



THE POPULARITY OF BIDEN AND TRUMP IN THE UNITED STATES AND LATIN AMERICA DURING THE 2020 CAMPAIGN

A study through Google Trends

VÍCTOR Cerdán-Martínez¹, Sergio Bárcena², Daniel Villa-Gracia³

¹ Universidad Complutense de Madrid, España

² Tecnológico de Monterrey, México

³ Universidad Complutense de Madrid, España

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ABSTRACT

Donald Trump and Joe Biden disputed an atypical electoral campaign marked by the Covid-19 pandemic and high impact social and racial conflicts. Even though, there are several articles that have studied the determining factors of the democrat leader's victory, none has analyzed the effects of the electoral campaign on the internet. This article renders an analysis on Trump's and Biden's popularities and their evolution on Google and YouTube during the 2020 presidential campaign in the United States and a few Latin American countries: Brazil, Mexico, Colombia, Argentina, Peru, Venezuela and Chile.

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1. Introduction

Donald Trump's and Joe Biden's electoral campaigns were marked by several political affairs. The Covid-19 pandemic, protests over the deaths of George Floyd, Breonna Taylor, and other African Americans, the death of Ruth Bader Ginsburg, associate justice of the Supreme Court, and issues concerning the Affordable Care Act known as Obamacare were some events that marked the presidential campaign of the United States of America in 2020 (Wagner et al., 2020).

On November 7, four days after Election Day, Democratic candidate Joe Biden was announced as the virtual winner of the presidential elections, pending last counts and ratification of electoral results (Honderich & Dissanayake, 2020). Biden, 78, became the oldest person to be president of the United States, and the first candidate in 28 years to defeat a president in office since Bill Clinton defeated George HW Bush in the presidential election of 1992. In addition, his campaign partner Kamala Harris would become the first black woman to hold the position of vice president (Honderich & Dissanayake, 2020).

The 2020 election campaign was marked by the Covid-19 pandemic. More than 200,000 people have died from coronavirus in the United States since the health crisis began in early 2020. While at the end of 2019, polls predicted the re-election of Donald Trump, this voting trend changed in mid-2020. According to several authors (Shi, 2021; Meeks, 2021), the mismanagement of the pandemic, the fact that vaccines did not arrive during the electoral campaign and the social and racial conflicts were decisive for Trump's electoral defeat.

Joe Biden obtained over 80 million votes, surpassing his rival Donald Trump by over 6 million votes, thus becoming the most voted presidential candidate in the history of the United States. This election also broke participation record, as both prime candidates got a figure of over 70 million votes, becoming the most voted candidates in history (Wagner et al., 2020).

Despite the overwhelming result, Trump did not accept defeat and denounced electoral fraud in the vote count. After several comments on social networks, Twitter began to indicate that some of Trump's comments could not be considered true (Sanderson et al., 2021). Trump's messages about electoral fraud culminated in January 6, 2021 when a crowd, who had previously attended a Trump rally, stormed the United States Capitol. The event ended with 4 civilians and a police officer killed, 14 people injured and 52 arrested. NATO intelligence services informed their governments that the incident was part of an attempted coup by President Trump with possible support from members of federal security agencies (Prother, 2021). This caused the social network Twitter to permanently suspend, for the first time in its history, a president of the United States' account on its platform.

The 2020 electoral campaign was marked by the health crisis, but also by the participation of citizens through their mobiles and computers in social networks in a communicative framework with more interactivity than ever before in recent history (Niburski & Niburski, 2020; Sanchez, 2020). A framework where a television news item could be commented on or parodied through different social networks (YouTube, Instagram, Twitter, TikTok) or simply search for information about a televised event on Google to contrast or expand the information. But the same can also happen in reverse, that is, any comment, video, tweet, meme, distributed on social networks can become the headline of a newspaper or a television newscast (Toro & Curiel, 2021).

1.1. Social media and new technologies: the aesthetization of politics

Some authors (Ungureanu, 2015; Arceo, 2021) have determined that political aestheticization depends largely on technological advances that can change human behavior in current societies. Mobile phones, computers and modern televisions have the ability to connect the world's citizens through social networks and the Internet. These changes modify, according to some authors (Ungureanu, 2015; Losiggio, 2018), the way of understanding and participating in politics.

The aestheticization of politics (Babul, 2011; Arceo, 2021) states that one of the main characteristics of modern societies is the enhancement of an image or spectacle-based society, where a modification of the real image of society is produced. It is transformed into a more entertaining product, that is also more attractive to consumers.

