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Populism, fake news and trends in the 2022 Colombian presidential campaign: a study via Google Trends

Populismo, fake news y tendencias en la campaña presidencial colombiana de 2022: un estudio a través de Google Trends

Abstract

Gustavo Petro and Rodolfo Hernández faced off in the second round of the Colombian presidential elections on June 19, 2022, with Petro winning (50.44% of the votes, compared to 47.31% for Hernández). Fake news and populist discourses on different social networks marked the spread of this atypical campaign. This article uses search data from the Google Trends platform to reveal the popularity trends for both qualified candidates on Google and YouTube. We used a quantitative and qualitative methodology where the results reflected: 1) there was statistical reliability between the searches by both candidates on Google (R²=0.92) and on YouTube (R²=0.67) over the 90 days before the second round of the elections. 2) 'Gustavo Petro' had a greater global search volume than 'Rodolfo Hernández', both on Google and YouTube. The dates with the highest levels of interest corresponded to videos, news, tweets or photographs, where both candidates mainly delivered populist speeches, or issues related to fake news. We conclude that the Google Trends data anticipated the Petro victory and at the same time informed us of the moments with the greatest impact on the Internet.

Resumen

Gustavo Petro y Rodolfo Hernández se enfrentaron en la segunda vuelta de las elecciones presidenciales colombianas el 19 de junio de 2022, siendo Petro el vencedor (50,44% de los votos, frente al 47,31% de Hernández). Esta atípica campaña estuvo marcada por la difusión de fake news y la proliferación de discursos populistas en diferentes redes sociales. Este artículo emplea los datos de búsquedas de la plataforma Google Trends para averiguar las tendencias de popularidad por ambos candidatos calificados en Google y YouTube. Empleamos una metodología cuantitativa y cualitativa cuyos resultados reflejaron: 1) existió una correlación estadística entre las búsquedas por ambos candidatos en Google (R² =0,92) y en YouTube (R²=0,67) durante los 90 días antes de las elecciones de la segunda vuelta. 2) La afluencia global de las búsquedas por "Gustavo Petro" fue mayor que por "Rodolfo Hernández", tanto en Google como en YouTube. 3) Las fechas con picos de interés más altos correspondieron con vídeos, noticias, tweets, o fotografías, donde ambos candidatos vertieron principalmente discursos populistas o asuntos relacionados con fake news. Concluimos que los datos de Google Trends anticiparon la victoria de Petro y al mismo tiempo nos indicaron cuales fueron los momentos con mayor repercusión en Internet.

Keywords

Politics; Google Trends; YouTube; elections; Colombia; surveys; populism; fake news; campaign.

Palabras clave

Política; Google Trends; YouTube; elecciones; Colombia; encuestas; populismo; fake news; campaña.

1. Introduction: Populism in Colombia

The electoral campaign for the Colombian presidency in 2022 was marked as being one of the most atypical in Colombian history. Gustavo Petro, a former M-19 guerrilla with leftist ideology, confronted Rodolfo Hernández, a 77-year-old businessman and engineer, accused of a multimillion-dollar corruption case. The parties of both candidates, Pacto Histórico and La Liga, founded in 2021, dethroned other traditional political parties in the first round of the elections, becoming the only two candidates for the presidency of Colombia.

It is important to analyze and understand the reasons for the political polarization resulting from the stigmatization of the candidates, particularly Gustavo Petro. Gustavo Petro Urrego (1960) was a member of the outlaw group M-19 during the 1970s and 1980s. Said organization was born as a result of the alleged electoral fraud that occurred on April 19, 1970, where the then ANAPO candidate, Gustavo Rojas Pinilla, after winning in the polls, inexplicably lost to the conservative candidate Misael Pastrana Borrero (Luna Benítez, 2006; Narváez Jaimes, 2012; Grabe Loewenherz, 2005).

The M-19, unlike other guerrilla groups of the time, such as the FARC and the ELN, had no motivations linked to peasant demands or agrarian reforms. The group was born in political protest against the aforementioned fraud, under a left-wing ideology, and from that moment on, they carried out a series of predominantly urban actions, which today, in the 21st century, would probably be classified as terrorist acts, including the kidnapping of the Bolívar sword (1974), the seizure of the Dominican Embassy (1980), and the seizure of the Palace of Justice (1985), the latter with a tragic outcome.

On the other hand, its main leaders were not of peasant origin. Carlos Pizarro, Jaime Bateman, Iván Marino, Vera Grabe, Rosemberg Pabon and Gustavo Petro, among others, were, at that time, mostly young middle-class people who had a university education, hence their intellectual, tactical and even promotional approach.

