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De las entrañas a la superficie: cultura organizacional, liderazgo femenino y desigualdad de género en las minas de México

From the Guts to the Surface: Organizational Culture, Women's Leadership, and Gender Inequality in Mexico's Mines

Das entranhas à superfície: cultura organizacional, liderança feminina e desigualdade de gênero nas minas do México

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Resumen

En este artículo se aborda el tema de la desigualdad de género y cómo ha afectado a las mujeres líderes en la industria minera mexicana. De acuerdo con Tarrés (2013), la categoría de género es el resultado de relaciones sociales basadas en diferencias percibidas por los sexos y el poder. En otras palabras, la desigualdad de género es el resultado de privilegiar a un grupo sobre otro a partir de un sistema ideológico, y no de las capacidades o habilidades. Para entender la desigualdad en las organizaciones y cómo erradicarla es necesario tomar en cuenta la cultura organizacional como un sistema de creencias, hábitos y procesos compartidos que mantienen, replican o cambian las dinámicas dentro de las empresas. En tal sentido, esta investigación tuvo como objetivo comprender la relación que se da entre cultura organizacional y el desarrollo de las mujeres directivas en las organizaciones de la industria minera destacadas en diferentes casos de estudio. Para conocer de primera mano lo que viven



las mujeres líderes en las minas, se hicieron 20 entrevistas semiestructuradas y se analizaron desde un enfoque interpretativo sustentado en una epistemología analógica. Gracias a este acercamiento, se pudo detectar que todavía existen empresas con prácticas de desigualdad, aunque también funcionan programas de educación de género, políticas de inclusión y redes de apoyo para erradicar la desigualdad y crear un mejor entorno laboral.

Palabras clave: empoderamiento, equidad de género, industria minera.

Abstract

This article addresses the issue of gender inequality and how it has affected women leaders in the Mexican mining industry. According to Tarrés (2013), the gender category is the result of social relations based on differences perceived by the sexes and power. Gender inequality is the result of privileging one group over another based on an ideological system and not on abilities or abilities. To understand inequality in organizations and how to eradicate it, it is necessary to take into account organizational culture as a system of shared beliefs, habits and processes that maintain, replicate or change the dynamics within companies. To learn first-hand about what women leaders experience in the mines, 20 semi-structured interviews were conducted and analyzed from an interpretive approach based on an analogical epistemology. Thanks to this approach, it was possible to detect that there are still companies with inequality practices, but also that there are gender education programs, inclusion policies and support networks to eradicate inequality and create a better working environment.

Keywords: Empowerment, Gender Equity, Mining industry.

Resumo

Este artigo aborda a questão da desigualdade de gênero e como esta tem afectado as mulheres líderes na indústria mineira mexicana. Segundo Tarrés (2013), a categoria gênero é o resultado de relações sociais baseadas nas diferenças percebidas entre os sexos e no poder. Por outras palavras, a desigualdade de gênero é o resultado de privilegiar um grupo em detrimento de outro com base num sistema ideológico, e não em capacidades ou habilidades. Para compreender a desigualdade nas organizações e como erradicá-la, é necessário ter em conta a cultura organizacional como um sistema de crenças, hábitos e processos partilhados que mantêm, replicam ou alteram a dinâmica dentro das empresas. Nesse sentido, esta pesquisa teve como objetivo compreender a relação entre a cultura organizacional e o



desenvolvimento de mulheres gestoras em organizações da indústria mineral destacadas em diferentes estudos de caso. Para conhecer em primeira mão o que as mulheres líderes vivenciam nas minas, foram realizadas 20 entrevistas semiestruturadas e analisadas a partir de uma abordagem interpretativa apoiada por uma epistemologia analógica. Graças a esta abordagem, foi possível detectar que ainda existem empresas com práticas de desigualdade, embora programas de educação de género, políticas de inclusão e redes de apoio também operem para erradicar a desigualdade e criar um melhor ambiente de trabalho.

Palavras-chave: empoderamento, igualdade de género, indústria mineira.

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Introduction

Most cultures, civilizations and organizations have been marked, in one way or another, by a patriarchal system, which has meant the generation and propagation of a social and culturally masculine structure that has endured to this day (Querol, 2014). . One of the consequences of this reality is the belief that there are substantial differences based on sex and the establishment of power relations based on them (Tarrés, 2013), which directly affects the social organization of the spaces where develops the experience of individuals.

In this sense, Angelcos (2015) emphasizes that women have had to face gender definitions constructed under a distribution of roles and expectations that aim to define who is who and how each person should act with respect to what is socially expected of them. she. According to Fraser (2011), gender is an economic-political and cultural differentiation from which actions, experiences and representations are configured to regulate subjects.

León (2000), for his part, postulates that with gender theory it is possible to relate productive and reproductive roles, in addition to understanding how inequalities between men and women are associated with the patriarchal model. Differentiation through gender is crucial to maintaining social inequality and consolidating social dynamics that define the value of people based on it, and not on intrinsic and individual factors. From this arises a series of social and labor problems such as the division of labor, the separation of spaces and the creation of expectations about abilities, capacities and skills according to the gender of the person (Selva et al . , 2011).

The result of social dynamics based on gender has been the creation of stereotypes rooted in everyday practices and social reality. In patriarchal society, the stereotype of women is based on a distorted vision in which they are condemned to be undervalued in the



workplace, social and cultural spheres. Because of this, the idea prevails that women should develop almost exclusively in the domestic environment and that this should be their priority.

These types of ideas mean that, in the workplace, many women continue to encounter various obstacles and inequalities. Consequently, currently, many female workers earn less than their male counterparts, are delegated to less important occupations or are associated with attitudes that come from the feminine stereotype such as carrying out domestic activities, having maternal behaviors or reacting to more emotional impulses than rational (Moreira, 2010). This prevents them from being considered for high positions or strategic positions that involve making important decisions.

One of the most interesting perspectives from which gender inequality in the workplace has been addressed is that of female leadership. According to Cuevas (2007), leadership is the quality of people to guide others, whether due to their personal characteristics, their intellectual capacity or the power granted to them. Leadership can be exercised in any area of life and is useful to coordinate efforts, resolve difficulties and achieve institutional objectives.

