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**Formal parity and hierarchical gaps:
feminization index in autonomous
universities in northwestern Mexico**

Paridad formal y brechas jerárquicas:
índice de feminización en universidades
autónomas del noroeste de México

Paridade formal e lacunas hierárquicas:
índice de feminização em universidades
autônomas do noroeste do México

Abstract

Introduction: in higher education institutions, formal parity does not guarantee an equivalent distribution of power within governance structures. **Objective:** to analyze the gaps between institutional commitments to gender equality and the representation of women in university governance positions at four universities in northwest Mexico. **Method:** a descriptive documentary study was conducted in which institutional normative frameworks, organizational charts, and official directories available as of July 2025 were reviewed; 258 positions were counted, the percentage of female distribution and the feminization index were calculated, and a structural parity map was constructed by university and hierarchical level. **Results:** women held 109 positions, representing 42.25%, while men held 149 positions, representing 57.75%; the overall feminization index was 73.15 women per 100 men. **Conclusion:** no institution achieved parity, and gaps widened at higher authority levels; therefore, university parity should be analyzed as a distribution of power rather than merely the presence of women.

Keywords: higher education, university governance, gender equality, gender parity, vertical segregation

Resumen

Introducción: en las instituciones de educación superior, la paridad formal no garantiza una distribución equivalente del poder en sus estructuras de gobierno.



Objetivo: analizar las brechas entre los compromisos institucionales de igualdad de género y la representación de las mujeres en cargos de gobierno universitario en cuatro universidades del noroeste de México. **Método:** se realizó un estudio documental de alcance descriptivo, donde se revisaron los marcos normativos institucionales, organigramas y directorios oficiales disponibles a julio de 2025; se contabilizaron 258 cargos, se calculó el porcentaje de distribución femenina y el índice de feminización, y se construyó un mapa de paridad estructural por universidad y nivel jerárquico. **Resultados:** las mujeres ocuparon 109 puestos que representa el 42.25 %, mientras que para los hombres fueron 149 representando el 57.75 %; el índice general de feminización fue de 73.15 mujeres por cada 100 hombres. **Resultados:** la productividad investigativa no constituye un resultado exclusivamente individual ni puede explicarse únicamente por la motivación, la formación o la trayectoria profesional del docente. **Conclusión:** ninguna institución alcanzó la paridad y las brechas se intensificaron en los niveles de mayor autoridad, por lo que la paridad universitaria debe analizarse como distribución del poder y no solo como presencia de mujeres.

Palabras clave: educación superior, gobierno universitario, igualdad de género, paridad de género, segregación vertical

Resumo

Introdução: nas instituições de ensino superior, a paridade formal não garante uma distribuição equivalente do poder em suas estruturas de governança. **Objetivo:** analisar as lacunas entre os compromissos institucionais de igualdade de gênero e a representação das mulheres em cargos de governo universitário em quatro universidades do noroeste do México. **Método:** realizou-se um estudo documental de alcance descritivo, no qual foram revisados os marcos normativos institucionais, organogramas e diretórios oficiais disponíveis em julho de 2025; contabilizaram-se 258 cargos, calculou-se o percentual de distribuição feminina e o índice de feminização, e construiu-se um mapa de paridade estrutural por universidade e nível hierárquico. **Resultados:** as mulheres ocuparam 109 cargos, representando 42,25%, enquanto os homens ocuparam 149 cargos, representando 57,75%; o índice geral de feminização foi de 73,15 mulheres por cada 100 homens. **Conclusão:** nenhuma instituição alcançou a paridade e as lacunas se intensificaram nos níveis de maior autoridade; por isso, a paridade universitária deve ser analisada como distribuição do poder e não apenas como presença de mulheres.

Palavras-chave: educação superior; governo universitário; igualdade de gênero; paridade de gênero; segregação vertical



Introduction

The presence of women in higher education institutions (HEIs) has grown in recent years, and in some settings, it now exceeds that of men. Yet this progress is not mirrored in the spaces where university leadership is exercised. Bringing more women into the roles of student, instructor, and researcher does not, by itself, translate into institutional integration on equal terms (Guizardi et al., 2024; Meza-Mejía et al., 2023).

Understanding how women enter the power structures of HEIs requires examining their position within the institutional hierarchy, the recognition they receive, and their capacity to make decisions (Buquet et al., 2013). Meza-Mejía et al. (2023) caution that studying gender equity in higher education demands attention to women's participation in leadership and decision-making spaces, spaces that also determine how resources are allocated and how career trajectories unfold within universities.

