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Scientific articles

El papel de las emociones en las preferencias electorales según en el nivel educativo en Monterrey, México

The role of emotions in electoral preferences according to educational level in Monterrey, Mexico

O papel das emoções nas preferências eleitorais de acordo com o nível educacional em Monterrey, México

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Resumen

El estudio analiza cómo las emociones, mediadas por el nivel educativo, influyen en las preferencias de voto en las elecciones de alcalde en Monterrey, México, 2024. Mediante un enfoque metodológico que combina análisis de correspondencias, sentimientos y diagramas de Sankey, se explora la interacción entre las emociones evocadas por las campañas políticas y los diferentes grados de escolaridad de los votantes. Utilizando datos obtenidos de encuestas cara a cara aplicadas mediante un muestreo probabilístico aleatorio polietápico, se identifican patrones emocionales en las preferencias por los candidatos Mariana Rodríguez Cantú y Adrián Emilio de la Garza Santos. Los resultados muestran que los votantes con menor nivel educativo responden, predominantemente, a emociones asociadas con el carisma y la cercanía, mientras que aquellos con mayor nivel educativo valoran aspectos emocionales ligados a experiencia y confianza en la gestión. Este análisis ofrece nuevas perspectivas sobre cómo las emociones y la educación interactúan en la formación de



preferencias electorales, y se destaca la importancia de comprender los factores emocionales para diseñar estrategias políticas más eficaces en contextos urbanos.

Palabras clave: análisis de sentimientos, educación, emociones, inteligencia afectiva.

Abstract

The study analyzes how emotions, mediated by educational level, influence voting preferences in the 2024 mayoral elections in Monterrey, Mexico. Through an approach that combines correspondence analysis, sentiment analysis, and Sankey diagrams, the interaction between emotions evoked by political campaigns and voters' different levels of education is explored. Using data obtained from face-to-face surveys applied through multi-stage random probability sampling, emotional patterns are identified in preferences for candidates Mariana Rodríguez Cantú and Adrián Emilio de la Garza Santos. The results show that voters with a lower educational level respond predominantly to emotions associated with charisma and closeness, while those with a higher educational level value emotional aspects related to experience and trust in governance. This analysis offers new perspectives on how emotions and education interact in the formation of electoral preferences, highlighting the importance of understanding emotional factors for designing more effective political strategies in urban contexts.

Keywords: sentiment analysis, education, emotions, affective intelligence.

Resumo

O estudo analisa como as emoções, mediadas pelo nível educacional, influenciam as preferências de voto nas eleições para prefeito em Monterrey, México, 2024. Por meio de uma abordagem metodológica que combina análise de correspondência, sentimentos e diagramas de Sankey, é explorada a interação entre as emoções evocadas por campanhas políticas e os diferentes níveis de escolaridade dos eleitores. Utilizando dados obtidos em pesquisas presenciais aplicadas por meio de amostragem probabilística aleatória em vários estágios, são identificados padrões emocionais nas preferências pelos candidatos Mariana Rodríguez Cantú e Adrián Emilio de la Garza Santos. Os resultados mostram que os eleitores com menor nível de escolaridade respondem predominantemente a emoções associadas ao carisma e à proximidade, enquanto aqueles com maior nível de escolaridade valorizam aspectos emocionais ligados à experiência e confiança na gestão. Esta análise oferece novas

perspectivas sobre como as emoções e a educação interagem na formação das preferências eleitorais, destacando a importância de compreender os fatores emocionais para projetar estratégias políticas mais eficazes em contextos urbanos.

Palavras-chave: análise de sentimentos, educação, emoções, inteligência afetiva.

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Introduction

Municipal elections, particularly in large cities like Monterrey, Mexico, are not mere democratic exercises where the best candidate is chosen on the basis of rational proposals and political platforms. Monterrey, the capital of the state of Nuevo León and one of the most industrialized cities in the country, has a diverse electorate that reflects its social and economic complexity. Beyond public policies and campaign promises, emotions play a crucial role in the formation of electoral preferences and in the final decision of voters. In an increasingly media-driven political environment, where information circulates at a dizzying speed and visual narrative takes on unprecedented importance, candidates must not only appeal to reason, but also — and perhaps more decisively — to the emotions of voters.

The case of the mayoral elections in Monterrey is a clear example of how emotions can influence the formation and change of electoral preferences. In a contest marked by polarization, controversies and intense competition between candidates, the emotions evoked through speeches, debates and media campaigns become determining factors of electoral behavior. Monterrey presents a particular political-electoral context, where the electoral base is characterized by diverse segments, from young people with high exposure to social networks to older voters with a greater inclination towards traditional proposals. In addition, the educational level plays a crucial role in how these emotions are processed and on what aspects voters decide to base their support. While young people with basic education tend to focus on the personal image projected by candidates on social networks, voters with a higher level of education prefer to consider the political trajectory, experience and public policy proposals.

In this context, it is relevant to analyze how the educational level influences the reception of emotional messages during campaigns. The population structure of Monterrey reflects a diverse composition in terms of age, socioeconomic level and schooling, which allows for a detailed analysis of the segments of the electoral base. According to the National Electoral Institute (INE), Monterrey has a predominantly urban electorate, with a significant



proportion of young people of voting age and an increase in the number of university voters, which generates a competitive environment for candidates with different approaches (Informador, 2024).

Against this backdrop, this study analyzes how emotions, mediated by educational level, influence voting preferences in the mayoral elections in Monterrey, specifically focusing on the two main contenders: Mariana Rodríguez Cantú and Adrián de la Garza Santos. Rodríguez Cantú, representative of the Movimiento Ciudadano (MC) party, stands out for her strong presence on social media and a focus on youth and innovation. On the other hand, De la Garza Santos, from the ruling Institutional Revolutionary Party (PRI), bases her campaign on experience, political trajectory and a traditional approach.

