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USING GOOGLE MAPS AS A TOOL FOR TWO-WAY POLITICAL COMMUNICATION WITH CITIZENS Analysis of the Case of the Congress of the Republic of Peru

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KEYWORDS

ABSTRACT

Perception Corruption Congress of the Republic Peru Google Maps Sentiments In recent times, there has been a discernible rise in the prevalence of corruption within Peru's democratic system. This study analyses a corpus of 993 comments on Google Maps reviews of the Congress of the Republic of Peru. VADER is employed for the purpose of sentiment analysis, with the generation of a word cloud facilitating the visualisation and summarisation of citizens' opinions. The results demonstrate a pervasive sentiment of distrust, with notable terms such as "Much Corruption" and "Rat Hole" emerging as prominent features. During periods of political turbulence, an increase in the number of opinions is observed. It is recommended that future studies expand the sample and consider records from other social networks in order to gain a more comprehensive understanding of public perception.

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1. Introduction

The Congress of the Republic of Peru, a unicameral legislative body, plays a pivotal role in the democratic system. The functions of Congress include the creation and approval of laws, the provision of oversight of the executive and other public entities, and the representation of the citizenry in the legislative arena. Throughout its history, Congress has been the subject of numerous controversies and corruption scandals, which have collectively eroded public confidence. Corruption, defined as the abuse of power for private gain, has a detrimental impact on the quality of governance, the effectiveness of public policies and the distribution of resources. (Bălan-Liseanu, 2023). Corruption has been identified as one of the most significant challenges facing Peru, with adverse implications for economic and social development (Aguilar, 2023; Antola, 2022). A substantial body of research conducted by international transparency and other non-governmental organisations has consistently identified elevated levels of perceived corruption within Peruvian public institutions, including Congress (Briolo & Cordova, 2022).

The challenge of addressing corruption in public institutions requires sustained effort and impartial decision-making to maintain the integrity and trust essential to a democratic system. (Agron, 2023). On occasion, an investigation into the extent of perceived corruption may serve to exacerbate political cynicism, diminish citizen participation and erode the social fabric. The majority of studies on perceptions of corruption have traditionally relied on surveys and public opinion polls, which has limited the depth and effectiveness of potential interventions (Thomas et al., 2024).

These instruments, while offering considerable utility, are not without intrinsic constraints. These include the potential for response bias and a paucity of depth in respondents' answers.

In recent years, the advent of digital platforms has offered novel avenues for the collection and analysis of data pertaining to public perception. Online reviews, in particular those published on platforms such as Google Maps, have emerged as a rich and diverse source of citizen opinion. Google Maps is a globally used tool that allows users to navigate to a destination, ascertain the location of a place, and share their experiences and opinions. (Khan & Loan, 2022) about a variety of establishments and services, including restaurants, shops, and government offices. Although Google Maps reviews were not originally designed for the analysis of perceptions of political institutions, they have since evolved into a voluntary (Chen & Chang, 2024), spontaneous, and often candid reflection of citizens' experiences and perceptions (Li et al., 2024).

In recent years, the advent of digital platforms has afforded novel opportunities for the collection and analysis of data pertaining to public perception. Online reviews, in particular those published on platforms such as Google Maps, have become a rich and diverse source of citizen feedback. Google Maps is a globally used tool that allows users to navigate to a destination, ascertain the location of a place, and share their experiences and opinions. (Khan & Loan, 2022) encompass a multitude of establishments and services, including restaurants, shops and government offices. Although Google Maps reviews were not originally designed for the analysis of perceptions of political institutions, they have since evolved into a voluntary (Chen & Chang, 2024), spontaneous, and often candid reflection of citizens' experiences and perceptions (Li et al., 2024).

In light of the aforementioned circumstances, there is a need to undertake a comprehensive investigation into the emotional nuances embedded within the language employed by citizens. Such an analysis would facilitate a more accurate capture of the emotions and perceptions of the population. In order to ascertain these emotions, tools such as TextBlob and the Valence Aware Dictionary and Sentiment Reasoner (VADER) model are available to facilitate sentiment analysis with a particular focus on users' opinions and comments in a variety of domains. The VADER model is particularly well-suited to this task, as it has been specifically designed for sentiment analysis in short texts and informal languages, such as those commonly used on social networks and in online reviews (Dsouza, 2023). The application of the VADER model enables the categorisation and quantification of users' opinions about the Congress of the Republic of Peru, thereby facilitating a detailed examination of citizens' perceptions. (Arora et al., 2024).

