"Elections: In Between the Certainty of Old Practices and the Chaos of New Technologies. Analyzing Online Campaigns with Text Mining,"

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The use of social networks in the air war is recent, and is increasing. In 2008, the candidate for the presidency of the United States, Barack Obama was the first to use technology and social networks as one of the main instruments in his political campaign. His technique allowed the creation of political groups, mobilized voters and won the vote of two million more young people than in the 2004 election, especially young people of color (Wells et al., 2015). As a result, Obama marked the way in which electoral campaigns would be printed in the future. Now digital strategies are a crucial component of contemporary political contests (Howard, 2005). The digital revolution not only came to the United States; Mexico and other countries are also experimenting.

In Mexico, the country examined in this study, several candidates standing for different positions of popular election used social networks as a complement to their political campaigns in 2015. Among them, Pedro Kumamoto and Jaime Rodríguez "El Bronco", both independent candidates, to a local council in the state of Jalisco and the governorship of Nuevo León, respectively. Kumamoto's campaign had a minimum budget and three communication strategies: "social networks, vehicle stickers and book dividers delivered (by hand)" (Petersen Farah, 2015); El Bronco´s campaign did not agree to traditional advertising. He used social networks as his main means of communication (Montalvo, 2015). The two candidates managed to gather thousands of volunteers through Facebook and Twitter. Due to external factors and excellent campaign strategies within social networks, they achieved a strong electoral victory. On a spotted medium they won without using a single spot. These events cast doubt on the old paradigms of electoral competition in Mexico over traditional political parties and mass media.

Given the great popularity of social networks, debates are slowly emerging on the importance of social networks in politics, especially in elections and public opinion (Davis, 2013; Ceron et al., 2014; Conway, 2013 Kinciño, 2014; Shirky, 2011; Bruns and Highfielg, 2013). While social networks alone do not win elections, they contribute to shape massive perceptions that facilitate territorial work during the ten hours of the electoral journey. Candidates (and precandidates) modify their strategies in campaign times in social networks, the how and why should be important for political science since they are, along with traditional media, a powerful communication weapon. With new technologies and media tools, political campaigns gather data from a range of sources that can be used to extrapolate political information that could be used to make reliable estimates of electoral results, once appropriate measurements are found.

This work incorporates text mining into the traditional quantitative analysis of political campaigns, which is quite new in the field of political science. It uses a semantic study based on Facebook data of primary elections from June 1, 2015 to March 30, 2016, of six

possible candidates for the run-up to the 2017 Nayarit gubernatorial contest, a small state on the Pacific Coast of Mexico. This paper chose Mexico as case of study because of the singularity of their campaign periods and the raising importance that social media has gained in the past years and Facebook because of the number of precandidates that used this social media to connect with the electorate. The collected data were obtained using the RFacebook library of Rstudio and three opinion polls that were conducted throughout this period. Thus, it was possible to compare the change of strategies, and their success, when candidates knew their position (via polls) in the offline universe and when they did not. The result of the strategy was measured in two ways. In the first place, the behavior of each precandidate on Facebook before and after the survey was observed. Secondly, when there was no poll, the precandidate modifies their strategy (or continue the same) when compared with that of their opponents. For this, the modification of interactions of each profile is studied based on the selection of words of each of the six political actors.

The activity within Facebook is used to calibrate strategies of political campaigns but public opinion polls are [still] indispensable (and used as feedback) because of the problems of measurements in social network (Ceron, et al, 2014, Bruns and Highfielg, 2012). Specifically, this work argues two things. First, that precandidates modify the selection of words, their slogan or hashtags and post in a greater way, based on the results of the polls. It was hoped that when there was no real battle, the most popular precandidate according to the polls, would be the one that posts the most along the observed time because he wants to keep his popularity that way (Denter and Sisak, 2014). In the second, it was hoped that, when there is a real battle or the preference's difference is marginal, all precandidates would have a similar online strategy. It is argued that the changes on the digital strategy may be the result, not of the polls but of the comparison of the activities from one precandidate to another.

To answer the research question, the text is divided in 4 parts. The first part consists of a literature review and includes how candidates modify their campaign strategies based on political polls. The second makes an introduction of the upcoming elections in Nayarit. The third part develop the main arguments and finally, the fourth part present the data and research designs to prove the results.

Argument

This study relies on the research conducted by Philipp Denter and Dana Sisak (2014) to develop verifiable expectations of how political campaigns in pre-election periods should respond to electoral surveys. Their study is among the few existing on political candidate´s behavior. The authors study the effect of results of public opinion surveys on the incentives of candidates to invest in a campaign during political competition. They suggest that polls create an "impulse" during campaign time, in the sense that the favorite candidate tries to improve or maintain his position over time. When there are no polls, candidates have a common belief a priori about their placement in the candidate range. Thus, a balance is created in which all candidates invest in a more or less similar way in

their campaign. When there are demographic studies, candidates know their position and it is easier to make investment decisions. If candidates are interested in winning the election, the polls give the favorite candidate an incentive to invest more than the adversary candidate.

The question that seeks to answer this work is how do politicians adjust their online campaigns to position themselves and postulate as governor? Following the thesis of Denter and Sisak, this thesis presents two hypotheses about the modification of strategies in digital campaigns of the candidates of the primary election for governor in Nayarit.

> **H1: After observing the results of the opinion polls, the candidate or the best positioned candidates will be the ones who have the most changes in their digital content over time.**

That is, after observing the results of public polls, when the competition is not closed, the precandidates reinvent their digital behavior. They change either the number of posts per day, the number of words or the type of word to obtain a greater number of likes and comments. It is hoped that the better positioned candidate in the results of a polls, and is interested in obtaining the candidacy, will be the one that publishes the most (in moderation and without saturating his audience). If, before the poll, the posts with the highest number of words (or the inverse) were those with the greatest impact and most likes, it is expected that the publications of that candidate will have on average a similar number of words. In short, it is expected that they modify their strategy over time, to preserve their advantage. Even this gives the ability to the favorite to define their opponents, before they have the opportunity to do so (Strother, 1999).

There is a possibility that the results of the polls reveal a closed competition among candidates. If this happens,

> **H1A: precandidates will change the strategy in a similar way: by publishing more (or less), changing words and increasing or decreasing the number of words.**

There is a possibility that the difference between the candidates is minimal, or that they ignore the results of the polls. In this case study, the polls are very preliminary, so the result of these may not have an impact on the digital activity of the candidates. As a consequence, all candidates (or most of them), will modify their strategies to try to connect with the voters of the online universe to increase their popularity. It is hoped that the behavior within the digital ecosystem will be similar among all competitors. That is to say, that none exist with a strategy that stands out from the others.