Evidence shows that the exact position women occupy within the university hierarchy shapes both their decision-making capacity and their access to spaces of academic prestige (Meza-Mejía et al., 2023; Kaymakcioglu & Thomas, 2024). Rondon Pereira et al. (2025) note that the constraints limiting women's access to academic leadership persist, and that institutional reforms and policies are needed to open opportunities and support women's advancement.

The United Nations (UN) embedded the commitment to gender equality in Sustainable Development Goal (SDG) 5, which aims to eliminate structural inequalities between women and men, ensure equitable access to education, and promote women's participation in leadership positions (ONU, 2015). The problem is global, and it emerges clearly in studies documenting various forms of segregation elsewhere, where women academics describe structural and cultural barriers that restrict their access to senior posts (Gaus et al., 2023).

In Mexico, reforms such as the 2019 measure known as 'parity in everything' established the principle of parity in public office (Diario Oficial de la Federación [DOF], 2019). In 2021, the General Law of Higher Education mandated that HEIs promote substantive equality and guarantee environments free of gender-based violence (DOF, 2021).

Lagarde (1997) argues that autonomy is not achieved through formal recognition alone; it also requires social conditions, operational mechanisms, and political recognition to be exercised in practice. In other words, the mere existence of regulations does not eliminate inequality; parity cannot be reduced to a normative declaration, it demands scrutiny of how power is distributed and which conditions enable or constrain women's participation.

Vertical segregation captures the differences in how women and men are concentrated across levels of authority within an organizational structure. This inequality is linked to the so-called glass ceiling: the visible and invisible barriers that limit women's access to higher-level positions even when they possess sufficient experience, training, and career trajectory (Hernández Herrera, 2024; Meza-Mejía et al., 2023).

Pacheco Ladrón de Guevara et al. (2023) show that women's access to power in Mexican universities remains mediated by organizational, familial, and gender-based obstacles, and argue that hierarchical gaps stem not merely from individual decisions but from institutional conditions that regulate how women and men reach positions of authority.

UNESCO IESALC (2021) points to a disconnect between the feminization of enrollment, women's access to the university, and the masculinization of decision-making spaces. Blanco (2025) warns that, despite normative progress, discrimination, segregation, and inequality persist and continue to affect women's academic and professional development. Likewise, the growing presence of women in academia is not reflected in their representation in university leadership and management positions (Yahya et al., 2024).

These inequalities have been documented across Latin America and the Caribbean by the Organisation for Economic Co-operation and Development (OCDE, 2025), which finds that gender differences persist in access to fields of study, labor market participation, earnings, and occupational distribution.

In Sinaloa's public HEIs in Mexico, women's participation in senior positions continues to fall short of parity, even in institutions where women have a substantial presence overall (Niebla Moreno et al., 2024). This finding aligns with Hernández Ortiz (2025), who argues that gender inequality persists despite the existence of legal and institutional frameworks oriented toward equality.

In northwestern Mexico, this configuration is no accident; it reflects a specific history of how university power has been constructed. Examining women's access to rectorates, secretariats, general directorates, coordination offices, and academic directorates makes it possible to observe how they are represented in the positions that shape institutional policy, resources, and projects. From this standpoint, analyzing women's autonomy becomes central, as it highlights the need for women to have the capacity and conditions to make decisions and to take part in the spaces where matters affecting the collective are defined (Aranda, 2021). This background confirms the need to examine parity not merely as a normative mandate, but in terms of how power is organized within university structures.

This study examines the gaps between institutional commitments to gender equality and women's representation in senior positions at four autonomous universities in northwestern Mexico: the Universidad Autónoma de Sinaloa (UAS), the Universidad Autónoma de Occidente (UAdeO), the Universidad de Sonora (UNISON), and the Universidad Autónoma de Baja California (UABC). These institutions were selected for their regional relevance and for the availability of up-to-date official documentation, including equality programs, protocols, and organizational charts.

This study aims to highlight the need for disaggregated data on women's participation in higher education, particularly across dimensions such as leadership, enrollment, teaching, working conditions, and STEM fields, as suggested by UNESCO IESALC (2025). The analysis by hierarchical level seeks to generate evidence on the distribution of power within HEIs in northwestern Mexico.