The objective of this study is to analyse the reviews of the Congress of the Republic of Peru on Google Maps in order to gain insight into public perception. In order to achieve this objective, the following questions will be addressed: What is the frequency of reviews published between 2012 and July 2024? What is the overall rating (stars) of the reviews? Which appraisals are most recurrent? And how does

public perception change over time? The objective of this analysis is to identify the recurrent perceptions and concerns expressed by citizens, as well as the intensity of criticism directed towards this institution. The study thus aims not only to provide insight into how citizens perceive the actions of Congress, but also to explore the feasibility and utility of online reviews as a social research tool. The following section outlines the methodology employed for the collection and curation of data. The results section presents and analyses the most relevant findings. The discussion section provides a more detailed analysis of the results, while the conclusions present a synthesis of the general perception of citizens and suggest potential avenues for future research.

2. Methodology

The study employed a mixed methodology, integrating both qualitative and quantitative techniques. The initial step involved the collection of all available Google Maps reviews pertaining to the Congress of the Republic of Peru. For the analysis of quantitative and qualitative data, tools such as Python and Microsoft Excel were employed (Israel et al., 2022). Additionally, a descriptive statistical analysis was conducted to investigate the polarity of opinions and the distribution of ratings (stars) assigned in the reviews. To provide further clarification, the following subsections present a comprehensive account of the data collection, curation and analysis phases.

2.1. Data Collection

The data set comprising Google Maps reviews pertaining to the Congress of the Republic of Peru was extracted manually. To this end, a working matrix was devised, comprising five principal fields, from the author's data to the description of the review. Table 1 illustrates the manner in which the data was extracted, with particular emphasis on the gender, date and rating assigned.

| Ν | Author | Gender | Date | Qualification | Review |
|------|-----------------------------|--------|----------|---------------|---|
| 1 | Robert Savidan | М | 21/07/12 | 3 | It was a nice little stop () |
| 2 | Paulo Zapata Flores | М | 23/01/13 | 2 | There is no lower rubric for assessing the quality of your staff. |
| 3 | Luis José Soto Rodríguez | М | 07/03/13 | 2 | A good group of congressmen who only represent their own interests and figureheads is shameful. |
| 4 | Daniel García Hurtado | М | 06/05/13 | 5 | Of national interest. |
| 5 | Carlos Chávez Inga | М | 22/06/13 | 3 | No discrimination against the poor. |
| 6 | Francesca Cervantes | F | 25/06/13 | 3 | Good place. |
| 7 | Pina Vera | F | 06/08/13 | 3 | A lot of corruption. |
| | | | | | |
| | | | | | |
| 2262 | Walter Fernandez | М | 12/06/24 | 3 | After years I was visiting, coordinated for some work. |

| | Table 1. | Frequency | of reviews | per vear |
|--|----------|-----------|------------|----------|
|--|----------|-----------|------------|----------|

Source: Own elaboration, 2024.

In the initial phase of the study, 2,262 reviews were recorded, accompanied by the aforementioned information. In some cases, the information available was limited to photographs of the organisation and reviews that consisted solely of emoticons.

2.2. Data Curation

Subsequent to the collection of the data, a curation process was undertaken to guarantee its quality and utility for analysis. This process included (1) content removal: Blank reviews and reviews containing only emoticons and pictures of the venue were identified and removed to avoid bias in the analysis. (2)

irrelevance filtering: Reviews that were not directly related were excluded. And (3) normalisation: Data were normalised to unify formats and correct possible typographical or grammatical errors. Following the aforementioned procedure, a total of 993 reviews were obtained between 2012 and July 2024.

2.3. Data Analysis

The data analysis was conducted utilising a combination of software tools, including Python and Microsoft Excel. The analysis was divided into two sections:

- Quantitative analysis: Descriptive statistics were employed to investigate the distribution of reviews and ratings (stars). Furthermore, trends in the polarities of reviews over time were identified.
- Qualitative analysis: A content analysis was employed to ascertain the prevalent perceptions expressed in the reviews. Sentiment analysis was conducted using the VADER model. In the final phase of the analysis, the reviews were classified according to their positive, negative or neutral sentiment.

