UNIVERSITAT JAUME·I

Doctoral Programme in Economics and Business

Universitat Jaume I Doctoral School

Citizens' Attitude towards Political Corruption and the Impact of Social Media

Report submitted by Guillermo Belda Mullor in order to be eligible for a doctoral degree awarded by the Universitat Jaume I

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Castelló de la Plana, November 2018

Funding

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Chapter 1. **Introduction**

1.1 Motivation for this Research

1.1.1 **Research Topic Contextualization**

Citizens are increasingly concerned about political corruption, and parties, especially during the electoral campaigns, promise voters not only that they will implement strictly measurements to avoid it, but also that they will expel of their parties those politicians involved in corruption. However, although the politicians not always keep these promises, there are several electoral processes which show they are not as much penalized as it could be expected. Citizens' attitude towards political corruption seems to be the key to explain what is behind of this behaviour.

Political corruption is damaging democracies' quality. In political corruption, it can be distinguished two different levels of responsibility: legal and political. Although they are naturally connected and citizens' attitude towards political corruption impacts on both of them, it is necessary to analyse each one independently.

From a legal perspective, there is a legislative branch, which develops the laws against political corruption; and a judicial branch, which judges it based on them. Regarding this perspective, in a short term, it seems citizens cannot do too much, although it is worth noting that the legislation also depends on citizens' attitudes and behaviour. History shows a multitude of laws which have been modified after citizens' mobilizations.

Nevertheless, from a political perspective, citizens' attitude towards political corruption has a quicker impact. When a corruption case comes to light, the politician involved should left his position immediately and his party should expel him. Unfortunately, it does not happen always and citizens are forced to keep being governed by corrupted politicians who claim they are not convicted. In these cases, on one hand, citizens can show their disapproval through citizens' movements. It has not always a direct and immediate impact, but, as discussed before, it can contribute in a long term to modify the legislation. On the other hand, citizens can effectively punish corrupted politicians and also the parties which hold them, by exerting their right of voting.

Citizens would be expected to punish those politicians who have been involved in corruption, however, not always political corruption has major electoral consequences.

Taking as a starting point the situation described above, the main goal of the thesis is the analysis of citizens' attitude towards political corruption. For this purpose, it will be identified and analysed the factors which play a key role. The information extracted, on one side, will allow developing better strategies in order to reach a greater impact on citizens' attitude towards political corruption; and on the other side, it will help to understand the results of some electoral processes.

The first part of this thesis will be focused on the analysis of what it has been called "Real World". In this part, it will be analysed the role played in citizens' tolerance towards political corruption by the following variables: economic context, social pressure, political awareness, political leaning, the new parties' emergence and political sympathy. For this purpose, on one hand, it will be used information provided by two independent entities: *Centro de Investigaciones Sociológicas*[1] (CIS) and *Instituto Nacional de Estadística*[2] (INE); and on the other hand, it will be designed and conducted a specific survey where participants will face questions related to each of the previous variables.

Then, it will be studied what it has been called "Virtual World". In this part, it will be analysed the online debate generated about political corruption. For this purpose, it will be selected the social network Twitter, one of the most popular forums globally increasingly considered by scholars as political platform. Furthermore, in general, the conversations on Twitter are open and accessible to all, and consequently, it is relatively easy to identify and collect conversations relating to any debate in progress.

1.1.2 **The suitability of the Spanish case**

Recently, Cordero and Blais (2017) underlined that Spain clearly illustrates how corruption does not have the electoral consequences it could be expected. In particular, they highlighted firstly, how during the period 2011-2015 where Spain was going through an economic crisis, the party in the government was affected for multitude cases of corruption. Secondly, that these cases of corruption were widely covered by the

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[1] http://www.cis.es/cis/opencms/EN/index.html
[2] http://www.ine.es/en/welcome.shtml

media: newspapers, radio, TV, and social media. Thirdly, that the vast majority of Spanish society was aware and worried about corruption. Concretely, a consequence of all the corruption scandals, following the CIS[3], while in 2011 just 2% of the population mentioned corruption as one of the main Spanish problems, this percentage increased until 56% in 2015. In fact, corruption became the second greatest problem for Spaniards after unemployment[4] and the Spain's score on the Corruption Perception Index by Transparency International[5], on a scale anchored at 0 (highly corrupt) to 100 (very clean), fell from 65 in 2011 to 58 in 2015. Finally, they stressed how in this context, the party which was in the government, although being party plagued of corruption, was still able to win the General Election of December 2015.

Accordingly, Fernández-Vázquez et al. (2016) considered that Spain was an excellent case to analyse citizens' attitudes towards political corruption as this country is a clear example where although voters disliked corruption, incumbents rarely suffered electoral consequences for their illegal actions. Besides, they pointed out how on a scale anchored at 0 (highly corrupt) to 10 (very clean), Spain generally scored poorly in all cross-country rankings of perception of corruption at all administrative levels. Finally, they emphasised that, as most of the Spanish corruption scandals are investigated by judicial authorities, there is an extensive press coverage which increased citizens' political awareness.

Previously, Anduiza et al. (2013) also found Spain was a clear example where political corruption has not the electoral consequences it could be expected. They justified the convenience of focusing on Spain the study of citizens' attitudes towards political corruption underlining that at the time in which their research was conducted, political corruption was a salient issue in the country. Particularly, they highlighted on one side, how the Spain's score on the Corruption Perception Index by Transparency International was 6.1 on a scale anchored at 0 (highly corrupt) to 10 (very clean); and on the other side, that Spain had an institutionalised party system with more than 60% of its population reporting feeling close to a political party, which in their opinion clearly benefited the goal of measuring the political sympathy impact.

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[3] CIS January 2011 and January 2015
[4] CIS January 2015
[5] https://www.transparency.org/cpi2015

Summarising, this research will be focused on Spain because it constitutes a suitable case to the study of citizens' attitudes towards political corruption. Firstly, the last years, Spanish citizens have been facing a multitude scandals of corruption in which their government has been involved. Secondly, it has recently broken into the political scene two new parties which claim to be the solution to regenerate a democracy strongly affected by political corruption: "Podemos" (We can) and "Ciudadanos" (Citizens). The irruption of these new parties on one hand, has divided the electorate breaking the traditional bipartisanship; and on the other hand, has contributed to the impossibility of reaching agreements after the General Elections of December 2015. As a consequence, the General Elections were repeated on June 2016. Noted that, in the last General Elections of 2016, Podemos presented a single list in coalition with "Izquierda Unida" (United Left) under the name "Unidos Podemos" (Together We Can). Finally, Spain, as mentioned, represents a clear case where political corruption, although Spaniards declare to be concerned, has not the electoral consequences it could be expected. The party which was in the government, in despite of being plagued with corruption, not only won the General Elections in December 2015 with a vote share of 28.7%, but also the repeated General Elections in June 2016 increasing their support until 33%.

In the following section, it will be described the recent evolution of the Spanish political situation, how the main parties are perceived in the left-right axis, their last electoral results, and the electorate's distribution by age. These characteristics also make this country especially interesting for this research.

1.1.3 The Spanish Political Landscape

Once it has been explained the reasons to focus the research on Spain, the aim of this section is to briefly introduce the lector into the current Spanish political situation. Traditionally, the main parties in Spain have been "Partido Popular" (Popular Party) and "Partido Socialista Obreo Español" (Social Worker Spanish Party), which have been associated with the right and left political leaning respectively, and have represented more than 70% of the Spanish voters. However, in recent years, as a consequence of the multitude scandals of political corruption and the economic and social crisis, it has appeared the new parties mentioned before: Podemos, which since the last General Elections of 2016 is presented in coalition with Izquierda Unida as Unidos Podemos; and Ciudadanos. For convenience of reference in the discussions, the four main parties

will be referred by the acronyms as follows: "Partido Popular" as PP; "Partido Socialista Obreo Español" as PSOE; "Unidos Podemos" as UP; and "Ciudadanos" as C's.

In order to draw a quick picture of the four main Spanish parties, firstly, it will be analysed where Spaniards place political parties in the traditional left-right axis. Then, it will be shown the electoral results of the last General Elections which were in June 2016 and those obtained in 2011 in order to better understand the recent evolution of the Spanish political situation. Finally, it will be studied the age distribution of Spanish voters.

Regarding the Spaniards' perception about parties' political leaning, following the CIS[6], in Figure 1-1 it is shown how being 1 left political leaning and 10 right political leaning, UP and PSOE are identified as having a left political leaning while C's and PP as having a right political leaning.

Figure 1-1 Parties' Political Ideology perceived
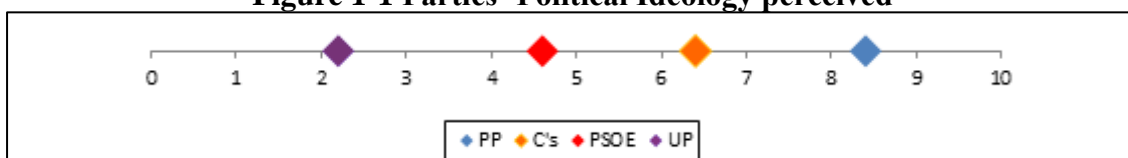
Source: CIS May 2016

Concretely the mean of the citizens' perceptions are 8.4 for PP, 6.4 for C's, 4.6 for PSOE and 2.2 for UP. It is especially relevant how in spite of the efforts that new parties have made to avoid being classified following the left-right axis, Spaniards clearly identify them as having a left and a right political leaning. Accordingly, Orriols and Cordero (2016), when characterising the new parties' voters, found that UP voters were mainly politically disaffected citizens with a left political leaning while C's voters were citizens with lower levels of political trust and ideologically moderate.

Related to the electoral results, in Figure 1-2 it is represented the recent evolution of the parties' support, by comparing the electoral results of June 2016 with those obtained in November 2011.

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[6] CIS May 2016

Figure 1-2 Electoral results 2011 vs. 2016
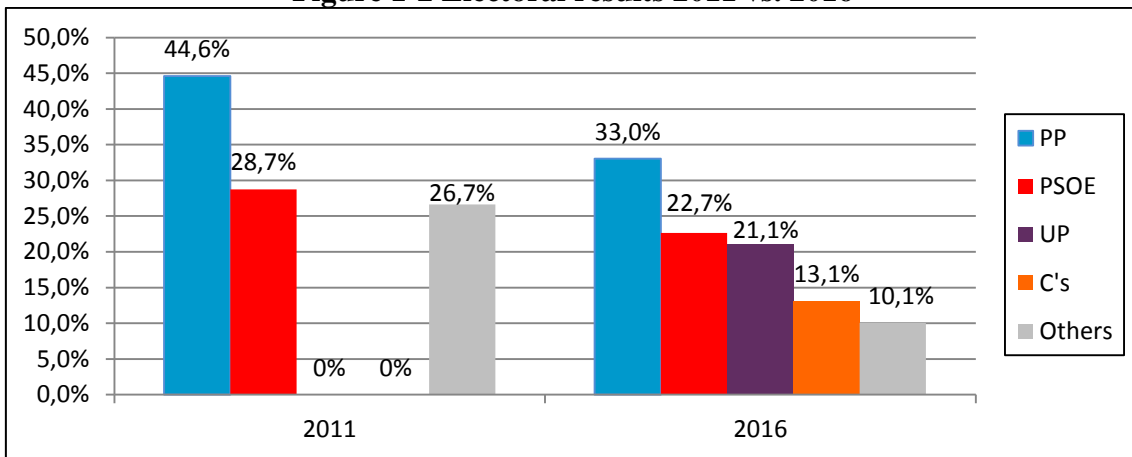
It is highlighted how traditional parties PP and PSOE have lost supporters, concretely 13.6pp and 6pp; while new parties UP and C's have strongly burst into the political scene with a vote share of 21.1% and 13.1% respectively.

Related to the voter's distribution by age, following the CIS[7], in Figure 1-3 it is shown how voters between 18 and 44 years feel closer to new parties while those with more than 55 years clearly prefer traditional parties, therefore, it is underlined how new parties especially engage with younger voters.

Figure 1-3 Spanish Voters' Distribution by Age
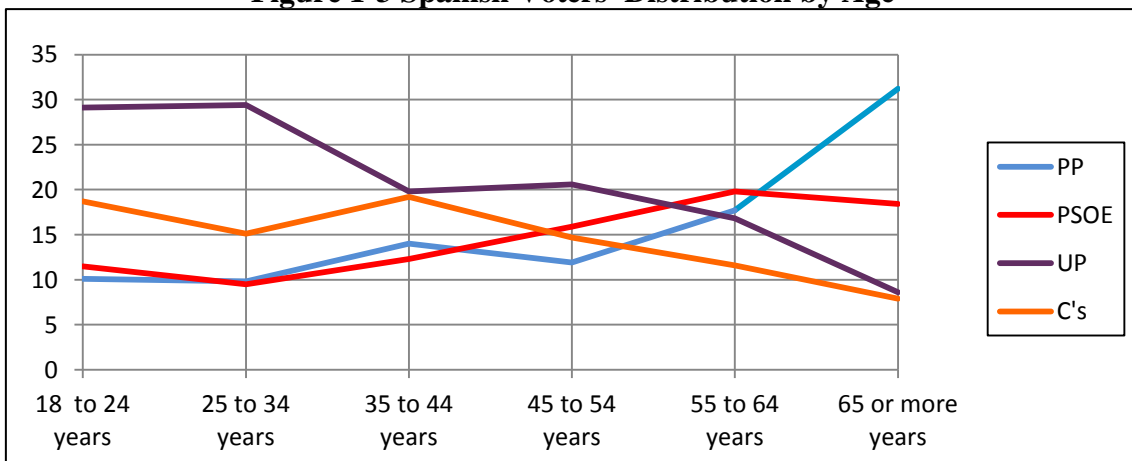
Finally, it is worth noting how in May 2018, a sentence that condemned for corruption the government of PP, led to a wide agreement among several parties of the opposition which allowed PSOE to win a no-confidence motion in June 2018.

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[7] CIS January-March 2016

Conclusion

Analysing all the information above, the main conclusion is that the Spanish political situation has recently lived the greatest revolution of the last decades. Two new parties have appeared and one of them has been really close to reach the second position in its first General Elections.

Considering new parties' ideology, it has been highlighted how both have been clearly identified as having a left and a right political leaning, which is not a big difference with the traditional parties. However, the new parties' emergence has introduced the age as a decisive variable when classifying voters. New parties' supporters are clearly younger than those who support traditional parties. Youth support, being currently a handicap in a society where more than 45% of the population with voting right is more than 50 years old, is also the main strength of new parties, as traditional parties will need to attract younger voters if they want to stay in power.

1.2 Research Statements

The main research question of this thesis, based on the fact that political corruption has not the electoral consequences expected and in order to design better strategies to promote citizens' political criticism and achieve a higher quality democracy is: **Which are the factors that have a greater impact on citizens' attitude towards political corruption and which is the role played by social media?**

In order to address this issue, it will be studied the following aspects:

- **What is the tolerance's level towards political corruption? Does it vary during an economic crisis?**

  It will be analysed citizens' evaluation about the economic and political situation to determine if it is possible to establish a positive correlation between both indicators. It will be used public data from the CIS, an independent entity whose main objective is "to contribute scientific knowledge on Spanish society". The CIS carries out surveys which allow finding out the Spaniards opinion in a very different fields and its evolution over time. For this purpose, it will be studied the evolution of citizens'

opinion on economic and political situation measured through the following indicators: "Economic situation assessment" and "Political situation assessment".

Moreover, it will be analysed the relationship between the Gross Domestic Product (GDP) and the concern over corruption to determine if it is possible to establish a negative correlation between both indicators. In this case it will be used data from the INE, an independent entity whose main objective is "to collect, produce and disseminate relevant, high-quality, official statistical information"; and also from the CIS. Concretely, it will be studied the evolution of the following indicators: "GDP growth rate" and "Growth rate of the concern over corruption".

Finally, and taking into account that Spain has recently moved from a situation of economic expansion to an economic crisis, participants will be directly asked in the survey how is their criticism's level towards political corruption since the economic crisis started.

- **The impact of social pressure on citizens' attitude towards political corruption. Has the information emphasizing other citizens' reactions against political corruption any effect? Has the information focused on citizens' losses a greater impact than the provision of factual information?**

It will be designed two versions of the survey with different scenarios assigning each one aleatory to half of the sample. The scenario of the first version will exclusively describe a political corruption case discovered while in the scenario of the second version, this description will be accompanied by information about how citizens are reacting. After reading the scenarios, participants will be asked to indicate their opinion. In order to be able to focus exclusively on the impact of the different scenarios, these responses will be compared with the responses expressed by participants in a previous question where they will be required to indicate their opinion about the same

case of political corruption, in this case presented just with a short sentence without any contextualization.

Besides, in order to analyse if it possible to reach a higher impact on citizens' criticism towards political corruption through information focused on citizens' losses, it will be presented a list of four hypothetical pieces of news about political corruption (two of them just providing factual information, and the other two emphasizing the economic and social losses they provoke). After reading the four hypothetical pieces of news, participants will be asked to choose the one which they feel as the most serious.

- **Are citizens with a higher political awareness less tolerant towards political corruption?**

For the purpose of measuring the level of political awareness, participants will be asked about two questions related to politics; then, they will be classified taking into account the number of correct questions. Regarding the analysis of the attitude towards political corruption, participants will be asked to indicate their opinion on four different cases of political corruption; then, it will be considered the mean of these opinions.

- **The effect of citizens' political leaning on their tolerance towards corruption. Do progressive citizens and conservative citizens exhibit different level of tolerance?**

In order to find out participants' political leaning, they will be required to place themselves on a left-right scale. Regarding the analysis of the attitude towards political corruption, as it has been already described, it will be used the mean of participants' evaluations of four political corruption cases.

- **The impact of the new parties' emergence. Have new parties' supporters different attitude towards political corruption compared with traditional parties' supporters?**

Participants will be asked to indicate the party which they feel closer to their ideas among a list containing the four main Spanish parties (PP, PSOE, UP and C's) and also the option "Other Party"; then, they will be classified as new parties' supporters when they select UP or C's, and as traditional parties' supporters when they chose PP, PSOE or the option "Other party". Regarding the analysis of the attitude towards political corruption, it will be also used the mean of participants' evaluations of four political corruption cases.

- **Citizens' perception about corruption in political parties. How strong do citizens associate different parties with corruption? Does this association vary among party's supporters? Does citizens' attitude towards a political case of corruption change when it affects to their own party?**

  In order to measure the association between parties and corruption, participants will be asked about the level of corruption perceived in each of the four main Spanish parties (PP, PSOE, UP and C's).

  For the purpose of analysing if the attitude towards political corruption varies when it is the preferred party the one involved, participants will face a hypothetical case of corruption where their preferred party is involved and they will be required to indicate their opinion. In order to isolate the partisanship effect, these responses will be compared with the responses expressed by participants in a previous question where they will be required to indicate their opinion about the same case of political corruption but without specifying the party involved.

- **Who is leading the online debate held on Twitter related to political corruption? Which is their political leaning? Which is their preferred party?**

  It will be analysed the online debate about politics held on Twitter to detect the political leaning and the preferred party of those users who are

contributing to disseminate the messages with the highest rate of diffusion against political corruption. For this purpose, it will be exhaustively performed a detailed analysis of the Twitter accounts of those users: their tweets, their websites, and the information provided in their profiles.

- **Which are the parties most reported on corruption in the online debate about political corruption held on Twitter?**

It will be also examined the content of the messages most retweeted against political corruption in the online debate about politics held on Twitter in order to identify which political parties are the most reported on corruption.

- **Is it possible to establish any association between users' preferred party and parties reported on corruption in the online debate about political corruption held on Twitter?**

Finally, it will be studied the relationship between users' preferred party of those users who are spreading the most retweeted messages about political corruption, and parties reported on corruption in the corruption most reported on Twitter.

1.3 Contributions of this Thesis

In this section it will be briefly summarised the major contributions of this thesis:

- It has been established that an economic crisis impacts on citizens' attitude towards political corruption, turning them less tolerant.
- It has been found how in order to increase citizens' criticism towards political corruption, social pressure is more effective than factual information.
- It has been proved the political awareness' impact on citizens' attitude towards political corruption, being less tolerant as higher it is.
- It has been shown the role played by political leaning in citizens' attitude towards political corruption, being less tolerant as more progressive they are.

- It has been demonstrated the effect of the new parties' emergence, which are being supported by younger and less tolerant towards political corruption citizens than traditional parties' supporters.

- It has been established the political sympathy's impact, which makes citizens to downplay political corruption when it affects to their preferred party.

- The characterisation of the most active users in the online debate about political corruption held on Twitter as users who feel closer to UP, the new party with a left political leaning.

- The establishment that the party most reported on corruption in the online debate about political corruption held on Twitter is PP, the traditional party with a right political leaning.

- It has been proved the political sympathy's impact in the online debate about political corruption held on Twitter, establishing an association between the preferred party of the most active users and the parties reported.

1.4 Organisation of this Thesis

This thesis is divided into six chapters. Chapter 1, the current chapter, is an introduction to the work that will be developed in the following chapters. Chapter 2 contains the literature review while in Chapter 3 it is established and motivated the hypotheses. The hypotheses themselves are tested in the following two chapters, with Chapter 4 describing the "Real World" experiments and Chapter 5 containing those related to the "Virtual World". Finally, in Chapter 6 it is presented the conclusions of the thesis.

Chapter 2. **Literature Review**

2.1 Introduction

2.1.1 **Political Corruption Definition**

Political corruption's definition can be approached from different perspectives. Peters and Welch (1978) identified three different general criteria based on legality, public interest and public opinion.

Following the legal criteria, Nye (1967) stated that a political act is corrupt when it deviates from the formal duties of a public role because of private-regarding wealth or status gains; or violates rules against the exercise of certain types of private-regarding influence. This includes bribery, nepotism and misappropriation. Berg et al. (1976) pointed out that all corrupt acts are not necessary illegal.

Based on the public interest criteria, Rogow and Lasswell (1963) considered a political act as corrupt when it violates responsibility towards at least one system of public or civic order. This definition would enable a politician to justify almost any act by claiming that it is in the public interest (Peters and Welch, 1978).

Accordingly to the third criteria, a political act is corrupt when the weight of public opinion determines it (Peters and Welch, 1978; Rundquist and Hansen, 1976). If it is difficult to agree what is "public interest", it is even harder to consider a definition involving the public opinion, as it clearly varies depending on the citizens who are judging a particular act. Heidenheimer (1970) concluded that an act is corrupt when it is considered by the general public and also by political elites.

Peters and Welch (1978) designed a study to analyse the attitudes about corruption held by a large group of public officials. One of their findings was that even if the vast majority of the public officials were aware that most of the public would identify a particular act as corrupt, some of them kept not considering it a corrupt act. As an example, the act of *holding a large amount of stock in Standard Oil by a member of Congress who is working to maintain the oil depletion allowance* was viewed as corrupt just by 55% of the public officials even if 81% considered that this act would be condemned by the most of the public.