Through sentiment analysis, key issue recognition, and relationship extraction using correspondence networks, this study explores how voters' educational levels influence the emotional perception of these candidates and voting decisions. By focusing the analysis on these two candidates, we aim to better understand the emotional and strategic factors that influenced the change in voters' preferences and, ultimately, the electoral outcome. In doing so, we aim to provide new insights into the interaction between education, emotions, and voting behavior in a highly competitive urban context.

Theoretical framework

Electoral behavior has been approached from various theoretical perspectives in the social sciences, evolving from traditional approaches, such as rational voting and sociostructural factors, towards models that integrate emotional dimensions. These contemporary perspectives highlight that emotions not only influence the mobilization and persuasion of voters, but also interact with sociodemographic characteristics, such as educational level, to shape electoral preferences (Bosch and Riba, 2005; Fraile, 2005; Fraile and Lewis, 2010; Jaime and Sáenz, 2001, 2007; Lago and Montero, 2010; Montero, 1994a; Montero, Calvo and Martínez, 2008). These investigations have provided explanatory models on how variables such as party identification, sociostructural factors and economic rationality shape electoral behavior (Harrop and Miller, 1987; Jaime and Sáenz, 2001). However, a limitation of these works is the lack of integration of emotional dimensions in the analysis, especially in contexts where educational level modulates voters' ability to process emotional information and make political decisions.

The theory of affective intelligence, proposed by Marcus, Neuman, and MacKuen (2000, 2017), fills this gap by arguing that emotions not only complement but also support political decision-making. Emotions such as enthusiasm reinforce pre-existing habits, while negative emotions such as fear or anxiety disrupt these patterns, promoting the search for additional information. In the electoral context, these dynamics are especially relevant to understanding how voters respond to candidates' emotional strategies. Research such as that of Valentino, Brader and Groenendyk (2011) has shown that negative emotions can mobilize voters to reconsider their options, while positive emotions strengthen loyalty to candidates or parties. This approach has been supported by Lodge and Taber (2013), who suggest that voters process both explicit and implicit emotional stimuli in their political evaluations.

In this context, specific emotions described by Plutchik (1980), such as joy, anger, hope and fear, become relevant in electoral analysis. These emotions not only shape the perceptions of candidates, but also interact with key factors such as projected personal image, political trajectory and presence in social networks. In this study, these emotional variables are analyzed based on their frequency and prevalence, allowing us to explore how voters with different educational levels respond to emotional stimuli in the context of the municipal elections in Monterrey.

Educational level acts as a key moderator in this process, influencing how voters respond to emotional stimuli. Studies such as those by Banks and Valentino (2012) and Huddy, Mason, and Aarøe (2015) highlight that voters with less education tend to respond more immediately to emotions evoked in media campaigns, such as the charisma or closeness of the candidates, while those with more education critically analyze the congruence of these messages with the candidate's political proposals and track record. In the case of the municipal elections in Monterrey, the contrast between the media image of a candidate such as Mariana Rodríguez Cantú and the political experience of Adrián de la Garza Santos illustrates how emotions evoked in campaigns aimed at different educational segments impact voting preferences.

Furthermore, research such as Brader et al. (2008) has pointed out that emotional messages can be designed to trigger specific emotions that directly affect voting intention, especially in polarized urban contexts. For example, emotions such as fear amplify the perception of risk associated with certain candidates, while trust reinforces the expected utility of others (Redlawsk, Civettini & Emmerson, 2010). This approach is also consistent

with the theory of rational voting (Downs, 1957), which is enriched by considering how emotional factors moderate political evaluations.

From a socio-structural perspective, Lipset and Rokkan's (1967) theory highlights how factors such as social class, gender and religion shape homogeneous patterns of electoral behaviour. In more recent research, Cramer (2016) and Petersen (2012) argue that emotions reinforce group identities, especially in voters with less education who perceive candidates as representatives of their social group. These emotions, such as pride and solidarity, consolidate support for certain candidates, while in voters with more education a diversification of preferences is observed, influenced by emotions related to self-efficacy and skepticism towards political elites.

On the other hand, the theory of party identification, proposed by Campbell et al. (1960), explains how emotional affinity towards a party, developed through political socialization processes, influences the perception of candidates and their proposals. In multiparty contexts such as Mexico, this identification combines with ideological and emotional factors to shape voting decisions. Fraile and Lewis (2010) highlight that voters with less education tend to show more marked party loyalties, while those with more education critically evaluate these affinities, considering their congruence with the candidates' proposals and values.

In this context, the analysis of emotions in interaction with the educational level offers an innovative framework to understand the dynamics of electoral behavior in contemporary scenarios. This study focuses on the theory of affective intelligence as the main basis to explore how emotions, modulated by education, influence voting intention in the municipal elections of Monterrey. Through this perspective, we seek to provide new theoretical and methodological contributions that not only allow contextualizing the empirical results within the case study, but also establish comparisons with research carried out in other sociopolitical environments .

Methodology

This study focuses on analyzing how educational level and emotions influence electoral preferences during the 2024 mayoral elections in Monterrey. To do so, a comprehensive methodological approach was adopted that combines sentiment analysis techniques, key issue recognition and relationship extraction through correspondence networks. The feelings considered in this analysis include joy, anger, hope and fear,



following Plutchik's (1980) theoretical model. These feelings were identified and categorized using natural language processing (Pérez and Santín, 2007) and sentiment analysis techniques, evaluating their frequency and predominance in voters' narratives. In addition, emotional associations with specific aspects such as candidate perception, projected image, political trajectory, and communication on social networks were analyzed.