It is important to note that the sentiment analysis was conducted with the objective of identifying and categorising the opinions expressed in the reviews into positive, negative and neutral scales (Table 2). A positive review indicates satisfaction and approval, suggesting that the reviewer had a favourable experience of the Congress of the Republic of Peru. In contrast, negative reviews indicate dissatisfaction and criticism, thereby highlighting aspects that citizens perceive as problematic or unsatisfactory. A neutral review presents an intermediate evaluation, whereby the user expresses a balanced opinion that is neither positive nor negative.

| Table | 2 | Sentiment | analysis |
|-------|------|-----------|-----------|
| Iable | : 4. | Sentiment | allalysis |

| N | Author | Gender | Date | Qualification | Review | Polarity |
|---|-----------------------|--------|----------|---------------|-----------------------|----------|
| 1 | Daniel García Hurtado | М | 06/05/13 | 5 | Of national interest. | Neutral |
| 2 | Francesca Cervantes | F | 25/06/13 | 3 | Good place. | Positive |
| 3 | Pina Vera | F | 06/08/13 | 3 | A lot of corruption. | Negative |

Source: Own elaboration, 2024.

3. Results

This section presents the findings, which are organised into four phases. Phase 1 presents an analysis of the distribution of reviews between 2012 and July 2024. Phase 2 analyses the overall rating of reviews in terms of the number of stars awarded. Phase 3 identifies the most frequently occurring ratings in Google Maps reviews. Finally, Phase 4 examines the temporal evolution of citizen perceptions.

3.1. Phase 1: What is the Frequency of Reviews Between 2012 and July 2024?

Table 3 presents the frequency of reviews per year from 2012 to 2024, with a total of 993 reviews recorded. The data demonstrate a notable fluctuation in the number of reviews over time. In 2012, a single review was documented, representing 0.1% of the total. In 2013, the number of reviews increased to 12, representing 1.21% of the total. Subsequently, the number of reviews exhibited a fluctuating pattern, with a slight decline observed in 2014 and 2015, where 7 and 4 reviews were recorded, respectively, representing percentages of 0.7% and 0.4%. From 2016 onwards, an increase in the frequency of reviews is observed, commencing with five reviews (0.5%) and reaching a peak in 2017 with 190 reviews, representing 19.1% of the total. The data indicate that the highest number of reviews was recorded in 2018, with a total of 429 reviews, representing 43.2% of the total number of reviews. In 2019, although there was a decrease from the previous year, 307 reviews were recorded, representing 30.9% of the total. In the following years, there was a marked decline in the number of reviews, with 15 in 2020 (1.51%), 8 in 2021 (0.81%), and 7 in 2022 (0.7%). In the two subsequent years, 2023 and 2024, the number of reviews was five and three, respectively, representing 0.5% and 0.3% of the total number of reviews registered.

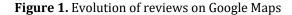
| Year | Reviews | n=% |
|-------|---------|------|
| 2012 | 1 | 0.1 |
| 2013 | 12 | 1.21 |
| 2014 | 7 | 0.7 |
| 2015 | 4 | 0.4 |
| 2016 | 5 | 0.5 |
| 2017 | 190 | 19.1 |
| 2018 | 429 | 43.2 |
| 2019 | 307 | 30.9 |
| 2020 | 15 | 1.51 |
| 2021 | 8 | 0.81 |
| 2022 | 7 | 0.7 |
| 2023 | 5 | 0.5 |
| 2024 | 3 | 0.3 |
| Total | 993 | 100% |

Table 3. Frequency of reviews by year

Source: Own elaboration. 2024.

The results demonstrate that particular factors were responsible for the significant surge in reviews between 2017 and 2019 (Figure 1). In the aforementioned years, Peru experienced a period of intense political instability, characterised by crises and confrontations between the executive and legislative branches. In 2017, then-President Pedro Pablo Kuczynski (PPK) was the subject of an impeachment attempt in Congress due to his alleged links to the Brazilian construction company Odebrecht. Despite Congress failing to impeach him on that occasion, PPK's pardon of Alberto Fujimori at the end of that year sparked a wave of controversy and protests, deepening the country's political crisis (Arce et al., 2018).