Once the M-19 demobilized, on March 9, 1990, Petro joined political life. He became a representative of the chamber, senator of the Republic and mayor of Bogotá. He was a staunch opponent of the right-wing government of President Álvaro Uribe (2002-2010) and his Democratic Security policy, which he questioned because of its ties to paramilitary groups and because of the compelling evidence of false positives, a plot that emerged within the military forces which consisted of killing mainly young peasants and passing them off as guerrillas killed in combat in order to produce satisfactory results for the senior government (Barrientos & González, 2018).

Uribe, who strengthened Colombia's combined armed forces economically and militarily, achieved success in military confrontation and reduced the armed influence and political space of the FARC and ELN, and for many years maintained high acceptance scores in polls conducted on a national level, which generated a polarization and stigmatization towards all anti-war discourse. An example of this was the defeated referendum for peace, promoted by the then president, Juan Manuel Santos (2016), a situation that shows the influence of Uribe on public opinion and in the political environment (Osorio, 2020), beyond his presidential administration and promoted by social networks (Rueda & Espinosa, 2019).

The political panorama of 2022 was not very different from the scenario of 2018, when, in the midst of polarization, the almost unknown Iván Duque, an Uribismo candidate, was elected, beating Gustavo Petro, who had already been a presidential candidate in the past, defeating him by a narrow margin, which according to public opinion, was an alarm bell for the growth of the left in Colombia.

In 2022, and after a languid management of the outgoing Iván Duque, questioned by opponents and having lost much support from Uribismo, the new candidate for the presidency, Gustavo Petro, integrated a peace proposal into his speech, while vindicating vulnerable communities such as indigenous, Afro and other minorities excluded from the country's political landscape. But Uribismo did not seem to have a candidate with the same political force, which could be considered a moment of political despair in the face of the defeat in the first round of Uribismo's main candidate, Federico Gutiérrez, "Fico". In addition to this, and in the face of the inexplicable rise of an almost unknown and septuagenarian Rodolfo Hernández, Uribismo focused its bets on the latter, who, with his discourse of austerity and authority, radically distanced himself from Petro's vindictive proposals (Osorio, 2020; Osorio, 2022).

Rodolfo Hernández Suárez (1945), an engineer and renowned businessman, has a brief political experience to his credit, as a councilor (1990) and later, as mayor of Bucaramanga (2015), the capital of Santander, a management that maintained great popular support. However, he has been called out several times for aggressive behavior and is currently linked to a case of administrative corruption. Furthermore, his radical right-wing discourse has led him to be described as a populist and moreover, even compared to Donald Trump.

Based on the foregoing, everything indicates that this electoral contest was not a political confrontation between Petro and Hernández, but between Petro and Uribismo, as suggested by these phrases that were spread on social networks in pre-electoral times: "whoever Uribe says, anyone except Peter".

According to several authors (Hernández-Mora, 2022; Oquendo, 2022), the success of Petro and Hernández was focused on the populist content of their political messages. The word "populism" comes from the Latin "tendency or fondness towards the people for what belongs to, or is within the reach of, the people", and comes from the suffix "-ism" (doctrine or tendency) on the word popular, relative to the people. Currently, several authors define or delimit the term "populism" to the political doctrine that divides society between the people, seen as a sovereign unit, and the elite, conceived as an unwanted political inequality (León, 2017; Barberá and Martin, 2019).

Following this line, for a populist discourse to reach the population, there must be discontent among the population towards the current elites. Likewise, an information channel is necessary to convey these messages. In the case of Hernández, the leader of La Liga began to connect with Colombian citizens through short and extravagant videos on the TikTok social network. The politician sang, danced, and appeared in multiple montages, with virtual glasses emoticons, daring slogans such as: "tasty old man" and other elements that gave him a fun and approachable appearance (Oquendo, 2022).

According to several authors (María del Rosario and Quintana, 2010; Babul, 2011; Losiggio, 2018), this type of message is consistent with the so-called aestheticization of politics. This theory describes a new way of doing politics based on superficial audiovisual communication and focused on the power of new information technologies (Arceo, 2021). The proliferation of memes, selfies, fake news, propaganda videos and iconic images related to the image of the candidates is one of the main characteristics of this aestheticization of politics, which focuses more on emotional messages than on political information.

This type of emotional discourse can be related to populist discourses such as: "the rich take advantage of the poor", "politicians steal from you", "power must be returned to the people". In other cases, the speech of politicians may be focused on false news that discredits their adversary. This fake news is forwarded by citizens without checking the veracity of the content. The supporters of a candidate are guided by an emotional impulse of hatred towards the opponent that generates a belief in what they read or see (Arceo, 2021).