Political, advertising, and marketing activities are responsible for educating consumer tastes through meaningful information in a specific context and for a specific purpose: to sell products, ideas, and make certain things look good, interesting, and convenient (Ungureanu, 2015). Media provides ideological information that determines people's attitudes towards the world. It forms and trains senses, feelings

and creates beliefs to determine certain social practices. With the wide spread of the Internet and, later, of social networks, this exchange of ideological information has become a more complex process, where users actively intervene creating all kinds of content; be it texts, images, memes, videos... This unstoppable activity has modified the way in which 20th century users consumed television, radio, and other traditional mass media. It has, therefore, changed the interaction between voters and their leaders and, above all, communication strategies in electoral campaigns. All these factors greatly influence the success or failure of a politician. The degree of popularity is conditioned by technological factors that determine the so-called aestheticization of politics (Rosario & Quintana, 2010; Arceo, 2021). If political candidates do not participate on television or on the Internet, it is very difficult for citizens to know them and, eventually, vote for them. Hence, the current importance of political candidates having a resonance in Internet searches, both in search engines -like Google- and in social networks -like YouTube-.

1.2. Google and YouTube

According to several studies (Bokelmann & Lessmann 2018), Google searches represent much more reliable social trends than some surveys or social studies because they represent the consummated action of citizens in a specific space and time. Specially, since citizens not only access Google through their computers, but also through their smartphones anywhere and at any time. These quantitative data are, for some researchers (Bokelmann & Lessmann, 2018; Quintanilha et al., 2019), very useful for the sociological study of electoral campaigns or other political events.

The Google search engine standardization around the world and global access to the Internet has caused this search engine, according to recent studies (Kamiński et al., 2019; Cerdán & Padilla, 2019), to become a reference when wanting to measure social trends. Applying this to politics, one can find out the popularity of one or more presidential candidates, its evolution and correlation on certain dates if one looks for data on a specific region's search history.

Until a couple of decades ago, these trend data could only be obtained through other ways such as traditional media: press, radio, or television. For years, political content broadcasted on traditional television has been related to the interaction citizens have on the Internet. Future voters, besides searching Google for content related to what they watch on television, also interact on social networks on current political issues (Chadwick, et al., 2017). According to several authors (Villa-Gracia & Cerdán: 2020), this is because television is experiencing an unprecedented period of transformation due to technological innovations of the 21st century (Guerrero, 2018).

The once linear television model has become a connected multi-screen interactive personalized television one, in which the production, marketing and viewing processes of audiovisual content have changed and been simplified, based on and related to different social networks. This digital convergence has merged three major industries: audiovisual, computer science and telecommunications (López Villanueva, 2011). The possibility, according to Guerrero (2018) that a video of a youtuber - with a modest budget - reaches more millions of views than a traditional television or advertising industry production, has important implications in the contemporary audiovisual panorama. Above all, because of the emergence of a young adult audience (millennials).

Regarding this aspect, searches for political content have a large presence in the YouTube video search engine, where, according to several studies (Guerrero, 2018; Golovchenko *et al.*, 2020), have a similar impact on nowadays voters than traditional television. However, these new ways of being informed are not at odds with the traditional ones, which is why it is increasingly common for citizens to get information on several screens at the same time. Dual-screening (or double screen, the simultaneous use of screens) is "the set of practices that involves the integration and commutative use through and between live broadcast media and social networks" (Vaccari, et al., 2015a). Since this phenomenon's outbreak in the public sphere, different researchers have tried to explain the effect of social networks on people's political behaviour, and the dynamics of consumption and appropriation of these means of communication (Chadwick, et al., 2017). Both Google and YouTube are search engines used by citizens in this new process of double screens in political information.

According to different studies, YouTube and other social media have increased citizens' ability for political agency by enabling collective discussion around issues of common interest (Abdelhay, 2012; Bennett, 2012; Howard & Parks, 2012; Malhotra, 2015). Access to content from original sources,

intervention in deliberative communities, contact with opinion leaders, and direct interaction with politicians and government bodies, can result in substantive citizen empowerment for those who use these networks (Baumgartner & Morris, 2010; Mishaal & Abu-Shanab, 2015). Furthermore, they not only encourage collective action in virtual spaces, but also provide a sense of political efficiency, by functioning as catalysts for both public institutional involvement and contentious manifestations: demonstrations, protests and other collective actions (Kofi Frimpong, et al., 2020; Enikolopov, et al., 2020).