In March 2018, PPK resigned from the presidency amidst a second impeachment process, with Martin Vizcarra, the then-vice president, assuming the role of president. Vizcarra concentrated his efforts on combating corruption, as evidenced by the emergence of the "Lava Jato" scandal in Peru. This scandal implicated numerous individuals, including judges, businessmen, and politicians, within a vast network of corruption. (Ponce de León et al., 2019). The administration of Vizcarra was defined by its confrontation with a Congress that was dominated by opposition groups, especially those aligned with followers of Fujimor. The culmination of this confrontation occurred in September 2019, when Vizcarra opted to dissolve Congress after it declined to endorse a vote of confidence pertaining to the appointment of judges to the Constitutional Court. This decision, although in accordance with the Constitution, was met with significant controversy and resulted in an attempt by Congress to suspend Vizcarra. The political climate became increasingly tense and polarised, resulting in protests and a growing distrust of institutions. This situation has been developing since 2016. (McNulty & McNulty, 2017).



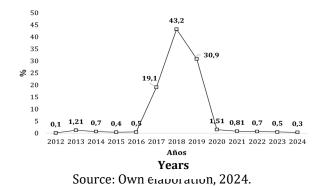


Table 4 presents the distribution of reviews by the gender of the authors, with a total of 993 reviews included. The data demonstrate a significant disparity in participation between male authors, female authors, and organisations or institutions that provided reviews. Firstly, female authors contributed 233 reviews, representing 23% of the total. This indicates a notable presence of women in the production of reviews, although their contribution is comparatively smaller than that of men. Conversely, male authors were responsible for 696 reviews, which constitutes 70% of the total. This majority is indicative of a predominantly male population engaged in review publishing activity. Additionally, 64 reviews were authored by organisations or institutions, representing 6.4% of the total. This category is less prominent in comparison with the other two, but the involvement of collective entities in the production of reviews is noteworthy.

| Table | 4. | Reviews | bv | generation |
|-------|----|-----------|----|------------|
| Tubic | | ICCVIC W5 | bу | Seneration |

| Gender | Count | n=% |
|-------------|-------|------|
| Female | 233 | 23 |
| Male | 696 | 70 |
| Not defined | 64 | 6.4 |
| Total | 993 | 100% |

Source: Own elaboration, 2024.

The results demonstrate a significant discrepancy in the involvement of men and women in the production of reviews. The data indicates a clear predominance of male contributions, with a comparatively smaller number of reviews from organisations or institutions.

3.2. Step 2: What is the Overall Rating (stars) of the Reviews?

In order to ascertain the overall rating of the Congress of the Republic of Peru, the ratings provided in the reviews were subjected to analysis. Table 5 presents a summary of the review ratings, which are distributed on a scale of 1 to 5 stars and are grouped by year from 2012 to 2024. The following section presents an analysis of the distribution and trends observed in the ratings:

- A total of 199 one-star ratings were recorded, representing 20% of the total number of ratings. The years with the highest proportion of one-star ratings were 2017 and 2018, with 22.58% and 48.24%, respectively. This evidence suggests that during these years, there was a notable negative perception in the reviews, potentially influenced by the turbulent political and social context in Peru at the time.
- A total of 62 reviews were recorded for the two-star rating category, representing 6.2% of the total number of reviews. The most significant years in this category were 2017 and 2018, with 37.07% and 50% of two-star reviews, respectively. This lends further support to the notion that these years were of particular significance.
- In terms of three-star ratings, there were 168 reviews, representing 16.9% of the total. The year 2017 is noteworthy in this category, with 22.02% of three-star reviews, indicating a more moderate perception during that year.
- Four-star ratings were represented by 194 reviews, which constituted 19.5% of the total. The proportion of four-star reviews was highest in 2018, at 43.13%, indicating a more positive perception than that indicated by the lower ratings.
- The largest number of reviews were of the highest rating, five-star, with 370 reviews, representing 37.3% of the total. The years 2018 and 2019 exhibited the highest proportion of five-star reviews, at 34.62% and 30.54%, respectively. This suggests a trend towards markedly positive evaluations during these years.