Data were collected through face-to-face surveys applied to a representative sample of 600 voters, selected through a multi-stage random probability sampling. This method included several stages: first, representative census sections of the districts of Monterrey were selected, prioritizing a balanced distribution in areas of high, medium and low marginalization. Subsequently, blocks and homes were randomly selected within each section, ensuring the inclusion of vulnerable groups, with a higher degree of marginalization and poverty, to guarantee a diverse representation of the population. Finally, within the homes, participants were chosen through quotas that considered age, gender and educational level. Data collection was carried out between March and May 2024, during the electoral period. It should be noted that this work had the written permission of the organizations involved — MMT Soluciones and the Business Development Center of the Autonomous University of Nuevo León —, which guaranteed an ethical and transparent process.

The study was designed as a cross-sectional, non-experimental explanatory research, focused on assessing electoral dynamics during the period. The questionnaire included both structured and open-ended questions. Open-ended questions, such as "For the candidate for whom you WILL vote, describe in your own words why he/she DID earn your vote?" and "For the candidate for whom you WILL NOT vote, describe in your own words why he/she DID NOT earn your vote?", captured detailed and spontaneous descriptions of respondents' emotions and perceptions. These responses were analyzed using natural language processing techniques, which allowed us to identify the emotional charge, implicit connotations, and recurring themes in voters' narratives (Pérez and Santín, 2007).

Key variables for this analysis included the frequency and prevalence of emotional terms, described by Plutchik (1980), such as joy, anger, hope and fear. These emotions were associated with specific themes, such as the candidate's image, political career and presence on social media. The association mechanism consisted of identifying semantic patterns and correlations between the keywords extracted from the narratives and the identified themes, using semantic clustering algorithms and co-occurrence analysis (Liu et al., 2013; Mehta et al., 2012). This allowed the predominant feelings to be directly linked to the key aspects of

each candidate. In addition, differences in the perception of the candidates according to the educational level and age of the voters were explored. For example, younger voters with less education tended to prioritize digital image and interactions on social platforms, while those with more education valued the experience and concrete proposals of the candidates more. This aspect was further explored by reviewing recent literature on the relationship between social platforms and electoral processes (Zarazúa and Alvarado, 2020; Nguyen and Jung, 2018).

The analysis was also enriched by the interaction between respondents' responses and semantic associations derived from search and sorting patterns. This approach allowed for a comprehensive understanding of the social and political interactions between the different geographic districts of Monterrey, identifying key differences in the emotional and educational dynamics that influenced voting behavior.

Results

This section presents the main findings derived from the analysis carried out to understand how emotions and educational level influenced electoral preferences during the 2024 mayoral elections in Monterrey. First, a descriptive analysis of the demographic and socioeconomic characteristics of the voters surveyed is presented, which allows contextualizing the general voting trends. Then, a detailed analysis of the most recurrent themes and keywords in voters' opinions is offered, identifying the central concepts that guide their perceptions.

Descriptive analysis of the respondents

Table 1 presents the demographic and socioeconomic characteristics of voters surveyed during the 2024 mayoral elections in Monterrey. In terms of gender, women represented the majority, with 56.8%, while men made up 43.2% of the sample. Looking at the age distribution, it is noteworthy that the majority group was over 46 years old (35.2%), followed by the 36 to 46 age groups (24.7%) and 25 to 35 age groups (24.5%). The group of voters under 24 years old was the least represented, with only 15.6%.

Regarding marital status, more than half of respondents were married (52.7%), followed by those who were single (22.8%), living in a common-law relationship (16.2%), widowed (5.5%), and divorced (2.8%). However, the variable of education is especially relevant to our analysis, as it plays a crucial role in how voters process emotional

information. Most respondents reported having completed middle school (34.7%) or high school (34.7%), while 26.5% had university studies. Only 2.2% of respondents had a postgraduate degree, which underscores the importance of considering how differences in educational level can influence candidate perceptions and electoral preferences. On the other hand, 2.0% of voters reported having completed only primary education.

In terms of socioeconomic status, the majority of participants were concentrated in the C+/C (53.4%) and D/E (44.3%) levels, with a small percentage (2.3%) in the highest levels (A/B). According to the income classifications used in Mexico, these levels represent approximate monthly incomes of between \$13,000 and \$40,000 MXN for the C+/C levels, and less than \$13,000 MXN for the D/E levels, while the A/B levels correspond to incomes greater than \$40,000 MXN (AMAI, 2022). This reference allows for better contextualizing the economic capabilities of voters and how these can influence their decisions, especially in terms of response to emotional messages related to economic promises or social programs.

In terms of occupation, employees made up the largest group (37.8%), followed by housewives (27.3%) and students (11.2%). Other groups such as traders (9.2%) and professionals (7.5%) also had a significant representation. The categories with the lowest participation included retirees (4.5%), business owners (0.7%) and the unemployed (1.8%). These categories allow us to observe differences in priorities and emotional responses, since groups such as students and employees tend to be more exposed to digital messages and social networks, while housewives and retirees tend to respond to issues of security, stability and proposals related to social welfare.

These data offer a comprehensive overview of the socioeconomic and educational composition of voters in Monterrey, providing a solid basis for understanding how schooling and economic context influence the formation of electoral preferences. This analysis is especially relevant in an environment where campaigns appeal to both emotional and rational factors. The observed distribution of schooling, combined with socioeconomic levels and occupations, will be key to analyzing the differences in the perception of the candidates, highlighting how emotions associated with issues such as digital image, political trajectory and promises of stability impact different segments of the electorate in a differentiated way.