Beyond mere presence and parity, this study seeks to locate women within

the university structure and to identify the spaces where female representation approaches balance and those where gaps persist in access to strategic decision-making positions. To this end, the study calculates the female distribution index and the feminization index, and constructs a structural parity map by institution and level of authority.

Methods and materials

This study is based on a descriptive documentary design intended to compare institutional discourses on equality with the actual distribution of power within universities. The institutions included were UAS, UAdeO, UABC, and UNISON. Inclusion criteria required that institutions be public and autonomous, and that verifiable official information be available through institutional or transparency portals as of a July 2025 cutoff date.

The study was carried out in two phases. The first involved reviewing normative and institutional documents related to gender equality, violence prevention, the creation of specialized units, service protocols, institutional programs, and monitoring mechanisms. For each of the four universities, the available official documents that allowed comparison across these dimensions were selected. Agreements, regulations, programs, protocols, and monitoring documents were reviewed because they provide information on the existence of formal structures, responsible parties, goals, indicators, and implementation mechanisms. Informational materials, news items, and documents lacking normative value were excluded, as they did not allow for a consistent comparison across universities.

To identify the individuals holding each position, the study first drew on the directories of public servants available through the Plataforma Nacional de Transparencia for the Universidad Autónoma de Baja California (2025a), the Universidad Autónoma de Sinaloa (2025b), and the Universidad de Sonora (2025d). In the case of the Universidad Autónoma de Occidente, the corresponding request yielded a report of vacant and filled positions rather than a nominal directory (Plataforma Nacional de Transparencia, 2025c); accordingly, the identification of position holders was supplemented with the institutional organizational chart available on that university's official website (Universidad Autónoma de Occidente, 2025).

In parallel, the institutional organizational charts in effect as of the July 2025 cutoff were analyzed for all four universities (Universidad Autónoma de Baja California, 2023a; Universidad Autónoma de Sinaloa, 2025; Universidad Autónoma de Occidente, 2025; Universidad de Sonora, 2025), in order to establish each position's hierarchical standing relative to the Rectorate and its level of subordination within the governance structure. This analysis made it possible to reconcile differing institutional labels that correspond to equivalent functions, and on this basis the six hierarchical levels used in the study were constructed: rectorate, general secretariats and vice-rectorates, general directorates, institutional coordination offices, deputy directorates, and academic unit directorates.

During the second phase, the analysis focused on counting the positions

associated with power and decision-making identified through publicly available organizational charts and official directories. For each position, the database recorded the institution, the administrative area, the hierarchical level, the position holder, and the sex identified on the basis of publicly available information. The database was built from institutional organizational charts and directories in effect or available through July 2025. A total of 258 positions were included, distributed across six levels: rectorate; general secretariats and vice-rectorates; general directorates; institutional coordination offices; deputy directorates; and academic unit directorates.

Two indicators were used to analyze the participation of women and men within the hierarchical structure: the Distribution Index (DI) and the Feminization Index (FI).

Distribution Index (DI): defined as the proportion of positions held by women relative to the total number of positions identified within each hierarchical category and institution. Following Pérez and Garda (2009), this index is calculated from the ratio between the number of women in a given sector or group and the total population of that sector or group, multiplied by 100. In this study, it was calculated using the following formula:

(Equation 1)

$$DI = \left(\frac{\text{Number of positions held by women}}{\text{Total number of positions}} \right) \times 100$$

This indicator made it possible to determine women's internal share of participation and to assess their integration at each institutional hierarchical level.

Feminization Index (FI): expresses women's representation relative to men within each hierarchical level. This indicator is calculated from the ratio between the number of women and the number of men in a given category or variable, multiplied by 100 (Pérez & Garda, 2009). In this study, the following mathematical expression was used:

(Equation 2)

$$FI = \left(\frac{\text{Number of positions held by women}}{\text{Number of positions held by men}} \right) \times 100$$

A value of 100 indicates an equivalent relationship between women and men; values below 100 indicate lower representation of women relative to men, while values above 100 indicate greater relative representation of women. For the purposes of this study, a value of 100 was taken as the parity threshold.

The presentation of results followed a dual criterion, organized by institution and by hierarchical level. A structural parity map was also constructed to show the proportion of women at each level, in order to identify where female representation approaches balance and where gaps persist in the distribution of university power. Combining these approaches made it possible to describe how institutional equality commitments relate to the actual composition of senior positions within universities.