1.3. United States and Latin America

The influence of United States politics in Latin America has changed from the last decades of the 20th century to the beginning of the 21st century. According to several authors (Howard & Parks, 2012; Losiggio, 2018), it has gone from a common strategy for the entire continent to strategies focused on specific countries or regions, determined by the political situation of each one of them. Mexico, Central America, and the Caribbean form an integrated area through migration and trade with the United States. The Andean zone, however, is a source of instability due to political changes and drug traffic. For example, in Venezuela, Donald Trump supported the proclamation of Juan Guaidó as interim president in 2019, to the detriment of Nicolás Maduro (Puertas-Hidalgo & Romero-Mora, 2019; Sánchez, 2021). However, both politicians are still in power, with conflicting international recognition.

Likewise, Google and YouTube have become two information channels with a large presence not only in the United States but also in most of Latin American countries (Mishaal & Abu-Shanab, 2015). In this sense, both platforms allow the citizens of each country to find out about issues from foreign countries in their own language about news that has been influential in the country of origin, such as the United States.

The globalization of social networks such as YouTube, Instagram, Tik Tok and Facebook or the most used search engine in the world (Google) is a widespread phenomenon in Latin American countries during the first decades of the 21st century. The data provided by platforms such as Google or YouTube can give us information about the relevance of some political candidates in Latin American countries. We can also find out the correlation of the searches carried out between the United States and the countries analyzed. This information can help us understand which Latin American countries were most similar to the behavior of North American citizens during the 2020 electoral campaign, among other aspects. Likewise, several papers (Gueorguieva, 2007; Klotz, 2019; Golovchenko et al., 2020) have studied the influence of political videos on YouTube. These authors state that political content videos published on this social network have helped some politicians achieve high popularity ratings and also an increase in electoral results (Klotz, 2019). Although there have been several recent studies on Donald Trump's popularity (Morris, 2017; Slutsky & Gavra, 2017; Minkus et al., 2018; Villa & Cerdán, 2020) and that of Joe Biden (Waisanen & Becker, 2015; Shumilina, 2020), there is no paper to date which compares the popularity of both candidates during the 2020 electoral campaign in the United States and most populated countries of Latin America.

2. Objective

The main objective of this research is to analyze the evolution of Trump's and Biden's popularities in YouTube and Google searches during the 2021 United States election campaign.

The secondary objective is to qualitatively analyze the relationship between the main peaks of popularity in Google and YouTube searches for the terms "Trump" and "Biden" and relate them to outstanding events of the electoral campaign.

The third objective is to analyze a comparison between searches for Trump and Biden in the United States and the seven most populous countries in Latin America: Brazil, Mexico, Colombia, Argentina, Peru, Venezuela and Chile on Google and YouTube. Also find out which of the Latin American countries obtained results most similar to the interest of North American citizens.

3. Methodology

This research performs a quantitative analysis of searches by searching for "Donald Trump" and "Joe Biden" on Google and YouTube, using Google Trends data. Recent research papers use similar

methodologies to study trends on topics of social and/or political interest (Bokelmann & Lessmann, 2018; Mahroum et al., 2018; Kamiński et al., 2019; Quintanilha et al., 2019; Cerdán & Padilla, 2019; Villa-Gracia & Cerdán: 2020). This because Google Trends can help understand how often people are searching for certain terms or topics by customizing search data (specifying: time period, region, category and type of search –e.g. web, news, images, YouTube–). It, thus, makes it possible to measure interest in one or more topics of interest in any specific region of the world (Google, 2020).

Based on the selected criteria, Google Trends generates a series of charts with normalized data. Data which is also anonymized, categorized and grouped (Google, 2020). The horizontal axis of the graph (x) represents time, since 2008) and the vertical axis (y) the frequency of searches, measured between 0 and 100, where 0 stands for minimum popularity and 100 for maximum.

In order to understand the values of the vertical axis (y) one must take into consideration that they are normalized by the following process: each data point is divided by the total searches of the geography and time range it represents to compare relative popularity, so the, places with the most search volume don't always rank the highest. The resulting numbers are then scaled on a range of 0 to 100 based on a topic's proportion to all searches on all topics. Different regions that show the same search interest for a term do not always have the same total search volumes (Google, 2020). For example, a country with few inhabitants, where 80% of the queries correspond to a specific word will reflect a higher score than a country with a large population where only 40% of the queries correspond to this word (Google, 2020).