Female leadership is, then, “the use of women's characteristics to exercise leadership within organizations” (Querol, 2014, p.236). Women's access to management positions is one of the essential conditions for equality within organizations. Allowing the exercise of female leadership is not only an effective measure to counteract the prevalence of the female stereotype, but also an innovative way to create positive work dynamics.

In works such as that of Díez *et al.* (2002), Pérez and Camps (2011) and Salinas and Cordero (2016) have addressed the differences between male and female leadership through the concepts of transactional leadership and transformational leadership. The first is characterized by using means to achieve personal goals and exert control instead of encouraging collaborative work, while the second focuses on stimulating collaborators and generating changes at the organizational and cultural level (Ayala, 2012). In this research, several characteristics that women leaders possess and that are related to transformational leadership have been described. According to Díez *et al.* (2002), women have a way of thinking, feeling and acting that does not coincide with a leadership model based on control or personal interests. Female leadership could, therefore, result in a way to transform collaborative work in companies and organizations.

Although several researchers have highlighted the need to incorporate more women into leadership roles, this idea is still not well accepted by companies. In this sense, the



mining sector is perhaps one of those that has most resisted change and the inclusion of women in activities not only at the leadership level, but also at the operational level. In cases like these, it is necessary to propose solutions from the organizational culture to contribute to equal opportunities between women and men, as well as the eradication of stereotypes coming from patriarchy.

In addition to this, some important institutions such as the United Nations (UN) (2022) have included gender equality and the empowerment of women and girls in their objectives to achieve sustainable development. The vindication of the social role of women has a global and multifunctional scope, evidence of this is the participation of different institutions and organizations with approved objectives in this matter.

Mining sector in Mexico

According to the Ministry of Economy (SE) (2022), the mining-metallurgy sector in Mexico contributes 2.05% of the national gross domestic product. In addition, Mexico is the main producer of silver worldwide, which represents a highly productive global industry. In the global exploration trends report, published by the S&P Global Market Intelligence agency, it is stated that global investment in mining exploration had a recovery in 2021. Latin America remained the main destination for investment in exploration with 24%. of the total and, in that year, Mexico rose to first place, followed by Chile, Peru and Brazil.

According to data published by the Mexican Social Security Institute (IMSS), at the end of 2021, 406,179 direct jobs were registered in the mining industry. This figure represents an increase of 10.4% compared to those registered in that same month of 2020. The total number of people employed in mining is 190,685 distributed in 3,123 economic units; Of the total, 166,056 (87%) are men and 24,629 (13%) are women. The state with the highest number of economic units is Puebla with 732, Guerrero with 307 and Sonora with 145. For its part, the states with the highest number of employed people are Sonora with 20,351 , Coahuila with 17,114 and Zacatecas with 16,661.

Regarding the educational level, the highest among mining jobs was complete primary school; Of the total population with this degree, 6,584 were men and 1,514 were women. The national average of unspecified level of education is 2,441 men and 409 women. From these data it can be inferred that the majority of the population employed in mining has incomplete primary school and completed secondary school.



Women in mining

Mining has historically been associated with the masculine and, therefore, a hierarchy dominated by men has been generated. Through the patriarchal structure and the differentiation of work by sex, men guarantee their privileges in the mining industry and maintain a hegemony that is difficult to eradicate (Salinas and Cordero, 2016; Tallichet cited by Salinas *et al.* , 2012).

In the social imagination, mining work involves efforts that go beyond female capabilities, hence , as in many other work areas, women have been excluded from productive work. In fact, only in the nineties of the 20th century, women began to play a relatively important role in the Mexican mining sector , which has maintained its upward trend in recent years. At the end of 2021, the total number of women working in the mining sector was 66,037; This represented 14.2% more workers than the previous year. The participation of women in mining-metallurgy employment rose to 16.3% of the total workers in the industry, so there was a slight increase compared to the 15.7% participation in 2020 (González, October 27, 2019) . The increase in women workers in the mining industry has also been reported by the Mexican Mining Chamber (Camimex). According to the data, the inclusion of women has increased significantly in recent years: in 2015 participation was 12.8%, a year later it rose to 13.4% and by 2017 it was already 13.9%. In 2018, the percentage rose to 14.9% and in 2019 the presence of women stood at 15.7%.

In an internal Camimex survey applied in 43 mines (26 underground, 11 open pit and 6 of both types), belonging to 29 different companies, women already concentrated 17% of the jobs, with similar salaries and levels of responsibility. to those of men. This has represented a very important advance for female participation in the mining industry. In the same survey , it is detailed that the majority of women hired are concentrated in administration positions (29.5% of the total). In second place are those that perform technical tasks with 9.61% and in third place are those that carry out supervisory tasks with 8.5%. At the end are those with executive positions with only 8.08% (González *et al.* , March 12, 2019).

On the other hand, a survey on human resources indicators, also applied by Camimex, shows that only 7.8% of the staff are women. If only unionized personnel are taken into account, the number drops to 5.1%. These inconsistencies reflect a sector that has not yet fully integrated female workers or sought their inclusion within the industry.



Although it is increasingly common to find a greater number of women in the different roles of this industry, mining culture has maintained a hierarchy dominated by men to guarantee their privileges through the functional differentiation of work by sex (Tallichet cited by Salinas *et al.* , 2012). To understand this phenomenon, it is important to study the role of organizational culture in the mining industry, specifically in leadership roles, and know what tools it provides to achieve more palpable equality.

Organizational culture

The term “culture” is complex and has been approached from different disciplines. This work does not intend to resume the discussion around it, but it is important to rescue a general definition that provides sufficient elements to understand it. For Geertz (1987), culture is “ a pattern of historically transmitted meanings, incorporated in symbols, inherited conceptions and expressed in symbolic form through which men communicate, perpetuate and develop their knowledge and activities in relation to culture.” life” (p. 103).