The data available depend on the currency, transparency, and accessibility of the organizational charts, directories, and other institutional documents published by each university. Because of this constraint, the systematized database of the 258 identified positions, classified by institution, sex, and hierarchical level, is made available to the editorial committee for verification purposes, together with the public information requests that support each record. Information retrieved from these publicly accessible sources was compiled into a single database for systematization and analysis; because institutional directories are updated over time, some of the information originally consulted may since have been modified or replaced. Classification by sex was carried out using publicly available information about the individuals holding each position, and should therefore be understood as a descriptive approximation rather than a substitute for gender self-identification processes. The disaggregated counts by institution, sex, and hierarchical level are presented in Table 4 and allow the calculated indicators to be verified.

Results and discussion

Institutionalization of gender equality at the universities analyzed

The existence of protocols or specialized units within universities does not, on its own, indicate that gender equality has been institutionalized. Institutionalization requires linking norms, programs, responsible parties, indicators, monitoring mechanisms, and organizational conditions in ways that translate into formal commitments and verifiable changes within the organization (Atães & Carneiro, 2026). The review conducted here reveals differing levels of progress among the universities analyzed.

In line with this, Echeverría Echeverría (2024), in analyzing the achievements, obstacles, and challenges involved in promoting gender equality at HEIs in south-southeastern Mexico, shows that institutional units, programs, and actions represent genuine progress, while also revealing the limits they face when they are not integrated transversally into university life, monitoring mechanisms, and institutional inclusion processes.

The national legal framework establishes specific obligations for HEIs. Article 43, section VIII, of the General Law of Higher Education states that institutions must promote measures to prevent, address, sanction, and eradicate all forms and modalities of violence, particularly gender-based violence. It further requires the development of diagnostic assessments, programs, and protocols, and mandates that institutions have trained personnel and bodies empowered to act in such cases (DOF, 2021).

Among the institutions analyzed, the Universidad de Sonora (UNISON) shows the highest level of formalization. It has maintained an Institutional Program for Inclusion and Equity since 2013. This program incorporates institutional goals, indicators, and designated officials, along with a protocol for responding to gender-based violence and activities in training, outreach, and research on equality (UNISON, 2021). Given these characteristics, its level of institutionalization can be considered high.

The Universidad Autónoma de Baja California (UABC) formally established its Gender, Diversity, and Educational Inclusion Unit in 2023. This unit coordinates institutional actions related to equality and works in conjunction with the Committees for the Prevention and Response to Gender-Based Violence across its various campuses. UABC also maintains a mandatory institutional protocol that defines a response pathway comprising initial contact, referral, accompaniment, and follow-up (UABC, 2023b, 2024). However, no public evaluation reports or consolidated monitoring indicators were identified, which places its level of institutionalization in the medium range.

The Universidad Autónoma de Occidente (UAdeO) has maintained a protocol for the prevention, response to, and sanctioning of gender-based violence since its approval in 2023. Its normative framework establishes an institutional structure comprising an Advisory Council and a Gender Equality Committee, together with an Annual Gender Equity Program that sets specific actions and goals, evaluation and monitoring mechanisms, and annual reports (UAdeO, 2022, 2023). The public sources consulted did not yield sufficient evidence of systematic publication of these programs, indicators, or monitoring reports, which places its level of institutionalization in the medium range as well.

At the Universidad Autónoma de Sinaloa (UAS), the Center for Gender Policy for Equality between Women and Men coordinates actions across the university's four regional units. UAS has maintained overall institutional planning under its Gender Equity Model since 2013, and in 2022 it approved a regulation to prevent, address, sanction, and eradicate sexual violence; published in 2023, this regulation replaced the previous protocol and elevated institutional responses to these cases to a normative level (UAS, 2023). No quantitative goals, verifiable indicators, or systematic public reports were identified at this university, which places its level of institutionalization in the medium range.

To systematize and compare institutional progress, three dimensions were considered across cases: the existence of formal normative documents, institutional operability through goals, indicators, and designated officials, and the public availability of information. Table 1 summarizes the variations by institution.

Table 1

Level of institutionalization, strengths, and main challenges at HEIs in northwestern Mexico

University	Level of institutionalization	Strengths	Main challenges
UAS	Medium	Specialized center, committees, protocol in force.	No public goals or indicators; no systematic evaluation.
UAdeO	Medium	Institutional regulation and	Limited public evidence of

		protocol; equality structure and monitoring mechanisms.	systematic implementation and monitoring.
UNISON	High	Formal program, defined indicators, public information.	Mainstreaming across all levels.
UABC	Medium	Formalized unit, protocol, and committees.	No public evaluation.