> **H2: when there is no poll, or the results of them are ignored, candidates will modify their strategy after observing their own digital ecosystem and comparing their own technique with that of the other competitors –or at least with the rival of the same party.**

Having no information, actors imagine their position in the ranking of preferences and modify their online strategy in a similar way to when there is closed competition. The number of publications and number of words will change over time because they seek to have as many likes as possible. It is expected that the behavior is more similar among candidates when there is no poll than when there is. What is clear is that candidates should modify their strategies to give voters a reason to support them and not their opponents (Strother, 1999). Said that, it is not excluded that there is the possibility that

> **H0: precandidates do not have any digital strategy and the change in their activity within the social network does not depend on the results of opinion surveys, nor on their digital ecosystem.**

Campaigning in Mexico, the case of Nayarit

This work chose Mexico as a case study for the singularity of its campaign periods and the importance that social networks have taken in the country. When talking about online campaigns, it is presumed that the cost of doing so, compared to spots, is relatively low. However, calculating the cost difference of conventional campaigns against campaigns on social networks is complicated. In Mexico, the 2006 presidential election was the last one in which political parties and/or candidates contracted directly radio, television and other media. That year, even business chambers financed a campaign of fear against a presidential candidate: "López Obrador is a danger to Mexico." The difference between the winning candidate and that of the second position of half a percentage point favored the hypothesis that this negative campaign had modified the decision of the voters in a significant way in favor of the candidate of the PAN. Reforms made to the electoral legislation of 2007 led to an over-regulation of electoral campaigns in the media. Now radio and television must distribute part of official times in a distribution scheme between political parties proportional to their electoral weight in the most recent election. From then on, political parties define their campaigns but cannot contract directly. It is now the National Electoral Institute that authorizes the contents and orders their dissemination in the media. This scheme put an end to the excesses of parties and business allies, but limited the agility of these in terms of content and response time to campaigns of the adversaries. In this context, social networks acquire an essential weight in political campaigns, due to their scarce regulation, and the possibility of immediate response, in real time, that allows a dynamic communication. The electoral model in terms of communication media gives campaigns in social networks a freedom of handling, calibration and interactivity, which radio and television lack.

In Mexico, campaign times are very short. The finite time of government -the six years of the presidential term (of local governments and senators) and the three years of mayors (and local and federal deputies), make permanent competition one of the main characteristics of the system. Officially, the campaigns begin the day following the

registration of each candidacy and end eight days before the election (Cofipe, article 190). Although local and federal law prohibits early campaign actions to ensure fairness among competitors, there is much activity disguised within social networks. The construction of preferences occurs in years prior to the election (in Nayarit for two or three), before the candidacies are even defined. Thus, the battle for a position to obtain a candidacy initiates to the interior of each party.

In this work, political behavior in social networks of six people seeking to get a candidacy for the governorship of the state of Nayarit is studied, so it seems relevant to explain what is the mechanics to get it. Normally, political parties are not required to call internal elections for the selection of candidates (or primary elections) for local and federal offices (Bruhn, 2014). From 1946 to 2000, when Mexico was characterized by an "almost unique" party, the null institutionalization of competition and informality were part of the system. Historically, the selection of candidates for positions of popular election was characterized by "*el dedazo*", referring to the positions being assigned arbitrarily. This allowed the President or Governor in turn to determine who would succeed him in the next election. With the democratization of the country, the current scenario is a bit different. From 1990 to 2000, all the political parties discussed the convenience of democratizing the internal processes of candidate selection (Wuhs, 2009).

There are now internal elections for the selection of candidates because of the benefits they have for electoral results. The internal consultation remains a democratic figure of the political parties that could have a positive impact on the outcome of the elections. However, there have also been adverse results in the constitutional elections after much publicized consultations with the militants. Each party must establish "norms for the democratic nomination of candidates" (Cofipe, article 27.1, d). That is, political parties establish the mechanisms and limitations, and this varies from state to state and election to election. In the primary elections, the public is not a direct participant –with the exception of some primaries to elect the candidate of the National Action Party (PAN), in which citizens have been summoned to vote. In most cases, public opinion polls are used as references of approval for the selection of the candidate.

In the year in which Nayarit celebrates its first centenary as a free and sovereign state, elections are also held to renew the governorship, the Legislative Power and 20 municipalities. As a result of the political-electoral reform of 2014, the state will have to tie local elections with federal ones. That is, they choose an interim governor for one or four years. The local Congress unanimously approved a period of 4 years for a single occasion for governor, deputies and mayors. With a dominant PRI (Institutional Revolutionary Party), an active but mostly testimonial left, a PAN with recent electoral triumphs and a phenomenon of independent candidacy, the panorama of the 2016-2017 electoral process offers an interesting case study.

In Nayarit there are ten registered parties. However, the actual number of parties is 2.70 (León Ganatios, 2012), which is why real competition has mainly occurred between PRI

and PAN and strategic alliances to win votes. For the 2017 elections, several contenders are already emerging. At least six people seek to be elected as candidates. Table 1 shows the political position of each candidate and possible party affiliation.

Of the six precandidates, three seek the nomination of the PRI: two senators, the leader of the National Peasant Confederation (CNC for its acronym in spanish), Manuel Cota Jiménez and Margarita Flores Sánchez; and the economist Raúl Mejía. The mayor of Tepic, Leopoldo Domínguez, who is the natural candidate of the PAN-PRD (Democratic Revolutionary Party) alliance, already competes with another candidate who immediately emerged as an adversary. Also from the PAN, son of Echevarría (former governor who arrived in alliance in 1999), who according to his own measurements and those of others, leads the way in the premature electoral preferences. Finally, the mayor of San Blas. Hilario Ramírez, better known as "El amigo Layín" seeks an independent candidacy in a wild campaign that has won spaces in national and international media with pharaonic parties and money distribution in massive concentrations. This has been translated, surprisingly, into a prominent position in citizen preferences.

Table 1. Precandidates.

Precandidate	Possible party affiliation	Political Experience	Political Office
Manuel Cota Jiménez	PRI	Yes	Senator
Leopoldo Domínguez González	PAN	Yes	Mayor of Tepic
Antonio Echeverría García	PAN	No	None
Margarita Flores Sánchez	PRI	Yes	Senator
Raúl Mejía González	PRI	Yes	National President of the League of Revolutionary Economists
Hiario Ramírez Villanueva	Independent	Yes	Mayor of San Blas

Research design and data description

This text chose Facebook as a study tool for two reasons: the number of households with broadband Internet, which makes them potential users of the platform and the number of candidates and candidates who uses Facebook to communicate with the electorate.

Probably, the most used social network in Nayarit, for both political and non-political purposes, is Facebook. Of the six candidates of the primary election for governor in Nayarit in 2017, only four have a Twitter account (the PRI members Manuel Cota, Raúl Mejía and Margarita Flores and the mayor of Tepic Polo Domínguez). In addition, its activity is not as intense as in Facebook. The latter is the channel of communication that precandidates use to reach citizenship. And unlike polls and spots or other traditional campaign media, it is a proactive medium that measures and reacts: it allows the electorate to comment, respond and give their opinion freely and spontaneously in real time.

The study period covers from June 1, 2015 to March 30, 2016. Three surveys were accessed during this period. Although the activity in the networks began before these dates, it was decided to take June as the starting month because a month later was carried out the first survey and the end of the sample was March due to the time of delivery of the study.