Figure 1. Method used to analyze



Source: self-made. Scheme that exemplifies the method used to analyze the impact of searches for “Trump” and “Biden” on Google and YouTube during the US election campaign. Source: self-made.

This research studies the entire US electoral campaign globally (from August to November 2020) through the searches carried out for Trump and Biden on Google and YouTube in the United States. To achieve this, we used public data from Google Trends to measure the repercussion of all Internet media content related to the two candidates and the impact it generated on searches on Google and YouTube.

Subsequently, we carried out a qualitative analysis based on the most outstanding peaks of interest from the Google Trends data. We looked for political events that concurred with the dates where both candidates got the highest search results.

Finally, we carried out several regression analyses of the terms “Trump” and “Biden” in United States compared with Brazil, Mexico, Colombia, Argentina, Peru, Venezuela, and Chile data from Google. The results of these statistical studies render an R^2 value that indicates the correlation in the searches for both political candidates. The closer the R^2 result is to 1, the more correlative the analyzed data is, and the closer it is to 0, the lower the correlation.

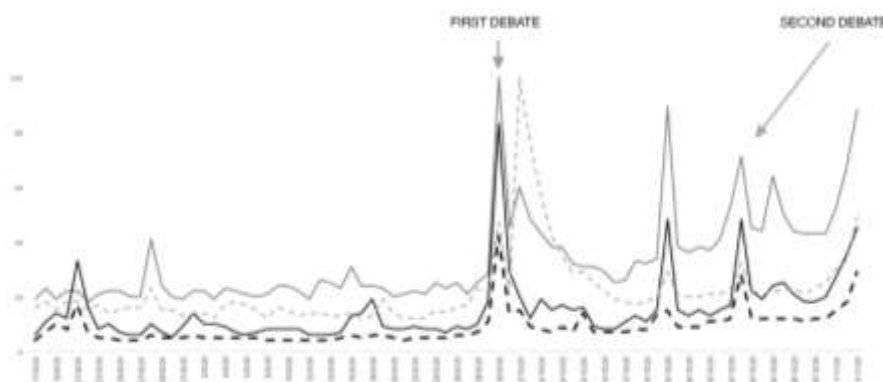
As this study is based on public data, it does not require approval from the ethics and research committees. The results of the searches analysis throughout the electoral campaign show a higher global influx of searches for Trump than for Biden on Google (21 for Trump and 8 for Biden) and on YouTube (33 for Trump and 15 for Biden). On Google searches, Trump reaches the highest peaks on: September 30 (47), October 2 (100), October 5 (42), and November 3 (49). On Google, Biden obtains the best results on: September 30 (42), October 23 (28), and November 3 (29) (Figure 2). On YouTube, Trump gets the best popularity results on: September 30 (100), October 16 (89), October 23 (71) and November 3 (88).

On YouTube, Biden reaches the highest popularity peaks on: September 30 (83), October 16 (48), October 23 (48) and November 3 (45) (Figure 2).

4. Results and analysis

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Figure 2. Global analysis of the entire 2020 electoral period.



Source: self-made. Global analysis of the entire 2020 electoral period. A: popularity of both politicians on Google (dashed line) and YouTube (continuous line) Trump in gray and Biden in black. B: regression analysis on Trump and Biden searches on YouTube. C: regression analysis on Google searches. Source: self-made.

Results show that popularity ratings reach the highest peaks in the graph (Figure 2) in time periods where debates between both candidates were broadcasted on national television.

The first peak that stands out in searches for “Trump” and “Biden” on both Google and YouTube is on September 29 (Figure 2), date in which the first televised electoral debate between Trump and Biden was carried out. Another peak coincides with Trump’s and Biden’s televised appearance on October 16, date in which they were individually interviewed by different journalists and appeared on two US national television networks. Trump was interviewed by Savannah Guthrie and went to NBC, and Biden appeared on ABC with George Stephanopoulos as moderator. Earlier in the campaign, this date was set for a second candidate debate. However, Trump tested positive for Covid-19. He was confined and unable to assist, but also refused to hold a virtual debate, so both candidates appeared separately. The last peak of search interest on both Google and YouTube coincides with the third and definitive official debate between the two candidates on October 22, 2020 (Figure 2).