Source: Author’s own elaboration.

Implementation gaps and challenges for equality

There has been progress in formalizing gender equality instruments, albeit at differing levels of development. This progress does not, on its own, guarantee a transformation in the spheres of university power. The principal gap lies between the existence of normative commitments and the capacity to influence the processes that govern the distribution of positions, authority, and institutional recognition.

Kaymakcioglu and Thomas (2024) note that changes in the distribution of power occur when equality programs and policies are accompanied by adjustments to the processes of appointing, promoting, and evaluating academic authorities. Accordingly, one of the challenges identified in the region is the failure to integrate equality instruments (protocols, centers, or units) into Institutional Development Plans (IDPs), together with their disconnection from the processes of appointing, promoting, or designating senior officials. Likewise, the absence of measurable goals and of institutional officials empowered to impose sanctions limits the extent to which formal commitments can be translated into actions capable of transforming organizational culture or altering existing hierarchies.

There is also limited systematization of information and restricted availability of up-to-date data on women’s participation in senior university hierarchies. UNISON represents the most consolidated case; for the remaining HEIs in the region, no periodic diagnostic assessments, annual reports, or impact evaluations were systematically located that would allow progress or setbacks in gender equality to be tracked over time.

Although the creation of protocols or gender units represents progress, it does not automatically alter patterns of access to positions of authority or reduce vertical segregation. Analyzing gender inequality in universities requires looking beyond parity and the number of women holding positions; it requires identifying the levels at which they are concentrated and the decision-making capacity they hold within those spaces.

In Mexico, the legal framework formed by the General Law of Higher Education (DOF, 2021), the General Law for Equality between Women and Men, and the General Law on Women’s Access to a Life Free of Violence, both amended as of December 16, 2024 (DOF, 2024), together with the international commitments assumed by the Mexican State (UN, 2015), provides a legal basis that obliges HEIs to

foster democratic environments, promote parity in participation, and adopt affirmative measures to eliminate structural discrimination.

Achieving substantive equality requires periodic diagnostic assessments disaggregated by sex and hierarchical level, institutional parity targets, monitoring indicators, transparent appointment and evaluation criteria, and training and mentoring initiatives capable of strengthening women's academic trajectories toward positions of greater responsibility. Such measures would help narrow the distance between formal equality commitments and the actual configuration of university power.

This lack of follow-up is also evident in other university contexts, where the systematic production of data on women's leadership has been identified as a condition that makes inequalities visible and helps guide strategies for institutional change (Meza-Mejía et al., 2023).

Distribution of women in university leadership positions

The quantitative analysis made it possible to identify the distribution of women and men across university governance positions at the four institutions examined. To this end, the positions listed in organizational charts and official directories available as of July 2025 were counted. In total, 258 positions were analyzed (N = 258), distributed across the four universities included in the study and classified by sex and hierarchical level.

As established methodologically, positions were categorized into six comparable hierarchical levels: rectorate (level 1), general secretariats and vice-rectorates (level 2), general directorates (level 3), institutional coordination offices (level 4), deputy directorates (level 5), and academic unit directorates (level 6). Table 2 presents the absolute count of positions by institution, disaggregated by sex, along with the overall percentage of participation and female distribution:

Table 2

Positions by sex and institution at HEIs in northwestern Mexico

Institution	Female	Male	Total	% Female	% Male
UABC	34	48	82	41.46	58.54
UADEO	16	24	40	40	60
UAS	46	62	108	42.59	57.41
UNISON	13	15	28	46.43	53.57
Total	109	149	258		

Source: Author's own elaboration based on the count of positions recorded in the official organizational charts and directories of UAS, UAdeO, UNISON, and UABC, available as of the July 2025 cutoff.

The statistical results show that none of the four universities achieves a

balanced distribution of women and men across the set of governance positions analyzed. In aggregate terms, women hold 109 of the 258 positions identified in the region (42.25%), while men account for the majority, with 149 positions (57.75%).

By institution, UNISON shows the highest share of female participation, at 46.43%, followed by UAS at 42.59%, UABC at 41.46%, and UAdeO, which shows the greatest lag, at 40%. The percentage differences among institutions are not especially pronounced; nonetheless, all four fall below the 50% mark.