Table 1. General characteristics of respondents in the Monterrey elections

Component		Frequency	%
Gender	Man	259	43.2
	Women	341	56.8
	Total	600	100.0
Age	Under 24 years old	94	15.6
	From 25 to 35 years old	147	24.5
	From 36 to 46 years old	148	24.7
	More than 46 years	211	35.2
	Total	600	100.0
State civil	Married	316	52.7
	Single	137	22.8
	Free union	97	16.2
	Widower	33	5.5
	Divorced	17	2.8
	Total	600	100.0
Schooling	Primary	12	2.0
	Secondary	208	34.7
	Preparatory	208	34.7
	University	172	28.6
	Total	600	100.0
Socioeconomic level	A/B	14	2.3
	C+/C	320	53.4
	OF	266	44.3
	Total	600	100.0
Occupation	Housewife	164	27.3
	Businessman	55	9.2
	Unemployed	11	1.8
	Employee	227	37.8
	Businessman	4	0.7
	Student	67	11.2
	Retired	27	4.5
	Professional	45	7.5
	Total	600	100.0

Source: Prepared by the authors based on data from surveys conducted by MMT

Soluciones.

Sankey Diagram Analysis

Analysis of the Sankey diagram (Figure 1), which illustrates voting preferences by level of education in the 2024 Monterrey mayoral election, reveals significant patterns in how different educational groups distribute their support between the two main candidates: Mariana Rodríguez Cantú and Adrián Emilio de la Garza Santos. This approach allows us to identify not only voting trends, but also the underlying emotions that influence these decisions.

Among voters with a primary education level (12 in total), a large majority (10 voters) show preference for Mariana Rodríguez Cantú, while only 2 voters lean towards Adrián Emilio de la Garza Santos. This pattern suggests that, within the group with a lower educational level, Mariana Rodríguez generates emotions such as trust and closeness, possibly due to her accessible image, her charisma and her ability to connect emotionally with an electorate that prioritizes these qualities.

Among high school voters (208 in total), support is split with 117 votes for Mariana Rodríguez Cantú and 91 for Adrián Emilio de la Garza Santos. Although both candidates receive significant support from this group, Mariana Rodríguez has a moderate lead, which could be related to emotions such as enthusiasm and optimism, generated by her dynamic campaign style and her strong presence on social media.

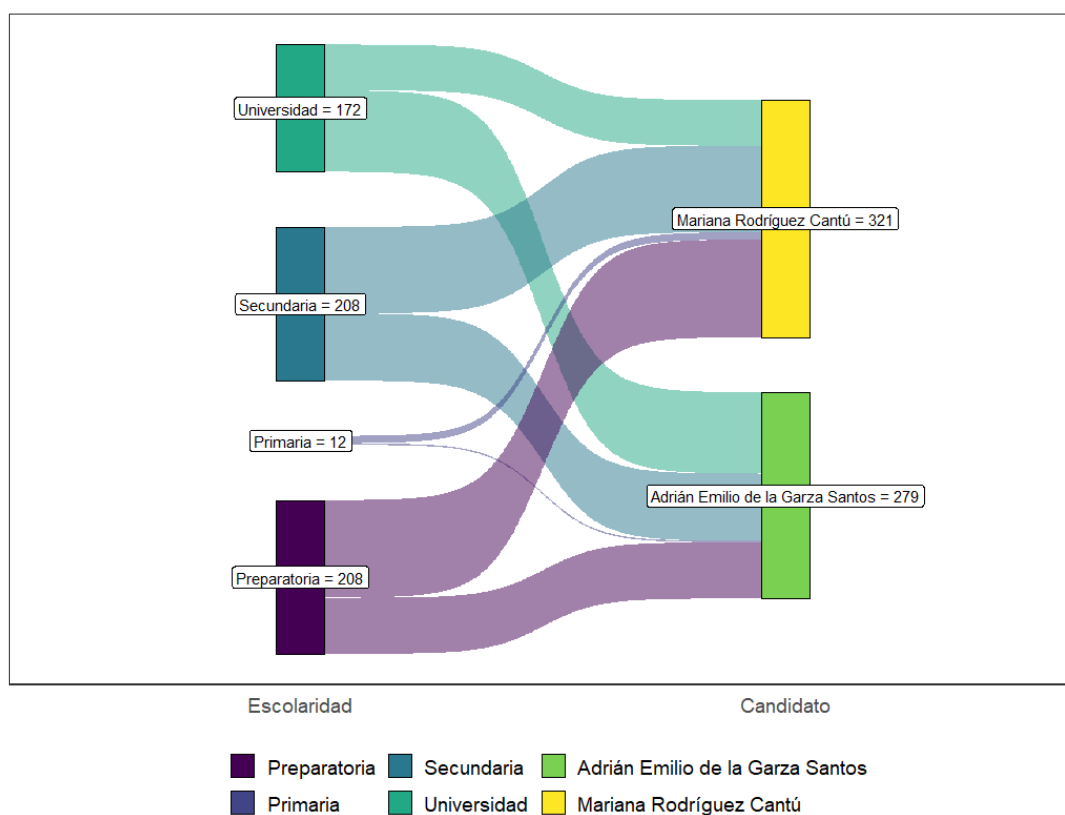
In the high school group (208 in total), there is a clear preference for Mariana Rodríguez Cantú, who obtained 132 votes compared to the 76 received by Adrián Emilio de la Garza Santos. This result highlights her popularity among high school voters, who seem to respond to positive emotions such as hope and admiration, motivated by her youthful image, fresh proposals and ability to connect with a younger electorate familiar with her media presence.

In contrast, voters with a college education (172 in total) show a marked inclination towards Adrián Emilio de la Garza Santos, who received 110 votes, compared to the 62 who support Mariana Rodríguez Cantú. This group, characterized by a higher educational level, seems to value attributes associated with emotions such as respect and security, which are evoked by Adrián de la Garza's political experience and his focus on security policies and government management.