As it has been just shown, there are different criteria to approach the corruption, and all of them seem to be unable by themselves to define this term. In this thesis, it will be considered a general definition of corruption given by the online Merriam-Webster Dictionary as *"dishonest or illegal behaviour especially by powerful people (such as government officials or police officers)"*[8].

2.1.2 **Political Corruption's Impact**

It has been empirically demonstrated the negative impact of political corruption on a society (Charron and Bågenholm, 2016). There is a wide agreement about the harmful effects not only from a political perspective (Cordero and Blais, 2017; Anderson and Tverdova, 2003; Seligson, 2002; Nye, 1967); but also from an economic and social perspective (Cordero and Blais, 2017; Weitz-Shapiro and Winters, 2010; Lambsdorff, 2006; Svensson, 2005; Mauro, 1995; Treisman, 2000). Although most of the effects are connected, in this thesis they will be classified into three different categories: political, economic and social.

Regarding the political consequences, it has been shown how political corruption affects political trust (Cordero and Blais, 2017; Burlacu, 2011; Morris and Klesner, 2010; Chang and Chu, 2006); reduces citizens' support for political institutions (Cordero and Blais, 2017; Anderson and Tverdova, 2003) and damages regime legitimacy (Cordero and Blais, 2017; Burlacu, 2011; Bowler and Karp, 2004; Anderson and Tverdova 2003; Della Porta, 2000; Rose-Ackerman, 1999). Besides, it has been found that as higher is the corruption perceived, as lower is the percentage of citizens going to the polls (Chong et al., 2015; Stockemer et al., 2013). Finally, is has been demonstrated how high level of corruption represents an opportunity for new parties to emerge (Ecker et al., 2016).

From an economic perspective, corruption is associated with less economic development (Charron and Bågenholm, 2016). The World Bank underlined that it is the most important impediment for development, having a negative impact on efficiency (Olken and Pande, 2012), deterring investment (Wei, 2000; Kaufman et al., 1999; Mauro, 1995) and reducing growth (Costas-Pérez et al., 2010; Mauro, 1995).

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[8] http://www.merriam-webster.com/dictionary/corruption

Focusing on the social effects, Charron and Bågenholm (2016) highlighted the negative relationship between corruption and inequality, Olken and Pande (2012) underlined how corruption has an adverse effect for equity and Sandholtz and Koetzle (2000) for fairness. Li et al. (2000) emphasized the association between corruption and the increase of income inequality and poverty. Mauro (1995) concluded that political corruption creates distortions on the allocation of public spending damaging the education and health systems.

The Spanish case

Since 2008, on one hand, Spain is going through an economic and social crisis; and on the other hand, the traditional parties PP and PSOE have been involved in a multitude of corruption scandals. As a consequence, following the CIS[9], in May 2011 Spaniards were overwhelmingly concerned with the unemployment (which rate was over 20% of the active population), the economic situation and the party political system.

In this precarious context, the political debate moved onto blogs and online social networks as Facebook and Twitter (Vallina-Rodriguez et al., 2012), which managed to channel the collective indignation (Anduiza et al., 2014). The online political debate quickly gained adherents and, as a result of merging more than 200 smaller citizen grassroots organisations, student organisations and other civil movements, it was born the collective "¡Democracia Real, Ya!" (Real Democracy, Now!), which had a definite bias to the left (Peña-López et al., 2014; Anduiza et al., 2012). This collective called for public protests against the established situation to be held on 15 May 2011 in more than fifty cities across Spain, which led to activists setting up camps in many of the cities, originating the well-known "Movimiento 15M" (15M Movement), which members called themselves "Los Indignados" (The Indignant) (Vallina-Rodriguez et al., 2012). The role played by the online social networks was crucial to generate and spread the call (Piñeiro-Otero and Costa-Sánchez, 2012; González-Bailón et al., 2011). The interaction between the physical and the virtual world was essential for this movement to succeed, feeding both each other with information, coordination and a sense of collective identity (Peña-López et al., 2014). This movement managed to communicate the Spanish feeling of indignation to the whole world (Giraldo-Luque, 2018).

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[9] CIS May 2011

In November 2011, PSOE, which had been in the government since 2004, lost the General Elections; and PP, not only won but also reached the outright majority. During the period 2011-2015 PP was affected for multitude cases of corruption which were widely covered by the media. In the following lines it will be summarised four of the most popular cases of corruption which are still in trial, the so-called "Gürtel case", "Barcenas' papers", "Púnica operation" and "Brugal case".

The "Gürtel case" consists in a corrupt organisation which laundered money and evaded taxes, bribing many PP local and regional leaders mostly in Valencia and Madrid (Cordero and Blais, 2017; Orriols and Cordero, 2016; Cordero and Montero 2015). One of the consequences of this scandal was the resignation in June 2011, of the Regional President of Valencia, Francisco Camps.

The "Barcenas' papers" which is considered as a piece of the "Gürtel case", is probably the case of corruption with the strongest impact on PP (Cordero and Blais, 2017). In January 2013, it was published and widely diffused an alleged double counting of the PP between 1990 and 2009. In these papers, it was registered illegal bonus payments to several leaders of the party, including Prime Minister Mariano Rajoy. Concretely, following this information, he was accused to receive 25000 € between 1997 and 2008.

The "Púnica operation" refers to an investigation of a corruption plot which involves politicians, officials and businessmen. This corrupt plot operated mainly in Madrid and, following the information published, it was awarded public services worth 250 million euros in two years in exchange for illegal payments and commissions, which were subsequently laundered through a societal network (Orriols and Cordero, 2016). One of the main consequences was the arrest in October 2014 of the PP's General Secretary of Madrid, Francisco Granados. Nowadays, he is still in prison.

The "Brugal case" involves a corrupt organization of local and provincial leaders of the PP of Valencia who were investigated for improper awarding of public tenders (Cordero and Blais, 2017). One of the consequences of this scandal was the resignation in December 2014, of the Mayor of Alicante (Valencia), Sonia Castedo.

As a consequence of all the corruption scandals, the majority of Spanish society was aware and worried about corruption and many Spaniards were actively participating

in demonstrations against it (Cordero and Blais, 2017; Robles-Egea and Delgado-Fernandez, 2014). Following the CIS[10], while in 2011 just 2% of the population mentioned corruption as one of the main Spanish problems, this percentage increased until 56% in 2015. In fact, corruption became the second greatest problem for Spaniards after unemployment[11]. Accordingly, the Spain's score on the Corruption Perception Index by Transparency International[12] during the government of PP, on a scale anchored at 0 (highly corrupt) to 100 (very clean), fell from 65 to 58.

In this context, Podemos and C's broke into the national political scene claiming to be the solution to regenerate a democracy strongly affected by political corruption. Podemos was closely related to the Movimiento 15M (15M Movement) (Kioupkiolis and Katsambekis, 2018; Franzé, 2017) while C's was a regional party of Catalonia opposed to Catalonian nationalism (Rodríguez-Teruel and Barrio, 2016) which jumped into the national scene focused on the defence of territorial centralisation (Orriols and Cordero, 2016). These parties reached to break the traditional bipartisanship in the General Elections of December 2015 and also in the repeated General Elections of June 2016. Concretely, the bipartisanship's support fell from 73.3% in 2011 to 55.7% in 2016. Orriols and Cordero (2016), when analysing the electoral results, concluded that the irruption of the new parties supposed the end of the bipartisanship.

However, PP was still able to win both General Elections reaching a vote share of 33% in June 2016. This party has remained in the government until June 2018, when a sentence that condemned this party for corruption led to a wide agreement among several parties of the opposition which allowed PSOE to win a no-confidence motion. Its mandates have been plagued with scandals of corruption which are still in trial and constantly on the focus of the media, nevertheless, it is remarkable how PP is still today the first political force with 7906185 votes and 137 seats out of 350.

The Spanish case clearly illustrate how political corruption impacts from a political, economic and social point of views. Summarising the information above, political corruption contributed to impoverish population, which in 2011 participated in massive protests against the established party system and its corruption originating the so-called "Movimiento 15M" (15M Movement). In turn, this movement contributed to the

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[10] CIS January 2011 and January 2015
[11] CIS January 2015
[12] https://www.transparency.org/cpi2015

emergence of the new party Podemos in 2014, which has shaken Spanish politics putting an end to the two-party political system (Sola and Rendueles, 2017).

2.1.3 Political Corruption's electoral consequences

The democratic theory holds that elections act as mechanisms of accountability against politics who abuse power for their own personal gain (Charron and Bågenholm, 2016). Accordingly, Fernández-Vázquez et al. (2016) underlined that elections are a citizens' tool to select and discipline politicians. Therefore, it could be theorised that voters punish corrupted parties, however, parties' electoral results are not penalised as much as it could be expected (Cordero and Blais, 2017; Ecker et al., 2016; Fernández-Vázquez et al., 2016; Ferraz and Finan, 2008; Golden, 2007; Davis, Camp, and Coleman, 2004; Jiménez and Caínzos, 2004; McCann and Dominguez, 1998; Dobratz and Whitfield, 1992; Rundquist et al., 1977). Despite the general disdain for corruption, it is a high re-election rate of corrupted politicians not only in developing countries but also in developed democratic countries (Chang and Kerr, 2009). The lack of consequences have been documented in different countries as Spain (Muñoz et al., 2016; Anduiza et al., 2013), Canada (Blais et al., 2015), Mexico (Chong et al., 2015; Chong et al., 2011), the United Kingdom (Vivyan et al., 2012; Egger, 2011), Italy (Chang et al., 2010), and the US (Dimock and Jacobson, 1995; Peters and Welch, 1980; Rundquist et al., 1977).

There are citizens who do not consider political corruption as an important problem to take into account before voting compared with other elements (Anduiza et al., 2013). There are corrupt politicians who are enjoying repeated electoral success (Cordero and Blais, 2017; Charron and Bågenholm, 2016) even in countries where citizens have a high perception of political corruption (Chang and Kerr, 2009).

Many researches have analysed how politics being tried in court have not suffered serious electoral consequences or even have been re-elected. For instance, Eggers (2011), when analysing the electoral consequences of the 2009 UK parliamentary expenses scandal on the 2010 General Elections, demonstrated that the support of those MPs implicated was reduced only by 1.5 pp.

Chang et al. (2007) showed how in post-war Italy, during ten legislatures, Italian voters did not penalize legislators being involved in corruption. They also found that the

probability of a legislator to be re-elected under judicial investigation for political malfeasance was over 50%. Chang and Kerr (2009) underlined how Silvio Berlusconi was re-elected as Prime Minister in Italy in three times, despite of being involved in a variety of corruption cases, including malfeasance charges and alleged links to the mafia.

Reed (2005) found that between 1947 and 1993, the 62% of legislators in Japan who had been convicted of corruption charges were re-elected. Johnson (1986) analysed how the Japanese Prime Minister, Tanaka Kakuei, being involved in the Lockheed sandal, was re-elected after the 1983 "Tanaka Verdict Election".

Peters and Welch (1980) showed that in the U.S. House of Representatives elections, corruption charges only reduced candidates' vote share by 6 to 11% and were unable to avoid corrupted candidates won.

The Spanish case

Cordero and Blais (2017) analysed how corruption could impact on the Spanish electoral results in the context of the electoral pre-campaign of the Spanish General Elections of 2015. For this purpose, it was used data from an online survey conducted in Spain by the Universitat Pompeu Fabra in June 2015 which had a sample size of 2410 respondents. It is remarkable that at the time in which the data was collected political corruption was a salient issue. The incumbent party (PP) which had won the General Elections in 2011 with a support of the 44.6%, had had a mandate (2011-2015) plagued with scandals of corruption as the so-called "Gürtel case", "Barcenas' papers", "Púnica operation" and "Brugal case". These corruption cases are still in trial and were on the focus of the media during the electoral campaign in December 2015.

As a consequence of all the corruption scandals, following the CIS[13], while in 2011 just 2% of the population mentioned corruption as one of the main Spanish problems, this percentage increased until 56% in 2015. In fact, corruption became the second greatest problem for Spaniards after unemployment[14]. Accordingly, the Spain's score on

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[13] CIS January 2011 and January 2015
[14] CIS January 2015

the Corruption Perception Index by Transparency International[15] during the government of PP, on a scale anchored at 0 (highly corrupt) to 100 (very clean), fell from 65 to 58.

Cordero and Blais (2017) justified the convenience to focus their research on Spain because this country clearly illustrate how corruption does not have the electoral consequences it could be expected. Firstly, during the period 2011-2015 where Spain was going through an economic crisis, the party in the government was affected for multitude cases of corruption; secondly, these cases of corruption were widely covered by the media: newspapers, radio, TV, and social media; thirdly, the majority of Spanish society was aware and worried about corruption and many Spaniards were actively participating in demonstrations against it; and finally, the incumbent party plagued of corruption was still able to win the General Election in December 2015. PP lost electoral support in 2015 in reference to the previous General Elections of 2011, concretely, PP obtained a 44.6% of votes in November 2011 while in December 2015 its support was 28.7%. It is worth noting that this decrease must be relativized taking into account the emergence of the new parties Podemos and C's. However, in despite of its corruption and the emergence of new parties which were traduced in electoral losses of 17pp, PP still reached the first position in the General Elections in 2015 with more than 7 million of votes and 123 seats.

In this context, these researchers were interested in investigating citizens' willingness to support a corrupt party. In order to address this issue, participants were required to indicate the likelihood in which they would vote for the incumbent government (PP) which was strongly affected by corruption on a scale anchored at 0 (not at all likely) to 10 (very likely). This variable was recoded following a very conservative criterion as follows: "1", when participants completely reject the idea of voting for the government; and "0", otherwise.

The results showed that 35% of respondents considered it was not totally unacceptable to support the incumbent government in despite of being plagued with corruption scandals. These results contribute to explain why political corruption has not the electoral results it could be expected.

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[15] https://www.transparency.org/cpi2015

Previously, Fernández-Vázquez et al. (2016) analysed the impact of corruption on the electoral results of the Spanish Local Elections held in May 2011. For this purpose, it was prepared an original dataset with the electoral results of the Local Elections in May 2007 and May 2011. Besides, following an exhaustive process, it was identified the corruption scandals between both Local Elections and the municipalities affected. The result of this process yielded a dataset of 75 municipalities affected by corruption (1% of Spanish municipalities).

These authors justified the convenience to choose Spain for the study of corruption underlining how at that time this country was a clear example where although voters disliked corruption, incumbents rarely suffered electoral consequences for their illegal actions. Besides, on a scale anchored at 0 (highly corrupt) to 10 (very clean), Spain generally scored poorly in all cross-country rankings of perception of corruption at all administrative levels. Finally, they emphasised that, as most of the Spanish corruption scandals are investigated by judicial authorities, there was an extensive press coverage which increased citizens' political awareness.

The results showed on one side, how while 67.9% of the incumbent mayors were re-elected, this rate was just slightly lower when considering exclusively those mayors involved in scandals of corruption (62.7%); and on the other side, focusing on the vote share, how the average loss for the incumbent mayors was -3.4%, while it was slightly higher when considering exclusively those mayors involved in scandals of corruption (-8.5%). Moreover, when estimating the impact of political corruption on the vote share of the incumbent mayors controlling potential confounders, it was found that mayors involved in corruption scandals just lost an average of 1.8pp. As a consequence, it was concluded that political corruption has not the electoral consequences it could be expected.

These results are in agreement with those obtained by Vallina-Rodriguez et al. (2012) when analysing citizens' attitude towards political corruption and the established political system in the online debate held on Twitter during the electoral pre-campaign of May 2011. For this purpose, these authors identified on one hand, 400 hashtags and key words related to the political debate; and on the other hand, a set of 200 Twitter accounts used by political parties, their candidates, the "Democracia Real, Ya!" (Real Democracy, Now!) organisation, which was against the established political system and,

the main media sources. Then, it was collected through the Twitter Streaming API those tweets between 10 and 24 May 2011 which contained one hashtag of the list, were mentioning a Twitter account of the list or, were published by a Twitter account of the list. This process yielded a dataset of 3 million tweets sent by about 500000 Twitter users. These tweets contained more than 115000 different hashtags.

These researchers found especially interesting to study Spain as at that time this country was going through a convulsed political, economic and social situation. Since 2008, Spain was going through an economic and social crisis like many other European countries. Following the CIS[16], in May 2011 Spaniards were overwhelmingly concerned with the unemployment (which rate was over 20% of the active population), the economic situation and the party political system. Besides, Spain was facing Regional and Local Elections. Concretely, 13 out of 17 Spanish autonomous areas and more than 8000 municipalities were facing elections.

The results showed how although the vast majority of the tweets were against the traditional party system and its corruption, it was still able to reach a vote share of the 65.3% in the Local Elections, which meant a loss of just 6pp with respect to the Local Elections of May 2007. Once again, it is shown how political corruption has not the electoral consequences it could be expected.

In this chapter it will be reviewed the literature related to the most relevant variables which influence citizens' attitude towards political corruption. Concretely, the chapter is structured as follows: in section 2.2, it will be reviewed the literature regarding the role played by political awareness in citizens' attitude towards political corruption; it will be studied if there is any difference between individuals with a different political leaning; it will be investigated the effect of the political sympathy when citizens are analysing the information about corruption; it will be examined the impact of the economic context on the attitude towards corruption; it will be studied the impact of the new parties' emergence; and finally, it will be deeply analysed the effect of social pressure in different domains and how it is spread. Then, in section 2.3, it will be studied the role played social media on politics. For this purpose it will be analysed the impact of social media on citizens' political attitudes and behaviours; it will be investigated different approaches that have been proposed in order to measure influence

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[16] CIS May 2011

on Twitter; it will be characterised the political debate held on Twitter; and finally, it will be analysed Twitter conversations on politics. At the end, it will be highlighted the most relevant conclusions in section 2.4.

2.2 Citizens' attitudes towards political corruption: The key variables

2.2.1 **Introduction**

Citizens' attitude towards political corruption is heterogeneous and depends on several factors (Ecker et al., 2016). When political corruption is studied, it has been identified the following variables as the most important: political awareness, political leaning, political sympathy, economic context, new parties' emergence and social pressure.

Jennings et al. (2017) underlined that in order to make rational voting decisions, citizens need to be aware of who the candidates are and, at least, their main political proposals. Cordero and Blais (2017), Anduiza et al. (2013) and Weitz-Shapiro and Winters (2010) proved a negative relationship between citizens' political awareness and their tolerance towards political corruption. Accordingly, Arceneaux (2007) and Kam (2005) pointed out that sophisticated citizens tend to be more critical with parties than those who are not interested in political issues. On the basis of the previous findings, in this thesis, it will be investigated if citizens with higher levels of political awareness are less tolerant towards political corruption.

Festinger (1962) stated that the existence of dissonance, being psychological uncomfortable, motivates the person to try to reduce it and achieve consonance. Besides, this author also underlined that citizens tend to actively avoid situations and information which would likely increase that dissonance. It explains why do exist consistency between one citizen's social and political attitudes, and between what that citizen knows or believes and his acts. Citizens tend to analyse political information accordingly with their political predispositions (Jennings et al., 2017; Lodge and Taber, 2013; Brader and Tucker, 2009; Anderson and Singer, 2008; Coan et al., 2008; Malhotra and Kuo, 2008; Anderson et al., 2005; Bartels, 2002, 2000; Gerber and Green, 1999; Miller and Shanks, 1996; Zaller, 1992; Sherrod, 1971). As a consequence, it is

expected that political leaning and political sympathy will play interesting roles on citizens' attitude towards political corruption.

Many authors agree that citizens' criticism towards political corruption differs when the country's economy is growing or decreasing. Citizens tend to be more tolerant when their country is in a stage of economic growth (Cordero and Blais, 2017; Charron and Bågenholm, 2016; Anduiza et al., 2013; Klasnja and Tucker, 2013; Winters and Weitz-Shapiro, 2013; Zechmeister and Zizumbo-Colunga, 2013; Jerit and Barabas, 2012; Weitz-Shapiro and Winters, 2010; Manzetti and Wilson, 2007; Golden, 2007; Diaz-Cayeros et al., 2000; Duch et al., 2000; Mauro, 1995). As a consequence, it will be considered the economic context as one of the variables which has a relevant role when analysing citizens' attitude towards political corruption.

The economic, social and political crisis has recently shaken the traditional political system contributing to the emergence of new parties (Altiparmakis and Lorenzini, 2018; Muro and Vidal, 2017; Della Porta, 2015). It represents an opportunity for citizens to punish traditional parties affected by political corruption (Cordero and Blais, 2017). Engler (2015), Pop-Eleches (2010) and Mainwaring et al. (2009) found that corruption benefits new parties pushing voters away from all the traditional parties, not only from the one which is in the government. In this thesis, it will be studied if those citizens who feel closer to new parties are less tolerant towards political corruption than those who support traditional parties.

In a context of an economic, social and political crisis, it has been proved how social pressure plays a key role in mobilising citizens against the established political system and its corruption (Giraldo-Luque, 2018; Anduiza et al., 2014; Peña-López et al., 2014; Toret, 2013; Anduiza et al., 2012; Piñeiro-Otero and Costa-Sánchez, 2012; Vallina-Rodriguez et al., 2012; González-Bailón et al., 2011). In this this thesis, it will be analysed the impact of social pressure in citizens' criticism towards political corruption.

2.2.2 Political Awareness

There is a wide agreement among scholars in pointing out that political awareness is a salient factor in explaining citizens' attitude towards corruption. Siegel (2018) highlighted how democracy depends on citizens' political awareness, being necessary to

become educated politically. Bode (2016) underlined that a basic tenet of democracy theory is that voters' political choices must be based on informed thinking about political issues. Accordingly, Jennings et al. (2017) emphasised that in order to make educated and rational voting decisions, citizens need information about candidates and issues. Habermas (1962) stated that an informed electorate is fundamental to a deliberative democracy.

It has been shown how as higher is the political awareness as lower is the level of tolerance towards corruption (Cordero and Blais, 2017; Anduiza et al., 2013; Weitz-Shapiro and Winters, 2010). Sophisticated citizens tend to be more critical with parties than those who are not interested in political issues (Arceneaux, 2007; Kam, 2005).

One of the theories which could explain why citizens keep voting for corrupt politicians is the lack of information. Charron and Bågenholm (2016) underlined how to reach an efficient electoral accountability mechanism, the first prerequisite is that the information on political corruption is reliable, available and comes to the knowledge of the voters. Fackler and Lin (1995) established a negative relationship between information published about corruption cases and electoral results. As greater is the amount of information about corruption being spread through the media, as higher is the impact on the electoral results of the party which was in the government. As a consequence, the role of the media is absolutely crucial, citizens who do not have access to plural and high quality information will be more likely to vote for corrupt politicians (Winters and Weitz-Shapiro, 2013; Geddes, 1994; Rose-Ackerman et al., 1980).

