

Comparative analysis of women's empowerment in Mexico**Análisis comparativo del empoderamiento de la mujer en México**

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Abstract

Empowering women and reducing gender inequalities boosts economic growth and has multiplier effects across the development spectrum. In this article we will calculate and compare measures of empowerment for Mexico and its 32 states. This will allow us to better understand Mexico's progress on Sustainable Development Goal 5. Achieve gender equality and empower all women and girls.

Women's empowerment, Empowerment indices, Mexico

Resumen

El empoderamiento de las mujeres y la reducción de las desigualdades de género potencian el crecimiento económico y tienen efectos multiplicadores sobre todo el espectro de desarrollo. En este artículo calcularemos y compararemos medidas de empoderamiento para México y sus 32 entidades federativas. Esto nos permitirá una mejor comprensión de los avances en México respecto del Objetivo de Desarrollo Sostenible 5. Lograr la igualdad entre los géneros y empoderar a todas las mujeres y las niñas.

Empoderamiento de la mujer, Índices de empoderamiento, México

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Introduction

"Sustainable development without gender equality it is not development nor sustainable".

United Nations

The 2030 Agenda for Sustainable Development puts gender equality and the empowerment of all women and girls at the centre of the debate through Sustainable Development Goal (SDG) 5. Empowering women and reducing gender gaps in health, education or labour markets reduces poverty and has multiplier effects across the development spectrum. However, gender inequality remains a persistent problem even in the most developed countries.

Given the potential of women's empowerment as an engine of growth and development, in this article we will calculate measures of empowerment for Mexico and its 32 states. This will allow us to analyse the differences between state values and the national average in various dimensions relevant to women's empowerment, such as their decision-making power within the household, their autonomy or freedom of movement, or their perception of traditional gender roles. These three dimensions will then be integrated into an overall empowerment index, from which we will investigate the relationship between women's empowerment and their situation in the labour market. This will allow us to better understand progress in Mexico on *SDG 5. Achieve gender equality and empower all women and girls*. The results show that both nationally and in the 32 states, women have relatively high values of empowerment, although there are some gaps between states and between the dimensions of empowerment, so there is still some way to go to achieve the full empowerment of women in Mexico. Likewise, the econometric exercise shows a favourable impact of labour market participation and educational level on the aggregate empowerment index and a negative impact of age.

The remainder of this paper is organised as follows. Section 1 provides a brief literature review closely related to our topic of study. Section 2 presents data from the National Survey on the Dynamics of Household Relationships (ENDIREH) for 2016¹. Section 3 presents the method used to construct the empowerment indices. Section 4 discusses the results obtained for Mexico and its 32 states. In section 5, some exploratory exercises are carried out on the relationship between women's empowerment and their situation in the labour market. Finally, section 6 summarises the results of the analysis and draws our conclusions.

A glance at the related literature

Gender inequalities are partly due to the existence of social norms, such as gender stereotypes, which traditionally or culturally emphasise women's role as the main caregiver and men's role as the main breadwinner. This division limits women's participation in the public sphere, as they have to take on more of the private sphere. This suggests that the greater the prevalence of gender roles, the less women are empowered and the longer the road society has to travel to achieve SDG 5.

Traditional female roles are closely linked to the concept of domestic work, "defined as the set of activities that are carried out in the domestic sphere and that are aimed at satisfying the primary needs of the members of the family unit, which makes it obligatory and free of charge" (Vega Montiel, 2007).

Research on men's involvement in domestic work agrees that men's participation within the household is noticeable in very specific activities, such as childcare (García Guzmán, 2019). However, in Mexico, the roles that a man should play and those that a woman should play are still deeply rooted, which continues to drive gender gaps (Martínez Salgado & Rojas, 2016). According to García Guzmán (2019), public policies need to recognise and value the contribution of domestic work to social well-being, both in the paid and unpaid spheres, in order to lighten, and as far as possible balance, the burden of unpaid work that today falls mainly on women.

¹ The 2016 survey is used as, to our knowledge, the ENDIREH 2021 data have not yet been published.