By not having a platform to run Facebook data analysis, as several political consultancies and for which they pay up to hundreds of thousands of pesos, it was decided to use the free Rstudio packages. With a bit of statistical knowledge and algorithmic programming, two databases were designed. A database with 5249 data, which includes the publications of precandidates, the date they were published and the number of likes and shares of each one. The second base, a little larger but less studied, has 9674 data. Those are the sum and content of the comments to the publications of each of the actors analyzed.

Once data mining was done, the activity on Facebook was measured using different variables over time. To test hypothesis 1, the dependent variables of this project are: number of words per publication, number of posts per day and type of words used. The independent variables are: opinion polls 1, 2 and 3, dichotomous variables that show the effect before and after the surveys. Also, a variable called "day of the week" was added to capture seasonality[1] effects between days of the week.

When there is no poll, precandidates imagine their position in the digital ecosystem. To test the second hypothesis, the dependent variables are: number of likes, number of comments and number of times shared. Together with these three variables, the number of posts becomes dependent and the relation between the posts of a precandidate and the number of posts of its opponents is observed. Independent variables are: number of publications and the sentiment of them.

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[1] The term refers to the component or components within a time series that represent more or less stable fluctuations, with respect to synchronization, direction and magnitude, within the same period of time (usually one year) (OECD, 2005).

There are different metrics to measure the potential of social networks and in different studies have been tested in different ways. Some, for example, make a total recount of mentions of political actors (Bermingham and Smeaton, 2011); others do something similar but focus their attention on the mentions of the contenders made by key actors (McKelvey et al., 2014); and there are those who measure the feeling of each publication. This study concentrates on a mixture of measurements. On the one hand, when the candidates have information about their current position in the preference classification, the number of words per publication, the number of publications, the type of words and the frequency of the same, per day are measured. These four variables depend on the survey, so dichotomous variables were created, 0 before and 1 after the survey.

The number of followers is not relevant when comparing strategies between actors but it is when comparing publications of the same act over time. The number of followers as a measure of popularity would be inappropriate because the accounts were created at different times, some followers could be bots, and due to the effect of crises or events external to the social networks, which could have a greater impact on the popularity of the candidate within the social network.

Among the precandidates are three priístas (referring to PRI affiliates), the aforementioned panists (referring to PAN affiliates) and an independent. The account of the PRI senator Manuel Cota Jiménez (who is also the leader of the National Peasant Confederation of his party, was the municipal president of the state capital, a local deputy and has occupied other positions of popular election) has 18 330 followers. The second PRI member of the list, Raúl Mejía, is the National President of the League of Revolutionary Economists of the CNOP and was a delegate of the CEN of Jalisco and Sonora and since last March the national executive director of the Shared Risk Trust (FIRCO); his account is followed by 31 708 people. The third and only woman is Senator Margarita Flores. She is the precandidate with the fewest followers, her Facebook profile has a total of 15,875.

Within the opposition are the current mayor of Tepic, Leopoldo Domínguez González (being a local deputy was candidate for mayor and lost the same position in 2002 against the PRI) and the son of former PAN governor, Antonio Echevarría García, entrepreneur who until now has not held any public office position. The accounts have a total of 43,847 and 41,241, respectively.

The sixth political actor is the current (independent) mayor of the municipality of San Blas, Hilario Ramírez Villanueva "El amigo Layin". Who was recognized by Global Quality Foundation as mayor of the year in 2014, a few months into the position. He is famous for throwing money at events and festivities and exhibiting eccentrics. He has the most popular account with a total of 65,738 followers.

Table 2. Facebook accounts.

Precandidate	Facebook Page	Date of creation	Followers
Manuel Cota Jiménez	ManuelCota.Nayarit	feb-12	18 804
Leopoldo Domínguez González	PoloDominguez.Dr	aug-12	44 131
Antonio Echeverría García	antonioechevarriag	jul-14	41 752
Margarita Flores Sánchez	MargaritaFloresNayarit	feb-12	15 875
Raúl Mejía González	Raúl-Mejía-88572249778	2009	31 793
Hiario Ramírez Villanueva	ElAmigoLayin	sep-14	69 282

We had access to three pre-election surveys. The first was conducted by the consultancy *Numeros Negros* from July 17 to 19, 2015. The results of this were the following: party preferences show an advantage for the PRI with 33%. The intention of the vote granted the victory to Antonio Echeverría García, the second place to Layín; the third to Cota, the fourth to Polo Domínguez and finally Margarita Flores. However, 49% of respondents would prefer the next governor of the state to be an independent candidate, rather than a party candidate. Raúl Mejía does not appear in any of the results.

The second survey was conducted on October 13, 2015 by *Consultora del Valle*. All precandidates used in this work were considered for this survey. The spontaneous responses to the question "who would you like to be the next governor of Nayarit?" were the following: Hilario Ramírez 6.5%; Antonio Echeverría 6.4%; Manuel Cota 2.7%; Leopoldo Domínguez 1.4%, Margarita Flores 0.7% and Raúl Mejía 0.4%. In the non-spontaneous answers to the same question the first two places change: Antonio Echeverría occupies position number one in the preferences, followed by El amigo Layín. However, when showing possible alliances, the positions are the following: in the first scenario Manuel Cota, with the PRI-Green Party-New Alliance alliance, is number one with 31%; the place number two is won by the PAN-PRD alliance with 21% with Polo Domínguez as a candidate and the third place is held by Antonio Echeverría with 16% as an independent candidate. In the second scenario, if Antonio Echeverría is a candidate of the PAN-PRD alliance, he obtains a victory of 28%, only two percentage points above the second place occupied by the PRI candidate, Manuel Cota. If there is no alliance between PAN-PRD, the triumph is for the PRI. But when asked what is best for Nayarit in the next

election respondents answer that an independent candidate with 49%, instead of a party member.

The third survey was developed by the consultant Bench Poll in November 2015. In the index of knowledge, the best-known is Layín with 66.9%. He is followed by Antonio Echeverría with 55%, Polo Domínguez and Manuel Cota, both with 46.9% and Raúl Mejía with 34.7%. About preferences for possible PRI and PAN candidates, the respondents said: Manuel Cota 28.5% and Raúl Mejía 16.9% for the PRI and Antonio Echeverría 39.8% and Polo Domínguez 17% for the PAN. 30% of respondents would vote for the PRI and 30.2% would never vote for the PRI. Regardless of the party, if today were the elections, the results would be as follows: Antonio Echeverría 26.6%, Layín 21.4%, Manuel Cota 16.6%, Polo Dominguez 11% and Raul Mejia 3.5%. Although at the time of making different scenarios among three candidates the favorite to win the elections, on average, is Hilario Ramírez Villanueva.

The demographic studies are very preliminary, so Table 3 was built. The place of each candidate was determined based on two factors: the positioning and the level of recognition for each survey. The first refers to the result of the question "if today were the elections for whom would you vote?"; the second to the recognition of faces. The results of these should have a relative value, which should serve the pre-candidates to refine their campaign strategies and thus modify future outcomes.