| Year | | | | | Rating | s - Stars | | | | |
|-------|-----|-------|----|-------|--------|-----------|-----|-------|-----|-------|
| - | 1 | n=% | 2 | n=% | 3 | n=% | 4 | n=% | 5 | n=% |
| 2012 | 0 | 0 | 0 | 0 | 1 | 0.60 | 0 | 0 | 0 | 0 |
| 2013 | 0 | 0 | 3 | 4.84 | 6 | 3.57 | 1 | 0.52 | 2 | 0.54 |
| 2014 | 0 | 0 | 2 | 3.23 | 3 | 1.79 | 0 | 0 | 2 | 0.54 |
| 2015 | 2 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0.54 |
| 2016 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1.55 | 2 | 0.54 |
| 2017 | 26 | 13.07 | 14 | 22.58 | 37 | 22.02 | 33 | 17.01 | 80 | 21.62 |
| 2018 | 96 | 48.24 | 31 | 50.00 | 66 | 39.29 | 84 | 43.30 | 152 | 41.08 |
| 2019 | 69 | 34.67 | 12 | 19.35 | 49 | 29.17 | 64 | 32.99 | 113 | 30.54 |
| 2020 | 3 | 1.51 | 0 | 0 | 3 | 1.79 | 2 | 1.03 | 7 | 1.89 |
| 2021 | 1 | 0.50 | 0 | 0 | 2 | 1.19 | 0 | 0 | 5 | 1.35 |
| 2022 | 2 | 1.01 | 0 | 0 | 0 | 0 | 4 | 2.06 | 1 | 0.27 |
| 2023 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1.03 | 3 | 0.81 |
| 2024 | 0 | 0 | 0 | 0 | 1 | 0.60 | 1 | 0.52 | 1 | 0.27 |
| Total | 199 | 100% | 62 | 100% | 168 | 100% | 194 | 100% | 370 | 100% |

Table 5. Summary of ratings on the 1-5 scale

Source: Own elaboration, 2024.

The years 2017 and 2018 demonstrate a considerable degree of variability in ratings, with a notable prevalence of both highly positive (4 and 5-star) and highly negative (1 and 2-star) reviews. As previously stated, during this period, there was a notable prevalence of both critical and positive reviews, potentially influenced by the political and social events occurring in Peru during that time, including the resignation of PPK, the inauguration of Vizcarra, and the subsequent dissolution of Congress. From 2020 onwards, the distribution of ratings appears to be more uniform, with a reduction in the number of extreme reviews and an increase in those in the intermediate range (3 and 4 stars). This more homogeneous distribution may be indicative of a stabilisation in perceptions and a reduction in the polarisation observed in previous years.

3.3. Phase 3: What Are the Most Frequently Occurring Appraisals in Google Maps Reviews?

In this phase of the study, a qualitative analysis of the reviews was conducted with the objective of identifying the most common appraisals expressed by citizens. Specific focus was placed on the most frequently occurring words, as well as on discrepancies in perceptions based on the gender of the authors. Figure 2 presents an analysis of the Google Maps reviews, classified according to the gender of the authors and the type of sentiment expressed (negative, neutral, positive).

- A total of 37 negative, 75 neutral and 121 positive reviews were recorded for female authors (F). This indicates that women tend to provide predominantly positive reviews, followed by neutral and, to a lesser extent, negative reviews.
- In the case of male authors (M), the number of reviews in all categories is higher. The data set comprises 143 negative, 254 neutral, and 299 positive reviews. Similarly, men also demonstrate a proclivity for positive reviews, albeit with a comparatively higher prevalence of neutral and negative appraisals, suggesting a greater degree of variability in their evaluations.
- In contrast, organisations or institutions (O) have 12 negative, 26 neutral and 26 positive reviews. This represents a more balanced distribution between neutral and positive reviews, with a smaller number of negative reviews. Collective entities tend to provide evaluations that are more moderate in nature and less polarised.