Overall, the Sankey diagram (Figure 1) shows that voting preferences in the 2024 Monterrey elections are clearly segmented by level of education. While Mariana Rodríguez Cantú captures a greater proportion of support among voters with primary, secondary and

high school education, Adrián Emilio de la Garza Santos concentrates his support in the segment with university education. This pattern suggests that the campaigns of both candidates have had a differentiated impact, with messages and strategies that have resonated differently depending on the educational level of the voters. Mariana Rodríguez appeals more to emotions such as closeness, enthusiasm and hope, while Adrián de la Garza evokes emotions related to trust, respect and stability.

Figure 1. Distribution of voting preferences by level of education for candidates Mariana Rodríguez and Adrián de la Garza Santos in the 2024 Monterrey mayoral elections



Source: Prepared by the authors based on data from surveys conducted by MMT Soluciones

Analysis of topics or keywords

Figure 2 is composed of two images, each reflecting the most prominent words mentioned by different groups of voters in relation to candidate Mariana Rodríguez. The first image, located at the top of the figure, corresponds to the keywords identified among people with a high school education level. In this group, terms such as "Popular", "Social networks", "Influencer", "Youth" and "Innovative" are observed, which reflect a positive assessment of



her presence in digital media and her connection with youth. In addition, words such as "Closeness", "Empathy", "Fresh image" and "Modern campaign" suggest that voters with this educational level appreciate her accessible communication style and her ability to connect emotionally with them. This analysis suggests that her popularity among this group is based on her ability to project a fresh and close image, combined with an innovative and youthful approach in her campaign.

Second image, located at the bottom of Figure 2, represents keywords mentioned by people with higher and postgraduate education. In this group, terms such as "Digital strategy", "Effective communication", "Innovative proposals", "Emerging leadership" and "Transparency" stand out. These terms indicate that voters with higher education levels value his ability to develop digital strategies and communicate effectively, as well as his focus on innovative policy proposals and his potential as an emerging leader. Additional words such as "Media impact", "Connectivity", "Efficient management" and "Modern politics" underscore an appreciation for his ability to leverage digital media and his progressive vision in politics.

This contrast between the two images in Figure 2 suggests that while voters with a high school education value primarily the candidate's personality and media presence, those with a college education and postgraduate studies focus more on her strategic ability, transparency, and potential for effective leadership in the modern political context. This analysis illustrates how educational level influences the emotional perception of candidates, highlighting the differences in voters' expectations and evaluations.

"Public policy" and "Tangible results" indicate that this group of voters values their focus on security policies, administrative efficiency and transparency in public management.

This contrast between the two images in Figure 3 highlights how educational levels influence the perception of the candidate. While voters with a secondary education level focus more on the candidate's experience and ability to maintain security and order, those with a higher education level and postgraduate studies value his institutional leadership, his experience in governance and his ability to implement effective and transparent public policies. These differences underline how emotions, such as trust and security, are perceived differently depending on the educational profile of the electorate.

Figure 3. Reasons for supporting Adrián de la Garza as a candidate for mayor of Monterrey in 2024



Source: Prepared by the authors based on data from surveys conducted by MMT Soluciones.

Sentiment analysis

In Figure 4, the image on the left, which corresponds to the perceptions of upper-middle-class voters, both positive and negative aspects of Mariana Rodríguez's evaluation can be observed. In the negative section, terms such as "Superficial popularity", "Little experience", "Excessive marketing", "Frivolous image" and "Lack of credibility" stand out. These expressions are associated with emotions such as frustration, distrust and

dissatisfaction, indicating that some voters perceive Mariana Rodríguez as a candidate whose campaign is based more on image than substance. Comments such as "Dependence on husband", "Does not know reality" and "Triviality" also evoke emotions of disappointment and skepticism, suggesting that a portion of voters criticize her independence and depth on key issues, reinforcing a perception of lack of preparation for public office.

On the other hand, in the positive section, words such as "Youthful charisma", "Social innovation", "Close to people" and "Genuine empathy" stand out. These expressions are associated with positive emotions such as hope, enthusiasm and admiration, indicating that a significant portion of upper-middle-class voters value her ability to emotionally connect with young people. In addition, attributes such as "Vibrant energy", "Presence on networks" and "Fresh proposals" suggest that these voters appreciate her dynamic, youthful and innovative approach, highlighting her ability to project optimism and commitment as a woman in politics.

In contrast, the image on the right in Figure 4, which reflects the perceptions of college-level and graduate voters, presents a more technical and focused assessment of his political and administrative capabilities. In the negative section, terms such as "Excessive marketing", "Image over substance", "Lack of administrative experience" and "Lack of political maturity" stand out. These expressions reflect emotions such as disappointment and distrust, indicating that these critical voters perceive his campaign as superficial and lacking technical preparation. Comments such as "Showbiz strategy", "Lack of depth" and "Media dependence" reinforce the perception that some voters consider his approach more gimmicky than effective, generating skepticism about his ability to lead.

In the positive section, words like "Innovative", "Management ability", "Effective digital strategy", "Adaptability" and "Emerging leadership" are associated with emotions like confidence, optimism, and admiration. Voters with higher levels of education value her ability to adapt, her ability to use digital strategies and to communicate effectively. In addition, concepts like "Progressive vision", "Female empowerment" and "Modern proposals" highlight emotions associated with inspiration and hope, reflecting an appreciation for her ability to represent new generations and promote fresh ideas in politics.

Figure 4. Perceptions about Mariana Rodríguez, candidate for mayor of Monterrey in 2024



Source: Prepared by the authors based on data from surveys conducted by MMT Soluciones.

On the other hand, Figure 5 shows, in the image on the left, the perceptions of upper-middle-class voters about Adrián de la Garza. In the negative section, terms such as "Repetitive proposals", "Traditionalist policy", "Lack of innovation", "Disconnection with young people" and "Excessive formality" stand out. These expressions are associated with emotions such as frustration and apathy, suggesting that some voters perceive his approach as conservative and poorly adapted to the new generations. Comments such as "Authoritarian approach" and "Rigid policy" evoke emotions of rejection and distance, reinforcing the perception that his leadership style is strict and not very inclusive.