Women's empowerment is a term coined in 1995 at the World Women's Conference in Beijing to refer to the increased participation of women in decision-making processes and access to power. Today, the term also reflects an awareness of women's individual and collective power. As an abstract and subjective attribute, it empowerment is a difficult concept to define precisely and, even more, difficult to quantify. This is why there are various measures of empowerment. For example, the United Nations Gender Equality Index measures the effect of gender inequality on the level of human development achieved by a society or geographic region. Germán-Soto (2022) constructed similar indicators using socio-economic data from a survey of women's labour participation in the Oaxaca Metropolitan Area. The author finds that about 56% of the progress in human development in the Oaxacan capital is undermined by the predominance of stereotypes that empower men and women differently; he also identifies the low participation of the female sector in politics and economic activity as two of the variables that most contributed to undermine human development in that city. In the absence of similar surveys applied to the rest of the states, in this article we will use data from the National Survey on the Dynamics of Household Relationships (ENDIREH), which provides relevant data to quantify some aspects of empowerment.

The data: empowerment and the labour market

Mexico has the National Survey on the Dynamics of Household Relationships (ENDIREH), which provides relevant data to quantify some aspects of empowerment. In general terms, the ENDIREH was conceived to provide information on experiences of gender-based violence against women in order to address and eradicate it. It is in this context that, as part of the analysis of the various surveys, the contributions by Casique (2004), Castro and Casique (2008), Casique and Castro (2014) and Castro (2018) present various indices of female empowerment and extensively study their relationship with gender-based violence.

However, to our knowledge, the databases that collect the point values of the various indices for each individual are not provided, so as a preliminary step to be able to study women's empowerment in Mexico and its relationship with their situation in the labour market we will reconstruct the various indices.

The ENDIREH 2016 consists of several sections, of which the relevant ones for our study are Section XIV. Decisions and Personal Freedom and Section XV. Opinions on male and female roles. Also, as we are interested in studying the relative power of women vis-à-vis men, we will use data from surveys of married or cohabiting women aged 15 years and older. Finally, some socio-economic variables will be used to study the relationship between empowerment and women's situation in the labour market.

Response frequencies

Subsection 14.1AB of Section XIV considers 7 response codes that take values from 1 to 7 as follows: only you (the respondent), 1; only your husband or partner, 2; both of you, but he a little more, 3; both of you, but you a little more, 4; both of you equally, 5; other people, 6; and not applicable, 7. As the relative frequency of the responses "both of you, but he a little more" and "both of you, but she a little more" was very low, we chose to reduce the three options to "both of you". Also, responses 5 and 6 were removed from the sample as they were not relevant to our study. Thus, the following categories were retained: "only her", "only him" and "both of you".

Table 1 shows the frequencies of responses on who mainly makes decisions in the couple. The first thing that stands out is that the percentage of decisions made only by him is generally low, as most decisions are made by her or by both of them.

Section XIV. Decisions and Personal Liberty (14.1AB)			
Items 14.1AB. Who decides, most of the time, in the household or in your relationship...?	Only him	Both	Only her
1. whether you can work or study?	6.12	39.15	54.73
2. whether you can leave your home?	4.53	27.22	68.25
3. what to do with the money that you earn or have at your disposal?	3.52	40.96	55.53
4. if you can buy things for yourself?	3.67	23.72	73.41
5. when you want or are interested in participating in the social or political life of your community?	3.85	31.21	64.95
6. how do you spend or save money?	4.72	57.46	37.81
7. what do you do with the money you earn?	17.22	61.23	21.56
8. about the type of clothing and grooming for you?	1.8	14.54	83.66
9. about allowances for children?	4.5	78.68	16.81
10. About moving home or city?	7.06	82.47	10.47
11. when to have sex?	3.21	88.74	8.05
12. whether to use contraceptives?	2.77	79.03	18.2
13. who should use contraceptives?	4.41	74.84	20.75
14. whether or not to have children?	2.38	86.61	11
15. when and how many children to have?	2.39	87.04	10.57

Table 1 Frequency of responses about decisions

Note. Recoded response codes

Source: Own elaboration based on ENDIREH questionnaires, 2016

Subsection 14.3AB of Section XIV considers seven items on women personal freedom and (see Table 2): must ask permission (from husband or partner), 1; tells him or asks his opinion (from husband or partner), 2; does not have to do anything, 3; does not go alone or go with him, 4; does not, 5; other, 6; and does not apply, 7. In this case only response codes 1, 2, 3 and 5 are retained, which are recoded so that the higher values reflect greater autonomy of women. Table 2 shows that the first 5 items are dominated by the response "tells her or asks her opinion", while in the last two items the responses reflect a clear autonomy of women, who do not have to tell her or ask her permission or opinion to make friends or vote for a candidate.