Following this theory, it would be expected that if the information is available and citizens perceive an increase in the level of corruption, they will vote against corrupt politicians (Cordero and Blais, 2017; Fernández-Vázquez et al., 2016; Anduiza et al., 2013; Costas-Pérez et al., 2010; Figueiredo et al., 2010; Weitz-Shapiro and Winters, 2010; Chang and Kerr, 2009; Ferraz and Finan, 2008; Tavits, 2007; Gerring and Thacker, 2005; Adserá et al., 2003; Treisman, 2000; Rundquist et al., 1977). In the rest of this section, it will be analysed some researches in which it has been studied the role played by political awareness in citizens' attitude towards political corruption.

Cordero and Blais (2017) analysed the effect of political awareness in Spaniards' attitude towards political corruption. For this purpose, it was used data from an online

survey conducted in Spain by the Universitat Pompeu Fabra in June 2015 which had a sample size of 2410 respondents. It is remarkable that at the time in which the data was collected political corruption was a salient issue. The incumbent party (PP) which had won the General Elections in 2011 with a support of the 44.6%, had had a mandate (2011-2015) plagued with scandals of corruption as the so-called "Gürtel case", "Barcenas' papers", "Púnica operation" and "Brugal case".

As a consequence of all the corruption scandals, following the CIS[17], while in 2011 just 2% of the population mentioned corruption as one of the main Spanish problems, this percentage increased until 56% in 2015. In fact, corruption became the second greatest problem for Spaniards after unemployment[18]. Accordingly, the Spain's score on the Corruption Perception Index by Transparency International[19] during the government of PP, on a scale anchored at 0 (highly corrupt) to 100 (very clean), fell from 65 to 58.

Cordero and Blais (2017) justified the convenience to focus their research on Spain because this country clearly illustrate how corruption does not have the electoral consequences it could be expected. Firstly, during the period 2011-2015 where Spain was going through an economic crisis, the incumbent party was affected for multitude cases of corruption; secondly, these cases of corruption were widely covered by the media: newspapers, radio, TV, and social media; thirdly, the majority of Spanish society was aware and worried about corruption and many Spaniards were actively participating in demonstrations against it; and finally, the incumbent party plagued of corruption was still able to win the General Election in December 2015. PP lost electoral support in 2015 in reference to the previous General Elections of 2011, concretely, PP obtained a 44.6% of votes in November 2011 while in December 2015 its support was 28.7%. It is worth noting that this decrease must be relativized taking into account the emergence of the new parties Podemos and C's. However, in despite of its corruption and the emergence of new parties which were traduced in electoral losses of 17pp, PP still reached the first position in the General Elections in 2015 with more than 7 million of votes and 123 seats.

In this context, these researchers were interested in analysing the relationship between citizens' perception of corruption in the government and the likelihood to

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[17] CIS January 2011 and January 2015
[18] CIS January 2015
[19] https://www.transparency.org/cpi2015

support it. Concretely, these authors hypothesised that as higher is the perception of corruption in the incumbent government, as higher is the propensity to consider completely unacceptable to vote for it. In order to address this issue, on one side, participants were required to indicate the likelihood in which they would vote for the incumbent government (PP) on a scale anchored at 0 (not at all likely) to 10 (very likely). This variable was recoded following a very conservative criterion as follows: "1", when participants completely reject the idea of voting for the government; and "0", otherwise. On the other side, they were asked to manifest their perceptions of corruption in the government on a scale anchored at 0 (the government is not corrupt at all) to 10 (the government is very corrupt).

The results showed that the difference in the predicted probability to completely reject the idea of voting for the incumbent government between those respondents who perceived it was not corrupt at all and those who perceived it was very corrupt was -40pp. In other words, the likelihood of totally rejecting the idea of supporting PP of those who perceived this party was not affected by corruption was 40pp lower than those who perceived PP was involved in a multitude of corruption scandals.

As a consequence, it was concluded that political awareness plays a key role on citizens' attitude towards political corruption: as higher it is, as higher is the propensity to punish the party affected by corruption.

Fernández-Vázquez et al. (2016) also studied how political awareness impacts on Spaniards' attitude towards political corruption. For this purpose, it was prepared an original dataset with the electoral results of the Spanish Local Elections in May 2007 and May 2011. Besides, following an exhaustive process, it was identified the corruption scandals between both Local Elections and the municipalities affected. Then, these cases of corruption were classified according to the economic externalities they generated, i.e., it was distinguished between those cases where corruption provoked welfare decreasing and those which provoked welfare enhancing. The result of this process yielded a dataset of 75 municipalities affected by corruption (1% of Spanish municipalities), being 46 classified as welfare enhancing and 29 as welfare decreasing.

These authors justified the convenience to choose Spain for the study of corruption underlining how at that time this country was a clear example where although voters

disliked corruption, incumbents rarely suffered electoral consequences for their illegal actions. Particularly, between 2003 and 2007, the 70% of mayors who were involved in corruption were re-elected. Accordingly, Costas-Pérez et al. (2012) found that the electoral cost of corruption was on average just a 4%. Besides, on a scale anchored at 0 (highly corrupt) to 10 (very clean), Spain generally scored poorly in all cross-country rankings of perception of corruption at all administrative levels. Moreover, and taking into account the classification of the scandals of corruption used to test their hypothesis, where it was distinguished those cases where corruption provoked welfare decreasing and welfare increasing, Spain represented a suitable case as it offered a significant number of cases in which mayors irregularly changed the established land use allowing an excess of construction which benefited the local economy in the short time (Villoria and Jiménez, 2012). Finally, Fernández-Vázquez et al. (2016) emphasised that, as most of the Spanish corruption scandals are investigated by judicial authorities, there was an extensive press coverage which increased citizens' political awareness.

The results showed how as higher the media coverage of the corruption scandal was, as higher was the magnitude of the electoral punishment. Accordingly, when comparing the electoral results of the Spanish Local Elections in 2003 and 2007, Costas-Pérez et al. (2010) found how the vote losses were around 9% when the corruption cases were widely reported while the effect was just around 3% when voters were not properly informed about it.

Distinguishing those corruption cases which provoked welfare decreasing and welfare increasing for the municipality, Fernández-Vázquez et al. (2016) found that, in order to reach a larger electoral punishment, those cases classified as provoking welfare increasing needed higher media coverage. As a consequence, it was concluded that political awareness plays a key role when analysing citizens' attitude towards political corruption.

Previously, Anduiza et al. (2013) analysed the impact of political awareness on Spaniards' attitude towards political corruption as well. For this purpose, it was designed and conducted an online survey focused on the political attitudes and behaviours. The universe studied was the population resident in Spain, and the sampling was carried out in this country in November 2010. The sampling units were men and women with Internet access, older than 15 and younger than 45. These age limits were

selected because the percentage of people with access to Internet in that age range was over 83% while the Internet diffusion rate above this age was much lower. The sample size was 2300 respondents.

These authors justified their research was focused on Spain underlining that at the time in which the data was collected, political corruption was a salient issue. Accordingly, the Spain's score on the Corruption Perception Index by Transparency International was 6.1 on a scale anchored at 0 (highly corrupt) to 10 (very clean). In this context, the researchers expected more realistic answers. Besides, Spain had an institutionalised party system with more than 60% of its population reporting feeling close to a political party which clearly benefited the goal of measuring the political sympathy impact. Finally, it was also pointed out that Spain was a clear example where political corruption has not the electoral consequences it could be expected.

These researchers were interested in testing their belief that citizens are more tolerant towards political corruption as higher is their political awareness. In order to address this issue, firstly, participants were required to indicate which their preferred party was and, in order to measure their political awareness, to respond four questions related to politics. Then, they faced a randomly assigned vignette in which it was briefly reported a hypothetical corruption case related to one of the followings: a mayor of their preferred party; a mayor of a different party; a mayor of a party not specified. This design allowed isolating the impact of partisanship. After reading the vignette, respondents were asked to indicate how serious they considered the situation was on a scale anchored at 0 (not serious at all) to 10 (very serious).

The analysis was restricted to the supporters of the main parties (PP and PSOE) which at this time represented the 83.8% of the population. The reason was that this restriction ensured that the distance between "preferred party" and "different (rival) party" was the same for both parties' supporters.

On one hand, it was performed a multivariate test, which dependent variable was their opinion about the scandal of corruption, including political awareness as a factor. The conclusion was that, on average, political awareness plays a key role on the citizens' attitude towards political corruption, being severely judged by those citizens with a higher level.

On the other hand, taking into account the type of vignette participants faced, it was calculated the average values of the attitude towards political corruption for each of the three groups in which the sample was randomly divided (citizens who faced a scandal of corruption in their preferred party, in the rival party and in a party not specified) with the political awareness as moderator. The main conclusion was that among those respondents whit a high level of political awareness, the difference between the three groups was not statistically significant. However, among those respondents with the lowest level of political awareness, there was a difference statistically significant between the group who evaluated the scandal of corruption in their preferred party and the group who evaluated the scandal of corruption in their rival party. Concretely, the mean of the attitude towards political corruption was 1.6 higher in the group who faced the scandal in the rival party. In other words, while there was a widespread consensus about the seriousness of the scandal of corruption among those citizens with a high level of political awareness, citizens with a lower level of political awareness tended to downplay corruption, especially when it was their preferred party the one which was being involved.

There are other studies where it has been analysed the political awareness impact. For instance, Figueiredo et al. (2010) found in the 2008 São Paulo Mayoral Race, that the information about corruption spread about one of the candidates, had a negative impact on his electoral support. Acordingly, Ferraz and Finan (2008) showed how in the 2004 Brazil municipalities those incumbent Mayors who were involved in a multiple cases of corruption, had less electoral support than those who were perceived as less corrupt. Concretely, they found that when there was evidence of corruption, Mayors lost between 10% and 30% of the votes, and this percentage was even higher when there was a local radio station.

2.2.3 **Political Leaning**

It has been already proved that the attitude towards political corruption depends on the degree to which citizens are aware that a politician is involved in corruption, but it is worth noting that two citizens having the same degree of awareness may have different attitude towards political corruption (Chang and Kerr, 2009), therefore, it will be necessary to take into account other variables. In this section, it will be analysed the role

played by political leaning, which has been identified as crucial when analysing citizens' attitude towards political corruption (Charron and Bågenholm, 2016).

It has been shown that citizens tend to analyse political information accordingly with their political predispositions (Jennings et al., 2017; Lodge and Taber, 2013; Brader and Tucker, 2009; Anderson and Singer, 2008; Coan et al., 2008; Malhotra and Kuo, 2008; Anderson et al., 2005; Bartels, 2002, 2000; Gerber and Green, 1999; Miller and Shanks, 1996; Zaller, 1992; Sherrod, 1971).

Political leaning provides a shared values and beliefs system that allows individuals with the same ideology to view and react to many issues of the world around them in a similar way (Knight, 2006; Feldman, 2003). There are substantial differences among people on the left and right leanings, and a high degree of coincidence between people belonging to the same political leaning (McCright and Dunlap, 2011; Dunlap et al., 2001). The scale left-right or alternatively, progressive and conservative, summarizes political positions on a wide range of issues and the vast majority of the citizens can position themselves and parties on this scale (Mair, 2009). The Comparative Study of Electoral Systems (CSES)[20], accordingly with other cross-national studies which specifically ask citizens to place themselves and parties along a left-right scale, concluded that almost 90% of citizens are able to indicate their position and parties' position on this scale (Dalton and McAllister, 2015; Rohrschneider, 2015; Esaiasson and Holmberg, 1996).

Researchers have found a wide variety of variables which are useful to identify the main differences between left and right parties. The predisposition to change is a commonly analysed variable when studying these differences, being left, associated with an openness to change; while right, with conservativism (Anderson and Singer, 2008; Devos et al., 2002; Schwartz, 1992).

Freire (2006) and Knutsen (1997) studied on one side, the role played by social class, concluding that left is linked with the working class while right represents the interests of the middle class and professionals; and on the other side, the role played by religion, finding that from the left position it is claimed the limited social and political

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[20] http://www.cses.org/

role for religious organisations while the right position defends a greater relevance of religion in society.

Hellwig (2014); Dalton (2006); Knutsen (1995); Inglehart and Klingemann (1976) and Downs (1957) found that when studying economic issues, there are substantial differences between citizens' positions depending on their political leaning. There is a broad agreement to highlight the level of government's intervention in an economy as one of them. Left is traditionally associated with a greater intervention while right with free market and few restrictions in the economy.

Regarding the inequality, there is a wide agreement to note that those citizens who identify themselves as having a right political leaning tend to legitimate and justify inequality while those who feel themselves as having a left political leaning are more sensitive to this issue (Alesina et al., 2004; Jost et al., 2003a; Jost et al., 2003b; Jost and Hunyady, 2002; Listhaug and Aalberg, 1999; Tyler and McGraw, 1986; Lane, 1962).

It has been also identified a set of cultural variables which are key classifiers to discern if an individual has a left or right political leaning: issues of gender equality, immigration, multiculturalism, lifestyle choices, quality of life and environmental policy (Inglehart, 1990).

As it has been shown, political leaning involves and summarizes citizens' position in a wide variety of social, economic and cultural issues (Jou and Dalton, 2017). Left and right are the most common tags to place parties into a common framework (Mair, 2009), which is useful in many parliamentary systems where citizens face a wide variety of parties and, as a consequence, to evaluate all the proposals in order to decide how to cast the vote becomes a challenging task (Best and McDonald, 2011; Converse, 1964). These tags are an efficient way to understand, organise and store political information and, therefore, they clearly simplify the parties' evaluation and vote's decision (Jou and Dalton, 2017; Downs, 1957). It has been found how the relation between political leaning and party choice is stronger than the relation between other social, economic or cultural variables and party choice.

Focusing on the topic of this thesis, Rundquist, et al. (1977) proved that when corrupt politicians have a policy position on an important issue to the voter according with him, his reaction towards corruption is less negative. In the rest of this section, it

will be analysed some researches in which it has been studied the role played by political leaning in citizens' attitude towards political corruption.

Charron and Bågenholm (2016) analysed the role played by political leaning in Europeans' attitude towards political corruption. Their analysis was based on the largest multi-country survey focused on the matters of governance and corruption. The universe studied was the population resident in Europe, and the sampling was carried out in 24 European countries between February and April 2013 by the authors in collaboration with the European Commission. The sampling units were men and women over 18 years old and the sample size was roughly 85000 respondents.

Participants, on one hand, were required to place themselves in the left-right axis on a scale anchored at 1 (extreme left) to 7 (extreme right); and on the other hand, were asked about which would be their most likely reaction if their first party choice was involved in a corruption scandal. They had to choose among the following three options: keep voting for their first party choice; vote for an alternative party not involved in corruption; or not vote at all.

The results showed that in a multiparty system, i.e., when citizens have reasonable ideological alternatives, voters with a right political leaning were more likely to keep supporting their party than voters with a left political leaning. Besides, when focusing on those who decide not to keep sustaining their corrupted party, it was found that the percentage of voters who decide to not vote at all was higher for citizens with a right political leaning while the percentage of voters who switch to an alternative party was higher for citizens with a left political leaning.

In other words, compared with those citizens with a left political leaning, those on the right found harder to stop sustaining their party and, when they did, they had more difficulties to vote for an alternative party and decided to abstain from voting in a higher proportion.

When analysing each country separately, these researchers found that Spaniards were those with the highest difference on the attitude towards political corruption between those with a left and right political leaning. The overall results indicated that the vast majority was against to keep supporting its corrupted party, concretely, a 52% selected the abstention and a 34% to vote for an alternative party. The percentage of

participants who expressed their desire to keep sustaining their party in despite of corruption was a 10% (a 4% declined to answer the question). However, Charron and Bågenholm (2016) emphasised the contrast between Spanish supporters with a left and right political leaning underlining how while those on the left were strongly against to keep supporting their corrupted party, the likelihood of a citizen with a right political leaning to keep voting for his or her corrupted party was the highest of all the European countries studied.

In addition, it is worth to highlight that the Spanish results are even more relevant when taking into account the period in which the data was collected (February - April 2013). At this time, Spain was going through an economic crisis and the incumbent party was PP, the traditional Spanish party with a right political leaning. The government which was in the middle of its first mandate (2011-2015) was plagued with a multitude of corruption cases. Besides, part of the Spanish civil society was actively participating in protest movements against corruption and the economic and social situation. Both, scandals of corruption and protest movements were widely covered by the media and, as a consequence, Spaniards were aware about of the salient corruption. In this context, not only a 10% of participants selected the option of keep voting for their corrupted party when the data of the multi-country survey was collected in 2013, but also the party most involved in corruption was re-elected with a vote share of 28.7% in the the General Elections of 2015.

Anduiza et al. (2013) analysed the role played by political leaning in the Spaniards' attitude towards political corruption. For this purpose, it was designed and conducted an online survey focused on the political attitudes and behaviours. The universe studied was the population resident in Spain, and the sampling was carried out in this country in November 2010. The sampling units were men and women with Internet access, older than 15 and younger than 45. These age limits were selected because the percentage of people with access to Internet in that age range was over 83% while the Internet diffusion rate above this age was much lower. The sample size was 2300 respondents.

These authors justified their research was focused on Spain underlining that at the time in which the data was collected, political corruption was a salient issue. Accordingly, the Spain's score on the Corruption Perception Index by Transparency International was 6.1 on a scale anchored at 0 (highly corrupt) to 10 (very clean). In this

context, the researchers expected more realistic answers. Besides, Spain had an institutionalised party system with more than 60% of its population reporting feeling close to a political party which clearly benefited the goal of measuring the political sympathy impact. Finally, it was also pointed out that Spain was a clear example where political corruption has not the electoral consequences it could be expected.

These researchers analysed the differences between PP supporters and PSOE supporters in relation with their tolerance towards political corruption. In order to address this issue, participants, who had been previously required to indicate which their preferred party was, faced a randomly assigned vignette in which it was briefly reported a hypothetical corruption case related to one of the followings: a mayor of their preferred party; a mayor of a different party; a mayor of a party not specified. This design allowed isolating the impact of partisanship. After reading the vignette, respondents were asked to indicate how serious they considered the situation was on a scale anchored at 0 (not serious at all) to 10 (very serious).

The analysis was restricted to the supporters of the main parties, PP and PSOE, which at this time represented the 83.8% of the population and were clearly identified as having a right and left political leaning respectively. The reason was that this restriction ensured that the distance between "preferred party" and "different (rival) party" was the same for both parties' supporters.

The main conclusion was that in all the cases, i.e., when participants faced a case of corruption in which the party affected was their preferred party, was a different party, or was a party not specified, sympathizers of PP were more tolerant towards political corruption.

Accordingly, when comparing the electoral results of the Spanish Local Elections in 2003 and 2007, Costas-Pérez et al. (2010) concluded that when corruption was widely reported, left voters punished corruption cases more than right voters. Concretely, it was found how corruption detracted 22.3% of the votes in a municipality controlled by a left-wing party, while just 12.8% in a municipality controlled by a right-wing party.

2.2.4 **Political Sympathy**

After studying the role played by political leaning, it is worth analysing the specific role played by citizens' political sympathy towards their preferred party. When citizens' preferred party is involved in corruption, they have to face a crucial decision: keep supporting their party, not vote or vote for an alternative party. In order to punish a corrupted party, support an alternative one represents the most effective option, however, it has been widely proved how certain voters not only decide not voting but also continue supporting their party even being aware it is plagued of corruption scandals and having reasonable ideological alternatives. Charron and Bågenholm (2016) highlighted how when citizens face a scandal of corruption affecting to their preferred party, the "home team" psychology factor makes them find hard assigning blame. In this section, it will be studied the role played by political sympathy in citizens' attitude towards political corruption.

Cordero and Blais (2017) underlined that those citizens who feel closer to an incumbent party involved in corruption tend to be more tolerant towards it. Anduiza et al. (2013) found that citizens evaluate information differently depending on if that information affects or not the party they are supporting. Mullainathan and Washington (2009) and Beasley and Joslyn (2001) showed that party's supporters evaluate more positively its candidate than the rival. There is a wide agreement among scholars in pointing out that voters' political sympathy can balance the impact of corruption on the electoral results, being even the candidate involved in a corruption case re-elected (Cordero and Blais, 2017; Charron and Bågenholm, 2016; Welch and Hibbing, 1997; Peters and Welch, 1980). According with this finding, Ecker et al. (2016) found that citizens have a strong predisposition to keep voting the same party in despite of corruption. The role played by political sympathy in the attitude towards political corruption has been documented in different countries as Canada (Blais et al., 2015), Spain (Anduiza et al., 2013), the UK (Vivyan et al., 2012), Mexico (Chong et al., 2011), Italy (Chang et al., 2010), and the US (Dimock and Jacobson, 1995; Peters and Welch, 1980; Rundquist et al., 1977).

A citizen who is informed about corruption in his preferred party may experiment a contradiction between two cognitions: on one hand, the preference for the political party; and on the other hand, his preferred party is affected by corruption. As the

dissonance is psychological uncomfortable, the citizen may try to modify one of his two cognitions, his party's preference or his degree of tolerance towards political corruption. Anduiza et al. (2013) underlined that modifying the second cognition may be easier.

Party's supporters may find difficulties to believe information about corruption in their party (Blais et al., 2015), especially, when it is not confirmed by court corruption (Rundquist et al., 1977). It may be easier to think that this information is just the result of the partisan conflict, especially, in contentious political contexts. Anduiza et al. (2013) highlighted how partisans are more likely to believe corruption scandals when they affect to other party rather than when it is their preferred party involved. In these cases, partisans tend to consider political noise made by competing parties and magnified by media and, when the scandal of corruption is too obvious to deny, it is easier for partisans to think that the other parties are also corrupt (Charron and Bågenholm, 2016). However, it is not just a question of credibility. There are cases where although citizens know and believe the political corruption information which is being spread about their party, they choose to downplay it and focus on other benefits the politicians are delivering (Anduiza et al., 2013). In the following lines, it will be analysed some researches in which it has been studied the role played by political sympathy in citizens' attitude towards political corruption.

Charron and Bågenholm (2016) analysed the political sympathy's effect on Europeans' attitude towards political corruption. Their analysis was based on the largest multi-country survey focused on the matters of governance and corruption. The universe studied was the population resident in Europe, and the sampling was carried out in 24 European countries between February and April 2013 by the authors in collaboration with the European Commission. The sampling units were men and women over 18 years old and the sample size was roughly 85000 respondents.

Concretely, these authors analysed the likelihood of European citizens to keep supporting their preferred party being aware it was involved in corruption. In order to address this issue, participants were asked about which would be their most likely reaction if their preferred party was involved in a corruption scandal. They had to choose among the following three options: keep voting for their preferred party; vote for an alternative party not involved in corruption; or not vote at all.

The results showed that a 21% of all respondents would support their preferred party in despite of corruption, a 34% would vote for an alternative party and a 39% would abstain from voting (a 6% declined to answer the question).