In contrast, the positive section of the same image reveals terms such as "Experience", "Trust in government", "Management ability", "Security" and "Proven track record." These expressions are associated with emotions such as trust and security, indicating that many upper-middle-class voters value his experience, his ability to provide stability, and his focus on public safety. Words such as "Responsibility", "Traditional approach" and "Clear proposals" reinforce the perception of strong leadership and a commitment to clear and direct policies, which convey order and predictability.

On the other hand, the image on the right, which represents the perceptions of voters with higher education and postgraduate degrees, shows negative comments that focus on terms such as "Lack of modernization", "Political rigidity", "Resistance to change",

“Narrow focus” and “Lack of innovation”. These expressions evoke emotions such as disappointment and skepticism, indicating that these voters perceive his approach as too traditional, with a lack of vision for the future and a lack of adaptability to contemporary needs. Words such as “Distant with new generations” and “Priority on security over innovation” suggest concern about his disconnection with younger sectors and an excessive emphasis on security, perceived as limiting the need for more innovative policies.

In contrast, the positive section for this group highlights terms such as “Trust in management”, “Institutional leadership”, “Effective governance”, “Solid strategy” and “Proven results.” These words reflect emotions such as admiration and reassurance, indicating that voters with higher educational levels value their administrative experience, their ability to implement public policies effectively, and their solid leadership in the governmental sphere. In addition, words such as “Political stability”, “Professionalism”, “Governmental control” and “Public security” reinforce a perception of efficiency, professionalism, and commitment to stability within public management.

This analysis highlights how emotions associated with Adrián de la Garza vary by educational level. While voters with a high school education tend to focus on his experience and his ability to provide security and order, those with a college degree and postgraduate education prioritize administrative efficiency, institutional leadership and effective governance. These differences reflect the influence of educational level on how voters interpret both the candidate's strengths and limitations.

Figure 5. Perceptions about Adrian de la Garza, candidate for mayor of Monterrey in 2024



Source: Prepared by the authors based on data from surveys conducted by MMT Soluciones.

Figure 6 groups the most frequent keywords in voters' responses to candidates Mariana Rodríguez and Adrián de la Garza, classifying them within the four basic emotions proposed by Plutchik (1980): joy, anger, fear and sadness. This analysis allows us to observe how the emotions associated with each candidate vary significantly according to the perceptions of the electorate:

1. *Joy (brown)*: For Mariana Rodríguez, terms like “Renewed hope”, “New vision”, “Inspiring youth” and “Bright future” evoke emotions of satisfaction and optimism. These terms reflect a positive perception of change, highlighting her youthful energy and ability to connect with the aspirations of younger voters. For Adrian de la Garza, words like “Security and confidence”, “Solid leadership”, “Assured success” and “Solid commitment” generate emotions of stability and tranquility. These expressions denote confidence in her ability to lead effectively and provide trustworthy governance.

2. *Anger (blue)*: In the case of Mariana Rodríguez, terms such as “Remarkable irresponsibility”, “Clear inexperience”, “Immature leadership” and “Lack of credibility” reflect frustration and indignation among voters who perceive her campaign as superficial and unprepared. These negative emotions highlight criticisms of her apparent lack of

political substance. In the case of Adrián de la Garza, words such as “Broken promises”, “Inefficient management”, “Past ineptitude” and “Constant lies” evoke anger and indignation at his political record, associated with traditional practices perceived as ineffective or corrupt.

3. *Fear (green)*: For Mariana Rodríguez, terms such as "Fear of change", "Visible insecurity" and "Youth anxiety in leadership" reveal emotions of uncertainty and distrust about her ability to face the challenges of the city. These expressions reflect fear of the unknown and possible risks derived from her inexperience. For Adrián de la Garza, words such as "Fear of repetition", "Fear of the past" and "Fear of corruption" underline concerns related to the continuity of past errors. These negative emotions reflect doubts about her ability to overcome the deficiencies associated with her previous political career.

4. *Sadness (purple)*: In Mariana Rodríguez's image, terms such as "Young disappointment", "False", "Sadness and doubt of her arguments" and "Constant frustration" express a deep disenchantment among those voters who initially believed in her proposal but now doubt its viability. These emotions highlight a feeling of loss in the face of unfulfilled expectations. For Adrián de la Garza, words such as "Loss of confidence", "Public disappointment" and "Obvious failure" reflect feelings of resignation and defeat, associated with the perception that she represents the continuity of obsolete political practices that many voters consider incapable of generating positive change.

This analysis of emotions highlights the complexity of voters' perceptions. On the one hand, Mariana Rodríguez's youth and energy generate hope and enthusiasm in some sectors, but also arouse fear and indignation in others, especially those who perceive her lack of preparation. On the other hand, Adrián de la Garza's career and experience generate confidence and stability for some voters, but also provoke rejection and skepticism among those who associate her figure with traditional political practices.

Figure 6. Analysis of emotions about the main candidates for mayor of Monterrey Mariana Rodríguez (top) and Adrián de la Garza (bottom)



Source: Prepared by the authors based on data from surveys conducted by MMT Soluciones.

Correspondence analysis

Figure 7 shows the significant results of the correspondence analysis applied to the 2024 mayoral elections in Monterrey, highlighting notable differences in the factors that influence the voting decision according to the voters' level of education and the emotions associated with these factors.

For voters with primary education, the most relevant factors are “the party to which they belong.” This finding suggests that the voting decision in this group is influenced by emotions such as loyalty and trust towards party affiliations, as well as by the perception of cohesion and stability of the candidate’s team. These emotions reflect a more direct and traditional approach to the election, based on group identities and party ties.