On the other hand, the concept “organizational culture” integrates several of the elements that define culture and applies them in organizations. For Aguilar (2017), organizational culture is the shared and endogenous behavior of an organization, as well as the shared beliefs and norms that govern that behavior. In other words, organizational culture is composed of shared interactions, values, norms, symbols, and traditions.

The antecedents of organizational culture are related to the origins of social sciences. The most important contributions to studying human behavior within social groups have come from anthropology, sociology, social psychology and economics. With the appearance of administrative science at the beginning of the 20th century, a new space was opened for the study of organizational culture, deeper from an epistemological point of view , more holistic and systemic. This approach not only encompassed various theoretical proposals, but also transcended scientific discourse and took the proposals to the field to enhance the relationship with other sciences and nourish them.

The concept of culture applied to the organization was developed from the administration of human relations. From the experiments developed by Elton Mayo (1972), the subjective and informal aspects of organizational reality begin to be recognized. Mayo studied the factors that affect the worker's performance and detected that the environment of the group to which he belongs significantly affects the perception he has about aspects of the organization.



According to Ansoff (1985), the theory of organizational culture can be conceptualized as a unique set of characteristics that allows one organization to be distinguished from another. Organizational culture informs how people in the organization should behave through the establishment of a system of norms and values that is transmitted from one generation to another, from one member to another, through a socialization/learning process that includes rituals, ceremonies, myths, legends and actions of reinforcement and punishment.

The existence of organizational culture allows people to perceive organizations as possessing certain unique characteristics, similar to individual personality characteristics that are relatively stable over time and provide a sense of belonging. Within the organizational culture there are dominant values and characteristics that govern at a general level. The central and general values in the organization are determined by the dominant culture, but there may also be subcultures within the organization that originate from the different departments that comprise it. Subcultures develop to manifest or reflect situational problems and common experiences in different departments of the organization.

Organizational culture synthesizes a pattern of beliefs, expectations, ideas, values and attitudes shared by each of the people who make up the organization. According to Hellriegel *et al.* (1999), there are five factors that define culture :

- Routine behaviors such as interaction between people, rituals, organizational ceremonies, and the language used.
- Standards that are shared by work groups within the organization.
- Dominant values that maintain the organization.
- Rules of the game that maintain harmony in the organization and that newcomers have to learn to become accepted members.
- Organizational climate determined by the physical layout and interaction of members with clients or external personnel.

These factors already included the essence of what Schein (2010) would later propose for the definition of organizational identity and cohesion: values, norms, deep beliefs, language and symbols. The interrelation of these factors results in the formation of different levels of organizational culture that is divided into several aspects:

- Shared positions: representation of beliefs about the nature of reality that are taken for granted within the organization.

- Cultural values: representation of beliefs, assumptions and feelings that are collectively accepted as good, valuable, normal and rational. These values are maintained even when the organization's personnel changes.
- Shared behaviors: norms that are more visible and easier to change. It is the part that unconsciously holds the staff together.
- Cultural symbols: words, gestures, images or other physical objects with particular meaning within the culture.

A cultural representation in the organization is any social, psychological, emotional or symbolic manifestation of a specific culture. These representations are manifested through aspects such as leadership styles, interaction between members, political behaviors, verbal and non-verbal communication styles, or the decision-making process. Cultural representations help reinforce an organization's identity by promoting a specific culture, forging a sense of loyalty and commitment, and encouraging members to work together to achieve goals.

According to Schein (2010), there are three basic types of organizational culture: group culture, hierarchy culture, and adhocracy culture. Each reflects a particular form of dominant relationship between leaders and followers within the organization. For their part, Cameron and Quinn (2006) propose a fourth type: market culture. We will return to this classification when addressing leadership and the role of women in it.

Although this work will not go into detail about the different theories and models that explain organizational culture based on indicators, it is worth mentioning one that is relevant: Schein's (1984) model of organizational culture, which postulates that values, Shared norms and beliefs define the culture of an organization, creating a more subtle form of coercivity than formal procedures and regulations.

In conclusion, organizational culture develops from the behavior of the members of the organization and is reflected through language, symbolism, images, traditions, relationships between people, trust and camaraderie. Furthermore, it defines the values and norms of the organization as a representation of the beliefs and nature of reality.

Leadership and gender

Leadership studies were born in the 1900s with Max Weber's theory of bureaucracy (1920) and the greatest advances occurred in the 1960s with the study of microleaders. A crucial contribution comes from Robert Greenleaf (1977), who focused his theory on



attention to followers and later proposed authentic, compassionate, collaborative, and adaptive leadership. On the other hand, Chris Argyris (2006) is based on the knowledge approach to propose the search for an environment oriented to learning, innovation, creativity and the development of emotional intelligence.

Leadership is a broad and complex concept that began to be studied in 1900 by Max Weber. With his theory of bureaucracy, Weber proposed that rationalization was the best way to organize an entity for its effectiveness. This marked the beginning of the field of organizational psychology, whose principles continue to guide modern approaches to leadership.

In 1960, a group of psychologists and sociologists conducted a study on leadership which they called *the microleaders study* and whose main objective was to establish a descriptive framework for leaders. Theorists delved into the basics of authoritarian, democratic, secular, and insightful leaders; Thanks to that, it was possible to create a classification based on leadership style and an orientation classification.

At the end of 1960, Robert Greenleaf (1977) made a theoretical approach to leadership characterized by attention to followers. His theory of *services leadership* (LSL) focused on the question of what are the main objectives that leaders should pursue, in addition to investigating how to achieve effectiveness. The author proposed that the well-being of followers is a central element of leadership and proposed that leaders should focus on caring for followers rather than obtaining benefits for themselves.

In the 2000s, the discussion on leadership was fueled by the emergence of new approaches such as authentic leadership (AL), compassionate leadership (CL), collaborative leadership (CLC) and adaptive leadership (ALM). One of the most notable, based on the knowledge approach, is the one proposed by Chris Argyris. Argyris (2006) proposes the creation of an environment that encourages learning and allows people to work together to generate new ideas and solutions. It also advocates innovation and creativity, as well as the creation of environments that generate trust and the development of emotional intelligence. With this, people would have more confidence when sharing information, working together and developing skills and knowledge to carry out successful projects.