The order of influx of searches for “Trump” was higher in the United States (21) than in the other countries analyzed (Table 1). The average interest in searches for “Trump” was Venezuela (18.3), followed by Brazil (15.8), Colombia (13.8), Argentina (13.6), Peru (13.1), Mexico (11.6) and Chile (11.4). For “Biden” the average number of searches in the United States was higher (8.5) than in the rest of the countries analyzed: Venezuela (7.6), Brazil (5.6), Colombia (4.7), Argentina (4.1), Chile (3.5), Peru (3.4) and Mexico (3.2).

In the YouTube search engine, the average number of searches for “Trump” in the United States (33.7) was higher than in the rest of the countries analyzed: Mexico (21), Peru (19.5), Colombia (17.3), Venezuela (14.5), Chile (13.4), Argentina (11.8) and Brazil (11.2). For “Biden” the search interest in the United States was 14.5 while in the rest of the countries it was the following: Venezuela (7.6), Peru (6), Chile (5.9), Colombia (5), Argentina (4.9), Mexico (4.2) and Brazil (3.8).

The popularity of Biden and Trump in the United States and Latin America during the 2020 campaign

Table 1. Average number of Google searches

Google	Trump	Biden	YouTube	Trump	Biden
United States	21	8.5	United States	33.7	14.5
Brazil	15.8	5.6	Brazil	11.2	3.8
Mexico	11.6	3.2	Mexico	21	4.2
Colombia	13.8	4.7	Colombia	17.3	5
Argentina	13.6	4.1	Argentina	11.8	4.9
Peru	13.1	3.4	Peru	19.5	6
Venezuela	18.3	7.6	Venezuela	14.5	7.6
Chile	11.4	3.5	Chile	13.4	5.9

Source: self-made. Average number of Google searches in the United States and Latin American countries: Brazil, Mexico, Colombia, Argentina, Peru, Venezuela, and Chile (Left). Average searches on YouTube in the United States and Latin American countries: Brazil, Mexico, Colombia, Argentina, Peru, Venezuela, and Chile (right).

Source: self-made.

Table 2. Results of the regression analysis

R ² Google	Trump	Biden	R ² YouTube	Trump	Biden
Brazil	0.59	0.68	Brazil	0.39	0.6
Mexico	0.88	0.66	Mexico	0.4	0.62
Colombia	0.88	0.67	Colombia	0.2	0.3
Argentina	0.95	0.72	Argentina	0.35	0.48
Peru	0.96	0.68	Peru	0.26	0.37
Venezuela	0.78	0.71	Venezuela	0.11	0.32
Chile	0.88	0.69	Chile	0.3	0.3

Source: self-made. Results of the regression analysis between the searches for "Trump" and "Biden" in Google comparing the data from the United States with the Latin American countries: Brazil, Mexico, Colombia, Argentina, Peru, Venezuela, and Chile (Left). Results of the regression analysis between searches for "Trump" and "Biden" on YouTube comparing the data from the United States with the Latin American countries: Brazil, Mexico, Colombia, Argentina, Peru, Venezuela, and Chile (Left). Source: self-made.

The regression analysis of Google searches for the term "Trump" in the United States in comparison with the other Latin American countries showed the following results: the two countries with the highest correlation were Peru (0.96) and Argentina (0.95), followed by Mexico (0.88), Colombia (0.88) and Chile (0.88). The results of the analysis (Table 2) showed, however, a lower correlation with Venezuela (0.78) and with Brazil (0.59). Regarding the term "Biden", the correlation was higher in the following countries analyzed: Argentina (0.72) and Venezuela (0.71), Chile (0.69), Peru, (0.68), Brazil (0.68), Colombia (0.67) and Mexico (0.66).

The results of the regression analysis between the searches carried out on YouTube for "Trump" in the United States compared to the rest of the countries analyzed were as follows: Mexico (0.4), Brazil (0.39), Argentina (0.35), Chile (0.3), Peru, (0.26), Colombia (0.2) and Venezuela (0.11). Regarding the term "Biden", the correlation was higher with the searches carried out in Mexico (0.62), Brazil (0.6), followed by Argentina (0.48), Peru, (0.37), Venezuela (0.32), Colombia (0.3) and Chile (0.3).

5. Discussions

The analyses show there was an increase in Joe Biden's popularity in relation to Donald Trump's, both on Google and YouTube, during the election campaign –compared to how low it was the previous year-. Although Trump continued to maintain an advantage in the global average of searches during both periods, it was relatively lower during the electoral campaign. Also, the difference in searches between the two candidates the days after the face-to-face debates and televised interviews was lower, meaning that Biden's popularity was closer to that of Trump's on both Google and YouTube searches.