Several fake news detection platforms warned of fake news during the electoral campaign. For example, the medical document certifying that Rodolfo Hernández suffered from Alzheimer's disease, or that President Uribe had congratulated Hernández on Twitter on his electoral victory, as well as that La Liga candidate had never said that he was a follower of Adolf Hitler. Another of the most notorious fake news stories was the news that Hernández had said that the churches "only serve to make money and buy votes" and also that the UNE had published a story that Rodolfo and Uribe were involved in a case of tax fraud in France (CAI, 2020).

Regarding the fake news against Petro, those that stand out are the news story that claimed the candidate had said that he looked like Jesus in a press release, the video in which Petro claimed that he was going to be like Chaves, as well as a photograph in which the candidate appeared next to Pope Francis. The latter had Putin's head replaced with his own. Some of the following statements published in the media and/or on social networks were also false (CAI, 2020): "we will not accept crucifixes in public schools", "we will start a civil war if we do not win the elections", "the leasing of housing will be subject to 25% VAT because it is a luxury" or "housing that is larger than 65 square meters will be shared with other families".

Following the theory of the aestheticization of politics, we also highlight other moments that became viral and/or appeared in the media, such as Hernández punching a councilor during an interview in 2018, the videos with young women in bikinis on a businessman's boat, or his promise to give drugs to drug addicts to put an end to drug trafficking during the 2022 campaign. According to the theory of the aestheticization of politics, all these moments generate an emotional influence based on short and powerful messages, true or false, that help to improve the popularity of the candidates or to discredit the opponent (Babul, 2011; Losiggio, 2018).

This new way of doing politics, marked by a strong presence of aesthetic elements and technological advances in mass communication, serves, according to several authors (María del Rosario and Quintana, 2010; Babul, 2011), to spread populist discourses more effectively, mobilizing the electorate in times of social and/or economic crisis. According to Jansen (2011), populist rhetoric establishes its solidary national existence in a vertical antagonistic relationship with some kind of "anti" discourse (often identified as an economic or political "oligarchy"), typically portrayed as having disproportionate and unjustified control over the conditions of the rights, well-being, and progress of the "people" (Jansen, 2011). Both Gustavo Petro and Rodolfo Hernández generated "anti" discourses, the first against the powers and economic elites and the second against corruption and the Colombian "establishment".

At the same time, each country has its own political styles and symbolism, group representations and narratives, problem creation and framing, all of which contribute to the variation of populist rhetoric (Jansen, 2011). The populism of Petro's ideology in Colombia focuses on blaming those who have the most for not showing solidarity with the poorest in Colombia. On the other hand, Hernández's populism is based on mixed and provocative ideas that follow a line similar to that of Donald Trump, but adjusted to Colombia (Oquendo, 2022). His speech is based on accusing the political class of stealing the people's money, and that he will return it to them when he wins the elections.

Populist mobilization should not be confused with traditional clientelism or with caudillismo. Current populist movements are not only based on the charisma of a leader, but also on the social and political situation of a place and at a specific time (Jansen, 2011). One of the first examples of populist mobilizations in Latin America is the Bolivarian revolution of 1952. It was supported by a relatively new political party: the Movimiento Nacional Revolucionario (MNR), led by Gualberto Villarroel. Facing opposition from the left and right, as well as pressure from the United States, the MNR embarked on a populist project to mobilize new bases (Gotkowitz, 2010; Jansen, 2011). The MNR project attracted miners, urban workers, and indigenous peasants. This appeal was made through a rhetoric that valorized the ideal of a mestizo nation allied against "anti-patria" of mining interests, landowners, and others seen as domestic allies of foreign imperialists (Gotkowitz, 2010). This first populist episode ended abruptly on July 20, 1946, when the Anti-Fascist Democratic Front staged a violent revolution that broke into the presidential palace, and Villarroel's body was hung from a lamppost in Plaza Murillo, in an apparent imitation of the death of Mussolini (Jansen, 2011).

This way of doing politics based on the idea of "anti" groups or elites of a given country is also present in the speeches of leaders considered populists during the 21st century, such as Hugo Chaves, Evo Morales, Donald Trump, or Boris Johnson. (Barberá and Martín, 2019). According to Jensen (2011), populist mobilization has not been a constant in Latin American political history, but rather an innovation that emerged in the 20th century and continues in the 21st, supported by new information technologies.