Anduiza et al. (2013) analysed the role played by political sympathy in the Spaniards' attitude towards political corruption. For this purpose, it was designed and conducted an online survey focused on the political attitudes and behaviours. The universe studied was the population resident in Spain, and the sampling was carried out in this country in November 2010. The sampling units were men and women with Internet access, older than 15 and younger than 45. These age limits were selected because the percentage of people with access to Internet in that age range was over 83% while the Internet diffusion rate above this age was much lower. The sample size was 2300 respondents.

These authors justified their research was focused on Spain underlining that at the time in which the data was collected, political corruption was a salient issue. Accordingly, the Spain's score on the Corruption Perception Index by Transparency International was 6.1 on a scale anchored at 0 (highly corrupt) to 10 (very clean). In this context, the researchers expected more realistic answers. Besides, Spain had an institutionalised party system with more than 60% of its population reporting feeling close to a political party which clearly benefited the goal of measuring the political sympathy impact. Finally, it was also pointed out that Spain was a clear example where political corruption has not the electoral consequences it could be expected.

These researchers theorised that citizens are more tolerant towards political corruption when it is their preferred party the one which is being involved in a corruption scandal. In order to address this issue, participants, who had been previously required to indicate which their preferred party was, faced a randomly assigned vignette in which it was briefly reported a hypothetical corruption case related to one of the followings: a mayor of their preferred party; a mayor of a different party; a mayor of a party not specified. This design allowed isolating the impact of partisanship. After reading the vignette, respondents were asked to indicate how serious they considered the situation was on a scale anchored at 0 (not serious at all) to 10 (very serious).

The analysis was restricted to the supporters of the main parties (PP and PSOE) which at this time represented the 83.8% of the population. The reason was that this restriction ensured that the distance between "preferred party" and "different (rival) party" was the same for both parties' supporters.

The main conclusion was that those participants who faced a scandal of corruption in which their party was involved were more tolerant towards political corruption than those who faced a scandal of corruption in their rival party. Concretely, the mean of the attitude towards political corruption was 7.6 and 8 respectively, and the difference was statistically significant.

Deeply analysing the difference between sympathizers of PP and PSOE, it was found that although sympathizers of both parties evaluated hardly corruption when it affected their rival party than when it was their preferred party the one which was being involved, that difference was just statistically significant in PP supporters.

The attitude towards political corruption clearly depends on how close citizens feel to the party which is being affected. When analysing what is behind the political sympathy towards a party, it has been identified two different sources which will be analysed in the rest of this section: clientelism and political identification (Chang and Kerr, 2009).

Clientelism and political identification

Clientelism can be considered as the informal, mutually beneficial exchange relationship in which a party offers material benefits in return for the electoral support (Stokes 2007). There are citizens who keep supporting parties involved in corruption because of the expectation of benefits (Cordero and Blais, 2017; Charron and Bågenholm, 2016; Fernández-Vázquez et al., 2016; Kurer, 2010). Chang and Kerr (2009) and Lemarchand (1972) identified a "norm of reciprocity", which considers that a citizen feels obliged to reciprocate after receiving some benefit from the party. Clientelism tends to be stable and persistent (Brusco et al., 2004). Stokes (2005) underlined the "perverse accountability", which bases the explanation of the clientelism's persistency on the clients' fear to lose their benefits.

Chang and Kerr (2009) underlined how on one side, it is easier to realise party's corruption when someone forms part of the corrupted system; and on the other side, how it is more difficult to criticise corruption when someone is being benefited from it. Citizens belonging to a patronage network, even if perceiving a high level corruption, are more tolerant (Chang and Kerr, 2009). Manzetti and Wilson (2007) argued that a corrupt government keeps its public support by satisfying their clientelist networks.

Fernández-Vázquez et al. (2016) analysed how clientelism impacts on Spaniards' attitude towards political corruption. Concretely, they theorised that when corruption provokes gains for a wide segment of the electorate in a short term, these voters tend to keep supporting the incumbent government in despite of their corrupted practices. For the purpose of testing their hypothesis, it was prepared an original dataset with the electoral results of the Spanish Local Elections in May 2007 and May 2011. Besides, following an exhaustive process, it was identified the corruption scandals between both Local Elections and the municipalities affected. Then, these cases of corruption were classified according to the economic externalities they generated, i.e., it was distinguished between those cases where corruption provoked welfare decreasing and those which provoked welfare enhancing. The result of this process yielded a dataset of 75 municipalities affected by corruption (1% of Spanish municipalities), being 46 classified as welfare enhancing and 29 as welfare decreasing.

These authors justified the convenience to choose Spain for the study of corruption underlining how at that time this country was a clear example where although voters disliked corruption, incumbents rarely suffered electoral consequences for their illegal actions. Particularly, between 2003 and 2007, the 70% of mayors who were involved in corruption were re-elected. Accordingly, Costas-Pérez et al. (2012) found that the electoral cost of corruption was on average just a 4%. Besides, on a scale anchored at 0 (highly corrupt) to 10 (very clean), Spain generally scored poorly in all cross-country rankings of perception of corruption at all administrative levels. Moreover, and taking into account the classification of the scandals of corruption used to test their hypothesis, where it was distinguished those cases where corruption provoked welfare decreasing and welfare increasing, Spain represented a suitable case as it offered a significant number of cases in which mayors irregularly changed the established land use allowing an excess of construction which benefited the local economy in the short time (Villoria

and Jiménez, 2012). Finally, Fernández-Vázquez et al. (2016) emphasised that, as most of the Spanish corruption scandals are investigated by judicial authorities, there was an extensive press coverage which increased citizens' political awareness.

The results proved that clientelism plays a key role when analysing citizens' attitude towards political corruption. Concretely, those mayors involved in corruption without benefits for the municipality reduced their vote share by a statistically significant 4.2%, while those mayors involved in corrupt practices which exerted benefits for the municipality increased their vote share by 1.9%.

There are other studies where it has been analysed the impact of clientelism. For instance, Bratton and van de Walle (1997), analysing the democratic transitions in Africa, found that the elites which had access to patronage benefits were more tolerant with the incumbent regime than the other elites which were being excluded from those benefits.

As seen, when citizens' sympathy towards a corrupted party comes from the obtaining of direct benefits, it becomes harder to find a strong criticism towards political corruption (Chang and Kerr, 2009). Bratton (2007) concluded that clientelism and corruption are the two sides of the same coin. However, not always political sympathy towards a party comes from the expectation of material benefits, many times it is based on a sense of shared identity with the political party (Charron and Bågenholm, 2016; Campbell et al. 1960). There are citizens who feel close to the social groups that comprise the party base and develop an affective identity towards the party (Goren, 2005). Party identification provides citizens with a partisan orientation through which they analyse political information and build their opinions (Zaller, 1992; Campbell et al. 1960). As higher is the party identification as higher is the tolerance towards corruption in this party (Chang and Kerr, 2009). Rundquist, et al. (1977) concluded that there are citizens who overlook corruption just in exchange for ideological satisfaction.

Cordero and Blais (2017) analysed the role played by political identification in Spaniards' attitude towards political corruption. For this purpose, it was used data from an online survey conducted in Spain by the Universitat Pompeu Fabra in June 2015 which had a sample size of 2410 respondents. It is remarkable that at the time in which

the data was collected political corruption was a salient issue. The incumbent party (PP) which had won the General Elections in 2011 with a support of the 44.6%, had had a mandate (2011-2015) plagued with scandals of corruption as the so-called "Gürtel case", "Barcenas' papers", "Púnica operation" and "Brugal case".

As a consequence of all the corruption scandals, following the CIS[21], while in 2011 just 2% of the population mentioned corruption as one of the main Spanish problems, this percentage increased until 51% in 2015. In fact, corruption became the second greatest problem for Spaniards after unemployment[22]. Accordingly, the Spain's score on the Corruption Perception Index by Transparency International during the government of PP, on a scale anchored at 0 (highly corrupt) to 100 (very clean), fell from 65 to 58.

Cordero and Blais (2017) justified the convenience to focus their research on Spain because this country clearly illustrate how corruption does not have the electoral consequences it could be expected. Firstly, during the period 2011-2015 where Spain was going through an economic crisis, the party in the government was affected for multitude cases of corruption; secondly, these cases of corruption were widely covered by the media: newspapers, radio, TV, and social media; thirdly, the majority of Spanish society was aware and worried about corruption and many Spaniards were actively participating in demonstrations against it; and finally, the incumbent party plagued of corruption was still able to win the General Election in December 2015. PP lost electoral support in 2015 in reference to the previous General Elections of 2011, concretely, PP obtained a 44.6% of votes in November 2011 while in December 2015 its support was 28.7%. It is worth noting that this decrease must be relativized taking into account the emergence of the new parties Podemos and C's. However, in despite of its corruption and the emergence of new parties which were traduced in electoral losses of 17pp, PP still reached the first position in the General Elections in 2015 with more than 7 million of votes and 123 seats.

In this context, these researchers were interested in analysing the relationship between citizens' ideologically identification with the party in the government plagued with corruption and the likelihood to support it. Concretely, these authors hypothesised that as ideologically closer is perceived the incumbent government involved in

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[21] CIS January 2011 and January 2015
[22] CIS January 2015

corruption, as lower is the propensity to consider completely unacceptable to vote for it. In order to address this issue, on one side, participants were required to indicate the likelihood in which they would vote for the incumbent government (PP) on a scale anchored at 0 (not at all likely) to 10 (very likely). This variable was recoded following a very conservative criterion as follows: "1", when participants completely reject the idea of voting for the government; and "0", otherwise. On the other side, they were asked to locate themselves and the incumbent party (PP) on the traditional left-right axis anchored at 0 (extreme left) to 10 (extreme right). Then, it was constructed a new variable: "Ideological distance from the government". This variable had a range of values fluctuating from 0 (when respondents locate themselves and the party in the government on the same score) to 10 (when respondents perceived the party in the government as being ideologically very far from their position).

The results showed that the difference in the predicted probability to completely reject the idea of voting for the incumbent government affected by corruption between those respondents who were ideologically the closest to the government and those who were the most distant was 74pp. In other words, the likelihood of totally rejecting the idea of supporting PP of those who felt this party exactly represented their ideology was 74pp lower than those who felt PP was the most distant party to their ideology.

As a consequence, it was concluded that political sympathy towards a party is a key variable when studying citizens' attitude towards political corruption: as higher it is, as lower is the propensity to punish the party in despite of being aware of its corruption.

There are other studies where it has been analysed the impact of political identification. For instance, Banerjee and Pande (2009) showed how in North India were elected more corrupt politicians as a consequence of the voter ethnicization, i.e., as a greater preference for the party representing one's ethnic group.

2.2.5 **Economic context**

Once it has been reviewed the role played by political awareness, political leaning and political sympathy, in this section it will be analysed the impact of the economic context.

It has been established in numerous empirical studies how the economic context is one of the key variables when explaining why political corruption is not always as

penalized as it could be expected. Cordero and Blais (2017) and Zechmeister and Zizumbo-Colunga (2013) highlighted how citizens tend to be more tolerant towards political corruption when the government is perceived to handle the economy satisfactorily. There are certain voters who keep supporting incumbent governments in despite of corruption when they perceive a good job in managing the economy (Charron and Bågenholm, 2016). Conversely, the worse is perceived the governments' economy performance, the more corruption becomes salient, especially in countries with a high level of corruption (Charron and Bågenholm, 2016; Klasnja and Tucker, 2013). The punishment of corruption clearly varies depending on the country's economic situation (Jerit and Barabas 2012; Duch et al., 2000; Mauro, 1995).

The problem of corruption is not only the extractive behaviour of some politicians, but also the society who tolerates such behaviour (Hutter et al., 2018). Weitz-Shapiro and Winters (2010), Manzetti and Wilson (2007), Golden (2007) and Diaz-Cayeros et al. (2000) found that there were citizens who kept supporting a corrupt politician because of the material benefits they were delivering to their constituency. These citizens perceived that there was a risk to stop the flow of those benefits by punishing the corrupt politician.

There are many cases in the literature where it has been proved that only when the country is going through an economic crisis, citizens react against political corruption. In the rest of this section, it will be analysed some researches in which it has been studied the role played by the economic context in citizens' attitude towards political corruption.

Charron and Bågenholm (2016) analysed the impact of the economic context on Europeans' attitude towards political corruption. Their analysis was based on the largest multi-country survey focused on the matters of governance and corruption. The universe studied was the population resident in Europe, and the sampling was carried out in 24 European countries between February and April 2013 by the authors in collaboration with the European Commission. The sampling units were men and women over 18 years old and the sample size was roughly 85000 respondents.

These authors theorised that when citizens are satisfied with the economic situation, they are more likely to keep supporting their preferred party in despite of corruption. In

order to address this issue, participants, on one hand, were required to indicate their level of satisfaction with the economy; and on the other hand, were asked about which would be their most likely reaction if their first party choice was involved in a corruption scandal. They had to choose among the following three options: keep voting for their first party choice; vote for an alternative party not involved in corruption; or not vote at all.

The results indicated how there was a relationship statistically significant between citizens' satisfaction with the economy and their likelihood to still vote for their first party choice in despite of corruption. This relationship was strongly and positive, i.e., as higher was the economic satisfaction, as higher was the likelihood to keep supporting their first party choice in despite of corruption.

Anduiza et al. (2013) analysed the role played by the economic context in the Spaniards' attitude towards political corruption. For this purpose it was designed and conducted an online survey focused on the political attitudes and behaviours. The universe studied was the population resident in Spain, and the sampling was carried out in this country in November 2010. The sampling units were men and women with Internet access, older than 15 and younger than 45. These age limits were selected because the percentage of people with access to Internet in that age range was over 83% while the Internet diffusion rate above this age was much lower. The sample size was 2.300 respondents.

These authors justified their research was focused on Spain underlining that at the time in which the data was collected, political corruption was a salient issue. Accordingly, the Spain's score on the Corruption Perception Index by Transparency International was 6.1 on a scale anchored at 0 (highly corrupt) to 10 (very clean). In this context, the researchers expected more realistic answers. Besides, Spain had an institutionalised party system with more than 60% of its population reporting feeling close to a political party which clearly benefited the goal of measuring the political sympathy impact. Finally, it was also pointed out that Spain was a clear example where political corruption has not the electoral consequences it could be expected.

These researchers were interested in analysing if citizens are more tolerant towards political corruption when they have a positive evaluation of the economic situation. In

order to address this issue, firstly, participants were required to express their opinion about the Spanish economic situation on a scale anchored at 1 (very bad) to 5 (very good). Then, they faced a vignette in which it was briefly reported a hypothetical corruption case. After reading the vignette, respondents were asked to indicate how serious they considered the situation was on a scale anchored at 0 (not serious at all) to 10 (very serious).

It was performed a multivariate test, whose dependent variable was their opinion about the scandal of corruption, including their evaluation of the Spanish economic situation as a factor. The conclusion was that the economic context plays a key role on citizens' attitude towards political corruption, being severely judged by those with a negative evaluation.

Analysing the electoral results of the Spanish Local and Regional Elections held in May 2011 it is found how the economic context played a stronger role than political corruption. At that time Spain was going through an economic and social crisis which started in 2008 and, on one side, the government's economy performance was being strongly criticised for opposition media groups and political parties which claimed that the government (PSOE) was not adopting the measures needed to tack the crisis; and on the other side, PP was being affected by corruption (Vallina-Rodriguez et al., 2012). In this context, in the Local Elections of May 2011, PSOE lost 7.5pp. while PP won 1.5pp. with respect to the Local Elections of May 2007 in despite of being involved in corruption scandals. Similarly, in the General Elections of November 2011, PSOE lost 15.1pp and PP won the elections increasing their support by 4.7pp.

Winters and Weitz-Shapiro (2013), exposed that in 1995, when Argentine's economy was growing, even if citizens knew that there were accusations of corruption against President Carlos Menem, they not only supported a constitutional change to permit their President to run for re-election, but also he won by a large margin. However, in 1999, when the Argentine's economy was in decline, citizens did not support their President to run for a third term. In agreement, Manzetti and Wilson (2007) underlined how in Argentina, those citizens with a positive opinion about the regime's economic performance were more tolerant with political corruption.

A similar case happened in Brazil, where two Brazilian Presidents whose collaborators were involved in political corruption cases suffered different consequences. While Fernando Collor de Melo (1990-1992), who did not success in economic issues, had to resign after corruptions allegations; Luis Ignácio Lula da Silva (2003–2010), in the context of economic growth, was elected to a second term and enjoyed high levels of public support (Winters and Weitz-Shapiro, 2013).

2.2.6 **The New Parties' Emergence**

The economic, social and political crisis shakes the traditional political system and contributes to the emergence of new parties (Altiparmakis and Lorenzini, 2018; Muro and Vidal, 2017; Della Porta, 2015). In this section, it will be studied the impact of news parties on citizens' attitudes towards political corruption.

The definition of "new party" has been widely discussed in the literature. Powell and Tucker (2014) labeled as new parties all those which take part in the elections with a new brand, regardless of whether the new party is the result of the union or separation of already existing parties (except when the new party is the result of the sum of one or several insignificant parties with an existing major party). Authors as Engler (2015), Tavits (2008) and Hug (2001) excluded those which are the result of merging existing parties and others researchers as Sikk (2005) excluded also those which appear as a consequence of the separation of existing parties. In this thesis, it will be followed the strictest definition, excluding those parties which are the result of the mix or division of traditional parties in order to be able to clearly figure out if there are differences in the attitudes towards political corruption between traditional and new parties' supporters.

The stabilization of the party system is usually noted as a relevant factor for the well-functioning democracy (Mainwaring and Zoco, 2007; Bielasiak, 2002), while the emergence of new parties is associated with volatility (Powell and Tucker, 2014). Party systems have been traditionally stable, making hard for new parties to burst onto the scene (Lipset and Rokkan, 1967), however, after the third wave of democratization, electoral volatility has been installed in many countries. Electoral volatility measures the aggregate of change in party systems (Mainwaring et al., 2009; Tavits, 2008, 2005; Lane and Ersson, 2007; Caramani, 2006; Gunther, 2005; Madrid, 2005; Mozaffar and Scarritt, 2005; Sikk, 2005; Tavits, 2005; Birch, 2003; Bielasiak, 2002; Roberts and Wibbels, 1999; Toka, 1998; Bartolini and Mair, 1990; Shamir, 1984; Pedersen, 1983,

1979). Mainwaring et al. (2009) emphasized the importance to distinguish between within-system volatility (the electoral volatility among established parties) and extra-system volatility (the electoral volatility among established parties and new parties), noting the second option as the one which represents the strongest change in the party system.

Mainwaring et al. (2009), analyzing the new parties' success along the twentieth century, found how the third wave of democratization was an impulse for the new parties' emergence. Their vote share increased from 2.4% to 13.4%. Considering what they labeled as "young parties", i.e., those parties with 10 years or less, the evolution of the vote share was from 8.2% to 26.6%.

Hutter et al. (2018) pointed out that the party systems are more institutionalised in the Northwest than in the Southern Europe. These researchers underlined that the party systems in the Northwest have been transformed on one side, in 1970s and early 1980s by new parties with a left political leaning which advocated individual autonomy, the free choice of lifestyle and other universalistic values; and on the other side, since 1990s by new parties with a right political leaning focused on immigration and European integration as threats to the homogenous nation-state. The new left and the new right were labelled as "Green-Alternative-Libertarian (GAL)" and "Traditional-Authoritarian-Nationalist (TAN)" by Hooghe et al. (2002) and, as "Integration" and "Demarcation" by Kriesi et al. (2012). Conversely, in Southern Europe the party systems have been less transformed and the left-right axis still plays a strong role.

Nevertheless, the recent economic, social and political crisis has shaken the traditional political system of many countries in Southern Europe, being austerity, political renewal and political corruption the salient conflicts (Muro and Vidal, 2017; Della Porta, 2015). A large share of population has felt frustrated with the established political system and, this frustration has been translated into mobilisations on the street (Altiparmakis and Lorenzini, 2018). In turn, these mobilisations have contributed to the emergence of new political parties.

There is a wide set of democracies where it has appeared new political parties which have successfully broken into the political scene making the fight against corruption their *leitmotif* (Bågenholm and Charron, 2014; Hanley and Sikk, 2014;

Bågenholm, 2013; Sikk, 2012; Bélanger, 2004). In the following lines it will be summarised the emergence of new parties which have reached remarkable electoral results in three countries of Southern Europe (Greece, Italy and Spain), which besides of being suffering an economic, social and political crisis, were affected by political corruption (Hutter et al., 2018).

In Greece, in 2004 was founded Syriza, an electoral coalition of radical left political parties and extra parliamentarian organisations. This party is closely related to the Greek mobilisations on the street against the established political system (Hutter et al., 2018) and evolved into a formal party in 2012. Stavrakakis and Katsambekis (2014) emphasised how Syriza's discourse is focused on the dilemma between "us" (the people) as opposed of "them" (the elite). Besides, these authors underlined that this party specially supports equal right for immigrants, gender equality and LGTB rights. In reference to its electoral results, Syriza increased its support from 4.6% in October 2009 to 26.9% in June 2012 which led it to gain unprecedented visibility in Europe (Stavrakakis and Katsambekis, 2014). Its quick growth is related to the fact that this party was perceived as being the only viable hope for an alternative way out of the crisis (Spourdalakis, 2013). More recently, in the General Elections of January 2015 and September 2015, Syriza won with a vote share of 36.3% and 35.5% respectively.

In Italy, in 2009 was founded the "Movimento Cinque Stelle" (Five Star Movement). This party engaged with citizens with a left but also with a right political leaning (Ceccarini and Bordignon 2016). The discourse of Movimento Cinque Stelle is focused on the "good citizens" versus "the elite" (existing parties, media and business leaders) who is oppressing people's well-being and democratic rights (Bobba and McDonnell, 2015). This party advocates to remove the corrupt and incapable elite and to empower citizens by online direct democracy (Hutter et al., 2018). With respect to its electoral results, this party caused a major impact at the General Elections in 2013, becoming the most voted party with a vote share of 25.6% (Tronconi, 2018). Passarelli and Tuorto (2016) underlined how its success is mainly attributed to its ability to represent those citizens disenchanted with the old politics. In the recent General Elections of March 2018, its support increased until 32.7%.

In Spain, as mentioned, in 2014 was founded Podemos, a left new party which is closely related to the Movimiento 15M (15M Movement) (Kioupkiolis and

Katsambekis, 2018; Franzé, 2017), a movement of citizens disgruntled with the established party system and its corruption (Vallina-Rodriguez et al., 2012). Accordingly, Kioupkiolis and Pérez (2018) underlined that this party was born in response to a crisis of political representation. Podemos claims greater citizens' participation in the policy-making and its discourse is focused on defending the "social majority" against the "casta" (the degenerate political elite) (Ramiro and Gomez, 2017). Regarding its electoral results, this party reached in the General Elections of December 2015 a vote share of 20.7% and, after the coalition with "Izquierda Unida" which originated the current party UP, in the General Elections of June 2016 its support was 21.1%.