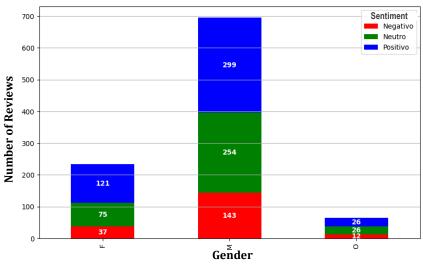


Figure 2. Negative, Neutral and Positive Reviews by Gender



The majority of reviews are positive, irrespective of the author's gender. However, it is observed that the male demographic is more inclined to offer criticism than their female counterparts, as evidenced by the prevalence of negative and neutral reviews. In contrast, organisations or institutions tend to provide more balanced evaluations, with a relatively high proportion of neutral reviews. Figure 3 presents a word cloud visualising the most recurrent terms in Google Maps reviews. The graphical representation allows for the rapid identification of the most frequently mentioned words and phrases, thereby providing an overview of the perceptions and opinions held by citizens. The term "Excellent" is situated at the centre of the cloud and is of a larger font size, indicating that it is the most frequently mentioned word in the reviews. In addition to "Excellent," other positive terms such as "Good place" and "Interesting" are also prevalent, thereby substantiating the inclination towards favourable commentary.

Figure 3. Word cloud of most frequent terms in the reviews

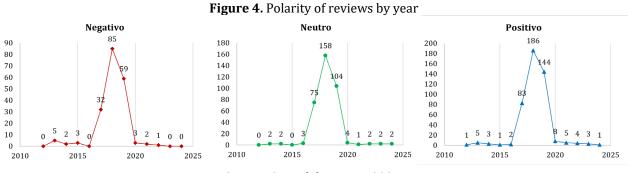


Source: Own elaboration, 2024.

However, it is notable that negative terms also emerge. The term "rat hole" is notable for its prevalence, which suggests that a significant proportion of the population has had unfavourable experiences. Similarly, the expression "much corruption" indicates concerns about the management of the Peruvian Congress. Additionally, the term "historical" is recurrent, suggesting that the aforementioned institution has a documented history. The word cloud thus demonstrates a combination of views about the Congress of the Republic of Peru on Google Maps. Although most terms are positive, indicating a general tendency towards favourable evaluations, the presence of negative terms and phrases demonstrates that there are also negative criticisms and experiences that affect the overall perception.

3.4. Phase 4: How do Citizens' Perceptions Change Over Time?

In order to gain insight into the evolving public perception of Congress, a comprehensive analysis of Google Maps reviews was conducted. The reviews were classified according to their polarity (negative, neutral, or positive) and distributed annually from 2012 to 2024. Figure 4 and Table 6 present a summary of the aforementioned analysis, displaying the reviews according to their classification, with a breakdown by year. In 2012, no reviews were recorded that could be classified as negative or neutral. Only one review was positive, representing 0.22% of the total number of reviews. In 2013, five negative reviews (2.60%) were recorded, in addition to two neutral reviews (0.56%) and five positive reviews (1.12%).



Source: Own elaboration, 2024.

In the case of the year 2014, the number of negative reviews was 2 (1.04%), the number of neutral reviews was 2 (0.56%), and the number of positive reviews was 3 (0.67%). In 2015, three negative reviews were recorded (1.56%), with no neutral reviews. Conversely, only one positive review was received (0.22%).

| Year | Negative | n=% | Neutral | n=% | Positive | n=% |
|-------|----------|-------|---------|-------|----------|-------|
| 2012 | 0 | 0.00 | 0 | 0.00 | 1 | 0.22 |
| - | - | | - | | — | - |
| 2013 | 5 | 2.60 | 2 | 0.56 | 5 | 1.12 |
| 2014 | 2 | 1.04 | 2 | 0.56 | 3 | 0.67 |
| 2015 | 3 | 1.56 | 0 | 0.00 | 1 | 0.22 |
| 2016 | 0 | 0.00 | 3 | 0.85 | 2 | 0.45 |
| 2017 | 32 | 16.67 | 75 | 21.13 | 83 | 18.61 |
| 2018 | 85 | 44.27 | 158 | 44.51 | 186 | 41.70 |
| 2019 | 59 | 30.73 | 104 | 29.30 | 144 | 32.29 |
| 2020 | 3 | 1.56 | 4 | 1.13 | 8 | 1.79 |
| 2021 | 2 | 1.04 | 1 | 0.28 | 5 | 1.12 |
| 2022 | 1 | 0.52 | 2 | 0.56 | 4 | 0.90 |
| 2023 | 0 | 0.00 | 2 | 0.56 | 3 | 0.67 |
| 2024 | 0 | 0.00 | 2 | 0.56 | 1 | 0.22 |
| Total | 192 | 100 | 355 | 100 | 446 | 100 |

Table 6. Summary of polarity analysis of reviews on Google Maps

Source: Own elaboration, 2024.