1.1. Election Outcome, Surveys, and *Google Trends*

All those populist discourses spread on social networks, such as all the fake news disseminated during the campaign, had an influence on the polls and on the electoral results (Vásquez, 2022). On June 19, 2022, Gustavo Petro won the second round of the presidential elections with 50.44% of the votes, compared to 47.31% for Rodolfo Hernández, with 2.24% of the votes being blank. Several organizations conducted surveys during the second round of the elections from May 30 to June 11, yielding the following results: AtlasIntel (47.5% for Petro and 50% for Hernández), Yanhass (47% and 50.2%), GAD3 (47.1% and 47.9%), Guarumo (46.5% and 48.2%), GAD3 (48.1% and 46.8%), Musketeers (43.83% and 44.68%), GAD3 (48.5% and 46.7%), Invamer (47.2% and 48.2%), GAD3 (47.8% and 47.1%), GAD3 (46.8% and 47, 8%), Guarumo (43.3% and 46.4%), GAD3 (46.8% and 48.1%), Yanhaas (42% and 41%), GAD3 (46.3% and 47.9%), CNC (44.9% and 41%), GAD3 (45.6% and 50.4%), GAD3 (45.1% and 52.3%), GAD3 (44.8% and 52.5%), CNC (39% and 41%). In six of the polls Petro won, while in 13 the winner was Rodolfo Hernández. In other words, in more than half of the surveys the prediction of the winner was incorrect.

Populist speeches, TikTok videos, Instagram stories, fake news, as well as nonsensical messages or appearances in traditional media interviews, also had a resonance in Google and YouTube searches. According to several authors (Reguillo, 2014; González Gómez, 2018; De-Aguilera-Moyano et al., 2018), citizens today are informed of political news through different social networks and traditional media, and subsequently seek more information through Google. These data can provide us with valuable information on the resonance of some speeches or political personalities, such as Gustavo Petro or Rodolfo Hernández.

Google Trends collected data from Colombian citizens' searches on Google and YouTube during the presidential elections. These data, according to several recent investigations (Choi & Varian, 2012; Bokelmann & Lessmann, 2018) can be used to forecast trends in different media events such as an electoral election, an advertising campaign, or the economic profitability of an industry or brand (Reguillo, 2014; González Gómez, 2018; De-Aguilera-Moyano et al., 2018; Rodríguez-Serrano et al., 2019; Villa-Gracia and Cerdán, 2020).

Likewise, the influx of searches on Google represents the interests of citizens in a specific territory. All the political content of an electoral campaign goes through various communication channels, such as: traditional media, word of mouth, or social networks. According to several authors (León, 2017; Villa-Gracia, and Cerdán, 2020), a citizen can first watch a video on YouTube or read a tweet and then search for its protagonist on Google or read a news item in the press or talk to a co-worker about a political issue and then expand their knowledge of that information on the Internet. For this reason, we believe that *Google Trends* data can be a very useful tool for analyzing trends in a political campaign.

2. Objectives

The aim of this research is to ascertain the popularity indices of Gustavo Petro and Rodolfo Hernández on Google and YouTube during the ninety days leading up to the second round of presidential elections in Colombia. A secondary objective is to investigate the correlation of these trends between both candidates and conduct a qualitative analysis of the significance of this data in the electoral campaign and the final election outcome. Additionally, we will evaluate which peaks of interest held greater importance during the analyzed period and compare these data with news articles and social media posts by Gustavo Petro and Rodolfo Hernández, seeking to establish a connection with their political discourses.

3. Methodology

The proposed methodology consists of several phases: 1) Searching for the selected terms on the *Google Trends* platform, limited by a specific time period and geographical area, and focused on either Google or YouTube searches. 2) Data extraction and creation of graphs to assess the trends' evolution for each term. 3) Performing a statistical analysis using linear regression through StatPlus software with the *Google Trends* data. 4) Qualitative analysis of the results by comparing the statistical outcomes with news articles and social media posts published during the peaks of interest indicated in the graphs (Figure 1).

Figure 1: Scheme of the quantitative and qualitative methodology employed in this study.

Data extraction in Google Trends.

Quantitative statistical analysis.

Creation of trend graphs.

Qualitative analysis of results.

Source: Own elaboration.

Google Trends is an online platform created by Google that tracks and stores the search query traffic in various regions around the world. The website also allows the use of graphs to compare one or multiple search terms over temporal periods ranging from 2004 to the last 36 hours at the time of the query (Google, 2022). Additionally, *Google Trends* offers filtering options such as categories (Health, Travel, Games, Science, etc.) and search locations (Google Web, YouTube, Google Images, Google News, Google Shopping). Google claims that the data from its platform is updated every hour and represents an impartial and categorized sample of searches made by internet users (Google, 2022).

