

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

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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

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* 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.