Section XIV. Decisions and Personal Freedom (14.3AB)				
Items 14.3AB. Now I am going to ask you about the arrangements you make with your spouse or partner when you need to do some activities	Does not go/does not go	His permission	You let him know or ask his opinion	Does not have to do anything
1. To work for pay or remuneration.	5.29	13.81	58.94	21.96
2. If you have to go shopping	7.28	6.38	57.68	28.66
3. If you want to visit relatives or friends	5.58	8.27	62.6	23.55
4. If you want to buy something for yourself or change your personal grooming	2.66	5.58	39.92	51.84
5. If you want to participate in a neighbourhood or political activity.	8.49	8.01	48.64	34.87
6. If you want to be friends with someone	3.95	3.91	25.22	66.92
7. To vote for some political party or candidate	5.55	2.81	18.22	73.42

Table 2 Frequency of responses on personal freedom
Note. Recoded response codes

Source: Prepared by the authors based on the ENDIREH questionnaires, 2016

In Section XV, the response options are Yes (agree): 1; and No (disagree): 2. However, the assessment of gender roles will depend on the question asked, as for some questions agreeing means a greater attachment of women to traditional gender roles, while for others agreeing reflects a more egalitarian conception of gender roles. For this reason the response options are recoded so that a value of 0 corresponds to greater attachment to traditional roles; and a value of 1 to more egalitarian thinking.

Thus, questions 1, 2, 6, 7, 8, 9 remain unchanged qualitatively (as the lower value represents attachment to traditional roles) and are only adjusted by changing the 2 to 1 and the 1 to 0. On the contrary, in questions 3, 4 and 5 the 1 changes to 2 and the 2 changes to 0. Table 3 shows that in most of the items a more egalitarian thinking of men's and women's roles overwhelmingly predominates. The two exceptions are item 5. Do you think that women should have the right to go out alone at night to have fun? and item 7. Do you think that working women neglect their children?

Section XV. Views on male and female roles		
Items 15.1. According to what you think or believe, tell me in each of the sentences I am going to read you "yes" when you agree and "no" when you disagree.	Traditional role attachment.	Egalitarian thinking.
1. Do you believe that women should be responsible for the care of children, the sick and the elderly?	38.66	61.34
2. Do you think that men should earn more than women?	16.81	83.19
3. Do you think that women should be as responsible as men for bringing money into the household?	33.15	66.85
4. Do you think that men should be as responsible as women for housework, taking care of children, the sick and the elderly?	14.39	85.61
5. Do you think women should have the right to go out alone at night to have fun?	55.73	44.27
6. Do you think that men should have better jobs than women?	11.66	88.34
7. Do you think that women who work neglect their children?	51.07	48.93
8. Do you think women should dress without cleavage so they won't be bothered by men?	34.31	65.69
9. Do you think married women should have sex with their husbands whenever he wants them to?	8.85	91.15

Table 3 Frequency of responses on male and female roles
Note. Recoded response codes

Source: Prepared by the authors based on the ENDIREH questionnaires, 2016

The method for calculating the indices is described below.

Method for calculating the empowerment indices

In order to better understand women's empowerment in Mexico, both at national and state level, we will apply Casique's (2004) methodology to obtain indices on three dimensions relevant to women's empowerment: decision-making power, autonomy or freedom of movement and women's view of traditional gender roles. In general terms, the higher the prevalence of gender roles, the lower women's empowerment and the longer the road society has to travel to achieve SDG 5.

Factor analysis

The first step of the method is to conduct a factor analysis in order to identify a set of dimensions underlying the variables and thus identify which questions represent the same dimension (concept or factor). Once these dimensions have been identified, it is possible to replace the original set of variables with a smaller number of factors; generally, factors with an eigenvalue greater than 1 are retained.

Preliminary to this, two tests were used to determine whether the data are factorisable. Bartlett's test for sphericity examines whether the observed correlation matrix is not the identity matrix. If the test statistic is significant it is concluded that at least one of the variables is correlated with some other variable. The Kaiser-Meyer-Olkin measure of sampling adequacy tests whether the partial correlations of the data are sufficiently close to 0, which would suggest the existence of at least one latent factor (or underlying variable). In all three cases, both tests showed that the data are factorisable.

Tables 4 - 6 report the results of the factor analysis by the principal components method for each set of items in tables 1 - 3.