Once the search terms are selected in *Google Trends*, the platform integrates the data into a graph where the horizontal axis represents time (from 2004) and the vertical axis represents the frequency of searches measured between 0 and 100. *Google Trends* normalizes its data by dividing the total searches by the geography and time range being represented to compare relative popularity. Otherwise, locations with higher search volumes would always rank higher (Google, 2020). This means that different regions showing the same search interest for a term do not necessarily have the same total search volumes. For example, a country with a small population where 80% of the queries correspond to a specific word will show a higher score than a densely populated country where only 40% of queries correspond to that word (Google, 2020).

Google Trends data is primarily used to uncover social trends, correlations between various internet searches, and even to make predictions about potential future events (Google, 2020; Cerdán, García, & Moraleda, 2021). It's important to consider that millions of users currently use Google search engines, using their mobile devices or computers, to gather information on diverse topics across different regions of the world. Therefore, this data provides insights into the interests of contemporary society (Metaxa et al., 2018).

In this research, we conducted a quantitative analysis using the data extracted from *Google Trends*, followed by a qualitative analysis based on the five highest interest peaks in the graphs for each candidate on Google and YouTube. We used the Google "News" search feature to determine the most relevant news about each candidate on days with higher search activity. Additionally, we examined the social media accounts of Petro and Hernández (Twitter, Instagram, TikTok, and their YouTube channels) to investigate which posts were influential on days with higher search activity during the election campaign.

4. Statistical analysis

In this research, we conducted an analysis of the search terms "Gustavo Petro" and "Rodolfo Hernández" on both Google and YouTube platforms. The dataset consists of 90 observations corresponding to the search activity over the 90 days leading up to June 19th, the day of the second round of elections in Colombia. Additionally, we have two variables, X (Candidate 1 - Petro) and Y (Candidate 2 - Hernández), and two groups: the Google and YouTube platforms.

For the statistical analysis, we employed the Pearson correlation coefficient to examine the linear relationship between the values of the variables for both candidates, separately on each platform. Given the high values of these coefficients, we utilized a simple linear regression analysis to derive the linear equation depicting this relationship. We performed these analyses using the statistical software StatPlus to determine the correlation between the trends for "Gustavo Petro" and "Rodolfo Hernández" on Google and YouTube. It's important to note that, in these cases, the closer the R^2 result is to 1, the stronger the correlation between the analyzed data. For instance, an R^2 result of 0.99 would indicate a strong relationship between the searches for both candidates.

Figure 2: Outline of searches for "Gustavo Petro" and "Rodolfo Hernández" on Google and YouTube based on the effect of their appearances in other media such as radio, television, social media, press, among others.
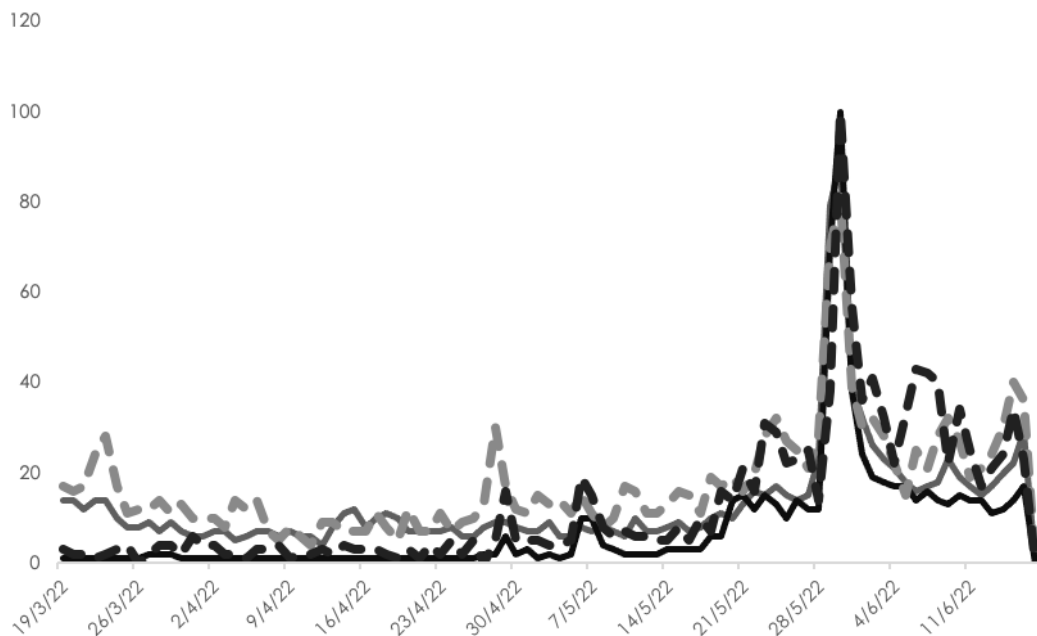

Source: own elaboration.