Table 3. Positioning (P) and level of knowledge (N)

Precandidate	Survey 1 (jul 2015)	Survey 2 (oct 2015)	Survey 3 (nov 2015)
Manuel Cota Jiménez	P: 3rd place (10%)	P: 3rd place (9%)	P: 3rd place (16.3%)
	N: 2nd place (49%)	N: 4th place (34%)	N: 3rd place (46.9%)
Leopoldo Domínguez González	P: 4th place (9%)	P: 3rd place (6%)	P: 4th place (11%)
	N: 3rd place (44%)	N: 2nd place (17%)	N: 3rd place (46.9%)
Antonio Echeverría García	P:1st place (27%)	P: 1st place (25%)	P: 1st place (26.6%)
	N: 5th place (28%)	N:3rd place (24%)	N: 2nd place (55.2%)
Margarita Flores Sánchez	P: 5th place (3%)	P: 5th place (0.3%)	P: N/A
	N: 4th place (33%)	N: 5th place (23%)	N: N/A
Raúl Mejía González	P: N/A	P: N/A	P: 5th place (5.7%)
	N: N/A	N: N/A	N: 4th place (34.7%)
Hilario Ramírez Villanueva	P: 2nd place (15%)	P: 2nd place (6.5%)	P: 2nd place (21.4%)
	N: 1st place (69%)	N: 1st place (58%)	N: 1st place(66%)

Another element that should be a guide for potential candidates, in theory, is what citizens perceive as the main problem of the state. In the three surveys, the major problems in descending order, are: employment, the economic crisis and security. So, it is considered that Facebook posts should include these topics. To see if they have it, text mining was done through RStudio again, observing the frequency of the words and the association of these with other terms. If they are used, the hypothesis that precandidates use surveys as a basis for the digital campaign is fulfilled.

Data analysis and discussion of results

Before estimating a regression model, the behavior of some precandidates seems to have a reaction to the results of the demographic studies.

Hypothesis 1: After observing the results of public opinion studies, the best positioned precandidate will be the one with the most changes in their digital content over time.

Three tests were developed to evaluate the first hypothesis. A time series analysis was conducted in four different models, based on one of the examples used by Denter and Sisak (2014). All estimated models have the form of a linear regression, that is:

$$1)\ Y \sim N(\mu, \sigma)$$

$$2)\ \mu = \alpha + \beta_1 D_t + \beta_2 D_t + \dots + \beta_6 D_t + \delta_1\varepsilon_1 + \delta_2\varepsilon_2 + \delta_3\varepsilon_3$$

$$3)\ \mu = \alpha + \beta_1 D_t + \beta_2 D_t + \dots + \beta_6 D_t + \gamma_1 T_{1\dots\gamma} + \gamma_3 T_3$$

Where:

μ is the digital strategy which, depending on the test, is number of publications or number of words per post.

$D_t = \{1,2,3,4,4,5,6\}$ are the days of the week starting on Monday and ending on Saturday.[2]

$\varepsilon_i = \{1,0\}$ are the surveys that are activated at the moment in which each of the three surveys begins.

$T_1 = T - t$ (incidence date). Where "t" are the days elapsed after polls.

Based on the preliminary results of the surveys and due to the variation between preference level and knowledge of each study, it could be said that there is not yet a single favorite, so the results were interpreted for the first hypothesis in the following scenario. There is a tie between two precandidates within the results of the demographic studies: El Amigo Layín and Antonio Echevarría. Therefore, his behavior was compared with the mayor of Tepic[3], who did not obtain favorable results in the polls but is considered a natural candidate for the governorship.

The first test consists of two models with which the paper sought to measure the activity of Facebook through the number of publications. A categorical variable was created, activated by each day of the week to control the seasonality effects of the number of publications over time. In addition, three dichotomous variables were developed for each survey. These are activated the date on which the results were delivered and it is deactivated when the next study begins.

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[2] Sunday is considered as the constant to avoid problems of multicollinearity.

The first model allows to observe the effect of each survey on the posts of each precandidate over time, depending on the day of the week, with respect to everything that does not happen in that poll. For the second model, some specifications were made to the independent key variable "survey". This model explains in a better way how the polls affect the way in which each one publishes over time. The reason why this model helps explain better the effect between the number of posts and the polls is because it contains a count of days from the day of the publication of results and until the beginning of each survey, in order to analyze the effect of the survey after the days elapsed[4]. The signs of the coefficients allow analyzing whether the number of publications increases or decreases from one poll to another. Table 4 shows the coefficients and the P value of the regressions made by each poll of the two models performed.

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[4] See figures 1 and 2

	Layín		Polo Domínguez		Antonio Echevarría	
Table 4. Regressions, hypothesis 1 "number of posts", models 1 and 2.						
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Monday	-0.118	-0.25	0.829	0.71	-0.043	-0.214
	0.607	1.29	0.444	0.967	0.205	0.423
	(0.846)	(0.846)	(0.063)	(0.463)	(0.832)	(0.614)
Tuesday	-0.958	-1.429	2.413	2.757	-0.087	-0.38
	0.607	1.268	0.595	1.358	0.208	0.418
	(0.116)	(0.261)	(0.000)***	(0.044)	0.677	(0.364)
Wednesday	-1.008	-1.686	2.392	3	0.084	-0.014
	0.576	1.149	0.623	1.468	0.212	0.48
	(0.081)	(0.144)	(0.000)***	(0.043)	(0.693)	(0.976)
Thursday	-0.184	-2.86E+00	2.391	2.112	-0.046	-0.114
	0.848	1.86	4.25	1.062	0.192	0.45
	(0.828)	(1.00)	(0.000)***	(0.048)	0.809	(0.8)
Friday	-0.076	-0.085	2.082	1.152	0.109	0.226
	0.673	1.351	0.582	1.022	0.216	0.508
	(0.909)	(0.95)	(0.000)***	(0.261)	0.612	(0.656)
Saturday	0.03	-0.47	1.528	1.317	-0.2	-0.114
	0.68	1.316	0.514	1.107	0.195	0.454
	(0.964)	(0.722)	(0.003)***	(0.236)	0.306	(0.802)
Opinion poll 1	-1.04		-0.58		-0.12	
	0.35		0.43		0.13	
	(0.003)***		0.182		0.358	
Opinion poll 2	-1.27		3.67		-0.17	
	0.69		1.14		0.19	
	(0.067)		(0.001)***		0.376	
Opinion poll 3	-0.40		-1.05		-0.17	
	0.47		0.42		0.14	
	(0.396)		(0.012)		0.224	
Day 2 (after opinion poll1)		1.909		1.434		1.666
		.658		1.142		.196
		(0.004)***		(0.211)		(0.000)***
Day 3 (after opinion poll1)		-.833		-.807		.3
		.384		1.27		.307
		(0.032)		(0.526)		(0.331)
Day 4 (after opinion poll1)		-1.52		3.08		-.6
		1.512		.765		.257
		(0.316)		(0.000)***		(0.022)
Day 2 (after opinion poll 2)		-1.833		1.192		1.3
		0.384		1.270		.307
		(0.000)***		(0.350)		(0.000)***
Day 3 (after opinion poll2)		-1.52		1.08		-.6
		1.512		.765		.257
		(0.316)		(0.160)		(0.022)
Day 4 (after opinion poll 2)		7.565		19.07		.058
		.807		.709		.348
		(0.000)***		(0.000)***		(0.866)
Day 2 (after opinion poll 3)		-3.05		2.04		1.5
		.747		.709		.208
		(0.000)***		(0.005)***		(0.000)***
Day 3 (after opinion poll3)		1.48		.192		-.333
		1.083		.736		.1961
		(0.174)		0.794		(0.092)
Day 4 (after opinion poll 3)		-1.269		2.481		-.6
		(0.072)		(0.000)***		(0.022)
Constant	4.320	4.52	4.113	3.807	1.737	1.714
R-Square	0.043	0.306	0.188	0.463	0.028	0.3754
P-Value	0.08	.	(0.000)***	.	0.844	.