In addition to the televised debates, there are several dates that peak in search interest on both Google and YouTube in the United States during the electoral campaign. We would like to highlight October 2 and November 3. The first of these dates coincides with the news that Donald Trump had just tested positive for Covid-19, and the second with the day of the presidential elections in the United States.

Our conclusion is that televised events did help increase Joe Biden's popularity in relation to Donald Trump's on Google and YouTube, maybe also contributing to a greater mobilization of the young

electorate, who –according to Monahan et al. (2020)– consume videos with political content on YouTube. The search trend during the last televised events shows that YouTube users were correlatively interested in searches for Biden and Trump only after their second appearance on American television. This shows that the evolution of Biden's popularity was increasing and evolved to become more correlated with that of Trump's until election day: results that demonstrate the content consumed on Google and YouTube had an influence in Biden's popularity.

Even though Donald Trump had a much higher total search index than Joe Biden, both the year before the election campaign and during the election campaign, it did not result in him getting reelected as president of the United States. Even though according to several authors YouTube has become a portal where populist politicians have increased their popularity (Rodríguez-Serrano et al., 2019; Abdulaev & Shomron, 2020), this is far from being the only factor that determines an electoral campaign's success. In the case of Donald Trump, his popularity might have been conditioned by negative factors, such as his management of the Covid-19 pandemic or his position in the racial conflicts in the United States (Konrad, 2018; Monahan et al., 2020). This influx of queries on Google and YouTube could have hurt the Republican candidate's electoral results.

In the second analysis carried out, after completing the comparison between the searches in the United States and in Latin American countries, we reached the following conclusions. First, that the average number of searches on Google and YouTube was higher in the United States than in the rest of the countries for both terms ("Trump" and "Biden"), something obvious considering that both candidates are North American and that one of them became the president of the country.

Second, as in the results of the first analysis, the popularity of Donald Trump was much higher than that of the Democratic candidate in all the countries analyzed during the North American electoral campaign.

Third, that the two countries whose citizens showed the greatest interest in both candidates were Venezuela and Brazil through the Google search engine. On YouTube, however, the countries that showed the greatest interest in the term "Trump" were Mexico and Peru and for "Biden" Venezuela and Peru. According to several authors (Puertas-Hidalgo & Romero-Mora, 2019; Sánchez, 2021), this interest of Venezuelan citizens in North American candidates could be due to political instability and the influence of United States policy in Venezuela, greater than that of other countries in recent years. Above all, after the proclamation and partial recognition of interim president Juan Guaidó by various governments, including the United States.

Regarding the results of the regression analysis, we concluded that there was a higher correlation for searches for "Trump" than for "Biden" in Latin American countries through searches carried out on Google. This means that the search interest for "Trump" is more similar between North American citizens and Latin Americans than those carried out for "Biden", where there was less correlation. We conclude that the evolution of Trump's popularity was more similar in the countries analyzed but that, however, Biden's, despite being less correlative, also grew as the electoral campaign progressed. This, according to several authors (Losiggio, 2018; Arceo, 2021) could be due to the populist and media character of Donald Trump during the campaign and his constant presence in the media and social networks with not only national but international resonance. However, this greater popularity was not enough to win the elections, and in this case, we conclude that the searches for Trump could have been conditioned by damaging news and information against his image, especially in relation to his management of the Covid-19 pandemic, the economy of the last year, and the social and racial conflicts in the United States.

6. Limitations

We also want to highlight some limitations. First, we have studied the impact of media repercussion only on YouTube and Google, therefore, for future studies, it would be pending to analyze the evolution of popularity of both politicians in other social networks: Instagram, Twitter, Tik Tok... Likewise, we have only collected data from Google, and even though it is the most widely used search portal in the United States, it would be interesting to include data from other search engines such as Altavista and Yahoo.

We also cannot estimate if Trump's or Biden's popularity on Google and/or YouTube contributed to improving their electoral results, because we cannot know if the interest in these politicians was positive or negative. In other words, we do not know if the determined popularity on YouTube and Google was due to a consumption of positive and/or negative news, in relation to each candidate.

Despite the limitations, we conclude that this study contributes to a better understanding of the relationship between traditional mass media, such as television, and new media, such as social networks. As well as it evidences the importance in current politics of being known and popular. Especially in a world that, according to several authors (Arceo, 2021; Ungureanu, 2015; Losiggio, 2018), is governed by an aestheticization of politics, where candidates and their speeches become one more marketing product that is presented to consumers through new technologies.

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