In the case of voters with a secondary education level, a greater value is observed towards "the candidate's proposals and team", as well as "personal history". These preferences indicate a concern for elements that transmit confidence, consistency and familiarity, linking emotions of security and admiration towards the candidate's figure. This group values the candidate's history and previous actions as indicators of his commitment and ability to keep his promises.

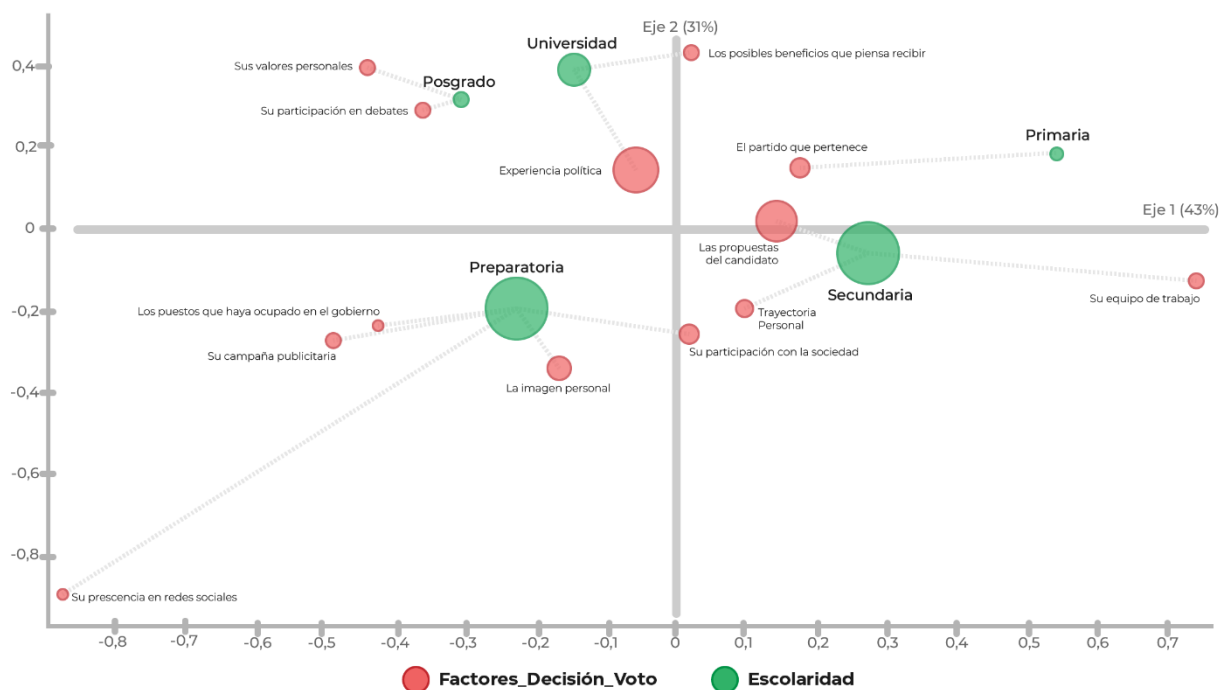
Voters with a high school education emphasize the importance of factors such as the "advertising campaign" and the "personal image" of the candidate. This suggests that the voting decision in this segment is more influenced by emotions such as enthusiasm and optimism, associated with the visibility of the candidate in the media and the emotional connection they manage to establish through their media presence. Visual perception and advertising messages play a central role in mobilizing positive emotions, such as hope, towards change or the proposals presented.

On the other hand, voters with a university and postgraduate education prioritize elements such as "political experience", "their participation in the debates" and "their personal values." This group tends to make a more critical assessment, based on emotions such as trust and respect, associated with the candidate's professional career and ideological solidity. Their analysis of the debates and personal values reflects a search for candidates who not only project confidence, but also coherence and ethical commitment.

This analysis shows how, depending on their educational level, voters in Monterrey value different aspects of candidates, which in turn is mediated by the emotions that these factors evoke. While voters with a lower educational level tend to prioritize more basic

elements, such as party affiliation and teamwork, those with higher levels value more complex factors, such as political experience, personal values, and performance in public spaces such as debates. This underlines how the emotions associated with these factors—trust, hope, admiration, and respect—play a crucial role in the formation of electoral preferences.

Figure 7. Relationship between voter perception and factors that influence voting



Source: Prepared by the authors based on data from surveys conducted by MMT Soluciones.

Discussion of results

The results of this research highlight how educational, emotional and socioeconomic factors shape electoral preferences in the 2024 mayoral elections in Monterrey. The findings reflect significant differences in the perception of the two main candidates, Mariana Rodríguez Cantú and Adrián Emilio de la Garza Santos, mediated by the voters' educational level and the emotions associated with their campaigns.

Correspondence analysis and Sankey diagram reveal that voters with lower educational levels (primary and secondary education) show a greater inclination towards Mariana Rodríguez Cantú. This pattern can be explained by her ability to evoke emotions such as enthusiasm and hope, through a campaign strategy focused on her youthful image

and her strong presence on social media. Previous studies have indicated that campaigns that appeal to positive emotions, such as charisma and closeness, tend to resonate more strongly among voters who prioritize personal characteristics over complex political proposals (Marcus, 2000; Cornelius, 1996). In contrast, Adrián de la Garza concentrates his support on voters with university and postgraduate education, who value more emotions such as trust and security, associated with her political experience and her focus on stability and effective governance. This coincides with research that links higher educational levels with a preference for candidates with proven track records and traditional politics (Montero, 1994b; Harrop and Miller, 1987).