Note: The coefficient of the estimators and the standard error are written as a number and the p-value is written between brackets

The results of the first two models show that there are differentiated effects in the behavior of precandidates (speaking only of the number of posts), both on days of the week and when exogenous events occur when the results of the surveys are published. However, it seems that polls do not have much relevance for the number of publications made by precandidates. Model two allows to see the effect for each day passed after the disclosure of the results of the polls. One of the most important discoveries of these two models is that all actors post at least once a day. Also, those who believe they have a chance to be chosen as candidates, and are among the four best positioned and best known, are the ones who publish the most. The day of the week does not matter, with exception of the mayor of Tepic Leopoldo Domínguez.

Following the hypothesis of Denter and Sisak, we would expect that the two precandidates who lead the polls will increase the number of publications after the results of the studies are revealed because they want to maintain their popularity inside and outside social networks. For El Amigo Layín, one of the two favorite precandidates of the polls, no day is significant to make a publication. On average, he posts 4.52 times on Sundays, but Saturday he posts the most according to the first model, the only significant poll is the first. The first two days after the poll was published, he almost doubled his publications and then polls seem to have no effect. The second and third polls are not significant, however the second model shows that the fourth day after poll 2 increases the number of posts significantly (on average, 7.5 more publications). The increase and decrease in publications do not seem to be constant over time so it is not ruled out that the increase or decrease in the number of posts after several days may be due to some exogenous event and not to the survey *per se*.

The other leading candidate in the polls is Antonio Echevarría García. He publishes between once and twice a day. No day of the week is significant for the number of publications and, apparently, no survey is relevant. However, model 2 proves that the second day after the first and second polls were published and the fourth day after the third, the number of publications increases significantly. The number of publications of the natural rival of these two precandidates, Polo Domínguez, is similar. The first model suggests that the only day that does not matter to write posts on Facebook is Monday and that the survey conducted in October is significant. By adding the days elapsed after the presentation of survey results, the days of the week cease to have significance. Between days 3, 4 and 5 after the publication of all polls, the number of posts increases significantly. As with El Amigo Layín, the increase and decrease in the number of posts does not follow a pattern.

The second test consists of two other models that seek to measure the relationship between the number of words per publication and the date of presentation of the results of the polls. Models 3 and 4 try to complement the argument of the first hypothesis. As in the previous models, a modification was made in the independent variables of the fourth

model to observe the effect of the elapsed days. The results of these two models are shown in Table 5, although they are not very relevant for the hypothesis because the number of words in the publications with the highest number of likes per actor varies indistinctly. For this reason, the days elapsed after the publication of each survey were not included.

Table 5. Regressions, hypothesis 1 "number of words", models 3 and 4.						
	Layín		**Polo Domínguez**		**Antonio Echevarría**	
	Model 3	Model 4	Model 3	Model 4	Model 3	Model 4
	5.728	0.161	0.726	-0.5811	0.319	-11.273
Monday	17.511	34.42	24.563	50.049	11.254	21.083
	(0.744)	(0.996)	(0.976)	(0.991)	0.977	(0.594)
	-1.1716	-0.8	35.492	55.264	-2.832	-20.607
Tuesday	17.152	33.747	27.815	59.816	11.199	21.298
	(0.946)	0.981	(0.203)	(0.357)	0.801	(0.336)
	-0.832	-11.216	45.143	97.73	-9.895	-19.457
Wednesday	16.937	32.055	32.174	71.744	10.295	21.751
	(0.961)	0.727	(0.162)	(0.175)	0.338	(0.373)
	98.284	156.16	52.712	32.387	-8.333	-15.857
Thursday	83.256	191.818	28.441	51.952	10.045	21.417
	(0.239)	0.417	(0.065)	(0.534)	0.408	(0.461)
	29.202	36.547	62.135	34.067	1.225	-2.651
Friday	21.666	41.065	33.358	60.278	10.339	21.964
	(0.179)	0.375	(0.063)	(0.573)	0.906	(0.904)
	20.46	17.2	12.548	-2.983	-13.756	-3.823
Saturday	17.906	34.742	25.703	49.066	10.232	21.02
	(0.254)	0.621	(0.626)	(0.952)	0.18	(0.856)
	-44.795		-50.25		-0.70	
Opinion poll 1	11.435		19.65		6.84	
	(0.000)***		0.011		0.918	
	-18.309		68.33		-4.84	
Opinion poll 2	25.239		50.30		10.07	
	(0.469)		0.175		0.631	
	29.404		-39.88		-7.58	
Opinion poll 3	38.624		21.07		7.34	
	(0.447)		0.059		0.303	
		43		23.043		93.25
Day 2 (after opinion poll1)		22.433		45.277		14.221
		(0.057)		(0.611)		(0.000)***
Day 3 (after opinion poll1)		-53.583		-90.423		33.1
		19.797		60.159		14.891
		(0.008)		(0.135)		(0.028)***
		-206.96		95.92		-36.5
Day 4 (after opinion poll1)		190.154		34.221		14.400
		(0.278)		(0.006)		(0.013)
		-92.583		-22.423		32.1
Day 2 (after opinion poll 2)		19.797		60.159		14.891
		(0.000)***		(0.710)		(0.202)
		-180.96		-28.08		-18.5
Day 3 (after opinion poll2)		190.154		34.221		14.400
		(0.343)		(0.413)		(0.202)
		254.652		871.24		21.294
Day 4 (after opinion poll 2)		32.414		45.886		15.201
		(0.000)***		(0.000)***		(0.164)
		-116		-102.708		-21.705
Day 2 (after opinion poll 3)		23.903		29.656		15.201
		(0.000)***		(0.001)***		(0.156)
		33.2		4.307		103.916
Day 3 (after opinion poll3)		25.211		39.089		13.897
		(0.190)		(0.912)		(0.0000)***
		-20.961		108.888		-11.75
Day 4 (after opinion poll 3)		23.433		31.257		14.221
		(0.372)		(0.001)***		(0.411)
Constant	107.367	123.8	172.383	150.692	75.712	76.357
R-Square	0.04	0.096	0.072	0.426	0.026	0.435
P-Value	0.008	.	0.045	.	0.84	.