The emergence of new parties represents an opportunity for citizens to punish traditional parties affected by political corruption and, therefore, a threat of losing power for existing parties (Cordero and Blais, 2017). Engler (2015), Pop-Eleches (2010) and Mainwaring et al. (2009) found that corruption benefits new parties pushing voters away from all the traditional parties, not only from the one which is in the government. It has been proved a negative relationship between corruption and citizen's trust in government, administration, parliament and political parties (Kostadinova, 2012; Anderson and Tverdova, 2003; Seligson, 2002; Mishler and Rose, 2001); and a positive relationship between citizens' disenchantment with traditional parties as a consequence of corruption and the new parties' share of votes (Böhler and Falathová, 2013; Haughton and Krašovec, 2013).

In the rest of this section, it will be analysed some researches in which it has been proved how the existence of reasonable ideological alternatives not perceived as corrupted impacts positively on the attitude towards political corruption, increasing citizens' punishment to parties involved.

Cordero and Blais (2017) analysed how the perception of a widespread corruption impacts on Spaniards' attitude towards political corruption. For this purpose, it was used data from an online survey conducted in Spain by the Universitat Pompeu Fabra in June 2015 which had a sample size of 2410 respondents. It is remarkable that at the time in which the data was collected political corruption was a salient issue. The incumbent party (PP) which had won the General Elections in 2011 with a support of the 44.6%,

had had a mandate (2011-2015) plagued with scandals of corruption as the so-called "Gürtel case", "Barcenas' papers", "Púnica operation" and "Brugal case".

As a consequence of all the corruption scandals, following the CIS[23], while in 2011 just 2% of the population mentioned corruption as one of the main Spanish problems, this percentage increased until 56% in 2015. In fact, corruption became the second greatest problem for Spaniards after unemployment[24]. Accordingly, the Spain's score on the Corruption Perception Index by Transparency International[25] during the government of PP, on a scale anchored at 0 (highly corrupt) to 100 (very clean), fell from 65 to 58.

Cordero and Blais (2017) justified the convenience to focus their research on Spain because this country clearly illustrate how corruption does not have the electoral consequences it could be expected. Firstly, during the period 2011-2015 where Spain was going through an economic crisis, the incumbent party was affected for multitude cases of corruption; secondly, these cases of corruption were widely covered by the media: newspapers, radio, TV, and social media; thirdly, the majority of Spanish society was aware and worried about corruption and many Spaniards were actively participating in demonstrations against it; and finally, the incumbent party plagued of corruption was still able to win the General Election in December 2015. PP lost electoral support in 2015 in reference to the previous General Elections of 2011, concretely, PP obtained a 44.6% of votes in November 2011 while in December 2015 its support was 28.7%. It is worth noting that this decrease must be relativized taking into account the emergence of the new parties Podemos and C's. However, in despite of its corruption and the emergence of new parties which were traduced in electoral losses of 17pp, PP still reached the first position in the General Elections in 2015 with more than 7 million of votes and 123 seats.

In this context, these researchers were interested in analysing the relationship between citizens' perception of corruption in the parliament and the likelihood to support the incumbent government plagued with corruption. Concretely, these authors hypothesised that as higher is the perception of corruption in the parliament, as lower is the propensity to consider completely unacceptable to vote for the incumbent government involved in corruption. In order to address this issue, on one side,

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[23] CIS January 2011 and January 2015
[24] CIS January 2015
[25] https://www.transparency.org/cpi2015

participants were required to indicate the likelihood in which they would vote for the incumbent government (PP) on a scale anchored at 0 (not at all likely) to 10 (very likely). This variable was recoded following a very conservative criterion as follows: "1", when participants completely reject the idea of voting for the government; and "0", otherwise. On the other side, they were asked to manifest their perceptions of corruption in the parliament on a scale anchored at 0 (the parliament is not corrupt at all) to 10 (the parliament is very corrupt).

The results showed that the difference in the predicted probability to completely reject the idea of voting for the incumbent government affected by corruption between those respondents who perceived the parliament was not corrupt at all and those who perceived it was very corrupt was 19pp. In other words, the likelihood of totally rejecting the idea of supporting PP of those who perceived the parliament was not affected by corruption was 19pp higher than those who perceived the corruption was widespread in the entire parliament.

This finding emphasises the importance of the emergence of new and clean parties in order to fight against political corruption. Following Cordero and Blais (2017), the presence of new alternatives not involved in corruption reduce the perception of corruption in the parliament and, therefore, increase the probability to punish those incumbent governments plagued with corruption.

Charron and Bågenholm (2016) analysed the impact of the presence of reasonable ideological alternatives on Europeans' attitude towards political corruption. Their analysis was based on the largest multi-country survey focused on the matters of governance and corruption. The universe studied was the population resident in Europe, and the sampling was carried out in 24 European countries between February and April 2013 by the authors in collaboration with the European Commission. The sampling units were men and women over 18 years old and the sample size was roughly 85000 respondents.

These authors theorised that when citizens are considering voting for a different party, the presence of reasonable ideological alternatives plays a key role. Concretely, these authors hypothesised that when the voters' first party choice is affected by scandals of corruption, the likelihood to switch to an alternative party was higher as

higher was the number of viable alternatives. In order to address this issue, participants were asked about which would be their most likely reaction if their first party choice was involved in a corruption scandal. They had to choose among the following three options: keep voting for their first party choice; vote for an alternative party not involved in corruption; or not vote at all.

The results indicated how when citizens are facing corruption scandals affecting to their first party choice, in a strong multiparty system, voters became more likely to switch to an alternative party not involved in corruption compared with those party systems with less number of parties. On one side, in limited party systems, the percentage of citizens who would keep supporting their first party choice affected by a scandal of corruption is higher and, among those citizens who would not support the corrupted party, to abstain from voting was the preferred option for most of respondents. On the other side, in multiparty systems, the percentage of citizens who would keep supporting their first party choice affected by a scandal of corruption is lower and, among those citizens who would not support the corrupted party, to vote for an alternative party was the preferred option for most of participants.

As it has been shown, the emergence of new parties is a key factor to fight against political corruption, not only because it decreases the probability to keep supporting a corrupted party, but also because it increases the probability to vote for an alternative party to the detriment of the abstention.

The key role played by the new parties' emergence has been also demonstrated when comparing the electoral results of the Spanish General Elections held in November 2011 with those of the General Elections held in December 2015.

In November 2011, Spain was going through a convulsive political, economic and social situation. Following the CIS[26], Spaniards were mainly concerned with the unemployment, the economic situation and the party political system. Moreover, the so called "Movimiento 15M" (15M Movement), which was born in May 2011 during the Spanish Revolution was still actively fighting against the established party system and its corruption. Finally, the traditional parties PSOE and PP were being strongly criticised because of its poor management of the economy and its corruption

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[26] CIS November 2011

respectively (Vallina-Rodriguez et al., 2012). In this context, without the presence of new alternatives not involved in corruption, in the General Elections of November 2011, PSOE reached a vote share of 28.8% and PP won the elections with a rate of 44.6% in despite of its corruption. However, in the General Elections of December 2015, in a similar economic and social situation but with the presence of new alternatives not affected by corruption (Podemos and C's), PSOE was supported by the 22% of the electorate; and PP, still won the elections but with a vote share of 28.7%. Simplifying, with the presence of reasonable ideological alternatives, PSOE lost 6.7pp. and PP 15.9pp. Besides, the turnout was 4pp higher in the General Elections of 2015 in respect to General Elections of 2011. Orriols and Cordero (2016), when analysing the electoral results of the General Elections of 2015, concluded that the irruption of the new parties Podemos and C's supposed the end of the bipartisanship.

2.2.7 **Social Pressure**

The last variable analysed in this thesis will be social pressure, which has been identified as a key variable when analysing citizens' attitude and behaviour in a wide variety of domains (Giraldo-Luque, 2018; Belda et al., 2015; Anduiza et al., 2014; Peña-López et al., 2014; Piñeiro-Otero and Costa-Sánchez, 2012; Vallina-Rodriguez et al., 2012; Allcott, 2011; DellaVigna et al., 2010; Gerber and Rogers, 2009; Gerber et al., 2008; Nolan et al., 2008; Schultz et al., 2007; Frey and Meier, 2004). Social pressure is defined by the online Psychology Dictionary as *"the influence that is exerted on a person or group by another person or group. It includes rational argument, persuasion, conformity and demands"*[27]. Citizens act different when they believe their actions are going to be public (Cialdini and Goldstein, 2004; Cialdini and Trost, 1998; Lerner and Tetlock, 1999).

As analysed in Belda et al. (2015), managing communities can be extremely useful to disseminate knowledge, opinions or propaganda and, as a consequence, to exert influence on the community members (Dholakia et al., 2004; Dholakia and Bagozzi, 2001). In the following lines, it will be explained the processes by which social pressure is spread in a social network.

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[27] http://psychologydictionary.org/social-pressure/

From a psychological perspective, a social influence network is a cognitive process where actors integrate conflicting influential opinions to form revised opinions on an issue and, as a result, social influence pressures towards the mean of the initial opinions (McGarty et al., 1992; Turner and Oakes, 1989; Asch, 1951; Sherif, 1936). From a sociological perspective, there is wide agreement among researchers that a social influence network involves a social structure that deals with an influence network defined by the pattern and strengths of the interpersonal influences among the members of the group. As a consequence, it results in a structure of stratification or domination (Friedkin and Johnsen, 1999; Isenberg, 1986; Lamm and Myers, 1978), which considers other options of group's agreement different from the mean of initial opinions.

Friedkin and Johnsen (1999) developed a model of social influence where the process of opinion change in a group is an interpersonal accommodation. In this model, each member of the community weighs his own and others members' opinions on an issue, and repetitively modifies his opinion until a settled opinion on the issue is formed. The result of this process has different options: the opinion settle on the mean of group members' initial opinion; on a compromise opinion that is different from the mean of initial opinions; on an initial opinion of a group member; on an opinion that is outside the range of group members' initial opinions because of a reinforcement process; or the group is not able to reach an agreement.

Assuming that it is possible to settle the group's agreement in a different point of the mean of initial members' opinions, it will be studied how to propagate social pressure through a network from different perspectives.

The processes by which ideas and influence are spread through a social network have been analysed by several researchers in different domains. For instance, Richardson and Domingos (2002), Domingos and Richardson (2001), Goldenberg et al. (2001a), Goldenberg et al. (2001b), Mahajan et al. (1990), Brown and Reinegen (1987) and Bass (1969) investigated the "word of mouth" and "viral marketing" processes related to the adoption of a new product; Young (2002), Morris (2000), Young (1998), Blume (1993) and Ellison (1993) studied the sudden and widespread adoption of various strategies in game theoretic settings; and Valente (1995) and Coleman et al. (1966) analysed the diffusion of medical and agricultural innovations.

The traditional view assumes that there is a small and well-connected group in a society perceived as informed, which has the ability to propagate ideas to others (Cha et al., 2010). Gladwell (2002) referenced them as the hubs, connectors, or mavens. Previously, Rogers (1962) identified them as innovators in his *Diffusion of innovations theory* and Katz and Lazarsfeld (1955) as the opinion leaders in their *Two-step flow theory*.

These theories have been criticised because its information flow process does not consider the role of ordinary users. Watts and Dodds (2007) analysed both type of users, influential and ordinary, and concluded that although influential users were those who initiated more frequent and larger cascades, they were not enough to explain all diffusions. These authors found that the spread of influence depends on how susceptible the society is overall to the idea or innovation more than on the person who starts it. In other words, being both necessaries it is more relevant the topic than the influential users. Domingos and Richardson (2001) underlined how in the new information age, people take into account the opinions of their friends and peers rather than the traditional influential users' opinions.

There are many papers which show the evidence of social pressure in a wide variety of domains: studies related to energy efficiency (Belda et al., 2015); crime (Ludwig et al., 2001; Glaeser et al., 1996; Case and Katz, 1991), educational outcomes (Sacerdote, 2001), health (Katz et al., 2001), unemployment (Topa, 2001), welfare participation (Bertrand et al., 2000), and social mobility (Borjas, 1994, 1992). Below, it will be exposed the main conclusions of some interesting researches collected in Belda et al. (2015).

Belda et al. (2015), when studying citizens' attitudes and behaviours towards energy efficiency, proved the effectiveness of social pressure in order to motivate improvements in consumers' energy behaviour. Specifically, it was theorised that among the variables which influence people to adopt energy efficient behaviours, social pressure had a higher impact than factual information related to the climate change. In order to address this issue, it was conducted a survey where participants randomly faced a vignette in which it was described one of the following scenarios: an scenario warming of the risks of the climate change through factual information; or an scenario emphasizing their neighbours were saving on their energy bills by following energy tips

received on their mobile phone. After reading the vignette, participants were asked to indicate how much they were more likely to adopt an energy efficiency behaviour in a scale anchored at 1 (not at all) to 5 (completely). The results showed that although both scenarios had a positive impact, social pressure was more effective than factual information in order to motivate improvements in the consumers' energy behaviour. Concretely, the mean of the citizens who faced the "social pressure scenario" was 4.27 while the mean of those who faced the "factual information scenario" was 3.45.

DellaVigna et al. (2010) found how social pressure is crucial when analysing charitable donations. Most of Americans (90%) give money to charities, but not all of them have the same motivations. There are altruistic people, but there are also people who prefer not to give money although they do because they feel uncomfortable saying no. They carried out a study where fliers were placed on the front door of a household, informing residents when the collection of a door-to-door fund raiser will be conducted. The results of this experiment was that the households opening the door decreased by 10-25% (being even stronger when homeowners had the option of ticking a "Do Not Disturb" box). This study also showed how about half of donors would prefer not to be contacted by the fundraiser, to donate less or directly to not donate.

Christakis and Fowler (2007) demonstrated that social pressure affects the spread of obesity in a large social network. They showed how the chances of becoming obese of an individual increased by 57% if he had a friend who became obese; by 40% if he had a sibling who became obese; and by 37% if his spouse became obese. This influence was stronger between people of the same sex.

Social pressure has also proved its effectiveness when analysing the workers' productivity. Falk and Ichino (2006) conducted an experiment where workers were putting letters into envelopes for an independent of output remuneration and found that those who were working in pairs in the same room were more productive than those who worked alone. Workers' productivity increased because they knew they were being observed and/or because they were observing other workers. Accordingly with the previous research, Mas and Moretti (2009) conducted an experiment in a supermarket and found that the cashiers' productivity increased when they were observed by other cashiers with a higher productivity. Charness and Kuhn (2011) found that workers working side by side, without interaction but observing each other's activity were more

productive. Moreover, Georganas et al. (2013) showed how workers being observed increased their productivity at least initially when compensation was team based.

Dohmen (2005) and Garicano et al. (2005) showed that social pressure is a determinant of corruption. Dohmen (2005) found that professional soccer referees tend to assist the local team. Concretely, it was concluded how professional soccer referees on one hand, awarded more injury time in close matches when the home team was behind; and on the other hand, awarded goals and penalty kicks to aid the home team. This behaviour was even stronger as higher was the size of the crowd, as closer was the crowd to the stadium and as higher was the importance of the game (Garicano, et al., 2005).

Finally, it will be analysed the role played by social pressure on citizens' attitude towards political corruption. Concretely, it will be studied the Spanish Revolution of May 2011 as it is directly related to the social pressure exerted by Spaniards in the field of politics. Firstly, it will be briefly contextualised the Spanish political situation at this time. Since 2008, Spain was going through an economic and social crisis which was impoverishing the population. Following the CIS[28], in May 2011, Spaniards were particularly worried with the unemployment, the economic situation and the party political system. Besides, the incumbent party (PSOE) was being accused to do not make the efforts needed at tackling the crisis while the main party of the opposition (PP) was being accused of corruption.

In this context where many citizens were dissatisfied with the Spanish economic and social situation and disaffected with the traditional parties, it was born the collective "¡Democracia Real, Ya!" (Real Democracy, Now!). This collective, by exerting social pressure reached to mobilize thousands of citizens who participated on 15 May 2011 in protests in more than fifty cities across Spain (Toret, 2013). In turn, these protesters by the contagious effect, influenced other citizens creating the broad movement "Movimiento 15M" (15M Movement) (Vallina-Rodriguez et al., 2012) which was able to communicate the Spanish feeling of indignation to the whole world (Giraldo-Luque, 2018).

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[28] CIS May 2011

As it has been seen, social pressure, when exerted positively, is able to impact on citizens' attitude by encouraging them to fight against political corruption, and therefore, to contribute to the goal of achieving a higher quality democracy.

2.3 Social media role on politics

2.3.1 Introduction

Social pressure can be exerted in both, real and virtual world. Social media has broken into the field of communication and is considered a powerful tool to spread social pressure (Belda et al., 2016; Demirhan and Çakır-Demirhan, 2016; Zhu et al., 2012; Hui and Buchegger, 2009). Dholakia et al. (2004) developed a social influence model of online community participation which considered individual motives, social influences and, finally, the decisions and behaviours. These researchers concluded that higher levels of value perceptions lead to a stronger social identity which leads in turn higher levels of participation in the online community. Social pressure is the key to understand how virtual communities behave (Belda et al., 2015).

Nowadays, following the 2018 Global digital suite of reports[29] published by *We are social* and *Hootsuite*, there are more than 4 billion people using internet around the world (53% of the world population), being nearly a 250 million of new users in 2017, which supposes an increase of 7%. Besides, each user spends by average around 6 hours.

Social media is defined as "*websites and applications that enable users to create and share content or to participate in social networking*"[30]. Regarding their use, in 2018 there are near of 3.2 billion people of active users (42% of the world population), a 13% more than 2017. Facebook is at the top, being used by almost 2.2 billion people, followed by Youtube (1.5) and WhatsApp (1.3).

Social media is seen as platforms for interactive and public discussions (Demirhan and Çakır-Demirhan, 2016). From a creators of content point of view, social media represents an opportunity to reach a larger audience; and from a consumers of content perspective, it supposes not only an opportunity to reach a greater amount of

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[29] https://wearesocial.com/blog/2018/01/global-digital-report-2018
[30] https://en.oxforddictionaries.com/definition/social_media

information by free, but also, to share and comment that information, which also converts them into creators. In the following lines, it will be briefly introduced some examples collected in Belda et al. (2015) which show how information and influence flow through the virtual world.

Belda et al. (2015) analysed the role played by online social pressure in the energy efficiency debate held on Twitter. Concretely, these researchers analysed the conversation about energy efficiency held on Twitter from July to December 2014. On one side, it was shown how the top mentioned users were altruistic; and on the other side, that the information which was being spread on Twitter was written by mostly altruistic users. These authors concluded that the energy efficiency debate was not dominated by people who had a commercial interest and, therefore, that Twitter was an interesting platform to spread information and tips about energy efficiency and motivate consumers to engage with better practices.

Zhu et al. (2012) proved the ability of social pressure to impact on citizens' online choices. They conducted an online experiment to test how often people's choices were changed by others' recommendations when facing different levels of pressure. Participants were first asked to choose between pairs of items and once they had finished, they were provided about the preferences of others. Then, they were asked to make second choices about the same pairs of items. The results depicted that other people's opinions significantly sway people's own online choices. This influence was stronger when people were required to make their second decision sometime later (22.4%) than immediately (14.1%); when individuals were facing a moderate, as opposed to large number of opposing opinions; and when they spent a short amount of time making the first decision. However, the demographic variables such as age and gender did not affect the results.

Hui and Buchegger (2009) conducted a study which demonstrated the neighbours' influence on the probability of a particular person to join a group on four popular Online Social Networks: Orkut, YouTube, LiveJournal, and Flickr. The "neighbours" in these networks had a mutually acknowledged relationship, most often defined as friendship, and they were directly connected on a graph of a social network. Users could join groups of users which represented common areas of interest. The results indicated that a

set of neighbours was about 100 times more powerful in influencing a user to join a group than the same number of strangers.

Focusing on the topic of this thesis, social media is a new tool in political communication and it is used by an increasing number of politicians and citizens to critique and advocate for policies, candidates and protests (Siegel, 2018).

On one side, social media has noticeably changed the way politics work (Dimitrova and Bystrom 2013). Politicians use social media to disseminate information and connect with voters (Siegel, 2018). It represents a new communication channel which allows politics to be more accessible (Koc-Michalska et al., 2016). Murthy (2015) underlined that it is a low cost channel which enables to reach a great audience.

On the other side, it has been proved how citizens, especially young adults, tend to rely on social media when seeking political information rather than on traditional media as newspapers or radio broadcasts (Baumgartner and Morris, 2010; Kushin and Yamamoto, 2010). Viewing political information through the social networks has become popular (Bode, 2016). Besides, social media also provides opportunity for sharing political content and set up political debates (Diehl et al., 2016).

In the following sections, it will be analysed the impact of social media on citizens' political attitudes and behaviour; it will be investigated different approaches that have been proposed in order to measure influence on Twitter; it will be characterised the political debate held on Twitter; and finally, it will be analysed Twitter conversations on politics.

2.3.2 Analysing the impact of social media on political attitudes and behaviour

Social media has been shown as a powerful tool when studying political science (Barbera, 2014; Settle, 2014; Messing et al., 2014; Aragón et al., 2013; Bond et al., 2012). It has been found a strong relationship between social media use and political engagement (Manrique and Manrique, 2016; Demirhan, 2016a; Xenos et al., 2012). Christensen (2011) proved a positive relationship between online and offline political participation.

Hendricks and Denton (2010) and Williams and Gulati (2008) concluded that the use of social media as a political communication platform was a key factor to explain the Barack Obama's success in the 2008 U.S. Presidential Election. However, it is seen by some governments as a threat (Gusinki, 2015; Gohdes, 2014, Zuckerman, 2014; and Wong and Brown, 2013), as the social pressure exerted through social media has proved its capacity to involve people to sign petitions and contribute to different causes (Coppock et al., 2014; Hale et al., 2014; McClendon, 2014). Tufekci and Wilson (2012) underlined the key role of social media to encourage people to take part in anti-regime protests. Social media contributes to create, organize and implement social movements around the world (Giraldo-Luque, 2018; Elantawy and Wiest, 2011).

Focusing on political corruption, Zinnbauer (2014) highlighted how social media allows citizens to complain loudly, visibly, and nearly instantaneously when they perceive corruption (Zinnbauer, 2014). It has been proved its potential to fight against political corruption in cases as WikiLeaks (Demirhan, 2016b; Jha, 2016; Waller, 2016). Marinov and Schimmelfennig (2015) emphasized that social media is not as easily silenced as traditional media which has stronger ties with the economic and political forces (Essien, 2016). Herkman and Matikainen (2016) underlined its capacity to keep the scandals in the public eye.