In its model, Argyris also proposes leadership based on performance management to help leaders be able to identify, evaluate and improve the performance of each member of the organization. The actions, in this sense, would be focused on providing incentives for achievement and encouraging feedback as a favorable exercise for the organization.



Along with Argyris, other authors have proposed theories that address the strategic management of leadership based on creation, transmission, management and control. Some of the most important are Bélanger and Calmé's (2004) transversal theory to create a culture that motivates and encourages positive organizational behavior; Simons' strategic leadership and quality leadership (2010) to develop a healthy and sustainable organizational culture and create a results-oriented organizational environment.

From Weber's early studies until now, using leadership strategies to manage culture and foster motivation, creativity, and insight has been shown to be key to transitioning to a healthy, results-oriented organizational culture. Leadership has been widely studied during the 20th century to create strategies that help manage culture and achieve organizational objectives. Regardless of which one is chosen, adopting a clear leadership strategy within organizations is essential to promote the development of culture, motivation and employee performance.

At the beginning of this article, the topic of gender and the consequences that gender roles have had in different dimensions of social, cultural and work life were addressed. According to what has been seen so far, gender roles are social constructions that shape the behaviors, activities, expectations and opportunities that are considered appropriate in a given sociocultural context.

Gender, as a sociocultural category, refers to the relationships between people and the distribution of power in those relationships. This category is related to the categories of biological sex (man and woman), although it does not necessarily correspond to them. In this sense “man” and “woman” are sexual categories, while “masculine” and “feminine” are gender categories. Gender is attributed to the social characteristics and opportunities associated with being a man or woman, as well as the relationships between men and women, non-binary people, and boys and girls.

According to Tarrés (2013), who returns to Joan Scott (1986), the gender category is essential in a society that is based on and promotes perceived differences between the sexes as a primary form of significant power relations. In the words of the author, “the relationships between men and women based on a hierarchy of power come from symbolic representations of sexual difference and operate from the most basic social processes” (Tarrés, 2013, p. 11).

At the workplace level, gender roles are based on the different positions that men and women occupy in the sexual division of labor (Godoy and Mladinic, 2009). According to Eagly and Carli (2003), gender roles are reflected at the managerial level through leadership



characteristics. According to the theory of these authors, male leadership privileges a competitive approach and is based on a hierarchical structure to exercise control and carry out a rational analysis in the resolution of conflicts. Female leadership, on the other hand, is more cooperative and focuses on the development of work teams to obtain good results through understanding and a more intuitive than rational analysis (Eagly and Carli, 2003).

According to Ramos *et al.* (2003), women have been able to break the traditional role that patriarchal society had given them over time. Today, women increasingly have levels of qualifications, professional experience and working conditions that are comparable to those of men. Since the second half of the 20th century, this rupture has generated a gradual incorporation of women into the active sectors of society within developed countries. Despite this, the authors recognize that there are still segregation mechanisms that perpetuate androcentrism in the workplace. This means that there are organizations where the division of labor is carried out based on the social inequality of women with respect to men, and not on the individual potentials or free will of the participants (Barberá, 2000; Ramos *et al.* , 2003). This is especially relevant when it comes to occupying positions of power and making important decisions for the organization (Valcárcel, 1997).

Likewise, Zamora (2023) mentions that the role played by women in various sectors, both in industry and services, has evolved over time. Currently, when referring to female leadership, we are emphasizing the relevance of leadership exercised by women in critical areas of the industry.

Creating an equitable work environment that encourages inclusion can improve the work atmosphere and cultivate a more collaborative and harmonious environment. Women's empowerment can play a significant role in reducing wage and gender disparity, as it is essential to ensure that women have equal opportunities with men (Malapit *et al.* , 2020).

The study of gender and the role of women in leadership positions is crucial to understanding phenomena such as non-sex work relationships, the glass ceiling for women leaders, and other circumstances that disadvantage them at all levels (Davidson and Cooper, 1992; Powell, 1991; Segerman- Peck, 1991). According to several studies (Sánchez-Apellániz, 1997; Powell, 1999), there are three categories of analysis to account for these situations:

- a) Internal barriers associated with female gender identity due to the influence of socialization and the development of differential characteristics between men and women when participating for a high position (Bonilla and Martínez, 1992).



- b) External barriers associated with organizational culture and gender stereotypes derived from patriarchal culture and asymmetrical power relations between men and women (Sarrió *et al.* , 2002).
- c) Barriers caused by the reproductive role and family responsibilities, specifically in the compatibility between the domestic and work spaces for women (Greenhaus and Parasurarnan, 1999; Sarrió, 2002).

Of these barriers, perhaps the most relevant is that involving gender roles and organizational culture. According to Ramos *et al.* (2003), there are cases in which the organizational culture does not favor women due to stereotypes that come from patriarchal society. Patriarchal dynamics in organizational culture can manifest themselves in four processes: i) informal rules and male networks, ii) human resources policies in personnel selection and career development, iii) scarcity of mentoring for women, and iv) lack of organizational policies to reconcile work and family.

The continuation of such practices in the workplace would lead to perpetuating asymmetrical gender relations and a segregated organizational structure (Kanter, 1977). Several scholars have already identified that, in many cases, women are relegated to feminized activities (services and administration) and middle management positions in which they are in charge of small groups of women, in addition to suffering vertical and horizontal segregation, wage discrimination. and other social distinctions (Sarrió *et al.* 2002).

Despite this, it is increasingly common for women to play an important role in organizations; This has been achieved by the recognition of their participation in decision-making and the incorporation of inclusive organizational policies in recent years. Decades ago, authors such as Loden (1987) and Helgesen (1990) had already identified that female leadership is characterized because, unlike male leadership, women not only take into account the rational when carrying out their management, but also the emotional. for decision making.