In the year 2016, no reviews were recorded that expressed a negative or neutral opinion. However, three reviews were recorded that expressed a positive opinion, representing 0.85% of the total number of reviews. In 2017, the number of negative reviews increased to 32 (16.67%), while the number of neutral reviews decreased to 75 (21.13%). Conversely, the number of positive reviews increased to 83 (18.61%). The year 2018 was the most noteworthy, with 85 negative reviews (44.27%), 158 neutral reviews (44.51%) and 186 positive reviews (41.70%). In 2019, 59 reviews were classified as negative (30.73%), 104 as neutral (29.30%), and 144 as positive (32.29%). In 2020, there were three negative reviews (1.56%), four neutral reviews (1.13%) and eight positive reviews (1.79%). In 2021, there were two negative reviews (1.04%), one neutral review (0.28%), and five positive reviews (1.12%). In 2022, a single negative review was recorded (0.52%), with no neutral reviews and four positive reviews (0.90%). In 2023, no negative or neutral reviews were submitted, but three positive reviews were received, representing 0.67% of the total. In 2024, there were no instances of negative or neutral reviews, and only one instance of a positive review (0.22%). In total, 192 reviews were classified as negative (19.34%), 355 as neutral (35.76%), and 446 as positive (44.90%). The year 2018 is notable for having the highest number of reviews in all categories, with a notable increase in negative and neutral reviews, suggesting a period of high activity and diversity of opinion. The overall trend indicates that positive reviews are more prevalent than neutral and negative reviews, suggesting a predominantly favourable perception among users. The years with lower review activity (2012, 2015, 2016, 2023 and 2024) demonstrate a clear prevalence of positive reviews, with a notable absence of negative or neutral reviews. The data indicate that, over time, reviews on Google Maps have become increasingly positive, although there have been instances where negative and neutral reviews have increased.

4. Discussion

The analysis of Google Maps reviews of the Congress of the Republic of Peru provides an in-depth insight into the public's perception of this institution, revealing significant findings that warrant detailed discussion. The perception of corruption and the general sentiment towards Congress are subject to change over time, largely influenced by political and social events. This analysis has identified how, at key moments of political instability, citizens express their discontent more intensely through digital platforms, with 2017 and 2018 standing out as periods of increased polarisation of opinions. In the aforementioned years, political crises such as the impeachment attempts against President Pedro Pablo Kuczynski and the subsequent dissolution of Congress by Martín Vizcarra led to a notable increase in public attention directed towards the actions of the legislature (Ponce de León et al., 2019). This resulted in not only an increased number of reviews, but also in intensified criticism and widespread scepticism.

These findings are in accordance with the extant literature examining the relationship between political instability and public perceptions of institutions. Cohaila and Cohaila (2020) posit that instances of corruption and government crises frequently exert a direct influence on public trust, which can precipitate cycles of political cynicism and diminish citizen participation. In this context, the negative appraisals of Congress during these periods are not only an expression of popular discontent, but also a reflection of the deterioration of trust in the political system. The aforementioned cycle of public disapproval is further reinforced when institutions are unable to effectively address the scandals or crises they face. Furthermore, this study emphasises the pivotal role of digital platforms in transforming the manner in which citizens engage with institutions and express their opinions. Previously, public opinion on government performance was gauged through surveys or protests. However, the advent of information technologies has introduced novel avenues for citizen participation. Spada and Allegretti (2022) highlight that in established democratic societies, digital tools facilitate the expansion of public deliberation spaces, enabling more direct and accessible interactions between citizens and institutions. Regarding the Peruvian Congress, the utilisation of Google Maps as a platform for the review and commentary of the institution's performance evinces an evolution in the manner in which citizens exercise their right to participate in public life. Such reviews are not merely a conduit for expressing disquiet; they also function as a barometer of the prevailing political and social climate.