In the rest of this section, it will be summarised some researches where it has been analysed the impact of social media on politics. Marinov and Schimmelfennig (2015) proved the ability of online social pressure to impact on civic activism and politics. They conducted an experiment with 3000 respondents between the ages 18 to 60 in all Bulgaria's towns with population of 50.000 or more. Firstly, they filtered them by considering just those who had a Facebook account and found that almost 66% of their random sample was a member of the social network. These users were invited to participate in the experiment and 1.000 agreed. Then, they were randomly classified into three different groups: "Facebook group", who received a message encouraging to like a Facebook page devoted to the preservation of a threatened natural resource, the country's Black Sea coast; "E-mail newsletter group" who received a message encouraging to sign up for an email newsletter promoting the same campaign; and "Control group". After two months, it was asked the participants' opinion about the likelihood of success of different civic initiatives. The results depicted that the

"Facebook group" was the one who had a more positive attitude towards the success of the campaign. Besides, it was also found that about 40% considered social media as the most reliable resource when they were looking for political information. As a consequence, these authors concluded that social pressure when promoting activism had a greater impact when it was spread through an online social network rather than through an email newsletter, and therefore, that online social pressure was an effective tool to fight against corruption.

Bond et al. (2012) found how the social pressure spread through an online network is also able to impact on political behaviour. Concretely, they conducted a randomized controlled trial in US with Facebook users of at least 18 years who accessed on 2_{nd} November 2010, the day of the US Congressional Elections. Users were randomly classified into three different groups: "Social message group", "Informational message group" and "Control group".

The "Social message group" received a message at the top of their "News Feed" encouraging them to vote where it was provided a link to find local polling places, a clickable button in which it was written "I Voted", a counter indicating how many other Facebook users had reported they had voted, and finally, six randomly "profile pictures" of user's Facebook friends who had already indicated they had voted. The "Informational message group" received the same message with the only difference that it was not shown any picture of user's Facebook friends who had already reported they had voted. Finally, the "Control group" did not receive any message. The researchers distinguished among the following direct and indirect impact.

Focusing on the direct impact, the results showed that users who received the social message where they could see the face of six of his Facebook's friends were more likely to report they had already voted than those who received the informational message where it was not any picture. Besides, users belonging to the "Social message group" were also more likely to seek information about the polling places than those belonging to the informational group. Finally, it was found that users receiving the social message were more likely to vote than those who received the informational message or did not received any message. However, it was not any difference between users belonging to the informational group and those belonging to the control group.

They concluded that social pressure exerted through an online community had impact on political self-expression (user's desire to report their vote to their social community); on political information seeking (user's desire to seek political information about the polling places); and on voting behaviour.

Regarding the indirect impacts, i.e., the social pressure that a person who has been directly influenced can exert towards his friends through an online network, Bond et al. (2012) proved that the effectiveness of spreading online influence depended on the closeness of the relationship. For this purpose, they classified individuals by decile analysing the degree to which they interacted with each other on Facebook and then, considered two different groups: "Close friends", those in the eighth decile or higher; and "Friends", the rest of the Facebook's friends.

The results depicted that users were more likely to report they had already voted, to seek information about the polling places, and also to vote, when they had a close friend who had received a social message than when their close friend had not received any message. However, they were just more likely to report they had already voted, when it was a friend who received the message.

In this case, they concluded that while close friends were able to impact on political self-expression, political information seeking and voting behaviour; friends were able to impact on online expressive behaviour (as users were more likely to report their Facebook's friends they had already vote), but not on private or real world behaviour (as it was no effect on increasing the probability to seek political information or to vote).

Eltantawy and Wiest (2011) studied the effectiveness of social media during the Egyptian revolution. Concretely, they analysed the role played by social media in the anti-government protests occurred between 25th January and 11th February of 2011 which led to the resignation of the Egyptian President Honsi Mubarak. These authors emphasized how social media allowed implementing greater speed and interactivity in the traditional dynamics of social mobilizations. Networks as Facebook and Twitter played a key role to engage citizens in online discussions about the political situation in Egypt. The exchange and diffusion of the information was not only helpful to mobilize and organize citizens before the protests, but also to report what it was happening

during the demonstrations inside and outside of Egypt and to disseminate safety information.

Shirky (2011) studied some cases where there was evidence of the impact of social media on political corruption. This researcher examined how citizens of Philippine were organised in 2001 through a text message to converge on Epifanio de los Santos Avenue in order to protest against the President Joseph Estrada when it was voted in the Congress to do not consider the evidence of corruption against him. Almost seven million of messages were sent and over a million people were mobilised. A few days later the president was gone. This author also analysed the Spanish massive demonstrations organised in 2004 through a text message against the government of José María Aznar, when he inaccurately blamed the Madrid attacks on the Basque separatists. A few days later, his party lost the General Elections. Finally, in this research it was also investigated how in Moldova, in 2009, protests were coordinated against the Communist Party after the fraudulent election triggering his loss of power.

Gerber and Rogers (2009) and Gerber et al. (2008) proved how it was possible to increase political participation by exerting influence through a set of e-mails. These authors analysed a study of 180,002 households receiving an e-mail encouraging them to vote. It was prepared four different e-mails. The first type emphasised simply the civic duty; the second claimed the citizens were going to be studied, which can be interpreted as a mild form of social pressure; in the third e-mail, each household was informed that a letter will be sent to inform the recipients about household's voting records (whether they vote or not), which can be interpreted as a higher level of social pressure; and in the fourth email, the recipients were informed that a letter will be sent with a list of the household's voting records and also of those living nearby, which according to the research was the highest level of social pressure that was tested.

The results showed that while the control group voted at a rate of 29.7%, the households to which first e-mail was sent voted at a rate of 31.5%, those who received the second mail at a rate of 32.2%, the households to which the third mail was sent at a rate of 34.5%, and finally, those who received the fourth mail at a rate of 37.8%. Therefore, the results proved that the level of social pressure had a direct impact on participation, showing that the turnout increased over the control group by up to 8.1% (Gerber et al., 2008).

2.3.3 **Twitter Platform Analysis**

As summarised in Belda et al. (2015), Twitter is one of the most popular and relevant online social networks. It was created in 2006 by Jack Dorsey, Evan Williams, Biz Stone and Noah Glass. In 2007, 1.600.000 tweets were posted but its popularity increased rapidly and nowadays this social network has 3.3 billion of active users who post 500 million tweets per day.

This social network allows registered users to publish short messages called "tweets" with a maximum length of 280 characters. Users can also become "followers" of people they find interesting, thereby receiving all the information they publish.

In additional to publishing messages, users can also re-publish messages of interest from others through a mechanism called a "retweet" (often abbreviated to RT). Users can make their messages to be read by other users by using a "mention", which consists in adding the character "@" in front of a username anywhere in the body of the tweet, allowing them to see the tweet. A variation of a "mention" is a "replies to", where the character "@" in front of the username appears at the beginning of the tweet, which can be used to send a private direct message that can be just read for the user mentioned.

Finally, users can also group posts together by topic using "hashtags", which are descriptive words with the "#" character in front of them (a "tag"). When a hashtag is tagged in large amounts, the hashtag is said to become a "trending topic". This can occur as a result of a concerted effort by users, but also as a consequence of the interest of an event by itself, which prompts people to talk about this specific topic. These topics aid users and communities to understand what is happening in the world.

In the rest of this section, it will be presented interesting results of some researches collected in Belda et al. (2015) in which it has been successfully applied the social network analysis on Twitter. Schwartz et al. (2013) and Wagner and Strohmaier (2010) proved that it was possible to predict the happiness of one set of people from the tweets of other people living in the same county by analysing sets of co-occurring words. It was especially interesting to discover how donating money and job satisfaction were discussed more than material possessions in happier communities.

Lumezanu et al. (2012) focused their research on how users sent their tweets and identified four extreme patterns: sending high volumes of tweets over short periods of

time; retweeting while publishing little original content; quickly retweeting; and colluding with others users, seemingly unrelated, to send duplicate or near duplicate messages on the same topic simultaneously. Besides, these authors compared hyperadvocated users (those who consistently disseminate content which subscribe to a single ideology or opinion), with neutral users. The main conclusion was that they exhibited different publishing behaviour patterns, but also that the tweeting behaviour of the hyperadvocates was affected by the specific characteristics of the community being analysed. In communities with a higher than average number of tweets and fraction of retweets, hyperadvocates tended to adopt volume-based patterns, i.e., sent many tweets over short periods of time and retweeted without publishing much original content; while in communities with a lower average of tweets and fraction of retweets, they tended to adopt time-based patterns, i.e., sent similar messages close in time and retweeted quickly.

Quercia et al. (2012) demonstrated how established sociological theories of real world (offline) social networks worked on Twitter. These researchers detected that social brokers (those who connect various set of users in a network) were opinion leaders with a higher network status who tweeted about diverse topics (while influential users tended to be specialised in concrete topics). In addition, it was observed that while social brokers expressed positive and negative emotions and had geographically wide networks; the vast majority of users expressed their emotions in intimate networks (although negative emotions were expressed in less constrained networks) and had geographically local networks.

Kouloumpis et al. (2011) analysed the utility of linguistic features for detecting the sentiment of Twitter messages. These authors focused their research on part-of-speech features (POS), hashtags and emoticons to identify positive, neutral and negative tweets. Their main finding was that while POS seemed to be not useful for sentiment analysis; hashtags and emoticons were powerful to detect the sentiments behind the tweets, especially when both were used together.

Hughes and Palen (2009) analysed how users' behaviour changed in mass convergence events (two related with national security and two with emergency situations). These researchers concluded that Twitter had evolved over time to offer more of an information-sharing purpose. Besides, it was seen that users who join

Twitter during a mass convergence event tended to become long-term users. Comparing the users' behaviour during mass convergence events with the general behaviour pattern in Twitter, it was detected on one hand, that the number of *replies* posted during the mass convergence events was higher; and on the other hand, that the number of tweets containing URLs was lower. Finally, related to the distribution of tweets among users during mass convergence events, the pattern observed was similar to the general behaviour pattern in Twitter, i.e, the number of messages sent increased as the number of senders decreased. In other words, there were a few people that act like "information hubs" (collecting and deploying information), while the majority of members had minimal participation.

2.3.4 **Detecting and Measuring Influence on Twitter**

In this section, it will be presented the research related to how to detect and measure influence on Twitter conducted by Belda et al. (2015).

Social network analysis not only helps to identify specific nodes but also to describe the structure of the entire communicative network (Kleinberg, 1999; Wasserman and Faust, 1994). Directed links represent anything from intimate friendships to common interests about a relative topic.

Analysing these connections on Twitter, Cha et al. (2010) concluded that those links show the flow of information and, as a consequence, that they are a good indicator to determine the users' influence. This influence appears when a user's action inspires a reaction from a second user (Berger and Strathearn, 2013). In order to analyse influence on Twitter, it is necessary to identify a relationship between two users in which at least one of them (X) follows another one (Y) because X is interested in the updates of Y. Using Twitter terminology, the previous relationship implies that X is a *follower* of Y. Once X has consumed the content, there are two possibilities: passive consumption, when X just read (or even ignore) the tweet published by Y; or active consumption, when X takes some action based on the original message. This action could be one of following: a) X sends a *private direct message* to the original publisher; b) X communicates with the original publisher by using the *reply option*; c) X post a message in which the original publisher is *mentioned*; or d) X amplifies the message by *retweeting* it. In these cases where X is choosing an active consumption option, it is concluded that X has been influenced by Y (Anger and Kittl, 2011).

For a better understanding of the reasons that explain why X adopts an active or passive consumption after reading a tweet of Y, Anger and Kittl (2011) propose the following classification based on Kelman (1958):

- Identification, which means that X follows an influential person who is liked, respected and/or has a celebrity status. In this case, it is expected that X replies to Y because of the status of Y rather than the content of the tweet.

- Compliance, which means that X publicly agrees with Y and keeps any disagreeing thoughts and opinions to himself. It could trigger a retweet if X perceives the content published by Y as popular and helpful for establishing its own reputation and social status on Twitter.

- Internalisation, which means that X accepts a belief or behaviour both publicly and privately. This is the most impacting social influence process and could involve recommendations, retweets and also dialogues.

- Neglect, which means that X ignores the content posted by Y.

- Disagreement, which means that X strongly disagrees with B, and as a result, X express his disagreement or even decides to unfollow Y.

It has found that a relatively small group of users can be considered as influencers. An influencer has a large and active number of followers that consume and spread the content published by him (Bakshy et al., 2011). As a result, this content not only reaches a large number of followers, but also a larger circle of users that are not direct followers (Anger and Kittl, 2011).

Once it has been identified from where the influence comes and that there are a reduced group of users that amass a lot of influence, it is valuable to describe several indicators in order to measure their influence.

A popular indicator of the influence of a user is his number of *followers*. However, Anger and Kittl (2011) underlined that solely taking into account the number of followers a person has can be misleading as many users follow a large number of other users just to increase their own following. Besides, it should be also considered that there are several companies that offer "follow" clicks for payment.

These researchers considered the *follower/following* ratio. It compares the number of users who have subscribed to the updates of a user with the number of users that the relative user is following. If this ratio is well below 1, it will mean the user needs to show interest in other users in order to gain more followers. However, if this ratio is well above 1, it will mean that this user is being followed by a relative large number of users without showing interest in too many users. However, these authors also highlighted that considering just this metric could lead to misinterpretations, as it clearly depends on the number of users that are being considered. As an example, a result of this ratio equal to 2 when it comes from a user who is followed by 200 users and follows 100 should not be interpreted as if it comes from a user who is followed by 2 users and follows 1.

Cha et al. (2010), when studying the user's influence on Twitter, pointed out how the number of *mentions* (as the user's name value) and the number of *retweets* (as the tweet's content value) are better indicators of the user's popularity than the number of *followers*, i.e., instead of having a large volume of followers, it is more effective to have an active audience mentioning the user and retweeting his tweets. When selecting those users with the highest number of followers, mentions and retweets, it was discovered that there is a little overlap. Moreover, these researches found on one hand, that the most influential users hold significant influence over a variety of topics; and on the other hand, that the best way to gain influence is by being creative and insightful.

Bruns and Stieglitz (2013) emphasised the importance of considering on one side, the number of *tweets sent by a user with a particular hashtag*, as it shows how strong the commitment of the user is to a specific topic; and on the other side, the *tweets received (replies, mentions and retweets)*, as it shows the number of other users who take notice of or engage with him. Considering both measures, the ratio *tweets received/tweets sent* could be considered as a measure of the social pressure of a specific user on the overall hashtag conversation. If this ratio is well below 1, it will mean he is tweeting frequently but receiving few replies, mentions and retweets, therefore, his impact is limited and cannot be considered an influencer. However, if this ratio is well above 1, it will mean that user is tweeting considerably less than the replies, mentions and retweets he is receiving and, as a consequence, that he has the significant impact necessary to be considered an influencer.

In addition, these researchers also highlighted the relevance of counting the number of *tweets containing URLs*, as it provides a powerful insight into the number of external resources a user is introducing or retweeting.

Anger and Kittl (2011), taking into account the ratio *follower/following* and *tweets received/tweets sent* proposed the *Social Networking Potential (SNP)* metric, which consists of the sum of both ratios divided by 2:

SNP = [(Follower/Following)*100 + (tweets received/tweets sent)*100] / 2

The interpretation of this metric is as follows: as higher is the SNP score, as more influential the user is.

Finally, there are other commercial approaches with proprietary algorithms focused on the analysis of user's online influence (Anger and Kittl, 2011). One of the most used online rating services is Klout[31], which uses a proprietary algorithm that considers more than 25 variables. Klout measures the user's overall online influence on Twitter (and also on Facebook and LinkedIn) with a score ranging from 1 (lowest) to 100 (highest) amount of influence. Once the score is calculated, Klout also places the user in a so-called influence matrix with 16 possible classifications created from the combination of eight attributes. Other commercial services which offer measures of influence on Twitter are Brandwatch[32] or Website Grader[33].

2.3.5 **Political Debate on Twitter**

Twitter is increasingly considered by scholars as political platform, where politicians, media professionals and citizens engage in a personal type of political communication (Murthy, 2015; Ekman and Widholm, 2014; Aragón et al., 2013). Peña-López et al. (2014) underlined that this platform is mainly used to broadcast opinions, to voice discontent and to call for gatherings in real time. Publishing a political opinion through a tweet, which means an intellectual processing of analysis, criticism and synthesis of political arguments, is becoming usual among a growing number of citizens (Jennings et al., 2017). Anger and Kittl (2011) and Leavitt et al. (2009) emphasised how Twitter is as a network where users exchange information around topics and subjects

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[31] https://klout.com
[32] https://www.brandwatch.com/
[33] https://website.grader.com/

rather than personal issues like others platforms. Political conversations on Twitter have been more successfully normalized than on other social media such as Facebook and Instagram (Ausserhofer and Maireder, 2013).

Investigating how Twitter is used in politics, it has been established a positive correlation between political events in the offline world and the use of Twitter (Aragón et al., 2013; Lehmann, 2012). Accordingly, Christensen (2011) proved how the engagement in online political debates correlates positively with offline political participation. Besides, McKinney et al. (2013) established that the online political debate held on Twitter contributes positively to the political knowledge. In agreement, Jennings et al. (2017) demonstrated a positive relationship between the frequency of tweeting about politics and the acquisition of knowledge.

Analysing online political debates held on Twitter, Peña-López et al. (2014) noted that Twitter is also being used to focus users' attention on specific topics. Aragón et al. (2013) and Wu et al. (2011) warmed the risk of homophily, i.e., as users choose which conversations to participate in and which users to follow, there is a high likelihood that it appears clusters of users engaged in a political conversation where most of them have the same political leaning or even the same preferred party. Guadián-Orta et al. (2012), studying the relationship between users and message proved that it works in both ways: based in a specific topic is created a social network, but then, the social network shapes the message over the time.

In the following lines, it will be summarised the use of Twitter as a platform to spread propaganda and generate political debate during the electoral campaigns (Jennings et al., 2017; Aragón et al., 2013); as a mobilizing platform for social movements (Vallina-Rodriguez et al., 2012); and as a predictor of electoral outcomes (Tumasjan et al., 2010).

Twitter has shown its usefulness as a platform to spread propaganda and generate political debate during the electoral campaigns (Aragón et al., 2013). For instance, this platform has been actively used during political events as the elections in Iran, Spain or USA (Vallina-Rodriguez et al., 2012). In particular, it has been found how it increases the use of Twitter during political debates (Siegel, 2018; Bruns and Burgess, 2011).

Jennings et al. (2017) underlined that Twitter shows, in real time, not only the salience of political issues, but also the successes or failures of public sphere arguments.

Twitter has also shown its usefulness as a mobilizing platform for social movements (Peña-López et al., 2014), allowing marginalized or oppressed groups to coordinate and express their concerns (Gladwell, 2010). This social network was crucial in the Women's Marches, which started in 2017 in Washington and used Twitter to spread information; in the Black Lives Matter movement, which started in 2013 with the hashtag #blacklivesmatters, allowing citizens to communicate with other like-minded citizens, supportive communities and legislators (Ince et al., 2017); in the Arab Spring, which started in 2010 and owes part of its success to the strategic use of Twitter (Vallina-Rodriguez et al., 2012).

In the case of Spain, Twitter played an essential role on the birth and development of the Movimiento 15M (15M Movement). In a precarious context of an economic, social and political crisis, Twitter was used not only as a platform for political debate (Vallina-Rodriguez et al., 2012), allowing citizens to channel their outrage (Anduiza et al., 2014); but also as channel to spread the call for protests (Piñeiro-Otero and Costa-Sánchez, 2012; González-Bailón et al., 2011). Peña-López et al. (2014) underlined how the interaction between the physical and the virtual world was crucial for this movement to succeed, as it facilitated the sharing of information and a better coordination, giving their members a sense of collective identity.

Moreover, it is worth noting how some researches have even highlighted the usefulness of analysing the online political debate in order to predict electoral outcomes as real world political coalitions and parties' vote share (Skoric et al., 2012; Vallina-Rodriguez et al., 2012; Bermingham and Smeaton, 2011; Congosto et al., 2011, Livne et al., 2011; Sang and Bos, 2011; O'Connor et al., 2010; Tumasjan et al., 2010). However, it is fair noting that there are also other studies that have questioned the previous results (Metaxas et al., 2011; Jungherr, 2010).

Finally, it will be briefly described some results of the literature review conducted about the role played by users' political leaning, the emergence of new parties and users' political sympathy on the online political debate held on Twitter.

Peña-López et al. (2014) and Anduiza et al. (2012), when characterising the Spaniards political leaning of those users who actively participate in the online political debate held on Twitter against the established system and its corruption, found how the majority has a left political leaning. This result is consistent with the one obtained by Robles-Morales (2008) when studying the political ideology of Spanish Internet users, since he discovered that they were significantly more likely to be left-wing than the average Spaniard. Besides, Vallina-Rodriguez et al. (2012) found how, before the emergence of the new Spanish party Podemos, the vast majority of users in the political debate held on Twitter against the economic, social and political crisis did not feel represented for the traditional parties strongly affected by corruption and, were demanding alternative political actors to represent their interests. Finally, Jennings et al. (2017) demonstrated how, as suspected, political sympathy not only impacts on citizens' attitudes towards political corruption in the face to face conversations, but also in the online debate about politics held on Twitter. When analysing the political debate held on Twitter, there is a high probability to find users having the same political preferences within a conversation (Aragón et al., 2013). Summarising the information above, political leaning, the emergence of new parties and political sympathy also play a key role when analysing the online debate about political corruption held on Twitter.

Due to the huge volumes of data being continually published on Twitter, it is unsurprising that a significant amount of research is taking place to analyse the structure and content of the information. In the following section, it will be discussed different results obtained in previous researches where political conversations held on Twitter have been analysed.

2.3.6 Analysing Political Conversations on Twitter

In the following lines, it will be analysed some researches related to the use of Twitter as a platform to spread propaganda and generate political debate during the electoral campaigns, to the effectiveness of Twitter as a mobilizing platform for social movements, and to the ability of Twitter as a predictor of electoral outcomes.

Regarding the use of Twitter as a platform to spread propaganda and generate political debate during the electoral campaigns, Jennings et al. (2017) studied the Twitter conversation generated during the Democrat and Republican presidential primary debates held on TV in 2016. Concretely, the experiment consisted in analysing

the tweets posted while viewing the primary debate of their preferred party by a set of individuals. Therefore, on their arrival, participants were asked about their partisan leaning and classified into two groups: Democrats and Republicans. Then, each group was in turn divided into three new groups. The first group was indicated to follow the "control condition", i.e., participants were required to simply tweet their thoughts. The second group was indicated to follow the "directional condition", i.e., participants were required to tweet their evaluations about the candidates and were told that these evaluations would be reviewed in order to determine the winner and report to the media. The third group was indicated to follow the "accuracy condition", i.e., participants were required to tweet their honest, non-partisan and unbiased evaluations about the candidates and were told that these evaluations would be reviewed and evaluated by experts in presidential debates in order to determine their accuracy. Each group was assigned a specific hashtag and participants were told to use the designated hashtag. Finally, after viewing the debate, all participants completed a post-test survey to establish their knowledge acquisition.