These figures offer an initial approximation of the object of study; as Buquet et al. (2013) caution, women's presence in higher education must be examined in relation to their position within spaces recognized for prestige and vested with power. Kohtamäki et al. (2024) report similar findings in international studies, showing that women's presence in leadership positions remains below numerical parity even in institutions with equality policies in place.

Feminization index and structural parity

To analyze gender gaps within university hierarchical structures and their distance from numerical balance, the sex-based distribution index and the feminization index were calculated.

The Distribution Index represents women's internal share of participation relative to the total universe of positions within a given stratum or institution (Equation 1). This indicator makes it possible to observe the relative weight of women at each level.

The Feminization Index (FI), in turn, captures the direct ratio between the absolute number of women and the absolute number of men within a specific organizational category, multiplied by a factor of 100 (Equation 2).

The distribution index allows us to observe the relative weight of women within the overall structure, while the feminization index directly compares the relationship between women and men within each category analyzed. An FI value of 100 represents exact parity; values below 100 indicate underrepresentation of women and a gender gap, while values above 100 indicate a female predominance or feminization. Table 3 presents the values obtained for both indicators by university.

Table 3

General gender indicators in university governance positions

Institution	Women	Men	Positions	Distribution Index	Feminization Index
UABC	34	48	82	41.46	70.83
UAdeO	16	24	40	40	66.67
UAS	46	62	108	42.59	74.19
UNISON	13	15	28	46.43	86.67

Total	109	149	258	42.25	73.15
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Source: Author’s own elaboration.

The index results show that none of the universities achieves parity within its formal governance structures. In terms of the feminization index, UNISON shows the highest value and comes closest to balance, with 86.67 women for every 100 men, followed by UAS at 74.19, UABC at 70.83, and UAdeO at 66.67 women per 100 men. Across the four institutions combined, the overall index stands at 73.15.

These figures indicate that female underrepresentation is not an isolated occurrence within a single organization, but rather a structural trend shared across the region. UNISON comes closest to balance, yet all four institutions remain below the parity threshold (FI = 100).

When women’s position within the institutional hierarchy is examined more closely, the inequality becomes more apparent, since overall presence alone does not reveal whether the positions held correspond to strategic, decision-making roles or to more operational levels.

In this regard, Guizardi et al. (2024) and Meza-Mejía et al. (2023) note that a greater presence of women in higher education does not translate into an equitable distribution of positions of authority. The analysis of women’s presence at the university must therefore go beyond quantitative terms and take into account their location within the spaces where prestige, institutional recognition, and decision-making converge (Buquet et al., 2013).

Hierarchical gaps in the distribution of power at universities

The disaggregated analysis by hierarchical level shows that women’s participation is not distributed evenly across university governance structures. Although the aggregate percentages point to a substantial presence of women, disaggregation by level of authority reveals differences in their placement within positions of authority and exposes the pattern of vertical segregation. Table 4 sets out the distribution of the 258 positions classified by level, sex, and institution:

Table 4

Distribution of positions by hierarchical level, sex, and institution

Institution	Positions	N1		N2		N3		N4		N5		N6	
		F	M	F	M	F	M	F	M	F	M	F	M
UABC	82	0	1	2	1	10	5	1	3	5	14	16	24
UAdeO	40	0	1	2	1	10	12	1	3	1	3	2	4
UAS	108	0	1	2	7	19	20	2	1	1	1	22	32
UNISON	28	1	0	2	3	4	3	1	2	3	1	2	6

Source: Author’s own elaboration.

The data show that level 1 (the rectorate), the space that concentrates the university's highest legal, political, and symbolic authority, constitutes the most critical point of hierarchical gender gap in the region; only UNISON currently has a woman holding this position.

Level 2 comprises general secretariats and vice-rectorates, positions that drive the operation and direction of institutional policy. Its composition offers a view of how power is distributed within a strategic zone of the university structure. Among the differences observed, UABC and UAdeO reach 66.67%, UNISON stands at 40.00%, and UAS shows the widest gap, at 22.22%.

At level 3, which includes general directorates and concentrates positions with a heavy operational and technical load, women's presence is more consistent, though still uneven. At UABC the figure reaches 66.67%, at UNISON 57.14%; UAS approaches formal balance at 48.72%, while UAdeO reports 45.45%.

At levels 4 and 5, female participation reaches or exceeds numerical balance in some institutions, while remaining below parity in others. Women's presence at the intermediate levels of the institutional structure thus does not follow a uniform pattern.