Note: The coefficient of the estimators and the standard error are written as a number and the p-value is written between brackets

The number of words seems to be irrelevant for the purpose of maintaining a strategic advantage over other competitors. The only one for whom a poll seems to have an effect is El Amigo Layín. Model 3 shows that the publication of the results of the first poll has a high effect on the decrease in the number of words used by the candidate. Model 4 shows that there are days after the poll is published in which the number of words for each candidate increases or decreases. However, the R-square of the model is very small, so it is possible to affirm that there is no relationship between the number of words per post and the results of the polls.
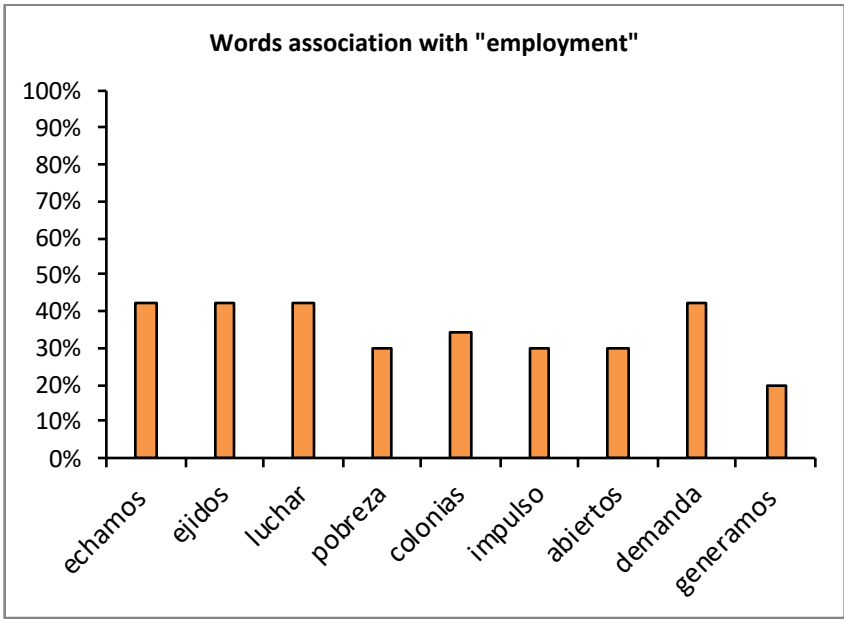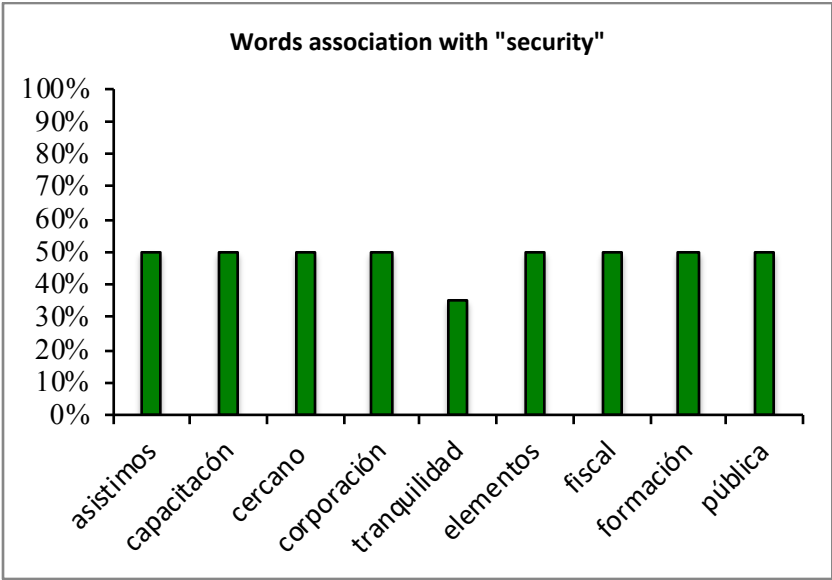
Text mining was used on test 3 to measure the relationship between the frequency of terms related to what the people from Nayarit consider, according to the results of the demographic studies, the main problems of their state: employment, the economic crisis and security. To see if there is a relationship between the type of terms used and the results of the polls, "tm" package in Rstudio was used to do text mining. The package allows to deconstruct structured data, from which terms and unknown information are extracted for the analysis. First, the punctuation marks were eliminated to get a base with random words. Having the base with thousands of unstructured texts, it was searched if within the first thousand words most used by the precandidates were the terms associated with the problems of the state. Likewise, the terms associated with the words "employment", "work" and "security" were traced for each actor.

Among the thousand words most frequently used by Ramírez Villanueva, the word "work" is among the first 30, like "San Blas", "Nayarit", "gracias". The terms most used are the largest and become smaller as the frequency decreases. The terms associated with the terms "employment" and "security" are shown in the next figures. Those linked to the word "employment" have a high correlation (23, 38 and 50%) with the words "best", "generate", "Opportunities", among others.

Words association with "employment"

Words association with "security"

The results are similar for Echevarría García. Within the 50 most commonly used words are "company" and "employment", as well as "Nayarit". The term security does not have a significant correlation (20%) with any word. However, "employment" and "work" have, as shown below.

Words association with "employment"

Something similar happens with the type of words and the frequency of the same for the mayor of Tepic. The words "security" and "work" are among the terms most frequently used by Leopoldo Domínguez.

Words association with "security"

Chart categories: asistimos, capacitacón, cercano, corporación, tranquilidad, elementos, fiscal, formación, pública

Words association with "employment"

Chart categories: echamos, ejidos, luchar, pobreza, colonias, impulso, abiertos, demanda, generamos

The results seem to be positive for the hypothesis that political actors use results of opinion polls to modify their digital strategies, especially those that are considered as favorites to be elected as candidates. Similarly, when examining the most frequent terms of the other actors there were not found words associated with the main problems of the Nayarit (see Annex), nor significant correlations between the words "employment", "work" or "security".

Tests one and three support the first hypothesis. With the data obtained by models 1 and 2 it is possible to observe that the result of the polls has a significant effect on the number of posts of precandidates the first days after being published. Although the effect decreases as time passes, public opinion polls continue to be relevant for those who consider candidacy a credible possibility, at least the first few days after the results are revealed. After a week the effect of these is doubtful, because it is likely that the increase in posts is due to an exogenous event such as a political scandal or some national or international celebration. In addition, the selection of topics or words seems to be determined by the results of the surveys. In addition, The number of words is not relevant to the first argument but the number of words and the frequency of the words are.

Hypothesis 2: when there is no survey, the candidates will modify their strategy after observing their own digital ecosystem and comparing their own technique with that of the other competitors - or at least with the rival of the same party.

To test the second hypothesis, six different tests were developed. As for hypothesis 1, time series models were used. The estimated models have the form of the following linear regression:

$$1) \quad Y \sim N(\mu, \sigma)$$
$$\mu = \alpha + \beta_1 D_t + \beta_2 D_t + ... + \beta_6 D_{t+} + \delta_i \varepsilon_j + ... \mu = \alpha + \beta_1 D_t + \beta_2 D_t + ... \gamma_1 S_{1...\gamma} + \gamma_3 S_3$$

Where:

μ it is the dependent variable, which varies. It can be number of publications, number of likes, type of feeling or number of daily publications.