5. Results

The total search volume for "Gustavo Petro" was 13 (65%), and for "Rodolfo Hernández" it was 7.6 (35%) on Google. On YouTube, the data was slightly different: the total interest in searches for "Gustavo Petro" was 17.4 (57%), and for "Rodolfo Hernández" it was 12.7 (43%).

Figure 3: Graph of searches on Google (solid lines) and on YouTube (dashed lines) for the terms "Gustavo Petro" (gray) and "Rodolfo Hernández" (black) during the ninety days leading up to the election day.

Source: Own elaboration.

The five highest peaks of interest in "Gustavo Petro" on Google were recorded on the following days: May 30 (89), May 29 (79), May 31 (39), June 1 (32), and June 16 (29). On YouTube, they occurred on the following dates: May 30 (81), May 29 (70), June 15 (40), May 31 (39), and June 16 (36).

The day with the highest search traffic was May 30, which coincided with Petro's victory in the first round of elections (Figure 3). The second-highest date was May 29, the day before the first-round elections, where several articles discussed Petro's rivals: Federico Gutiérrez and Rodolfo Hernández, and the historical possibility of a left-wing party winning for the first time in Colombia. On May 31, news broke that the Spanish justice system had filed a complaint against Petro for the kidnapping of a Spanish journalist. Also noteworthy is the interview conducted on "Pregunta a Yamid" (a Colombian journalistic talk show) where Petro claimed that the tax reform would apply to the rich, not the poor. The next peak of interest was on June 1, where Petro stated that the Spanish allegations against him "made no sense."

The fifth peak with the most searches occurred on June 16, coinciding with Alfonso Prada's statements, a member of Petro's team, about Hernández's refusal to debate on public television. This was also the date when a video explaining Hernández's indictment for corruption during his time as mayor was published. Petro's accounts also posted images of the candidate visiting coffee-picking farmers. Notably, the day after this peak of interest, Petro published a video where Rodolfo Hernández was seen dancing with girls on a yacht in Miami, and Petro claimed that the party had been funded by the pharmaceutical company Pfizer. In addition to these dates, the following are also noteworthy on YouTube: June 15, when a video was published certifying that the rights of religious individuals and churches would not be harmed if he won the elections.

In the case of Hernández, the days with the highest search index were as follows: May 30 (100), May 29 (70), May 31 (38), June 1 (24), and June 2 (19) on Google. On YouTube, the highest peaks for this candidate occurred on May 30 (100), May 31 (57), June 6 (43), June 7 (42), and June 2 (41).

For Hernández, the day with the highest search volume for his name was also the day of the election result during the first round (May 30). The second and third peaks were the day before and the day after the first-round results (May 29 and 31). During these three days, the most prominent news referred to Hernández as a "Colombian Trump," "a pro-abortion and pro-marijuana populist," "an eccentric old man, popular on TikTok," and "someone who could snatch the presidency from Petro" (Google, 2022).

Also notable is May 31, when a fake news story circulated, claiming that former President Uribe had congratulated Hernández on Twitter. The candidate himself posted a screenshot with the words "fake

news" and the text: "They're doing everything now that they see we're going to win, don't buy into it, my only alliance is with the Colombian people." On June 1, two videos were released: one titled "The 10 Inconsistencies of Petro," where an influencer spoke against traditional politicians and in favor of Hernández, and a video where politician Catalina Ortiz asked for votes in favor of Rodolfo Hernández.

On June 2, Hernández posted several photos in support of LGBTQ+ pride and voiced his support for their cause. He also participated in W Radio, where he explained his plan to govern Colombia. During the interview, Hernández set himself apart from other politicians by accusing them of not telling the truth and being corrupt, while claiming himself to be the opposite, someone who speaks from the heart. This sentiment was reiterated in a video on June 3, where he stated that he would not attend debates with his opponent because he considered them "polarizing" and part of the "division in the country."

Also noteworthy are the search peaks of June 6, where the candidate published a video in which he spoke about the future of education in Colombia. Hernández said phrases like: "if we remove the thieves from the government, there will be money left over to build more schools and universities." However, he had a lapse in not knowing what "Law 30" was, which is the law of higher education in Colombia. On June 7, he posted a video on his YouTube channel where he talked about 10 proposals in favor of women. Hernández spoke of a plan to improve the gender gap and attacked previous politicians who did nothing, in addition to making several promises that were almost unrealistic.