Factor	Eigen value Variance (%)	Cumulative variance (%)	Cumulative variance (%)
1	5.5	36.671	36.671
2	2.191	14.608	51.278
3	1.155	7.705	58.983
4	0.838	5.587	64.57
5	0.761	5.073	69.644
6	0.728	4.856	74.5
7	0.636	4.238	78.739
8	0.531	3.543	82.283
9	0.5	3.337	85.62
10	0.456	3.043	88.663
11	0.451	6.009	91.672
12	0.424	2.825	94.498
13	0.369	2.463	96.961
14	0.28	1.866	98.827
15	0.176	1.173	100

Table 4 Principal components of decision-making power

Table 4 shows that the 15 items on women's decision-making power within the couple represent three distinct underlying dimensions and together explain about 60% of the variance of all decision variables. Thus, depending on the correlation values with the retained factors, each of the original variables can be identified with one of these factors. In particular, the variables corresponding to women's decision-making power are grouped as follows: Dimension 1: Reproductive decisions (items 11 - 15). Dimension 2: Decisions on women's autonomy (items 1 - 6 and 8). Dimension 3: Family decisions (items 7, 9 and 10).

Factor	Eigen value Variance (%)	Cumulative variance (%)	Cumulative variance (%)
1	3.279	46.847	46.847
2	0.97	13.868	60.715
3	0.695	9.931	70.646
4	0.591	8.447	79.092
5	0.555	7.932	87.025
6	0.457	6.536	93.56
7	0.451	6.439	100

Table 5 Principal components of women's autonomy

Main components of autonomy or freedom of movement

In the case of freedom of movement (see Table 5), the parallel decomposition analysis indicates that there are 3 factors and one principal component. This, together with the graphical representations of the factor analysis for 1, 2 and 3 factors suggest that the seven items can be grouped into two underlying dimensions (even though one of the eigenvalues is slightly less than 1), which together explain 61% of the total variance.

The variables corresponding to women's autonomy or freedom of movement are grouped as follows: Dimension 1: Freedom to go out (items 1, 2 and 3). Dimension 2: Social freedom (items 4, 5, 6 and 7).

Factor	Eigen value Variance (%)	Cumulative variance (%)	Cumulative variance (%)
1	2.561	28.458	28.458
2	1.184	13.157	41.615
3	1.015	11.274	52.89
4	0.814	9.05	61.939
5	0.78	8.667	70.606
6	0.738	8.205	78.811
7	0.688	7.654	86.456
8	0.675	7.502	93.958
9	0.544	6.042	100

Table 6 Principal components of gender role views

Finally, Table 6 shows that the 9 items relating to the perception of traditional gender roles can be grouped into 3 dimensions, which together explain 53% of the variance: Dimension 1: items 1, 2, 6 and 9. Dimension 2: items 5, 7 and 8. Dimension 3: (items 3 and 4).

Communality

The second stage of the method is calculating the percentage of variance that each item shares with the rest; this measure is called communality and serves to assess whether all the items are conceptually similar. Some authors suggest discarding items whose communality with the rest is less than 0.3, since their nature would be conceptually different from that of the rest of the variables.

Decision-making power		Freedom		Gender Roles	
Ítem	Community	Ítem	Community	Ítem	Community
1	0.518	1	0.354	1	0.282
2	0.619	2	0.563	2	0.524
3	0.663	3	0.573	3	0.334
4	0.691	4	0.493	4	0.337
5	0.536	5	0.498	5	0.281
6	0.69	6	0.61	6	0.442
7	0.454	7	0.531	7	0.278
8	0.504			8	0.386
9	0.471			9	0.25
10	0.602				
11	0.564				
12	0.799				
13	0.7				
14	0.849				
15	0.821				

Table 7 Communalities

Table 7 shows that all items concerning women's decision-making power and freedom of movement are undoubtedly of the same conceptual nature, as they have high common variance values with the rest. In contrast, most of the items on the perception of gender roles show low communalities, but even the lowest ones are relatively close to 0.3, so we decided to keep all items for the calculation of the index.

Calculation of the indices

The factors retained in the factor analysis involve a specific grouping of the variables under each factor. From this, a sub-index is constructed for each dimension as follows: for each woman $i=1, \dots, n$ (where n is the sample size) the value of the recoded responses to each of the questions or items that make up each dimension is summed; the value obtained for each is standardised by dividing it by the highest value that the sum could take (maximum range). Then,

$$I_k = \frac{\sum_{j=1}^m P_{i,j}}{\text{maximum range}} \quad (1)$$

where j is the index of the m items that make up dimension k .