This leadership exercised by women has been known as *natural-feminine* (Loden, 1987; Helgesen 1990) and has been associated with strategies focused on cooperation to achieve team objectives. In this sense, in female leadership the most important thing is the team, the achievement of quality and problem solving through reasoning, intuition, reduced control, understanding, collaboration and high levels of performance (Ramos *et al.* 2003). The following table1 summarizes the differences between male and female leadership:



Table 1. Masculine and feminine management style

Items	Men's style	Feminine style
Operating style	Competitive	Cooperative
Organizational structure	Hierarchical	Equipment
Basic objective	Succeed	Achieve quality
Problem resolution	Rational	Intuitive/rational
Key Features	Strong control Strategy Not emotional Analysis	Reduced control Comprehension Collaboration High performance levels

Source: Loden (1987)

At the social level, Rosener (1990) has identified differences in the types of male and female leadership based on the socialization of gender roles and the associations with cooperative, understanding, and kindness characteristics that are attributed to women. Maier (1999), on his own, ensures that masculine leadership focuses on *doing* and its objective is results; the feminine, on the other hand, focuses on the *being* and its objective is the process.

One of the works that best substantiates the differences between male and female leadership is that of García-Solarte *et al.* (2018). These authors take up the classification of Cameron and Quinn (2006) that emerges from the Competing Values Framework and that contemplates four main types of organizational culture, each belonging to a quadrant formed by the intersection of two main dimensions: external-internal and stability- flexibility. According to this classification, the four types are the following:

- Clan culture: It is flexible and focuses on having good internal organization, informal governance and pleasant places to work. It is a culture associated with family businesses, shared values and goals, cohesion, sense of belonging, teamwork and participation.
- Adhocratic culture: it is flexible and enhances fundamental values such as creativity and initiative. It is a culture without centralized power or authority relationships, it allows employees to develop their activities freely if they are oriented to the objectives of the organization.
- Market culture: it is focused on the external, but with internal control. It is a culture focused on achieving goals, planning, execution and efficiency. Employees are motivated by competition and market share, there are few personal relationships, and



individuality is preferred (Al-Khalifa N. and Aspinwall, 2001; Cameron and Quinn, 2006; Wiewiora *et al.* , 2013).

- Hierarchical culture: emphasizes control and internal efficiency. It is a culture focused on stability, operations, coordination and strict compliance with rules and regulations. There are clear lines of authority, decision making and standardized procedures. Control mechanisms are valued positively to assess success.

García-Solarte's empirical results *et al.* (2018) point out that there are important differences between male and female leadership when it comes to relating them to the types of organizational culture just seen. According to the authors, “the gender of management exerts a significant effect on organizational culture” (p. 273) and this is reflected in the type of culture that is created depending on whether the organization is led by a man and a woman.

Specifically, the values of clan culture (flexibility, loyalty, commitment, teamwork and unity) are more present when the company is led by a woman. On the contrary, when a man is the head of the organization, values linked to market culture are promoted more (respect for the norm and market penetration as a standard of success or performance). Despite presenting opposite values related to the gender of management, organizational health is achieved with a dynamic of complementarity, and not opposition (García-Solarte *et al.* 2018).

According to Appelbaum *et al.* (2003) and Herrera *et al.* (2012), true business success is achieved with the balance between masculine and feminine values. In this sense, García-Solarte *et al.* (2018) state that the objective of recognizing the influence of gender on leadership and organizational culture is “to seek a balance between men and women that favors the complementarity of values within organizations” (p. 273).

Materials and method

This research was carried out with an interpretive approach, supported by an analogical hermeneutic epistemology from a qualitative paradigm. The technique used for data collection was the semi-structured interview with female managers, directors or plant heads in the operational area of the mining industry in Mexico.

Sampling was by convenience , not probabilistic. 20 female mining leaders were interviewed taking into account the ease of access and availability they had while carrying out their strategic position in the operational area. A reliability agreement was made, as well as the triangulation method to guarantee the validity of the instrument.



As highlighted by Hernández *et al* . (2010), qualitative research allows an investigative and dynamic action between the actors, the facts and their interpretation. Therefore, it is a circular process that travels in both directions. A fundamental point is to know the value judgments that the actors directly involved make about the problem.

Once the interviews were transcribed, they were analyzed in the Atlas ti *software* (version 22) with the previously established codes. To understand the relationship between organizational culture and gender identity, the analysis was carried out based on five thematic axes: i) gender inequality, ii) gender education-organizational philosophy, iii) obstacles within the organization, iv) organizational support-leadership network, and v) life lessons.

Results

The first dimension of the interviews is *gender inequality* . It groups together the situations that leading mining women perceive as discriminatory and unequal at the work and organizational level.

For Alma (one of the interviewees), what most reflects inequality are the working conditions within mining: “We do not have the same benefits nor do we have the same opportunities.” Alicia agrees with this last idea by stating that this is the main inequality in Mexico and the world: “It is basically not accessing job opportunities. I think that now that is the inequality perhaps, from country to country, especially in a large company.” Fátima, for her part, reaffirms the idea and explains what she sees as inequality: “Gender inequality is that, for example, we do not have the same opportunities just because we are not the same as others.”

The mining sector, as is known, has been exclusive when it comes to integrating women. If this has been evident in operational positions, it is even more so when it comes to integrating them into senior command and leadership positions. Karina is one of the participants who is most aware of this problem: “Here in Mexico I think there is a bit of inclusive resistance for management positions.” Norma, for her part, recognizes that inequality means that it is difficult for women to grow in a sector like mining: “It is a complicated issue, there is gender inequality; Yes, there are still positions in which we cannot advance. "There is a very marked theme." Eva has felt, first-hand, the inequality that predominates in the industry: “They don't give women the same opportunity as men, they don't give me the same opportunity as a man. This is what I see as gender inequality.”



Although the majority of participants agree that men and women are equal, there are others who recognize the existence of significant differences and affirm that true equity is adapting to each person's conditions; Doris is one of them: “We must recognize that physically we are different and have different needs (...) ; Equity means giving everyone what they need according to their conditions.” Cristina is another leader who supports the idea of adapting to differences: “[We need to] understand that women and men have different needs, that we have different expectations; also that we live differently. Inequality lies in not understanding these differences.”