These researchers hypothesised that as greater issue elaboration as greater is the knowledge acquisition. In order to address this issue, a total of 1082 tweets were analysed and classified manually as follows: "Image tweet", when it referred to physical or mental attributes of a given candidate; "Issue tweet", when it referred to a meaningful policy consideration present in the campaign; "Image and issue tweet", when it referred to both; "Neither image nor issue", when it did not refer to any. The results showed that those tweets related to issues led to more knowledge acquisition, therefore, it was concluded that tweeting about the specific policies while viewing a political debate on TV impacts positively on citizens' knowledge about politics.

Moreover, these authors investigated the frequency in which participants tweeted while viewing the primary debate on TV. The results depicted that the group of participants who tweeted following the "directional condition" had a higher frequency than those who tweeted following the "accuracy condition". Considering that the "directional condition" was aiming to evaluate candidates in order to determine the winner and publish it by the media, it is reasonable that participants posted more tweets than when they were required to be critic and express unbiased assessments, being told that their impartiality was going to be evaluated by experts to establish their accuracy.

In other words, the reason which explains that participants following the "directional condition" tweeted with a higher frequency is because this condition led participants to evaluate candidates according with their predispositions while those participants following the "accuracy condition" may experiment any contradiction between their predispositions and the perceptions about how their preferred candidate is performing on the debate. The confirmatory bias directly impacts on citizens' assessments and, as a consequence, participants under the "directional condition" find more pleasant to tweet than those under the "accuracy condition". As it has been demonstrated, the confirmatory bias, which in this context can be interpreted as political sympathy, also plays a key role when analysing the online debate about politics held on Twitter.

Aragón et al. (2013) analysed the Twitter conversation generated during the campaign of the Spanish General Elections held in November 2011. For this purpose, it was collected those tweets published between 4 and 24 November 2011 which satisfied at least one of the following conditions: contained a hashtag linked to the campaign; belonged to an official party account or to someone holding a position in one of the main Spanish parties; belonged to a user previously identified as activist, journalist, mass-media channel, radio or TV program focused on the campaign; mentioned a party or a candidate. This process yielded a dataset of 3074312 political tweets published by 380164 distinct users.

These authors justified their research was focused on Spain underlining on one hand, how the political use of Twitter in Spain had increased considerably since the Spanish protest in May 2011; and on the other hand, that while the Spanish electoral law regulated the offline campaign, there was no regulation for party campaigning on Twitter.

These researchers were interested in testing their belief that the volume of tweets over time reflects the involvement of different parties in the key moments of the electoral campaign. In order to address this issue, they analysed the volume of tweets per day to identify if the most relevant events of the electoral campaign led to a higher activity on Twitter. The results, according with previous researches (Barberá and Rivero, 2012; Congosto and Aragón, 2012; Bruns and Burgess, 2011) verified their hypothesis as the higher volume of tweets (19% of the dataset), corresponded with the electoral debate day between the two leading candidates; the second peak (14% of the

dataset), was found in the election day; and the third peak (7% of the dataset), belonged to the day of the end of campaign. Besides, it is worth noting, that the reflection day, i.e., the day preceding the Election Day, it was registered less activity. The Spanish electoral law establishes an election silence in order to promote the reflection without influence from political parties prior to voting the Election Day, and as it was registered less activity on Twitter, it can be concluded that it was partially followed also on this platform in despite of this law does not regulate the online campaign.

Related to the above, Hu et al. (2012) also investigated the crowd's tweeting behavior, but in this case, within a political event. Concretely, these authors analysed two large sets of tweets related to President Obama's speech on the Middle East in May 2011 (22,000 tweets), and a Republican Primary debate in September 2011 (110,000 tweets). These tweets were classified into two categories: "Steady tweets", which were referred to the event in general; and "Episodic tweets", which were related to specific topics. The results showed how the "Episodic tweets" were more posted during the event than before or after it. Besides, as the event evolved, the crowd tended to comment any topic independently if it had been discussed before, was being discussed, or was expected to be discussed later on.

Moreover, Aragón et al. (2013) were also interested in testing their belief that the Spanish political Twittersphere was polarized. In order to address this issue, they analysed the communication between parties through the network of retweets and replies to identify if they cross party borders. The results, according with previous researches (Conover et al., 2012; Feller et al., 2011), also verified their hypothesis as the vast majority of retweets and replies were among members of the same party. Regarding the retweets network, it was found that members of PSOE and PP were retweeting messages of their own party, in the 99.2% and 99.7% of the cases respectively. Related to the replies network, it was found that members of PSOE and PP were replying mostly to messages from their own party, in the 85% and 84% of the cases respectively.

Accordingly, Conover et al. (2011), when analysing the network of political retweets, demonstrated how it exhibits a highly segregated partisan structure with extremely limited connectivity between progressive and conservative users. These researchers suggested that what is behind this finding could be a users' preference to retweet other users' tweets with whom they agree politically. This high polarisation

shows how political sympathy plays a key role when analysing the online debate about politics held on Twitter. In addition, it was also found how the likelihood of a user to interact with other user with a different ideology increase as lower is his partisanship.

In reference to the effectiveness of Twitter as a mobilizing platform for social movements, it will be reviewed the research conducted by Vallina-Rodriguez et al. (2012), who analysed the use of Twitter during the Spanish Revolution in May 2011. In the following lines it will be contextualised the political, economic and social situation at that time, which led to the well-known "Movimiento 15M" (15M Movement).

Since 2008, Spain was going through an economic and social crisis like many other European countries. Following the CIS[34], in May 2011 Spaniards were overwhelmingly concerned with the unemployment (which rate was over 20% of the active population), the economic situation and the party political system. Besides, Spain was facing Regional and Local Elections. Concretely, 13 out of 17 Spanish autonomous areas and more than 8000 municipalities were facing elections. Focusing on the main parties, on one side, the incumbent party (PSOE) was being accused to do not adopt the measures needed to tack the crisis; and on the other side, members of PP were accused of being involved in corruption scandals.

In this precarious context, the political debate moved onto blogs and online social networks as Facebook and Twitter (Vallina-Rodriguez et al., 2012), which managed to channel the collective indignation (Anduiza et al., 2014). The online political debate quickly gained adherents and, as a result of merging more than 200 smaller citizen grassroots organisations, student organisations and other civil movements, it was born the collective "¡Democracia Real, Ya!" (Real Democracy, Now!), which had a definite bias to the left (Peña-López et al., 2014; Anduiza et al., 2012). This collective called for public protests against the established situation to be held on 15 May 2011 in more than fifty cities across Spain, which led to activists setting up camps in many of the cities, originating the well-known "Movimiento 15M" (15M Movement), which members called themselves "Los Indignados" (The Indignant) (Vallina-Rodriguez et al., 2012). The role played by the online social networks was crucial to generate and spread the call (Piñeiro-Otero and Costa-Sánchez, 2012; González-Bailón et al., 2011). The interaction between the physical and the virtual world was crucial for this movement to succeed,

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[34] CIS May 2011

feeding both each other with information, coordination and a sense of collective identity (Peña-López et al., 2014). Toret (2013) emphasized how this movement used actively Twitter as a channel to organise themselves and discuss their positions.

Vallina-Rodriguez et al. (2012) were interested in studying the way in which Twitter was used in this period. For this purpose, it was identified on one hand, 400 hashtags and key words related to the political debate; and on the other hand, a set of 200 Twitter accounts used by political parties, their candidates, the "Democracia Real, Ya!" (Real Democracy, Now!) organisation and the main media sources. Then, it was collected through the Twitter Streaming API those tweets between 10 and 24 May 2011 which contained one hashtag of the list, were mentioning a Twitter account of the list or, were published by a Twitter account of the list. This process yielded a dataset of 3 million tweets sent by about 500000 Twitter users. These tweets contained more than 115000 different hashtags.

The results showed that the most popular hashtags were: #acampadasol (716434 tweets), which was related to Madrid's camps and protests; #spanishrevolution (642149 tweets), which comprised all the Spanish protests; #acampadabcn (352088 tweets), which was related to Barcelona's camps and protests; #nonosvamos (175.127 tweets), which means "we are not leaving" and was proclaiming the intention of not to leave the camps; and #nolesvotes (172093 tweets), which means "do not vote" and was encouraging citizens not to vote for the traditional parties PSOE and PP. The main conclusion was that the vast majority of the tweets expressed an alternative political orientation outside the traditional parties PSOE and PP.

Concretely, on one side, when analysing the top 300 hashtags with a political scope, the 80% had an alternative scope while just the 10% had a traditional left and the 10% had a traditional right political scope. On the other side, when analysing the users' accounts with more than 1000 mentions with a political scope, the 67% had an alternative scope while just the 19% had a traditional left and the 14% had a traditional right political scope.

As a consequence, it is possible to establish that the online political debate was dominated for people who did not feel represented by the traditional parties. In fact, one of the mottos of the protests was "no nos representan" which means "they do not

represent us" and was referred mainly to PSOE and PP. The crowd was demanding alternative solutions to the economic and social crisis different from those offered by traditional parties, which were seriously affected by corruption. In other words, citizens needed new political actors to represent their interests. In turn, taking into account that this context served as the basis for the appearance of the new party Podemos (Kioupkiolis and Katsambekis, 2018; Franzé, 2017), the idea that the online political debate is dominated by users with a left political leaning is reinforced.

Finally, regarding the ability of Twitter as a predictor of electoral outcomes, it will be summarised the main results of the research conducted by Congosto et al. (2011) and Tumasjan et al. (2010) related to the Catalan Elections of 2010 and the German General Elections of 2009 respectively.

Congosto et al. (2011) analysed the political conversation related to the Catalan Elections of November 2010. Concretely, it was collected a total of 84000 tweets mentioning parties and candidates during 18 days previous to the Election Day. These researchers found a positive correlation between the number of mentions received for each party or candidate and the number of votes reached. They concluded emphasizing the usefulness of Twitter to measure the public opinion.

Tumasjan et al. (2010), when analysing the political conversation related to the German General Elections of September 2009, found firstly, that Twitter is a platform for political deliberation, although such forums tend to be dominated by a small number of users with a high level of participation. Secondly, how parties and politicians' profiles were seen as very similar, which was associated with the political proximity between parties in the weeks before the election. Thirdly, it was also discovered that joint mentions of two parties were in line with real world political ties and coalitions. Finally, the most surprising conclusion was that Twitter worked as a predictor of the results, as the percentage of messages mentioning each of the parties reflected its vote share. Related to this conclusion, it is necessary to underline that although the activity prior to the election validated the election outcome, the German political Twittersphere is not a representative sample of the German electorate.

2.4 Conclusions

In this chapter it has been firstly, approached the definition of political corruption from different criteria; described its impact from different perspectives; and investigated the electoral consequences. Secondly, it has been reviewed and summarise the literature related to political awareness, political leaning, political sympathy, economic context, the news party's emergence and social pressure. It has been concluded that these are decisive variables when studying citizens' attitude towards political corruption.

Finally, it has been studied the role played social media on politics. Concretely, it has been studied a set of researches in which it has been demonstrated the effectiveness of social media to impact on political attitude and behaviour; it has been described the platform Twitter and how to detect and measure the influence on this platform; it has been characterised the political debate held on Twitter; and finally, it has been reviewed a set of researches where it has been analysed political conversations held on this platform.

Based on the literature review carried out in this chapter, in Chapter 3 it will be raised the hypotheses of this thesis which will be subsequently attempt to validate in chapters 4 and 5.

Chapter 3. **Hypotheses Formulation**

3.1 Introduction

In the previous chapter, it has been reviewed the literature related to the main variables which have impact on citizens' attitude towards political corruption: economic context, social pressure, political awareness, political leaning, the new parties' emergence and political sympathy. The main goal of this thesis is to shed light on the puzzle of why political corruption does not seem to have the electoral consequences it could be expected, and even more important, to find out key factors to develop better strategies to promote citizens' political criticism and achieve a higher quality democracy.

In this chapter it will be stated and justified a number of hypotheses relevant to these questions. These will be tested in the following two chapters, with the hypotheses related to what it has been called "Real World" being tested in Chapter 4, and those related to "Virtual World" in Chapter 5. The current chapter is organised as follows: it will be stated, set in context, and justified the hypotheses related to the real world in section 3.2, and those related to the virtual world in section 3.3. Finally, in section 3.4 it will be presented the model of the thesis.

3.2 Hypotheses related to "Real World"

In this section it will be stated and justified the hypotheses related to the real world (H_1-H_6), which involve all the variables mentioned previously, i.e., economic context, social pressure, political awareness, political leaning, the new parties' emergence and political sympathy.

3.2.1 **Hypothesis 1: Economic Context and Attitude towards Political Corruption**

The economic context plays a crucial role in citizens' attitude towards political corruption. Scholars have analysed citizens' electoral behaviour in periods of economic expansion and crisis in different countries and have concluded that citizens' criticism towards political corruption increases when the country is going through an economic crisis (Cordero and Blais, 2017; Charron and Bågenholm, 2016; Anduiza et al., 2013;

Klasnja and Tucker, 2013; Winters and Weitz-Shapiro, 2013; Zechmeister and Zizumbo-Colunga, 2013; Jerit and Barabas 2012; Weitz-Shapiro and Winters, 2010; Manzetti and Wilson, 2007; Golden, 2007; Diaz-Cayeros et al., 2000; Duch et al., 2000; Mauro, 1995). Therefore, it is established the following hypothesis:

H$_1$- Citizens' level of tolerance towards political corruption is lower when the country's economy is in crisis.

In other words, it will be analysed if citizens' punishment is higher when the corruption cases are discovered while they are suffering the social and economic consequences of an economic crisis.

If it proved to be the case, it would show that an economic crisis supposes an opportunity to impact on citizens' political attitude and, as a result, to improve the democracy's quality.

3.2.2 Hypothesis 2: Social Pressure vs. Factual Information

There is a wide agreement among scholars in pointing out that social pressure plays a key role on citizens' political attitude and behaviour. Concretely, it has been proved how social pressure plays a key role in mobilising citizens against the established political system and its corruption (Giraldo-Luque, 2018; Marinov and Schimmelfennig, 2015; Anduiza et al., 2014; Peña-López et al., 2014; Toret, 2013; Anduiza et al., 2012; Piñeiro-Otero and Costa-Sánchez, 2012; Vallina-Rodriguez et al., 2012; Eltantawy and Wiest, 2011; González-Bailón et al., 2011; Shirky, 2011); Bond et al. (2012) have found how it impacts on political self-expression, political information seeking and on voting behaviour; and finally, Gerber and Rogers (2009) and Gerber et al. (2008) have demonstrated how by exerting it, political participation increases.

Based on the results obtained in the researches above, it is theorized that social pressure is more effective than factual information when analysing their impact on citizens' attitude towards political corruption. Therefore, it is raised the following hypothesis:

H$_2$- Among the variables which influence the citizens' attitude towards political corruption, social pressure has a higher impact than factual information.

In other words, it will be studied if the impact of an individual being informed about political corruption emphasizing there are already other people mobilizing against it and focusing on citizens' economic and social losses is higher than just spreading factual information.

If this hypothesis was verified, it would show the key influence that other individuals' attitudes towards political corruption exert on citizens and, therefore, the greater effectiveness to reach a higher impact on citizens' criticism towards political corruption of the information focused on other citizens' reactions against it. In addition, it would indicate how emphasizing the social and economic consequences of corruption is also a more effective strategy than the spread of factual information.

3.2.3 Hypothesis 3: Political Awareness and Attitude towards Political Corruption

Citizens with a different level of knowledge about politics show different levels of tolerance towards political corruption (Cordero and Blais, 2017; Anduiza et al., 2013; Weitz-Shapiro and Winters, 2010; Arceneaux, 2007; Kam, 2005).

Scholars have analysed how an increase in the level of corruption perceived by citizens plays against the electoral results of corrupt politicians (Cordero and Blais, 2017; Fernández-Vázquez et al., 2016; Anduiza et al., 2013; Costas-Pérez et al., 2010; Figueiredo et al., 2010; Weitz-Shapiro and Winters, 2010; Chang and Kerr, 2009; Ferraz and Finan, 2008; Tavits, 2007; Gerring and Thacker, 2005; Adserá et al., 2003; Treisman, 2000; Fackler and Lin, 1995; Rundquist et al., 1977).

Political awareness seems to play a decisive role to explain the attitude towards political corruption, therefore, it is proposed the following hypothesis:

H₃- Citizens' level of tolerance towards political corruption is lower as higher is their political awareness.

In other words, it will be investigated if there are significant differences in the attitude towards political corruption between citizens with a different level of political awareness in order to find out if those citizens with a higher political awareness are less tolerant.

If it proved to be the case, it would show that citizens' attitude towards political corruption can be modified by involving citizens in the political debate and therefore, the key role of the media.

3.2.4 **Hypothesis 4: Political Leaning and Attitude towards Political Corruption**

Citizens tend to analyse political information accordingly with their political predispositions (Jennings et al., 2017; Lodge and Taber, 2013; Brader and Tucker, 2009; Anderson and Singer, 2008; Coan et al., 2008; Malhotra and Kuo, 2008; Anderson et al., 2005; Bartels, 2002, 2000; Gerber and Green, 1999; Miller and Shanks, 1996; Zaller, 1992; Sherrod, 1971). Political leaning involves a position about a set of variables as the predisposition to change (Anderson and Singer, 2008; Devos et al., 2002; Schwartz, 1992); social class and religion (Freire, 2006; Knutsen, 1997); economic issues (Hellwig, 2014; Dalton, 2006; Knutsen, 1995; Inglehart and Klingemann, 1976; Downs, 1957); inequality (Alesina et al., 2004; Jost et al., 2003a; Jost et al., 2003b; Jost and Hunyady, 2002; Listhaug and Aalberg, 1999; Tyler and McGraw, 1986; Lane, 1962); and issues related to immigration, multiculturalism, gender equality, lifestyle choices, quality of life and environmental policy (Inglehart, 1990).

Focusing on the topic of this thesis, it seems that political leaning also plays a key role in explaining the different levels of tolerance towards political corruption. It has been found that supporters of right parties are more tolerant towards corruption (Charron and Bågenholm, 2016; Anduiza et al., 2013; Costas-Pérez et al., 2010).

Considering this finding, it is established the following hypothesis:

H4- Citizens' level of tolerance towards political corruption is lower as more politically progressive they are.

In other words, it will be analysed if there are significant differences in the attitude towards political corruption between citizens with different political leaning in order to find out if those citizens with a left political leaning are less tolerant.

If this hypothesis was verified, it would indicate that the electorate of left parties is more sensitive towards political corruption and, therefore, that these parties would need

to make greater efforts to fight against corruption. Besides, it would contribute to explain the success, in certain electoral campaigns, of right parties involved in corruption.

3.2.5 Hypothesis 5: New parties' emergence and Attitude towards Political Corruption

The economic, social and political crisis has recently shaken the traditional political system contributing to the emergence of new parties (Altiparmakis and Lorenzini, 2018; Muro and Vidal, 2017; Della Porta, 2015). There is a wide set of democracies where it has emerged new political parties which have successfully broken into the political scene making the fight against corruption their *leitmotif* (Bågenholm and Charron, 2014; Hanley and Sikk, 2014; Bågenholm, 2013; Sikk, 2012; Bélanger, 2004). For instance, it has recently appeared new parties which have reached remarkable electoral results in three countries of Southern Europe which were not only affected by the economic, social and political crisis; but also by political corruption (Hutter et al., 2018): Syriza in Greece, Movimento Cinque Stelle in Italy and Podemos in Spain.

The emergence of new parties represents an opportunity for citizens to punish traditional parties affected by political corruption (Cordero and Blais, 2017; Charron and Bågenholm, 2016). In this thesis, it will be studied if those citizens who feel closer to new parties are less tolerant towards political corruption than those who support traditional parties.

Taking into account the previous findings, it is raised the following hypothesis:

H_5- Citizens' level of tolerance towards political corruption is lower in those citizens who are supporting new parties.

In other words, it will be studied if there are significant differences in the attitude towards political corruption between citizens supporting different parties in order to find out if those citizens who are supporting new parties are less tolerant.

If it proved to be the case, it would show that new parties' supporters are more sensitive towards political corruption and, therefore, the effectiveness of the new parties' strategy based on showing themselves as anti-corruption parties.

3.2.6 **Hypothesis 6: Political Sympathy and Attitude towards Political Corruption**

Citizens evaluate a corruption scandal differently depending on which is the party affected, being more tolerant when it affects their preferred party (Cordero and Blais, 2017; Ecker et al., 2016; Anduiza et al., 2013). Charron and Bågenholm (2016) have explained how that is due to the "home team" psychology factor, which makes hard blaming the party they are supporting. There is a wide agreement among scholars in pointing out that voters' political sympathy can balance the impact of corruption on the electoral results, being even the candidate involved in a corruption case re-elected (Cordero and Blais, 2017; Charron and Bågenholm, 2016; Welch and Hibbing, 1997; Peters and Welch, 1980).

Considering the previous findings, it is proposed the following hypothesis:

H_6- Citizens' level of tolerance towards corruption is higher as higher is the political sympathy towards the party involved.

In other words, it will be investigated if there are significant differences in the attitude towards political corruption between citizens evaluating corruption when it is not indicated the party involved and when it is specified it is their preferred party the one affected. It will be studied if citizens are more tolerant when the case of corruption involves the party they are supporting.

If this hypothesis was verified, it would clearly contribute to explain why political corruption is not as much penalized as it could be expected and, therefore, it would indicate how necessary is citizens to become aware of the importance to fight against political corruption independently of the party affected in order to reach a higher quality democracy.

3.3 Hypotheses related to "Virtual World"

The second part of this research will be focused on the analysis of the conversations about politics held on Twitter. There is a wide agreement among scholars in pointing out that Twitter is becoming a political platform, where politicians, media professionals and citizens engage in a personal type of political communication (Murthy, 2015; Ekman and Widholm, 2014; Aragón et al., 2013). This platform has been identified as a

network where users exchange information around topics rather than personal issues like others platforms as Facebook or Instagram (Ausserhofer and Maireder, 2013; Anger and Kittl, 2011; Leavitt et al., 2009). There are many researches in which it has been successfully analysed the political debate held on Twitter (Jennings et al., 2017; Peña-López et al., 2014; Aragón et al., 2013; Hu et al., 2012; Vallina-Rodriguez et al., 2012; Conover et al., 2011; Tumasjan et al., 2010).