The analysis further illustrates the impact of information technologies on public perception and accountability processes. As posited by Gil de Zúñiga et al. (2021), information and communication technologies have transformed citizen participation in governance processes, enabling citizens not only to express their opinions but also to exert influence on political decision-making. In this regard, Google Maps reviews serve as a digital platform where citizens can exert pressure on their representatives,

thereby contributing to the public discourse on the governance of institutions. The visibility of these opinions amplifies their impact, as they are not only accessible to other citizens, but can also be monitored by the authorities.

One of the most frequently occurring themes in the reviews analysed is the perception of corruption in Congress. The general public frequently denounces corrupt practices and identifies members of Congress as the primary actors engaged in such behaviours. This reinforces the pervasive distrust of the institution. This type of perception, as posited by Cohaila & Cohaila (2020), can have a profoundly detrimental impact on the legitimacy of democratic institutions. When citizens perceive that their representatives are involved in corrupt practices, it engenders a sense of powerlessness and scepticism, which in turn erodes trust in the democratic system as a whole. This phenomenon is particularly concerning in contexts of political crisis, where the stability of the institutional system is contingent upon the level of public trust.

Another noteworthy outcome is the manner in which digital platforms have facilitated greater visibility and engagement by citizens in matters of accountability. It is recommended that public institutions, including the Peruvian Congress, utilise digital tools to gain a more comprehensive understanding of citizen concerns. The incorporation of platforms such as Google Maps into institutional performance monitoring and evaluation procedures could facilitate enhanced transparency and reinforce accountability. Nevertheless, it is of the utmost importance that those in authority do not underestimate the impact of these digital opinions, as a failure to acknowledge them will only serve to exacerbate the existing gap between citizens and their representatives.

Additionally, Cohaila & Cohaila (2020) demonstrate that the involvement of citizens in digital spaces is not solely limited to the act of denouncing malpractice; it also presents a valuable opportunity to reinforce the foundations of democracy. The capacity of digital platforms to facilitate the free expression of opinions and concerns by citizens creates a space for continuous dialogue that can influence political decision-making. This is of paramount importance in a context where democratic institutions are persistently confronted with the challenge of maintaining public trust. The incorporation of citizen feedback into the policy-making process enables authorities to make more informed decisions and respond more effectively to the needs of the population.

It is our contention that this analysis serves to underscore the vital importance of accountability in the digital age. The visibility of public opinions on platforms such as Google Maps or Facebook provides institutions with a distinctive opportunity to gain deeper insights into citizens' concerns (Cáceres et al., 2024). However, this opportunity also presents a challenge for institutions, which must adapt to this new reality and recognise the importance of digital platforms as tools to improve transparency. In conclusion, it is important to note that the perception of corruption remains high. Those institutions that do not adopt these new forms of participation risk further distancing themselves from the citizenry, particularly in light of the creation of memes on social networks and other media that amplify these perceptions. (Serna, 2024).

5. Conclusions

The findings of this study demonstrate that the political context and contemporary events exert a significant influence on perceptions of the Congress of the Republic of Peru, with instances of heightened citizen participation and polarisation of opinions occurring during periods of political instability and crisis. These periods, characterised by controversy and public scrutiny, tend to elicit both negative criticism and polarised evaluations, indicating a direct correlation between citizen perception and current events. However, a noteworthy aspect of the findings is that, despite the pervasive mistrust and criticism, a considerable proportion of positive evaluations persist, indicating a substantial appreciation for the role of Congress. This suggests that, in certain segments, the institution is still regarded as a vital pillar of democracy.

Furthermore, it emphasises the necessity of considering gender differences when analysing public perception. The greater prevalence of criticism in male reviews indicates that different demographic groups may have disparate expectations and demands regarding the institution. This underscores the necessity for an inclusive approach in the analysis of public perception. This discrepancy in opinion

provides valuable insights into the dynamics of public opinion, indicating the necessity of considering socio-demographic variables for a more comprehensive understanding.

The utilisation of Google Maps as a tool for the analysis of public perception serves to illustrate the value of digital platforms as essential data sources for the exploration of citizens' emotional patterns in relation to the activities of key institutions. A logical subsequent step would be to extend the study to encompass reviews from other platforms and social networks, thus obtaining a more comprehensive and nuanced understanding of public perception. Furthermore, the creation of predictive models that examine the influence of political and social events on citizens' opinions could facilitate the development of anticipatory capacity, enabling institutions to adapt more effectively to evolving public expectations and demands.

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