The result of the linear regression analysis determined that the searches for the terms "Gustavo Petro" and "Rodolfo Hernández" achieved a coefficient of determination of $R^2 = 0.92$ on Google and $R^2 = 0.67$ on YouTube during the 90 days leading up to the elections. The robustness of the correlation index is also reflected in the very low critical value of F (Tables 1 and 2) and a high F value in the analysis of variance section.

Table 1: Linear Regression Analysis on Google 90 days before the second-round election result. Source: Own elaboration.

Statistics of the regression

Multiple Correlation Coefficient	0,96
Coefficient of Determination R^2	0,92
Adjusted R^2	0,92
Standard Error	3,44
Observations	91

Analysis of variance

|	Degrees of Freedom	Sum of Squares	Mean Square	F	Value of F Critical
Regression	1	13161,35	13161,35	1109,62	4,88E-52
Residuals	89	1055,63	11,86		
Total	90	14216,98			

Source: Own elaboration.

The regression lines (Figure 4) indicate that the correlation was stronger on days when there was a search volume between 1 and 40, both on Google and YouTube. For this reason, we observe that the concentration of points is situated between X=40 and Y=40 in both graphs.

Statistics of the regression		Analysis of variance				
		Degrees of Freedom	Sum of Squares	Mean Square	F	Value of F Critical
Multiple Correlation Coefficient						
Coefficient of Determination R^2	Regression	1	9132,32	9132,32	186,06	1,59E-23
Adjusted R^2	Residuals	89	4368,19	49,08		
Standard Error	Total	90	13500,52			
Observations	91					

Source: Own elaboration.

Figure 4: Linear Regression Line (Google) between searches for Petro and Hernández, 90 days before the second-round election results (left). Linear Regression Line (YouTube) between searches for Petro and Hernández, 90 days before the second-round election results (right).
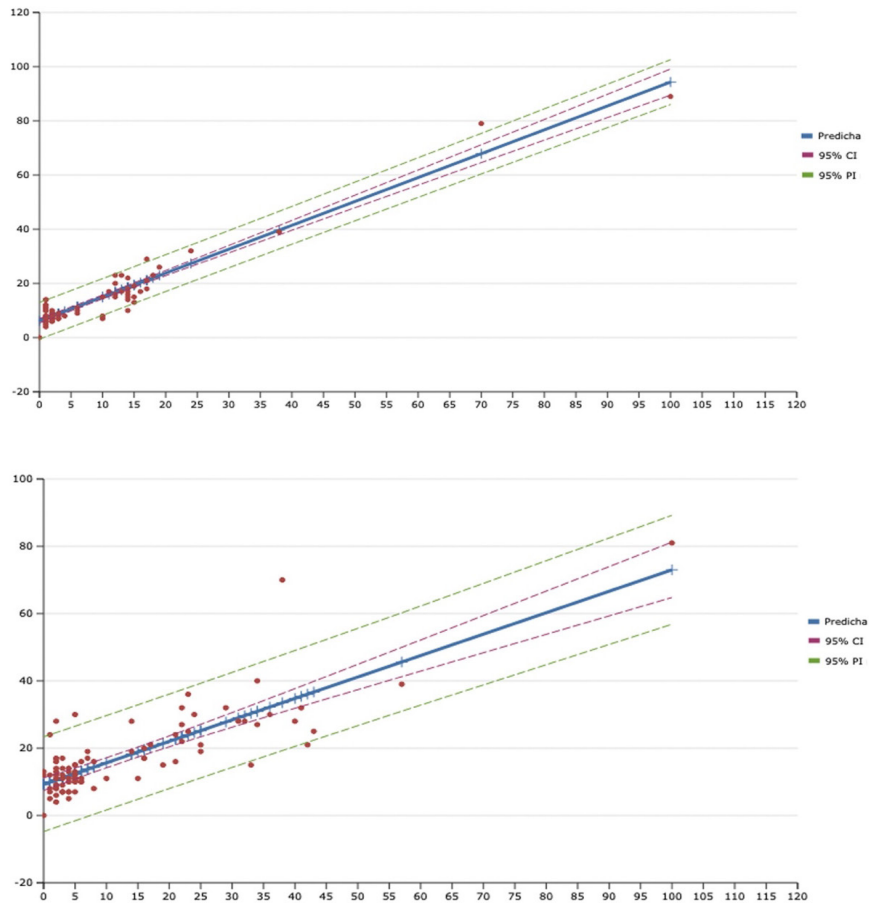
Source: Own elaboration.