$D_t = \{1,2,3,4,4,5,6\}$ are the days of the week starting on Monday and ending on Saturday.

$\varepsilon_j = \{1,2,3,4,5,6\}$ is the number of publications of each candidate.

$S = \{1,2,3\}$ is the sentiment classification of each publication (positive, negative or neutral)

The order of the dependent and independent variables used in the first hypothesis was modified. When there are no polls or they cease to have an effect on the digital behavior of precandidates, online political campaigns are modified based on digital ecosystems.

The first test consisted of two models that attempt to measure the effect of the number of publications by five political actors on the number of publications of a precandidate. For the second model, delayed variables were added one day prior to each precandidate's

daily publications, in order to incorporate previous information because the publications have a delayed response time. Results are shown in the following tables. The days of the week were not added to the results tables because none is significant.

Table 6. Hypothesis 2, model 1 (number of posts)

	Layín	Cota	Polo	Antonio E.	Margarita F.	Raúl Mejía
Number of posts	Model 1	Model 1	Model 1	Model 1	Model 1	Model 1
Posts candidate 2	-.471	-.166	-.4471310	-.0961655	-.3483669	-.0740861
	.044	.027	.070225	-.1590994	.05613	.0126899
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Posts candidate 3	-.235	-.137	-.7405165	-.1590994	-.5703557	-.118954
	.021	.012	.064933	.0152274	.0531094	.0124436
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Posts candidate 4	-.889	-.520	-1.383552	-.0787644	-.2840022	-.0597462
	.0672	0.042	.0939103	.0071474	.0250704	.0059939
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Posts candidate5	-.269	-.155	-.4166383	-.0893827	-1.070241	-.2249297
	.067	.0125339	.0276099	.0068577	.0795826	.0195621
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Posts candidate 6	-.973	-.5523212	-1.490241	-.3193948	-1.161994	-.0683432
	.096	.0590334	0.1407074	.0329667	.115041	.0059004
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Constant	1.672	.8475882	2.288664	.5118518	1.839987	.4226419
R-Square	0.2	0.1962	0.2472	0.2065	0.2204	0.173
P-Value	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***

Note: The coefficient of the estimators and the standard error are written as a number and the p-value is written between brackets

Number of posts	Layin	Cota	Polo	Antonio E.	Margarita F.	Raúl Mejía
	Model 2	Model 2	Model 2	Model 2	Model 2	Model 2
Posts candidate 2	-.413	.0111	-.091	0.032	-.060	.011
	.076	.0055	.009	.005	.008	.004
	(0.000)***	(0.045)	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Posts candidate 3	.102	.0397	13.630	.0309	-.900	-.143
	.033	.0195	.0649	.005	.111	.023
	(0.002)***	(0.042)	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Posts candidate 4	-.530	-.445	15.759	-.177	.072	-.023
	0.147	0.097	.171	.009	.037	.006
	(0.000)***	(0.000)***	(0.000)***	(0.237)	(0.054)	(0.054)
Posts candidate5	.077	.0319	.114	-.011	-.957	-.125
	.029	.0179	.030	.009	.111	.028
	(0.009)	0.076	(0.000)***	(0.000)***	(0.054)	(0.000)***
Posts candidate 6	2.016	-.348	3.924	-.017	4.214	-.008
	2.341	.065	2.870	.001	2.859	.005
	(0.389)	(0.000)***	(0.171)	(0.000)***	(0.131)	(0.141)
Constant	1.672	.657	2.288	1.030	1.030	.177
R-Square	0.2	0.024	0.247	0.103	0.026	0.025
P-Value	(0.000)***	.	(0.000)***	.	0.84	.

Table 7. Hypothesis 2, model 2 (number of posts)

Note: The coefficient of the estimators and the standard error are written as a number and the p-value is written between brackets

The results show that, in some cases, the number of posts of the other precandidates is significant for the publications of each precandidate. Although these do not seem to have effect until the next day. That is, the posts of precandidates tend to be influenced by the activity of other actors one day before. This hypothesis is applicable to Polo Dominguez, who post a considerable number of times more than his main opponents: Manuel Cota and Antonio Echevarría. However, the R-square of model two is very small so we cannot reject the null hypothesis that the publications of the other precandidates do not matter for the own activity.
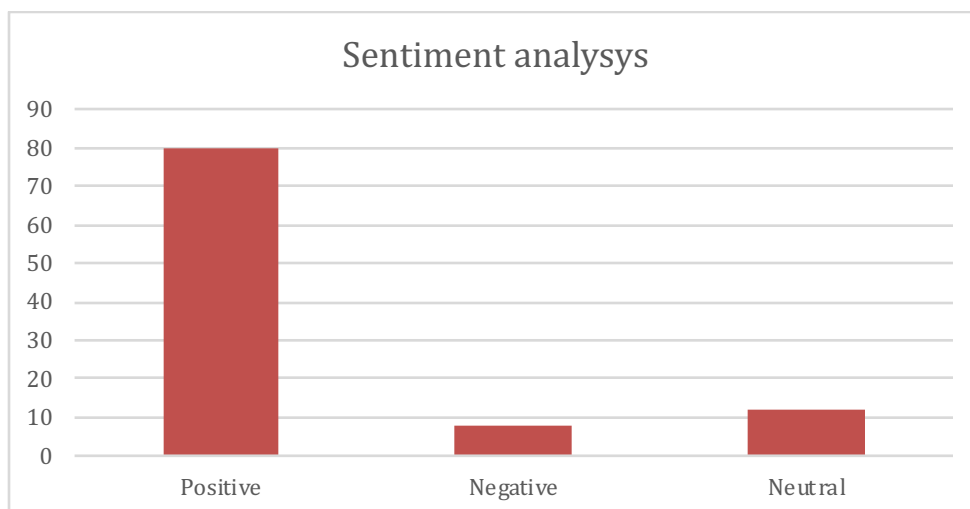
For model 4 the dependent variable is the number of likes. A panel was made because it explains in a better way the transversal effect of the behavior of the precandidates as a whole. In addition, this model has fixed effects. Which means that it recognizes that there are other variables such as charisma, among others, that cannot be measured. The results suggest that the most relevant thing to get likes is the number of publications. As a whole, the number of publications a week ago is relevant to the number of daily likes.