At level 6, where academic unit directorates are located, female participation remains below parity across all four institutions: 40% at UABC, 33.33% at UAdeO, 40.74% at UAS, and 25% at UNISON. At this level, academic units concentrate decisions related to school management, the organization of teaching staff, collegiate life, and the day-to-day conduct of academic affairs.

The differences described across all levels are presented graphically in a structural parity map corresponding to the percentage share of women by level and institution, shown in Table 5.

Table 5

Percentage of women by hierarchical level and institution

Institution	N1	N2	N3	N4	N5	N6
UABC	0.00 %	66.67 %	66.67 %	25.00 %	26.32 %	40.00 %
UAdeO	0.00 %	66.67 %	45.45 %	25.00 %	25.00 %	33.33 %
UAS	0.00 %	22.22 %	48.72 %	66.67 %	50.00 %	40.74 %
UNISON	100.00 %	40.00 %	57.14 %	33.33 %	75.00 %	25.00 %
Regional average	25.00%	40.00%	51.81 %	35.71 %	34.48 %	38.89 %
of women						

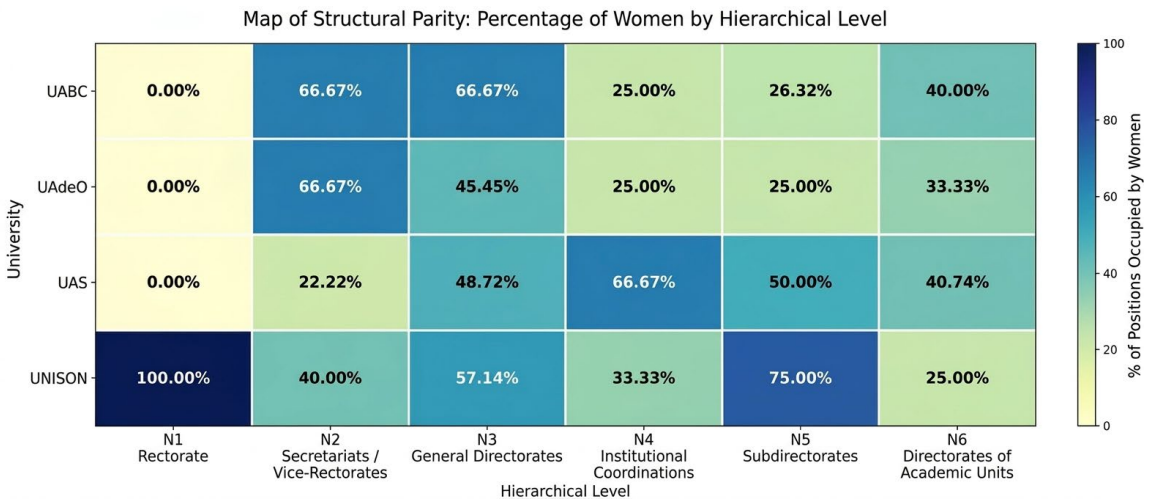
Source: Author's own elaboration. Note. The percentages correspond to the proportion of women relative to the total number of positions at each level. The regional percentage was calculated in aggregate form from the total number of women and positions across the four institutions.

Figure 1 presents the structural parity map as a heat matrix. The visual

gradient makes it possible to distinguish organizational levels that approach balance from those where female underrepresentation is more pronounced.

Figure 1

Structural parity map by university and hierarchical level



Source: Author's own elaboration.

Note. Unified representation based on the percentage of women by hierarchical level. Values close to 50% indicate greater numerical balance; lower values reflect female underrepresentation, and higher values indicate female predominance at the level analyzed.

The results suggest that formal parity does not automatically translate into structural parity within university governing bodies. Although all four universities have instruments related to gender equality in place, the distribution of positions shows that the highest levels of authority remain spaces where women have a comparatively smaller presence.

This indicates that democratization and equality cannot be assessed solely on the basis of the existence of protocols, regulations, gender units, or statements of principle. They must be examined in terms of the actual capacity of these instruments to reshape the organization of power within the university. A range of studies warn that the institutionalization of equality can coexist with persistent inequalities in university leadership, recognition, and representation (O'Connor, 2023; Blanco, 2025; Buquet et al., 2013; Imhoff et al., 2024).

The results of this study should not be read solely as a percentage difference between women and men, but rather as an expression of an institutional structure in which female presence has yet to achieve an equivalent distribution across all levels of authority. Vertical segregation reflects this asymmetric ordering: the uneven distribution of women and men along an institutional hierarchical axis along which formal authority, symbolic capital, and economic rewards are arranged in

pyramidal fashion (Buquet et al., 2013).