The second dimension of the study is *gender education-organizational philosophy* , which encompasses the vision of the participants regarding the actions necessary to promote gender equality, labor equity and fair treatment. Organizational philosophy allows us to create educational policies to close the gender gap and vindicate the role of women in management positions.

In the case of this dimension, all participants recognized the need to create organizational policies focused on education and the elimination of inequalities. Such is the case of Marisol, for whom education focused on changing the male mental model regarding women's work is very necessary, especially in mining: “Gender education is required in the mining industry, for women and men. ; I think that men are somewhat confronted with their ideas and beliefs.” Eva shares with Marisol the idea that it is absolutely necessary to raise awareness about gender equality in the mining industry to eradicate discriminatory attitudes: “Gender education is required because in mining it is very old for men to say how women are going to treat them. teach something to them; well, they say it uglier. I think they are issues of continuity and monitoring.”

Currently, there are several mining companies that already integrate gender education and philosophy into their organizational policies. Marcela, for example, belongs to one where they are carrying out interesting inclusion programs: “We are recruiting more women, we are giving women opportunities in operational areas.” Other companies have promoted policies that go beyond recruiting and generating opportunities. Fátima has witnessed this in her organization: “We have been working for more than approximately a year with a cultural evolution that is going to attack this entire part. There are several issues to discuss, but we are starting slowly because there are many of us.” Something very similar happens to María, who belongs to a mining company committed to this type of actions: “From the year until

now, they are already dabbling in programs to educate us and promote diversity in the group from the moment the hiring is made. Yes, they are modifying several processes.”

Unfortunately, not all mining companies have made progress on the issue of gender education. Rosario is one of the leaders who has never witnessed programs aimed at generating gender awareness, neither in her current company, nor in those she has been in previously: “No, none that I have been in or that I have seen include within their philosophy a gender education still.” The same thing happens in Cristina's workplace: “In the company they talk about inclusion, but there is still no explicit topic of education on gender issues or female inclusion, it is only a topic that is talked about, which is involved in strategies, but there is no education.” Fortunately, in most places where specific actions have not been implemented to counteract discriminatory manifestations, there is an organizational awareness about what types of attitudes should be avoided. Sandra recognizes this environment of empirical equality in her work: “Not an education or a policy as such, but equity and equality in salary have been respected. “There is no difference if men earn more than women.”

Some women leaders, like Marisol, have made their own efforts to make gender education a reality in companies where it does not yet exist as such. She, taking advantage of her management role, has been promoting these types of topics in her organization: “Yes, education is implicit [in my company] but, now with the power that I have, I promote training on these topics for men and women.”. Doris, very aware of her context and the problems that may exist regarding inequality, is informed about the alternatives that exist and what other women leaders do globally to improve their organizational conditions: “There is a group called *Women and Allies*. “Each mine has its women as allies, plus a diversity inclusion committee.”

Other participants, like Karina, know that they cannot expect all organizations to carry out programs of this type and prefer to start with family education on these topics: “From home, as children, we need to start gender equality. I believe that from having freedom for them to decide and not putting up barriers as parents or certain stigmas or pigeonholing.” Tatiana thinks something very similar: “It is a lot of work for us since we were children or, if we already come from a macho family, to leave those things and seek to develop yourself; believe in you”.



The third dimension is *obstacles within the organization* , which refers to all those circumstances that women leaders have had to face in the mining industry and that have hindered their path to getting to where they are today.

The obstacles faced by women leaders in mining can be divided into two blocks: work obstacles and personal obstacles. The first refer to all the problems that, as women, they encounter in the workplace , especially having to deal with the inequalities characteristic of the sector. Alma, for example, recognizes that she has had to fight against discriminatory treatment, especially with the senior management of a company where she worked: “I suffered a lot of discrimination in that sense. It was not from colleagues, but from the boss and the vice president that I had.” Something very similar happened to Doris in some of the organizations where she has worked; In her case, she has had bosses who have abused her position to condition and take advantage of it: “Yes I had bosses who took advantage of their situation, they were still in that mindset that because I was a woman they put many obstacles in front of me.”

Being a woman in a mining company can be the subject of mistrust due to the bad belief that they are not suitable to carry out the activities of the sector. Eva was a victim of this unequal and unfounded treatment when she began her career: “There were many obstacles, the first was that they did not trust me. "I was in an environment where they didn't even want to lend me the key to the rock laboratory." Unequal treatment, however, is not only reflected in women's relationships with their partners. In many cases, the very facilities of the companies are an example of the little consideration that exists in the sector for mining workers. In her participation, Sandra shared how difficult it has been for her to adapt to a totally masculinized environment: “If someone closed the office, I couldn't go to the bathroom anymore. If I wanted to go to the bathroom, I had to go wherever I could. Once, while transporting to the mine, they even stopped me from a place to leave it to a union member.”

When it comes to personal obstacles, problems associated with the role of women leaders as mothers or wives predominate. At a social and cultural level, women are required to fully fulfill their family role regardless of whether they have a full-time job and have to double their efforts to fulfill all their “obligations.” For Norma, the inequality of demands for men and women is evident: “There is inequality in the understanding that we also have more roles than men. They only have one role, that is, that of work; "He is not assigned the role of father, brother or son like we are." In that sense, mining women have to work far from



their family and that has prevented them from growing in the organization because it implies more time dedicated to work and less time to children or husband.

Fátima is frank when explaining that her family has been a reason for not getting involved at higher levels in her work: “Right now I have my children and I think about things more, much more. I like to be growing and everything, but I also say 'good'.” Another of the participants who shares this feeling is Marcela, for whom the separation from her family has been the biggest obstacle she has encountered: “The separation from my family has been the main obstacle that I have had because I have always had to depend on "a person who is looking out for them.”

