

Article sections, for example:

1. *Introduction*
2. *Description of the method*
3. *Analysis from the regression demand curve*
4. *Results*
5. *Thanks*
6. *Conclusions*
7. *References*

Author Name (s)

Email Correspondence to Author

References

Intellectual Property Requirements for editing:

-Authentic Signature in Color of Originality
Format Author and Coauthors

-Authentic Signature in Color of the
Acceptance Format of Author and Coauthors

Reservation to Editorial Policy

RINOE Journal-Labor and Demographic economics reserves the right to make editorial changes required to adapt the Articles to the Editorial Policy of the Journal. Once the Article is accepted in its final version, the Journal will send the author the proofs for review. RINOE® will only accept the correction of errata and errors or omissions arising from the editing process of the Journal, reserving in full the copyrights and content dissemination. No deletions, substitutions or additions that alter the formation of the Article will be accepted.

Code of Ethics - Good Practices and Declaration of Solution to Editorial Conflicts

Declaration of Originality and unpublished character of the Article, of Authors, on the obtaining of data and interpretation of results, Acknowledgments, Conflict of interests, Assignment of rights and Distribution.

The RINOE® Management claims to Authors of Articles that its content must be original, unpublished and of Scientific, Technological and Innovation content to be submitted for evaluation.

The Authors signing the Article must be the same that have contributed to its conception, realization and development, as well as obtaining the data, interpreting the results, drafting and reviewing it. The Corresponding Author of the proposed Article will request the form that follows.

Article title:

- The sending of an Article to RINOE Journal-Labor and Demographic economics emanates the commitment of the author not to submit it simultaneously to the consideration of other series publications for it must complement the Format of Originality for its Article, unless it is rejected by the Arbitration Committee, it may be withdrawn.
- None of the data presented in this article has been plagiarized or invented. The original data are clearly distinguished from those already published. And it is known of the test in PLAGSCAN if a level of plagiarism is detected Positive will not proceed to arbitrate.
- References are cited on which the information contained in the Article is based, as well as theories and data from other previously published Articles.
- The authors sign the Format of Authorization for their Article to be disseminated by means that RINOE® in its Holding Bolivia considers pertinent for disclosure and diffusion of its Article its Rights of Work.
- Consent has been obtained from those who have contributed unpublished data obtained through verbal or written communication, and such communication and Authorship are adequately identified.
- The Author and Co-Authors who sign this work have participated in its planning, design and execution, as well as in the interpretation of the results. They also critically reviewed the paper, approved its final version and agreed with its publication.
- No signature responsible for the work has been omitted and the criteria of Scientific Authorization are satisfied.
- The results of this Article have been interpreted objectively. Any results contrary to the point of view of those who sign are exposed and discussed in the Article.

Copyright and Access

The publication of this Article supposes the transfer of the copyright to RINOE® in its Holding Bolivia for its RINOE Journal-Labor and Demographic economics, which reserves the right to distribute on the Web the published version of the Article and the making available of the Article in This format supposes for its Authors the fulfilment of what is established in the Law of Science and Technology of the United Mexican States, regarding the obligation to allow access to the results of Scientific Research.

Article Title:

Name and Surnames of the Contact Author and the Coauthors	Signature
1.	
2.	
3.	
4.	

Principles of Ethics and Declaration of Solution to Editorial Conflicts

Editor Responsibilities

The Publisher undertakes to guarantee the confidentiality of the evaluation process, it may not disclose to the Arbitrators the identity of the Authors, nor may it reveal the identity of the Arbitrators at any time.

The Editor assumes the responsibility to properly inform the Author of the stage of the editorial process in which the text is sent, as well as the resolutions of Double-Blind Review.

The Editor should evaluate manuscripts and their intellectual content without distinction of race, gender, sexual orientation, religious beliefs, ethnicity, nationality, or the political philosophy of the Authors.

The Editor and his editing team of RINOE® Holdings will not disclose any information about Articles submitted to anyone other than the corresponding Author.

The Editor should make fair and impartial decisions and ensure a fair Double-Blind Review.

Responsibilities of the Editorial Board

The description of the peer review processes is made known by the Editorial Board in order that the Authors know what the evaluation criteria are and will always be willing to justify any controversy in the evaluation process. In case of Plagiarism Detection to the Article the Committee notifies the Authors for Violation to the Right of Scientific, Technological and Innovation Authorization.

Responsibilities of the Arbitration Committee

The Arbitrators undertake to notify about any unethical conduct by the Authors and to indicate all the information that may be reason to reject the publication of the Articles. In addition, they must undertake to keep confidential information related to the Articles they evaluate.

Any manuscript received for your arbitration must be treated as confidential, should not be displayed or discussed with other experts, except with the permission of the Editor.

The Arbitrators must be conducted objectively, any personal criticism of the Author is inappropriate.

The Arbitrators must express their points of view with clarity and with valid arguments that contribute to the Scientific, Technological and Innovation of the Author.

The Arbitrators should not evaluate manuscripts in which they have conflicts of interest and have been notified to the Editor before submitting the Article for Double-Blind Review.

Responsibilities of the Authors

Authors must guarantee that their articles are the product of their original work and that the data has been obtained ethically.