Table 8. Number of likes

Likes	Todos los candidatos Model 4
Number of words	.005 .0207 (0.790)
Posts, 3 days ago	-7.123 3.510 (0.045)
Posts, a week ago	9.187 3.02 (0.003)***
Constant	161.247
R-Square	0.587
P-Value	(0.000)***

Note: The coefficient of the estimators and the standard error are written as a number and the p-value is written between brackets

In test 3, structured texts were conserved to carry out an analysis of feelings of each publication sent by the profiles of the precandidates. Sentiment analysis refers to the task of classifying each of the opinions, related to the feelings expressed within a natural language of text (Mullen and Malouf, 2006). And it turns out to be a very useful tool to automatically identify information that allows classifying, evaluating texts, as well as identifying particular problems in them (Mullen and Malouf, 2006). For precision it was decided to use "positive", "negative" and "neutral". In Spanish there is still no dictionary developed by programmers to be able to automatically make the analysis of sentiment in Rstudio, so texts were translated into English and it was necessary to create a new database for the classification of feelings. One of the most interesting results is that the emotional tone of 80% of the publications of all precandidates as a whole is positive. There are very few publications classified as negative and when there are, it is because some precandidate criticizes present or past administrations, for example, and neutral ones consist basically of reports of activities.

Sentiment analysys

Once publications were categorized, the new data were added to the original base, with which it was possible to make the following observations. For test 4, the number of likes was used as the dependent variable and the number of publications as independent. The feelings of the publications were added as an independent variable to see if it has any effect on the behavior of the electorate. The feeling of each publication has no effect on the number of likes it receives for any candidate. The day of the week was not added to the results table because it is not significant either for the number of likes. The only variable that has a positive and significant effect for all precandidates is the number of publications per day.

Table 9. Likes per candidate

likes_count	Layín	Cota	Polo	Antonio E.	Margarita F	Raúl Mejía
	Model 5	Model 5	Modelo 5	Model 5	Model 5	Model 5
Number of posts	344.467	175.158	128.685	652.696	111.105	273.999
	30.601	12.384	20.291	108.300	7.563	76.165
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Positive sentiment	-23.459	-27.602	-149.907	-79.921	124.013	37.537
	173.073	33.893	132.674	154.822	58.396	78.287
	(0.892)	(0.416)	(0.259)	(0.606)	(0.035)	0.632
Negative sentiment	-244.775	-26.975	101.847	-139.898	83.342	-68.84
	275.3	40.748	233.975	248.055	70.335	79.622
	(0.375)	(0.509)	(0.664)	0.573	(0.237)	0.389
Constant	92.357	138.456	123.707	161.492	-56.489	-101.856
R-Square	0.492	0.748	0.476	0.254	0.478	0.455
P-Value	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***

Note: The coefficient of the estimators and the standard error are written as a number and the p-value is written between brackets

For test 5 the same process was performed as in the test and model 5. The only difference was that the number of comments per day was used as dependent variable. The possible effect on them of the day of the week, the number of posts and the sentiment of the publications was observed. No day of the week is significant for the number of daily comments. The results show that the sentiment of the publications have no impact on the number of comments in each post. One reason may be that the people who comment in the precandidate's publications are either safe voters or loyal attackers, so the only thing that matters to them when they comment is to support or attack, regardless of the content of the publication.

			Table 10. Number of comments			
Number of comments	**Layin** Model 6	**Cota** Model 6	**Polo** Model 6	**Antonio E.** Model 6	**Margarita F.** Model 6	**Raúl Mejía** Model 6
Number of posts	16.488 1.499 (0.000)***	4.003 .534 (0.000)***	7.751 1.364 (0.000)***	26.163 6.111 (0.000)***	7.060 4.232 (0.096)	11.713 3.776 (0.002)***
Positive sentiment	1.452 11.827 (0.902)	-11.474 7.944 (0.150)	-22.058 10.503 (0.037)	-10.451 8.494 (0.220)	-11.093 14.178 (0.435)	5.487 4.070 (0.179)
negative sentiment	1.327 18.249 (0.942)	-13.699 8.191 (0.096)	5.815 21.291 (0.785)	-1.099 14.082 (0.938)	6.235 12.919 (0.630)	-.442 3.978 (0.912)
Constant	-5.642	20.728	20.261	15.106	-3.443	-6.975
R-Square	0.348	0.269	0.356	0.22	0.098	0.268
P-Value	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.114)	(0.030)

Note: The coefficient of the estimators and the standard error are written as a number and the p-value is written between brackets

What determines the number of comments per day is the number of publications of each candidate. That is to say, the more published the precandidates, the greater the number of comments there will be. This is most evident for the two favorite actors in the polls, El amigo Layín and Toño Echevarría, and for the natural candidate for the governorship, Leopoldo Domínguez.

These tests are relevant to verify that the six candidates change their digital strategy based on their own digital ecosystem. That is to say, as hypothesis 2 suggests, these six precandidates compare their strategy with the one they used in previous days to make modifications. In addition, they compare their own strategy with that of other political actors, mainly against those seeking the candidacy of the same party.

Conclusions

After observing the digital behavior of the six precandidates for Nayarit's candidature in 2017, through the combination of different quantitative methods, it can be seen that demographic studies are no longer the only effective means for feedback from political campaigns. Due to the over-regulation of traditional campaigns, much of the struggle for power occurs within social networks. The six political actors that seek to position themselves as candidates for the governorship of Nayarit in 2017 are already on a political social media campaign. To achieve its objective, as demonstrated in this paper, the precandidates modify their strategy in two ways: using the certainty of old practices and venturing into the chaos of new technologies. That is, after studying the results of public opinion surveys and comparing its digital ecosystem, with what was done in previous days and with that of its opponents.

Public opinion polls continue to be necessary tools for conducting and modifying electoral campaigns, including those that occur in the social media arena. The best positioned actors in public opinion studies take advantage of the results to position themselves within social networks as favorites. When comparing the results of all candidates, it is observed that in the period in which there are surveys, the best positioned actors or those who believe that they have a real chance of winning a candidacy use the results of the demoscopic studies as a starting point. They modify the words they use within each publication and they are the actors that have the most publications per day, at least the first days after the results are known.

When the polls cease to have an effect, that is, after a few days have elapsed, the precandidates for the governorship of Nayarit modify their digital strategy by observing their own publications and those of the other precandidates. It was expected that the feeling of the publications determined both the number of comments and the number of likes. However, it seems that the only thing that has an effect for these two reactions of the electorate is the number of daily publications.

The best positioned candidates could use their advantage, especially due to the lack of regulation within the social networks, to define their opponents but in Nayarit they have not done so. Apparently, for the time being, they are still more interested in improving their political image, the level of knowledge and an eventual intention to vote that puts them in a competitive position to get the candidacy of their own party than in attacking whoever could be their possible opponents.

The exercise carried out in this work could benefit precandidates, candidates, governors in turn and even academics. It could help politicians to modify or preserve the perception that the electorate has about them. Social network studies within the academic field are few but could be enriched if there were works that expands the understanding of the topics explored in this work.

Social networks are a young tool that has changed communication habits, from the innocuous exchange of content in the field of friendship to the strategies for obtaining and

retaining public power. And although the companies that own the networks have in-depth knowledge of the behaviors and personal data of the users that allow their "monetization", the study of the behavior of those who hold or claim public offices and potential voters have not produced conclusive data that are material accurate premium for the digital strategies of electoral castes. This work is added to the set of academic explorations that will lead to a better knowledge of the new forms of political communication imposed by digital environments.

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