The fourth dimension is *organizational support-leadership network*, and refers to the networks that exist in organizations to help women solve obstacles within jobs. These allow workers to face the various situations that arise at work and personal level with greater enthusiasm and professionalism; The main objective is to prevent them from giving up professional growth and to create more and more female leaders.

The main networks that women leaders have found in their workplace are made up of their female peers or their closest team. Fátima, for example, belongs to a network of women mentors who, in addition to helping on a professional level, does so on a personal level: “We are in women mentor programs, it is a mentoring support network by women for women. Another network we have is the same female employees of the organization.” Verónica has also found great support in the women's groups within her workspace: “For me they have always been the same women that I have found within this industry, they have taught me a lot and supported me.”

When they are not other women, the participants find support in their male work team who understands the difficult context with which they are dealing. That happens to Alma with her team: “My support right now is my own guys from the same department and those I have around me, all the people I know.” There are cases, like Norma's, in which people with a superior role are the main members of a small but effective support network: “My boss is obviously my main support, he does believe that the work that women do is Very important, the largest team he has is made up of all women.”

In particular cases, support networks are outside the organization and are made up of people who help carry out the activities that women leaders stop doing because they are at work. Such is the case of Doris, who has an entire network made up of several people who help her every day: “I have my husband and my mother. If my mom gives up helping me, I



don't know what I will do. There are also teachers and babysitters. I think that without that support network I would not be here.” Like Doris, Marisol has a whole support network with other women who support her to take care of pending things in her family role: “ Other women help me to be able to go to work calmly, they help me to deal with all my personal issues.” .

Thanks to support networks, many of the women leaders have gotten to where they are. They themselves recognize that, without these networks, the situation would be different. But support is not only limited to a group of people who help others, but is also reflected in support programs integrated into the companies' growth plans. Alicia is one of those who have had the opportunity to grow thanks to one of these support plans, in addition to having networks of people that have made it possible for her to grow without worrying about the commitment in time and space that this means: “In my organization there is what is called a succession plan. Certain levels look at the profiles, see who has potential. I feel like that's how I grew because they saw me.”

The last dimension of analysis is that which corresponds to life lessons and encompasses all the learning that women leaders share with other women to promote their professional and personal growth. Among the tips mentioned by the participants, those focused on never doubting themselves and always pursuing goals despite obstacles stand out. Alma says it clearly: “We must not give up.” In the same way, Karina motivates to always be prepared: “I can tell you to trust and prepare, no matter what situation you are going through because at some point in your life the opportunity will come to you.” Verónica links this type of advice with her personal philosophy of life, with what she is passionate about and what makes her happy: “That is my motto: work with passion, I like what I do and it is very important that all women work with passion, with objectives, with desire and with joy.”

A series of tips are framed within what gender roles have been and the importance of asserting the status of woman in any situation and context. Marisol is very clear about this: “First we have to work a lot internally to recognize our value, to understand and understand that there are no differences.” Doris, for her part, reinforces this idea of feminine solidity: “[I would tell them] not to lose the feminine presence, to learn to develop that part that has made great male leaders get to where they are, but that the differentiator is what can contribute as a woman to the organization.” Part of strengthening the feminine role of future women leaders is to let go of the beliefs that patriarchal society has established in society and educate oneself so as not to continue repeating the mistakes of past generations. Cristina transmits



these ideas in a firm and decisive way: “First, educate yourself because the first thing is to detect in ourselves the micro- and macro-machisms that we commit. Until then you begin to understand what inequality means.”

Finally, some of the advice matches the type of leadership expected of women leaders. Fatima, for example, advises always maintaining a transformational approach when it comes to leading in an organization. With her words, she invites us to never underestimate empathy as a way to guide companies towards their objectives: “[I would tell them] to always be themselves, that just because they have a direction they don't have to be tough or appear to be very rude to others. decision making. They have to have empathy with the staff and be an example with their values.” Being empathetic does not mean giving up the freedom to express oneself and debate points of view from a firm and informed position. In this sense, María del Rocío invites you to never leave your convictions aside and always fight for what you believe in: “I think I would tell them to never stay silent, to always express themselves, to make use of political instruments and tools.” and, if they are not used within the company, let's look for other means.”

Discussion

Being a woman in a patriarchal society is not easy, but being a female leader in a sector as masculinized as mining makes everything more complicated. The majority of the participants in this research confirmed what began as a hypothesis: at the social, cultural and organizational level there is still a long way to go to achieve a satisfactory degree of inclusion.

In this sense, it is important to recognize that the mining industry has had a deeply rooted tradition of masculinity. Resistance to the inclusion of women in the workforce, especially in management roles, reflects a persistent problem in the industry. This resistance may be due to a number of factors, including ingrained gender biases and gender role stereotypes. As Martínez (2018) mentions, the idea still persists that the main function of women is maternal commitment and the well-being of the family, which is why their productivity is underestimated.

Now, according to the information collected in this work, it can be stated that discriminatory treatment in mining companies continues to predominate for the women interviewed. Although there are official employment equity policies, there are still unequal salaries and benefits between men and women with the same position, in addition to the fact

that opportunities for them to advance to positions with more responsibility continue to be scarce.

Although it is important to recognize that equality does not mean that everything is identical for men and women (there are, for example, physical differences that must be maintained), there should be no sex or gender distinction in working conditions and the number of opportunities available. They occur in a company. As seen at the beginning of this article, gender is a cultural category that has been used to establish relationships of inequality without taking into account people's capabilities and attitudes. These relationships have always disadvantaged and made invisible the potential of women. Unfortunately, gender roles and unequal relationships are still present in many organizations in Mexico and the world.

A great advance in the current panorama has been making women aware of their rights. In the interviews it was observed that not all companies have integrated educational or political resources to promote gender equality; However, all participants recognized that these types of actions are necessary to generate significant changes.

According to González (October 27, 2019), gender discrimination in job hiring processes is produced by gender stereotypes, since women are usually seen as people less committed to paid work and more family-oriented. Although they are few, there are companies that have already developed awareness programs on gender policies and that seek to improve conditions for their workers. According to the participants, these programs range from establishing standards of behavior to avoid attacks and harassment to recruiting more women in operational areas and creating opportunities for professional growth. In some cases, those in charge of generating and disseminating gender and inclusion policies are the women leaders themselves; Their main objective is to prevent others from going through the same thing as them.