Sentiment analysis shows a mixed perception of Mariana Rodríguez among upper-middle-class voters. While some value her “youthful charisma” and “presence on networks” others express emotions such as distrust and frustration, criticizing her “little experience” and “lack of preparation.” This contrast suggests that, although her innovative and accessible image has allowed her to gain support, she faces challenges related to the perception of her administrative competence. On the other hand, voters with higher education and postgraduate studies appreciate her “effective digital strategy” and her “emerging leadership”, but question her “lack of depth” and her “populist approach.” This finding reinforces the theory of affective intelligence, which argues that emotions — such as enthusiasm or distrust — play a crucial role in voters’ decisions, particularly in media contexts where image and communication are determining factors (Marcus et al., 2000).

In the case of Adrián de la Garza, his support base is predominantly found among the segments with higher and postgraduate education, who value his “administrative experience”, “institutional leadership” and “political stability”. These qualities evoke emotions such as respect and trust, essential for this more analytical group. However, he faces criticism related to emotions such as skepticism and frustration, stemming from his “resistance to change” and his “lack of modernization”. This contrast suggests that, although his profile is attractive to a more critical and educated electorate, his traditionalist approach may limit his ability to capture younger voters and those with lower educational levels (Duch and Stevenson, 2008; Downs , 1957).

Another relevant aspect is how the perception of candidates as media figures influences voters' emotions. Mariana Rodríguez, being seen as an "influencer", generates an emotional connection with segments that value authenticity and innovation in politics. In contrast, Adrián de la Garza faces the challenge of being perceived as a representative of an

"old politics", which generates emotions of rejection in certain groups. This finding aligns with studies that point out that perceived authenticity and the ability to connect emotionally are increasingly relevant in modern electoral campaigns (Marcus et al., 2000; LeDoux, 1996).

As for educational dynamics, voters with a higher level of education tend to evaluate candidates' proposals and trajectories more critically, prioritizing political experience and administrative capacity. This reinforces the notion that education promotes a more analytical and less emotional approach to political decision-making, as suggested by Montero et al. (2008). However, even in this segment, emotions such as trust and respect continue to play a key role in shaping electoral preferences.

Conclusion

The findings of this research highlight how educational level and emotions influence electoral preferences in the 2024 Monterrey mayoral election. A clear segmentation of support was identified between candidates Mariana Rodríguez Cantú and Adrián Emilio de la Garza Santos, mediated by differences in the level of education and the emotions they generated in voters. While Mariana Rodríguez aroused emotions such as enthusiasm, hope, and closeness in voters with lower educational levels, Adrián de la Garza evoked trust and respect among those with a higher educational level.

Mariana Rodríguez was able to attract greater support among voters with lower levels of education, thanks to her youth-oriented campaign, innovation, and strong social media presence. These elements resonated particularly well with voters who value authenticity and a modern style in politics. However, her inexperience and lack of preparation generated distrust and skepticism, especially among voters with higher education, who tend to prioritize attributes such as administrative experience and political strength. This duality reflects both the strengths and challenges of a media-driven approach to building her image.

For his part, Adrián de la Garza found his largest base of support in the segments with university and postgraduate education, where his political experience, institutional leadership and focus on stability generated confidence and reassurance. However, he also faced criticism for his traditionalist approach and resistance to change, which limited his appeal among younger and less educated voters. This contrast shows how the characteristics of each candidate resonated differently depending on the educational profile of the voters. In addition, it is important to highlight that Adrián de la Garza became the first municipal

president in the history of Monterrey to be democratically elected for a second consecutive term. This fact reflects his ability to consolidate support in a key segment of the electorate, although it also underlines the importance of considering the final results in the analysis of electoral dynamics.

Despite the findings on the emotions provoked by the candidates, it is necessary to contrast them with the electoral results. Although Mariana Rodríguez was perceived as a figure capable of mobilizing young and less educated voters, her impact did not translate into favorable results during the election day. This suggests that, although her campaign generated a high level of visibility and emotional connection, it may have been affected by disinformation dynamics on social media or a lack of consolidation of support among the most critical segments of the electorate, who prioritize concrete proposals and proven experience. A deeper discussion on the literature related to electoral campaigns and the role of social media is crucial to interpret this phenomenon.

Finally, the results of this study underline the importance of considering not only voting intention but also the electoral context and final results when analyzing electoral preference dynamics. Emotions evoked by candidates, such as enthusiasm, hope, confidence and scepticism, played a key role in segmenting electoral support according to educational level. This analysis provides a basis for understanding how campaigns can adapt to capture the support of different groups of voters, highlighting the relevance of emotional and educational segmentation in future political strategies.

Future lines of research

As a future project, it is pertinent to monitor electoral behavior in Monterrey in the upcoming electoral processes, to analyze how voting preferences evolve in relation to changes in the political, social and emotional contexts. This will allow us to evaluate whether the observed trends, such as the inclination towards candidates with a strong presence on social networks or those with proven political experience, are maintained or transformed based on new campaign strategies and media dynamics.

Furthermore, it is recommended to extend the study to other cities in the country to explore how educational level, emotions and media exposure influence electoral preferences in different urban contexts. Comparing differences between regions could provide a more comprehensive view of how emotions – such as hope, trust or skepticism – shape voters' decisions in diverse sociocultural environments.



It would also be relevant to incorporate data analysis from interactions on social networks and digital media—such as comments, reactions and shared posts—to understand more deeply how these platforms reinforce or modify the emotions associated with the candidates. This would help to unravel the impact of the digital environment on public perception and changes in voting intention.

Finally, it is suggested to investigate the impact of online and in-person electoral campaigns separately or in combination, with a focus on how different communication strategies affect the emotions and perceptions of voters at different educational and socioeconomic levels. This analysis could offer new perspectives for designing more effective and segmented campaigns, adapted to the emotional and rational needs of each electoral group.

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