Authors must ensure that they have not been previously published or that they are not considered in another serial publication.

Authors must strictly follow the rules for the publication of Defined Articles by the Editorial Board.

The authors have requested that the text in all its forms be an unethical editorial behavior and is unacceptable, consequently, any manuscript that incurs in plagiarism is eliminated and not considered for publication.

Authors should cite publications that have been influential in the nature of the Article submitted to arbitration.

Information services

Indexation - Bases and Repositories

Research Gate (Germany)
Google Scholar (Índices de citaciones-Google)
Mendeley (Gestor de Referencias bibliográficas)

Publishing Services

Citation and Index Identification H
Management of Originality Format and Authorization
Testing Article with PLAGSCAN
Article Evaluation
Certificate of Double-Blind Review
Article Edition
Web layout
Indexing and Repository
Article Translation
Article Publication
Certificate of Article
Service Billing

Editorial Policy and Management

244 - 2 Itzopan Street La Florida, Ecatepec Municipality Mexico State, 55120 Zipcode, MX. Phones: +52 1 55 2024 3918, +52 1 55 6159 2296, +52 1 55 4640 1298; E-mail: contact@rinoe.org
www.rinoe.org

RINOE® Journal-Labor and Demographic economics

Chief Editor

RAMOS-ESCAMILLA, María. PhD

Senior Editor

SERRUDO-GONZALES, Javier. BsC

Senior Editorial Assistant

ROSALES-BORBOR, Eleana. BsC

SORIANO-VELASCO, Jesús. BsC

Editorial Director

PERALTA-CASTRO, Enrique. MsC

Executive Editor

IGLESIAS-SUAREZ, Fernando. BsC

Production Editors

ESCAMILLA-BOUCHAN, Imelda. PhD

LUNA-SOTO, Vladimir. PhD

Administration Manager

REYES-VILLAO, Angélica. BsC

Production Controllers

RAMOS-ARANCIBIA, Alejandra. BsC

DÍAZ-OCAMPO, Javier. BsC

Associate Editors

AALÍ-BUJARI, Ali. PhD

CHIATCHOUA, Cesaire. PhD

MIRANDA-GARCIA, Marta. PhD

SUYO-CRUZ, Gabriel. PhD

VARGAS-DELGADO, Oscar. PhD

Advertising & Sponsorship

(RINOE®-Mexico-Bolivia-Iran-Pakistan-Nicaragua-Cameroon-Spain-Ecuador-Colombia-Peru-Taiwan-Chile-Western Sahara), sponsorships@rinoe.org

Site Licences

03-2010-032610094200-01-For printed material ,03-2010-031613323600-01-For Electronic material,03-2010-032610105200-01-For Photographic material,03-2010-032610115700-14-For the facts Compilation,04-2010-031613323600-01-For its Web page,19502-For the Iberoamerican and Caribbean Indexation,20-281 HB9-For its indexation in Latin-American in Social Sciences and Humanities,671-For its indexing in Electronic Scientific Journals Spanish and Latin-America,7045008-For its divulgation and edition in the Ministry of Education and Culture-Spain,25409-For its repository in the Biblioteca Universitaria-Madrid,16258-For its indexing in the Dialnet,20589-For its indexing in the edited Journals in the countries of Iberian-America and the Caribbean, 15048-For the international registration of Congress and Colloquiums. financingprograms@rinoe.org

Management Offices

Loa 1179, Cd. Sucre. Chuquisaca, Bolivia

S/C Zacharie kamaha, Street: Boulevard de la Liberté, Apartamente: Immeuble Kassap, Akwa- Douala.

CP-5963, Republic of Cameroon

38 Matacerquillas, Moralarzal – CP-28411.Madrid-Spain.

1047 La Raza Avenue -Santa Ana, CP-11500. Cusco-Peru.

YongHe district, ZhongXin, Street 69. Taiwan-Taipei.

Agueinit # 4, Wilaya de Awserd, Sahara Occidental

Journal-Labor and Demographic economics

“Influence of gender in the choice of professional career among university students”

CABRERA-IGNACIO, Elisa, CUPUL-ROSADO, Carlos Alberto and CRUZ-DIAZ, Olga Libia

Universidad Tecnológica Metropolitana

“Market aspects that affect the closing of the micro and small business in Mérida”

SÁNCHEZ-PACHO, José Enrique, NEGRÓN-HOH, José Jesús Hernán and GÓMEZ-GALAZ, Karla Gabriela

Universidad Tecnológica Metropolitana

“Measurement of sex discrimination among teachers of the Universidad Tecnológica Metropolitana”

ZAPATA-AGUILAR, José Apolinar, MOO-NOVELO, Carlos Antonio and MARTÍNEZ-MORALES, Javier

Universidad Tecnológica Metropolitana

Universidad Autónoma de Chihuahua

“Alternatives of production and economic development for the small productive units of the first valley of the Selva region of the Municipality of Ocosingo, Chiapas”

AGUILAR-FLORES, Miguel Ángel, LOPEZ-OCAÑA, José Elías and DOMÍNGUEZ-MUÑOZ, Mario Alberto

Universidad Tecnológica de la Selva