Finally, the indices are obtained by adding the sub-indices weighted by the relative variance explained by each component with respect to the variance explained jointly by all of them. In other words,

$$I^l = \frac{\text{var}_k}{\text{ac.var}} \sum_{k=1}^n I_k \quad (2)$$

In the above expression, l represents decision-making power, freedom or perception of gender roles; $(\text{var})_k$ is the variance explained by dimension k , ac.var is the variance accumulated by the factors of each index and n the number of dimensions that make up each index.

Thus, we have the following expressions for the Decision-making Power Index (ID), the Freedom of Movement Index (IL) and the Gender Roles Opinion Index (IR):

$$ID = \left(\frac{3.671}{58.983}\right) I_1 + \left(\frac{14.07}{58.983}\right) I_2 + \left(\frac{7.704}{58.983}\right) I_3 \quad (3)$$

$$IL = \left(\frac{4.85}{60.72}\right) I_1 + \left(\frac{13.87}{60.72}\right) I_2 \quad (4)$$

$$IR = \left(\frac{28.46}{52.89}\right) I_1 + \left(\frac{13.16}{52.89}\right) I_2 + \left(\frac{11.27}{52.89}\right) I_3 \quad (5)$$

Finally, the Women's Empowerment Index (IE) is obtained from the equal-weighted aggregation of the three previous indices:

$$IE = \left(\frac{1}{3}\right) ID + \left(\frac{1}{3}\right) IL + \left(\frac{1}{3}\right) IR \quad (6)$$

The following section presents the results of the calculation of the indices.

Women's empowerment in Mexico and its 32 states

Table 8 shows the average value of the indices obtained for Mexico and its 32 states. This information is complemented by Figures 1 - 4, where the median is also reported in order to have an idea of the distribution of each index.

	ID	IL	IR	IE
Aguascalientes	0.615	0.736	0.775	0.719
Baja California	0.624	0.757	0.775	0.728
Baja California Sur	0.628	0.714	0.774	0.708
Campeche	0.615	0.683	0.724	0.686
Coahuila de Zaragoza	0.622	0.735	0.743	0.708
Colima	0.614	0.707	0.750	0.703
Chiapas	0.542	0.620	0.625	0.602
Chihuahua	0.602	0.749	0.781	0.717
Ciudad de México	0.647	0.744	0.816	0.758
Durango	0.630	0.734	0.739	0.718
Guanajuato	0.631	0.709	0.745	0.721
Guerrero	0.607	0.645	0.646	0.655
Hidalgo	0.600	0.707	0.716	0.688
Jalisco	0.619	0.744	0.762	0.722
Estado de México	0.625	0.727	0.780	0.726
Michoacán de Ocampo	0.611	0.691	0.710	0.694
Morelos	0.626	0.723	0.752	0.714
Nayarit	0.618	0.698	0.712	0.675
Nuevo León	0.631	0.694	0.757	0.706
Oaxaca	0.596	0.646	0.632	0.662
Puebla	0.595	0.711	0.731	0.697
Querétaro	0.600	0.716	0.781	0.712
Quintana Roo	0.601	0.703	0.737	0.679
San Luis Potosí	0.613	0.677	0.727	0.681
Sinaloa	0.626	0.732	0.722	0.701
Sonora	0.618	0.732	0.753	0.711
Tabasco	0.574	0.652	0.689	0.643
Tamaulipas	0.639	0.708	0.734	0.704
Tlaxcala	0.573	0.703	0.749	0.691
Veracruz de Ignacio de la Llave	0.600	0.689	0.689	0.671
Yucatán	0.619	0.725	0.702	0.698
Zacatecas	0.595	0.689	0.701	0.674
MÉXICO	0.610	0.706	0.730	0.696

Table 8 Average indices, Mexico and its 32 states

The indices are normalised so that a value of 0 implies no empowerment of women, while a value of 1 would indicate full empowerment. The results reported in table 8 show that in all cases the level of empowerment is above 0.5.