Escobar-Jiménez (2022) identifies this segregation, showing that the incorporation of women into mid-level positions does not necessarily carry over into higher-ranking posts such as rectorates. Rectorates, secretariats, general directorates, and academic unit directorates are not equivalent or interchangeable positions; each concentrates a different level of formal authority, symbolic capital, and capacity to influence university life.

Evaluating university equity solely through aggregate global percentages oversimplifies the problem and obscures the core spaces in which traditional male power is exercised and preserved. The structural parity map in Figure 1 makes this positional inequality visible. Although universities such as UNISON, UAS, and UABC report overall rates of female participation in leadership above 41%, women are concentrated in intermediate administrative management spaces (such as level 3) or in operational coordination roles subordinate to the directives of senior governing bodies. Rectorates, by contrast, remain 75% held by men across the region.

Imhoff et al. (2024) show that vertical segregation in the university setting becomes apparent when women's presence is concentrated in particular segments of the structure, while positions of greater hierarchy, dedication, or political representation retain an uneven distribution. This reading is relevant for interpreting the regional results presented here.

Studies such as that of Niebla Moreno et al. (2024), on women's leadership at HEIs, find that only 36.5% of senior-level positions were held by women academics, despite the fact that these institutions operate within a higher education system marked by exponential growth in both enrollment and the female teaching staff.

Díaz (2022) and Hernández Herrera (2024) link these gaps to cultural expectations, organizational biases, glass ceilings, and the legitimacy criteria attached to the exercise of leadership. From this perspective, the problem must be understood in terms of the conditions that enable or constrain the recognition of women as legitimate holders of authority. Khan et al. (2025) examine glass ceilings within HEIs and observe that the barriers to women's advancement in academic careers operate simultaneously at the normative, organizational, and cultural levels.

From a political reading of women's autonomy, Lagarde (1997) argues that autonomy is neither achieved nor produced through formal declaration alone; it requires social conditions, operational mechanisms, recognition, and agreements that make its exercise possible. Aranda (2021), for her part, notes that women's autonomy entails having the capacity and conditions to participate in the spaces where matters affecting collective life are defined. Within HEIs, these spaces correspond to the positions from which academic policy decisions are made and resources, institutional priorities, and forms of governance are allocated.

Conclusions

The analysis of the gaps between institutional commitments to gender equality and women's representation in university governance positions at four

autonomous universities in northwestern Mexico shows that these institutions have made normative progress (through protocols, specialized units, centers, committees, or programs) while nonetheless differing in their levels of formalization, monitoring, and evaluation. The existence of institutional equality frameworks is indispensable, yet it does not automatically translate into a parity-based distribution of university power.

With respect to women's presence, the findings show that women hold 109 of the 258 positions analyzed, equivalent to 42.25%, while men hold 149 positions, or 57.75%. The overall feminization index stood at 73.15 women for every 100 men, confirming female underrepresentation in senior university leadership.

The disaggregation by hierarchical level shows that this inequality is expressed not only in the overall number of women, but also in where they are positioned within the structure. Vertical segregation is especially visible in rectorates and in academic unit directorates.

Institutional mechanisms are needed that can shape the processes of appointment, monitoring, evaluation, and transparency for leadership positions—particularly at the levels where decision-making power is concentrated—so that formal equality can genuinely support balanced access for women to the highest spaces of authority.

This diagnosis points to the need to strengthen transparency at HEIs by regularly publishing directories, organizational charts, and diagnostic assessments disaggregated by sex, hierarchical level, and area of assignment. It is likewise necessary to strengthen equality programs by incorporating quantitative parity targets, monitoring indicators, and evaluation reports into strategic plans.

Finally, the limitations inherent to a documentary design point to the need to deepen this line of research through qualitative studies and analyses of academic career trajectories that would help clarify the institutional, symbolic, and organizational conditions shaping women's access to, permanence in, and exercise of authority within university governance positions. Such continuity would help explain not only the magnitude of the gaps identified, but also the mechanisms that produce and sustain them within university structures.

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Declaration of author responsibility

Samantha Yadira Niebla Moreno: 1: Conceptualization, Data Curation, Formal Analysis, Investigation, Methodology, Resources, Software, Supervision, Validation/Verification, Visualization, Writing/Original Draft, and Writing/Review & Editing.

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