Organizations, in their role as social and cultural pillars, should have gender awareness as one of their priorities. In the absence of concrete actions in their fields of work, women leaders have chosen to make their family the center of learning about the importance of women in society, the need to value themselves, the rights for which they must fight, the adversities that they must overcome and the attitudes that they must reject and denounce.

Regarding adversities, during this research it was possible to identify several obstacles that women leaders must overcome to grow as professionals. In the workplace, the participants have had to endure discriminatory attitudes and harassment situations.



Unfortunately, the largest number of cases are related to abuse of authority and violent treatment by bosses or superiors. None of the participants mentioned conflicts with their colleagues, but they did mention conflicts with men who hold positions higher than them.

Another obstacle has been mistrust towards female workers because they do not belong to the masculinized context to which miners are accustomed. Although they no longer have to deal with myths about their presence at the mine, women still have to fight to gain credibility from their peers just for not being men.

Furthermore, the challenges are not only limited to the workplace, since sometimes the family can also represent a barrier to professional development. Despite not wanting to do so, some participants recognized that children and relationships are factors that have influenced them to reject growth opportunities or assume more responsibilities in organizations. The problem, however, is not in having a family or living in a marriage, but in what is expected of a woman in the social and family sense. It does not matter whether women work a full day or return home late, since in most cases they are expected to attend to the domestic and family tasks that “apply to them” because they are women. The real problem, therefore, is the inequality in what is considered the female role should be within the family and the difference with the expectation that is had about the male role.

For the majority of participants, gender policies in the company are fundamental to guarantee their effective integration and their appreciation as professionals. However, in the absence of greater efforts on the part of the companies, they themselves have created and sought their own support networks, many of which are made up of other women who have gone through similar situations and who have generated strategies to improve conditions in their work spaces. In other cases, networks are made up of several associations with a common objective: to eradicate inequality and prevent these situations from being maintained in the organizational culture. The support networks are informal and are made up of all the colleagues who accompany us every day on the difficult path of being a mining woman. Solidarity and unconditional support are the most valuable resources that these groups make available to any worker, regardless of the role they play.

The most important thing for all the women leaders who have shared their experiences here is to convey the message of how they have fought to be where they are. For them, any woman has the opportunity she seeks if she works hard to achieve it; It is true that there are many obstacles and that socially there is still a long way to go for women to be valued for who they are, but the effort begins by valuing themselves, facing inequalities with the



necessary security and, above all, not changing their essence. for what is expected of them. This is related to recognizing that there are different types of leadership that are associated with different types of organizational culture; Women, with their own characteristics, can exercise leadership based on empathy, cooperation and flexibility. Far from being something that generates a lack of character and problems of insubordination, it would represent an important balance that would lead the organization to achieve its objectives.

Finally, this research highlights that progress has been made in the area of inclusion and gender equity in the mining industry. In this sense, the implementation of gender education programs, inclusion policies and support networks is a step in the right direction. Esparza (2016) in her research on female inclusion in the mining industry mentions that the country, continent or industry does not matter: the actions taken to date are simply insufficient to achieve change. However, the fact that workplaces with differential pay, discriminatory treatment and precarious working conditions still exist underlines that there are outstanding challenges that require continued attention.

Gender equality, therefore, is not limited to the creation of fair working conditions; It also refers to the creation of opportunities and development plans for women in the mining industry. This is essential to enable women to achieve their professional, personal and social goals. Furthermore, equity is not just about equality in the present, but also about ensuring that there is a clear and accessible path for women in the future.

The voices and experiences of women leaders in the mining industry are fundamental to understanding the reality of gender inequality. The interviews provide valuable insight that can guide future policies and practices aimed at addressing these issues. Finally, this research highlights the continued need to address gender inequality in the mining industry, identifying persistent challenges and highlighting the importance of inclusion policies, gender education programs and support networks.

Conclusions

This article addressed several concepts related to the situation of inequality that women leaders experience in mining companies in Mexico. This sector, which has an important male tradition, is one where there has been the greatest resistance to the incorporation of women. The rejection of female participation in productive activities has been high, which is accentuated when it comes to management positions.



Although it is true that much progress has been made in terms of inclusion, it is still possible to find workplaces with differentiated salaries, discriminatory treatment and precarious working conditions for female workers. Gender education programs, inclusion policies, support networks and an organizational culture designed to take advantage of women's potential seem to be the best options to increasingly eradicate inequalities and achieve their genuine integration.

Thanks to the interviews carried out for this work, it was possible to learn first-hand what women leaders experience in the mines. According to them, there is still much to do in terms of opportunities and development plans. Equality, in this sense, is not only having good working conditions, but also creating paths that allow women to achieve their professional, personal and social goals.

Equity is an ideal that should be achieved and nurtured over time. Therefore, it is false to believe that equity does not require constant monitoring. Progress is slow, but work like this helps to make visible what is currently happening to record progress, pending issues and next steps because, in the words of Doris, one of the participants: “We have not yet understood that the worst way to treating this is as if it were a fashion topic. It is not fashion, it should not be a fashion and it should not be seen as such, we still have many conscious and unconscious biases in society.”

Future lines of research

1. Evaluation of the effectiveness of inclusion policies: Further investigate the effectiveness of inclusion policies and gender education programs in the mining industry.
2. impact of gender diversity: Analyze the economic and business impact of gender diversity in the mining industry.
3. Experiences of women at different hierarchical levels: Delve into the experiences of women at different hierarchical levels in the mining industry, not just in leadership positions, to understand how gender inequality affects all women in the industry and how they can overcome the challenges. obstacles.
4. Mentoring and support networks: Explore how mentoring and support networks specific to women can influence their professional development and ability to access leadership roles in the industry.



5. Perspective of men in the industry: Investigate the attitudes and perceptions of men in the mining industry regarding gender equality.

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