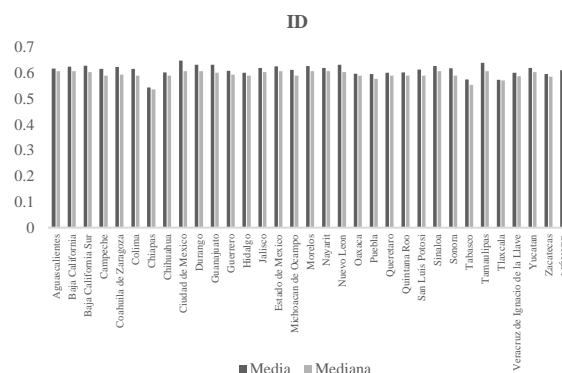


Figure 1 Decision-making power index (ID), Mexico and its 32 states

In particular, the Decision Power Index takes values between 0.54 and 0.65. The national average is 0.61, while the states with the highest average indices are Mexico City, followed by Tamaulipas, Nuevo León, Guanajuato and Durango, with values very close to each other; on the contrary, the worst positioned states with respect to women's decision-making power within the couple are Chiapas, Tlaxcala, Tabasco, Zacatecas, Puebla and Oaxaca.

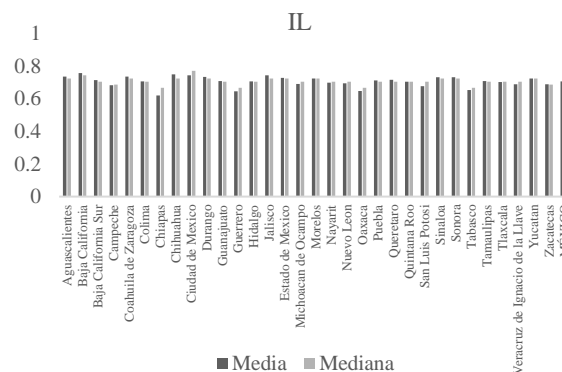


Figure 2 Freedom of Movement Index (IL), Mexico and its 32 states

The Freedom of Movement Index takes higher average values than the Decision Making Power Index, with a range between 0.62 and 0.76. The national average is 0.73, while the states with the highest average indexes are Mexico City, Querétaro and Chihuahua; on the contrary, the states with the worst position in terms of opinion on traditional gender roles are Zacatecas, Oaxaca and Guerrero.

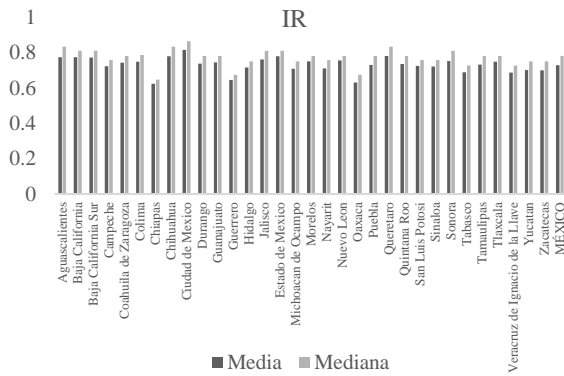


Figure 3 Opinion Index on Gender Roles (IR), Mexico and its 32 states

Regarding the Opinion Index on Gender Roles, the values range from 0.62 to 0.82; that is, of the three, it is the one that reports the highest values in general. The national average is 0.61, while the states with the highest average indexes are Mexico City, followed by Tamaulipas, Nuevo León, Guanajuato and Durango, with values very close to each other; on the contrary, the states with the worst position in terms of women's decision-making power within the couple are Chiapas, Tlaxcala, Tabasco, Zacatecas, Puebla and Oaxaca.

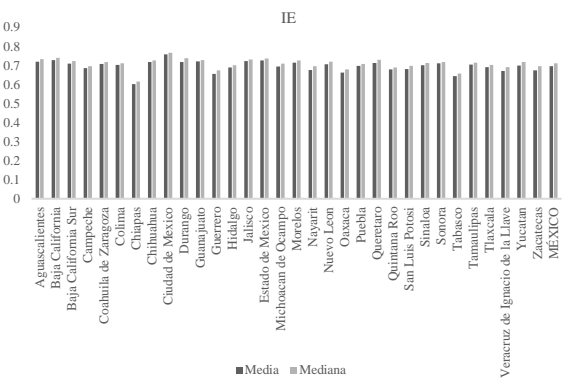


Figure 4 Aggregate Empowerment Index (IE), Mexico and its 32 states

Finally, the Aggregate Empowerment Index takes values between 0.60 and 0.76. The national average is 0.70, while the states with the highest average indexes are Mexico City, Baja California, State of Mexico, Jalisco and Guanajuato; on the contrary, the states with the worst overall ranking in terms of women's empowerment are Chiapas and Tabasco.