Figure 4 displays both regression lines with their 95% confidence intervals. The intercepts, which should not be interpreted as they represent the estimated number of searches for Candidate 2 (Hernández) when Candidate 1 (Petro) has no searches, are 6.2913 and 9.4155 respectively, indicating a higher estimated number of searches for Candidate 2 on days when Candidate 1 has fewer searches. On the

contrary, the regression coefficient values, 0.8786 and 0.6133, both below 1, suggest that on days when Candidate 1 has a higher number of searches, the estimated number of searches for Candidate 2 is lower.

The width of both confidence intervals, narrower for Google, highlights the close relationship between the number of searches for both candidates (Google r=0.96). In the right graph (Figure 4), the width of the bands is narrower, indicating a weaker relationship between searches for both candidates (YouTube r=0.822). Also, there is a higher concentration of points (search correlation for each candidate) on Google than on YouTube, which aligns with the correlation coefficients of both studies.

On the other hand, the statistical analysis provides us with two formulas that could be used to predict the search index for one candidate with respect to the other. In Google, the formula is as follows: $y=0.8786x+6.2913$ and in YouTube: $y = 0.6133x + 9.4155$. This indicates that during the electoral campaign, it was possible to predict the interest of the Colombian citizens in searches for one candidate and the other, as there was a strong correlation between them according to the statistical analysis result.

Our results indicate that the interest in Gustavo Petro on both Google and YouTube was higher than that for Rodolfo Hernández during the electoral campaign. According to Metaxa et al. (2018), the search interest in *Google Trends* could serve as an indicator of citizens' voting intentions. In this case, the search volume was higher for the candidate who eventually won the elections. In fact, the *Google Trends* results proved more reliable than most of the surveys conducted during the second round in Colombia.

The peak interest results demonstrate that both candidates used populist discourses disseminated through social media, traditional media, and the internet (León, 2017; Villa-Gracia and Cerdán, 2020) during those dates. According to various authors (Brett, 2013; Cavaller, 2017), this constitutes one of the main tools for some candidates to attain power in Latin America. Additionally, Gustavo Petro and Rodolfo Hernández employed messages and/or videos where they discredited their adversaries through different messages spread on social media; some were identified as fake news, and they themselves discredited or indicated them as such in their channels. They also shared photos and videos with very specific aesthetic messages like "I'm on the people's side," "I'm a family person," "I'm approachable and fun." This kind of messaging with a strong presence of aesthetic elements is, according to various authors (María del Rosario and Quintana, 2010; Babul, 2011; Losiggio, 2018), a main characteristic of the aestheticization of politics. This form of politics has been very present in the early 21st century, as highlighted by the qualitative analysis of this study, and it was highly present in the electoral campaign in Colombia.

7. Conclusions

We have reached several conclusions: 1) The search interest was higher for "Gustavo Petro" than for "Rodolfo Hernández" during the electoral campaign. 2) The highest peak of interest was on May 30, 2022, in favor of Hernández both on Google and YouTube, which coincided with the results of the first round of elections in Colombia. 3) The regression analysis data shows a statistical correlation ($R^2 = 0.92$) between searches for "Gustavo Petro" and "Rodolfo Hernández" on Google, slightly higher than on YouTube ($R^2 = 0.67$). This suggests a general correlation in searches for both candidates in the data provided by *Google Trends*. 4) The analyzed peaks of interest align with news where the candidates posted populist messages, videos, or photos defaming their opponents, fake news (or messages alerting that a news item was false), as well as images with an aesthetic representation consistent with their ideology or political discourse. Additionally, the peaks of interest coincided with significant dates in the electoral campaign, such as the day of the first-round election results.

For future studies, it remains to be explored whether the results of this study hold true in electoral campaigns of other countries, particularly in the case of populist candidates, and whether the search interest aligns with electoral outcomes.

On the other hand, there are limitations to consider. First, we don't know the intention behind users' searches for the terms "Gustavo Petro" or "Rodolfo Hernández." While we can determine if a politician has gained search interest during a specific period, we can't discern whether these searches held a positive or negative implications for their reputation.

Another limitation is that, in conducting qualitative analysis, we don't have absolute certainty that the peaks of interest were directly related to the news or events coinciding with the analyzed dates. Our qualitative analysis is based on a reasonable assumption: that the most media-highlighted publications during the peaks of high interest had an influence on the searches registered via *Google Trends*.

8. Contributions

Contributions	Authors
Conception and design of the work	Author 1
Literature search	Author 2
Data collection	Author 1
Data analysis and critical interpretation	Author 1
Review and approval of versions	Author 2

11. Declaration of Conflict of Interest

The authors declare that there is no conflict of interest.

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