Women's empowerment and their situation in the labour market

As the last part of our analysis, we will use the socio-demographic data section to construct indicators on women's labour market status: employed (E), unemployed (U) or inactive (N); these will be used as explanatory variables for the Aggregate Decision Index, together with the variables of age (age) and educational level (NIV). The table shows the results of the various ordinary least squares regressions. In all cases a constant (c) is included.

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	β_1 (p)	β_1 (p)	β_1 (p)	β_1 (p)	β_1 (p)	β_1 (p)
c	.6752*** (.0000)	.6954*** (.0000)	.7249*** (.0000)	.6645*** (.0000)	.6721*** (.0000)	.6972*** (.0000)
E	.0495*** (.0000)			.00325*** (.0000)		
U		.0611*** (.0000)			.0398* (.0155)	
N			-.0501*** (.0000)			-.03276*** (.0000)
Age				-.00072*** (.0000)	-.00073*** (.0000)	-.00072*** (.0000)
NIV				.01083*** (.0000)	.01224*** (.0000)	.01078*** (.0000)
R ²	.0431	.0006	.0441	.1177	.1007	.1181
F	871*** (.0000)	12.42*** (.0004)	838.1*** (.0000)	808.3*** (.0000)	678.4*** (.0000)	810*** (.0000)

Note: Linear regression models, ordinary least squares. *** Variables significant at 100%. * Variables significant at 95%
R²: Adjusted R-squared

Table 9 Models of empowerment and women's labour market status

All variables are significant and have the expected sign. Models 1 and 4 suggest that the higher the employment, the higher the level of empowerment. Models 2 and 5 suggest that unemployment also has a positive impact on women's empowerment; although this sounds strange, it is because both employed and unemployed women are part of the economically active population, so that by participating in the labour market they are in a better position of empowerment than inactive women. Indeed, models 3 and 6 indicate that inactivity negatively affects women's empowerment. On the other hand, models 4, 5 and 6 suggest that as age increases, women have less decision-making power, which can be seen as a generational situation, where older women are those who presumably grew up in more conservative and traditional environments with respect to the subordinate role of women in their couple's life.

Finally, models 4, 5 and 6 also point to the fact that the higher the level of education, the more empowered women are. This could be due to the fact that women with higher levels of education are more likely to be economically autonomous.

It is worth noting that all models have a very low goodness of fit (R^2). However, this does not mean that the qualitative information just recapitulated is not valid or relevant. Recall that the R^2 or coefficient of determination is a statistical measure of how close the data are to the fitted regression line. Its value is always between 0 (the model explains no part of the variability of the data around its mean) and 100% (the model explains all the variability of the data around its mean). This is why, in general, the higher the coefficient of determination, the better the model fits the data.

However, R^2 does not indicate anything about whether a regression model is adequate or not, since in some fields, such as social sciences or any other discipline that aims to predict human behaviour, low values of R^2 are expected because social processes are more difficult to predict than natural processes. Moreover, if, as in the models in this article, one has a low R^2 value but also obtains statistically significant predictors, it is possible to draw important conclusions about the association between changes in the values of the explanatory variables and changes in the value of the dependent variable.

Conclusions

In this paper, different indices on important dimensions of women's empowerment in Mexico and its 32 states were constructed based on data from the ENDIREH 2016. The results show that the level of women's empowerment in the dimensions related to decision-making power within the couple's life, freedom of movement in the public sphere and the perception of traditional gender roles exceeds 0.5 in all cases. Furthermore, the differences between the mean and median values indicate a distribution slightly skewed to the right, i.e. with the indices concentrated in the highest values. On the other hand, differences between states are not very marked, although several states are consistently below the national average.

However, there is still a long way to go, as the highest values of the indices are around 0.7 for slightly less than half of the states, and policies must continue to be implemented to close the empowerment gaps between states and to favour the full empowerment of women relative to that of their husbands or partners.

The indices were used to make an exploratory analysis of the relationship between women's situation in the labour market and their level of empowerment, finding that the more women belong to the economically active population (employed and unemployed), the higher the level of empowerment. It was also found that women's educational level has a positive impact on empowerment, while age has the opposite effect, reflecting the fact that older women presumably grew up in environments with a strong attachment to traditional gender roles. Therefore, this research adds to the literature on SDG 5 in Mexico by offering insight into the level of women's empowerment.

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