It has been proved the effectiveness of this platform to spread social pressure and impact on citizens' political attitudes and behaviour. For instance, it has been demonstrated the usefulness of this platform to spread propaganda and generate political debate during the electoral campaigns (Jennings et al., 2017; Aragón et al., 2013), and also as a mobilizing platform for social movements (Vallina-Rodriguez et al., 2012).

In this section it will be stated and justified the hypotheses related to the virtual world (H_7-H_9). Considering on one hand, that the main topic of the thesis is the analysis of citizens' attitude towards political corruption; and on the other hand, the extraordinary capacity of Twitter to impact on citizens' attitudes and behaviour, it will be studied the roles played by political leaning, preferred party and political sympathy in the online debate about political corruption held on this platform.

The goal of the hypotheses H_7, H_8 and H_9 is to analyse if the results of the real world analysis (concretely of H_4, H_5 and H_6) are consistent in the virtual world.

3.3.1 Hypothesis 7: Political Leaning and Attitude towards Political Corruption in the online debate

As it has been proved, citizens tend to analyse political information accordingly with their political predispositions (Jennings et al., 2017; Lodge and Taber, 2013; Brader and Tucker, 2009; Anderson and Singer, 2008; Coan et al., 2008; Malhotra and Kuo, 2008; Anderson et al., 2005; Bartels, 2002, 2000; Gerber and Green, 1999; Miller and Shanks, 1996; Zaller, 1992; Sherrod, 1971). It has been studied how political leaning involves a position about a set of variables as the predisposition to change (Anderson and Singer, 2008; Devos et al., 2002; Schwartz, 1992); social class and religion (Freire, 2006; Knutsen, 1997); economic issues (Hellwig, 2014; Dalton, 2006; Knutsen, 1995; Inglehart and Klingemann, 1976; Downs, 1957); inequality (Alesina et al., 2004; Jost et al., 2003a; Jost et al., 2003b; Jost and Hunyady, 2002; Listhaug and

Aalberg, 1999; Tyler and McGraw, 1986; Lane, 1962); and issues related to immigration, multiculturalism, gender equality, lifestyle choices, quality of life and environmental policy (Inglehart, 1990).

Political leaning has been found as a key variable when analysing citizens' attitude towards political corruption. Charron and Bågenholm (2016), Anduiza et al. (2013) and Costas-Pérez et al. (2010) showed how left voters tend to punish corruption more than right voters. Regarding the political debate held on Twitter, Peña-López et al. (2014) and Anduiza et al. (2012) found that the Spanish users who actively participate in the online political conversations held on Twitter against the established system and its corruption have mainly a left political leaning.

In the hypotheses related to real world, it has been theorised that more politically progressive citizens are less tolerant towards political corruption than conservative. The goal of this hypothesis is to analyse if the previous theory can be verified when studying the online conversations about politics held on Twitter. Therefore, it is established the following hypothesis:

H[7]- In the online debate about politics held on Twitter, users' level of tolerance towards political corruption is lower in progressive users.

In other words, it will be analysed if when reporting corruption in the online debate about politics, there are significant differences in the attitude towards political corruption between users with different political leaning. It will be studied if those users with a left political leaning are more active.

If this proved to be the case, it would show that the electorate of left parties is dominating the online debate about political corruption. It would also indicate that those users who support left parties are more sensitive towards political corruption and, therefore, that these parties would need to make greater efforts to fight against corruption. Moreover, it would contribute to explain the success, in certain electoral campaigns, of right parties involved in corruption.

3.3.2 Hypothesis 8: New parties' emergence and Attitude towards Political Corruption in the online debate

As it has been seen, the economic, social and political crisis has recently shaken the traditional political system contributing to the emergence of new parties (Altiparmakis and Lorenzini, 2018; Muro and Vidal, 2017; Della Porta, 2015). There is a wide set of democracies where it has emerged new political parties which have successfully broken into the political scene making the fight against corruption their *leitmotif* (Bågenholm and Charron, 2014; Hanley and Sikk, 2014; Bågenholm, 2013; Sikk, 2012; Bélanger, 2004). For instance, it has recently appeared new parties which have reached remarkable electoral results in three countries of Southern Europe which were not only affected by the economic, social and political crisis; but also by political corruption (Hutter et al., 2018): Syriza in Greece, Movimento Cinque Stelle in Italy and Podemos in Spain.

The emergence of new parties represents an opportunity for citizens to punish traditional parties affected by political corruption (Cordero and Blais, 2017; Charron and Bågenholm, 2016). Related to the political debate held on Twitter, Vallina-Rodriguez et al. (2012) found how, before the emergence of the new party Podemos, the vast majority of Spanish users in the online political conversations held on Twitter against the economic, social and political crisis did not feel represented for the traditional parties strongly affected by corruption and, were demanding alternative political actors to represent their interests. Therefore, it is expected that when analysing the online debate about politics held on Twitter, those users who nowadays support the new parties which have recently emerged to fight against political corruption, will be less tolerant towards the scandals of corruption.

In the hypotheses related to real world, it has been theorised that new parties' supporters are less tolerant towards political corruption than traditional parties' supporters. The goal of this hypothesis is to analyse if the previous theory can be verified when studying the online conversations about politics held on Twitter. For this purpose, it is raised the following hypothesis:

H_8 statement- In the online debate about politics held on Twitter, users' level of tolerance towards political corruption is lower in those users who are supporting new parties.

In other words, it will be studied if when reporting corruption in the online debate about politics, there are significant differences in the attitude towards political corruption between users supporting new and traditional parties. It will be investigated if those users supporting new parties are more active.

If this hypothesis was verified, it would show that new parties' supporters are more sensitive towards political corruption and, therefore, the effectiveness of the new parties' strategy based on showing themselves as anti-corruption parties.

3.3.3 Hypothesis 9: Political Sympathy and Attitude towards Political Corruption in the online debate

As it has been demonstrated, citizens evaluate a corruption scandal differently depending on which is the party affected, being more tolerant when it affects their preferred party (Cordero and Blais, 2017; Ecker et al., 2016; Anduiza et al., 2013). Charron and Bågenholm (2016) have explained how that is due to the "home team" psychology factor, which makes hard blaming the party they are supporting. Voters' sympathy towards a party can reduce the impact of corruption on the electoral results of a corrupt politician (Cordero and Blais, 2017; Charron and Bågenholm, 2016; Welch and Hibbing, 1997; Peters and Welch, 1980).

In reference to the political debate held on Twitter, Aragón et al. (2013) established that in the Spanish political Twittersphere there was a high probability to find users having the same political preferences within a conversation. It seems that political sympathy not only impacts on citizens' attitudes towards political corruption in the face to face conversations, but also in the online debate about politics held on Twitter.

In the hypotheses related to real world, it has been theorised that party's supporters are more tolerant towards political corruption when it is their preferred party the one which is being involved. The goal of this hypothesis is to analyse if the previous theory can be verified when studying the online conversations about politics held on Twitter. As a consequence, it is proposed the following hypothesis:

H_9 statement- In the online debate about politics held on Twitter, users' level of tolerance towards political corruption is higher as higher is the political sympathy towards the party involved.

In other words, it will be investigated if when reporting corruption in the online debate about politics, there are significant differences in the attitude towards political corruption between the supporters of each party when they are facing corruption in another party and when it affects their party. It will be studied if users are more tolerant when it is their preferred party the one which is being involved.

If this proved to be the case, it would clearly contribute to explain why political corruption is not as much penalized as it could be expected and, therefore, it would indicate how, in order to reach a higher quality democracy, it would be crucial citizens to become aware of the importance to fight against political corruption independently of the party affected.

3.4 Model of the Thesis

In this chapter it has been presented and justified the hypotheses of the thesis, which will be subsequently examined and tested in detail in the following chapters. The hypotheses themselves, and the environments in which they will be tested are summarised in Table 3-1, and the model of this thesis is presented in diagrammatic form in Figure 3-1.

Table 3-1 Hypotheses of the Thesis

Hypotheses	
Real World	H_1- Citizens' level of tolerance towards political corruption is lower when the country's economy is in crisis.
	H_2- Among the variables which influence the citizens' attitude towards political corruption, social pressure has a higher impact than factual information.
	H_3- Citizens' level of tolerance towards political corruption is lower as higher is their political awareness.
	H_4- Citizens' level of tolerance towards political corruption is lower as more politically progressive they are.
	H_5- Citizens' level of tolerance towards political corruption is lower in those citizens who are supporting new parties.
	H_6- Citizens' level of tolerance towards political corruption is higher as higher is the political sympathy towards the party involved.
Virtual World	H_7- In the online debate about politics held on Twitter, users' level of tolerance towards political corruption is lower in progressive users.
	H_8- In the online debate about politics held on Twitter, users' level of tolerance towards political corruption is lower in those users who are supporting new parties.
	H_9- In the online debate about politics held on Twitter, users' level of tolerance towards political corruption is higher as higher is the political sympathy towards the party involved.

Figure 3-1 Model of the Thesis
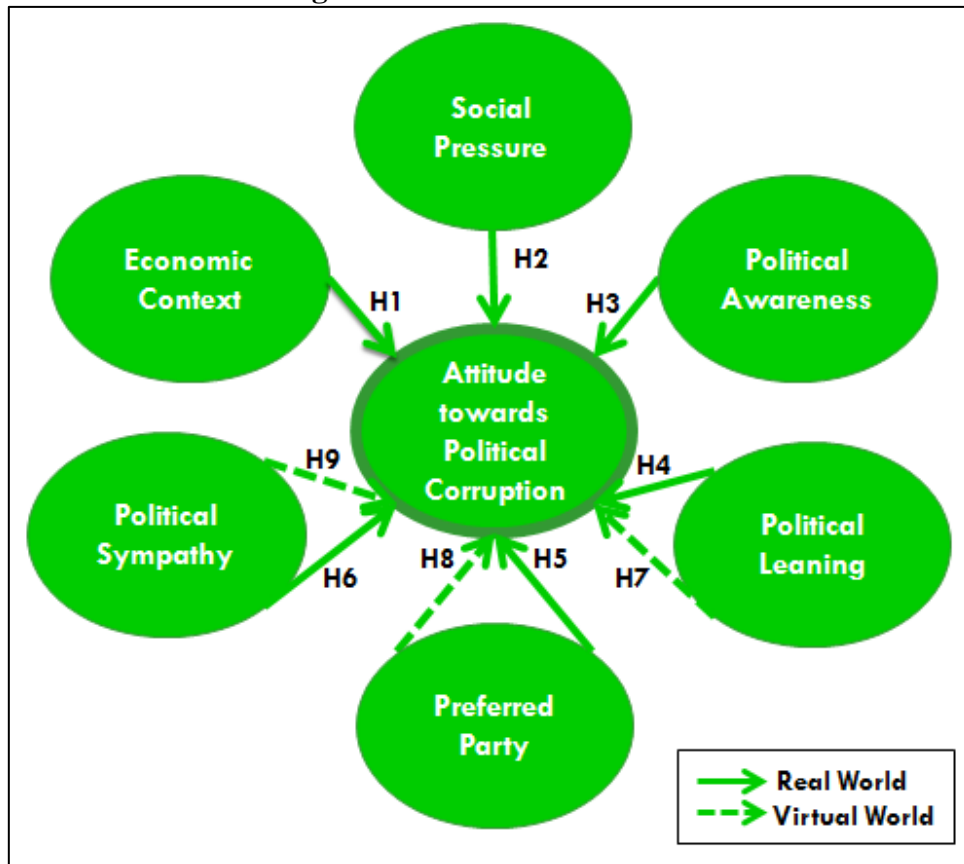
Following the diagram above, in this thesis it will be analysed the impact of the variables which have been previously identified as the most relevant when studying the citizens' attitude towards political corruption (economic context, social pressure, political awareness, political leaning, preferred party and political sympathy) from two different perspectives, real and virtual world.

Related to the real world, firstly, it will be analysed if citizens' attitude towards political corruption varies depending on the country's economic situation (H_1). Secondly, it will be studied if exerting social pressure, i.e., emphasizing other citizens' reactions against political corruption and spreading information focused on the economic and social consequences it provokes, is a better strategy to increase citizens' criticism towards political corruption than just providing factual information (H_2). Thirdly, it will be investigated the impact of citizens' political awareness on the attitude towards political corruption (H_3). Then, it will be analysed if more politically progressive citizens have a lower level of tolerance towards political corruption (H_4). Moreover, it will be studied if citizens' attitude towards political corruption varies

depending on citizens' preferred party (H_5). Finally, it will be investigated the role played by political sympathy in citizens' attitude towards political corruption (H_6).

Regarding the virtual world, it will be analysed the debate about politics held on Twitter. Firstly, it will be studied if there is any difference between progressive and conservative users in their attitude towards political corruption (H_7). Then, it will be investigated if it is possible to establish any difference between traditional and new parties' supporters (H_8). Finally, it will be analysed if users' attitude towards political corruption varies depending on the sympathy they feel towards the party involved (H_9).

In order to test each of the hypotheses of the model, in the remaining chapters it will be developed experiments for both scenarios (real and virtual world) and presented the results, analysis and conclusions. Chapter 4 will be focused on the "Real World" to test hypotheses H_1-H_6, while Chapter 5 will be focused on the "Virtual World" to test hypotheses H_7-H_9. Finally, in Chapter 6 it will be summarised the main conclusions of the thesis.

Chapter 4. Citizens' attitudes towards political corruption in the Real World: Experiments and analysis

4.1 Introduction

In this chapter, it will be presented the design and outcomes of the experiments which test the hypotheses relating to the "Real World" described in Chapter 3. These are repeated here in Table 4-1 for convenience.

Table 4-1 Hypotheses related to the real world

Hypotheses	
	H_1- Citizens' level of tolerance towards political corruption is lower when the country's economy is in crisis
	H_2- Among the variables which influence the citizens' attitude towards political corruption, social pressure has a higher impact than factual information.
Real World	H_3- Citizens' level of tolerance towards political corruption is lower as higher is their political awareness.
	H_4- Citizens' level of tolerance towards political corruption is lower as more politically progressive they are.
	H_5- Citizens' level of tolerance towards political corruption is lower in those citizens who are supporting new parties.
	H_6- Citizens' level of tolerance towards political corruption is higher as higher is the political sympathy towards the party involved.

The experiments presented here are focused on the role played by the economic context, social pressure, political awareness, political leaning, the new parties' emergence and political sympathy, in the study of the attitude towards political corruption. Firstly, it will be analysed if citizen's criticism towards political corruption is higher when the country is in a context of economic crisis. Secondly, it will be studied which is the best strategy to impact on citizens' attitude towards political corruption, analysing if it is possible to reach a greater impact emphasizing other citizens' reactions against political corruption and focusing on citizens' losses rather than just providing factual information. Thirdly, it will be investigated the impact of political awareness, studying if it reduces the level of tolerance towards political corruption. Then, it will be analysed if progressive citizens and conservative citizens show different level of criticism towards political corruption. Moreover, it will be

studied if there is any difference in the level of tolerance towards political corruption between those citizens who are supporting new parties and those who are supporting traditional parties. Finally, it will be investigated if citizens' criticism towards political corruption varies depending on the sympathy they feel towards the party which is being involved.

The data needed to test the hypotheses above is provided on one hand, by two independent entities: CIS and INE; and on the other hand, by a survey specifically developed for this purpose. The data collection process of this survey was April 2017 and participants faced questions related to all the variables of the model.

The structure of the rest of the chapter is as follows: in section 4.2 it will be explained the survey design, focusing on its structure, the sample and the procedures for each of the experiments conducted. In section 4.3, it will be tested the hypotheses, presenting the methodology followed and describing the main results and analysis. In section 4.4, it will be reported the analysis of the results obtained. Finally, in section 4.5 it will be summarised the main conclusions.

4.2 Survey design

The technique used to collect the data needed to test the hypotheses H_1- H_6 was the personal interview. The main reasons are its high reliability and the possibility it offers to personally attend to any questions from the interviewees.

In the following lines, it will be briefly contextualised the Spanish political situation of the last years focusing on the period in which the dataset was collected.

In November 2011, PP won the General Elections reaching the outright majority. Since the beginning of its mandate, this party has been involved in a multitude of corruption scandals as the so-called "Gürtel case", "Barcenas' papers", "Púnica operation" and "Brugal case". As a consequence of all the corruption scandals, the majority of Spanish society has been aware and worried about political corruption and many Spaniards have been actively participating in demonstrations (Cordero and Blais, 2017; Robles-Egea and Delgado-Fernandez, 2014). In this context, Podemos and C's broke into the national political scene claiming to be the solution to regenerate a democracy strongly affected by political corruption and broke the traditional

bipartisanship in the General Elections of December 2015 and also in the repeated General Elections of June 2016.

PP has remained in the government until June 2018, when a sentence that condemned this party for corruption led to a wide agreement among several parties of the opposition which allowed PSOE to win a no-confidence motion. Its mandates have been plagued with corruption cases. These cases are still in trial and have been constantly on the focus of the media, also in April 2017 when dataset was collected. As a consequence, at that time, the vast majority of Spanish society was aware and worried about corruption. Concretely, following the CIS[35], in April 2017, the 42% of the population mentioned corruption as one of the main Spanish problems, becoming the second greatest concern for Spaniards after unemployment.

In the following subsections, it will be considered in detail the survey structure, the sample and the procedures.

4.2.1 Survey structure

The first part of the survey is a short introduction in which participants were informed about the purpose of this research, the voluntary nature of the participation, and the confidentiality of the data to be collected. Then, participants faced a set of questions related to each of the variables of this thesis. In those questions where participants had to express their opinion, it was asked them to indicate their position on a scale anchored at 1 to 5 (indicating in each case the values of the extremes). In order to design these questions properly, it was followed several authors who have proven their goodness in previous researches (Cordero and Blais, 2017; Charron and Bågenholm, 2016; Anduiza et al., 2013; Gromet et al., 2013; Pollitt and Shaorshadze, 2011; Allcott, 2011; Nolan et al., 2008; Schultz et al., 2007; Gatti et al., 2003; McClelland and Cook, 1980).

Finally, the questionnaire concludes with a set of socio-demographic questions related to gender, age, civil status, studies completed, current job, number of people living at home and the household's income.

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[35] CIS April 2017

4.2.2 **Sample**

The participants interviewed were a total of 400 individuals over 18 years old and no monetary compensation was offered. The interviews were distributed proportionally among the three capitals of province of the Region of Valencia (Castellón, Valencia and Alicante) based on the number of inhabitants according to the INE (Table 4-2).

Table 4-2 Interviews' distribution

	Castellón	**Valencia**	**Alicante**	**Total**
Population	170.990	790.201	330.525	1.291.716
Distribution of population	13.2%	61.2%	25.6%	100%
Surveys assigned	**53**	**245**	**102**	**400**

Source: INE

Finally, in Table 4-3 it is presented the technical form of the survey.

Table 4-3 Technical form of the survey

Technical characteristics	
Population under study	The universe studied was the population resident in Spain over 18 years old, which according to the INE was a total of 38.249.648 inhabitants.
Application's area	The sampling was carried out in the three capitals of province of the Region of Valencia: Castellón, Valencia y Alicante.
Sampling units	The sampling units were men and women residents in Spain, over 18 years old.
Technique and sample size	The technique used was a simple random probabilistic sampling. Given that the population under study was greater than 100,000 individuals, it was considered an infinite sample size. Demanding a confidence level of 95% (K=2), and assuming the most unfavorable case P=Q=0.5, it was carried out 400 interviews. Sample size = $(K2*P*Q)/e^2 = (22*0.5*0.5)/0.052 = 400$. In order to distribute proportionally the number of surveys among the three capitals of province of the Region of Valencia it was taken into account the number of people who live in each of them.

Source: INE

4.2.3 **Procedures**

Experiment 1: The effect of the economic context on citizens´ attitude towards political corruption.

In this experiment, it is studied if citizens' criticism towards political corruption varies depending on the country's economic situation. It has been hypothesised that it will be higher when the country is going through an economic crisis.

One of the main factors which citizens consider when they are evaluating political issues is the economic situation. It is believed that if a citizen feels that his country is going through an economic crisis, his opinion about the political situation will be probably negative. In order to test this belief, it will be analysed citizens' evaluation about the economic and political situation to determine if it is possible to establish a relation between both indicators. It will be used public data from the CIS, an independent entity whose main objective is "to contribute scientific knowledge on Spanish society". The CIS carries out surveys which allow finding out the Spaniards opinion in a very different fields and its evolution over time. For this purpose, it will be studied the evolution of citizens' opinion on economic and political situation measured through the following indicators: "Economic situation assessment" and "Political situation assessment".

Moreover, it has been considered interesting to analyse the relationship between the Gross Domestic Product (GDP) and the concern over corruption. It is believed that it will be possible to establish a negative relationship between both indicators, i.e., the concern over corruption will increase when the GDP decreases. In this case it will be used data from the INE, an independent entity whose main objective is "to collect, produce and disseminate relevant, high-quality, official statistical information"; and also from the CIS. Concretely, it will be studied the evolution of the following indicators: "GDP growth rate" and "Growth rate of the concern over corruption".

Finally, and taking into account that Spain has recently moved from a situation of economic expansion to an economic crisis, participants were directly asked in the survey how was their criticism's level towards political corruption since the economic crisis started.

Experiment 2: The effect of social pressure on citizens´ attitude towards political corruption.

The goal of this experiment is to investigate whether there is a different impact on citizens' attitude towards political corruption between social pressure and factual information. It has been hypothesised that social pressure has a greater impact than factual information, i.e., the impact of an individual facing a scenario where it is being explained that other citizens are strongly against to a specific case of corruption or the impact of facing the citizens' losses caused by political corruption is higher than just spreading factual information about it.

In order to test this belief, it was designed two versions of the survey. Each one contains a different scenario and was assigned aleatory to half of the sample. In the version measuring the impact of factual information, it is just explained a corruption case which has been discovered; while in the version containing the social pressure scenario, the information about the corruption case is accompanied by information about how citizens are reacting. The specific scenarios are presented in Table 4-4. After reading the scenarios below, participants were asked to indicate their opinion about the corruption case showed on a scale anchored at 1 (not serious at all) to 5 (very serious).

Table 4-4 Scenarios proposed

Factual information	Social pressure
A mayor has hired his son as one of his consultants It has been discovered that a politician has hired his soon as one of his consultants in despite of his qualifications. His son has not the qualification expected to hold this position, usually held by economists or lawyers.	**A mayor has hired his son as one of his consultants** It has been discovered that a politician has hired his soon as one of his consultants in despite of his qualifications. His son has not the qualification expected to hold this position, usually held by economists or lawyers. Citizens consider completely unacceptable this situation and have organised a protest in front of the Town Hall next Saturday at 8pm.

In order to be able to focus exclusively on the impact of the different scenarios, it will be needed to compare the opinion expressed by participants after reading the scenario, with the opinion expressed previously; otherwise it would not be possible to discern between how much their response were based on their attitude towards the

political corruption case, and how much they were modified by the scenario's impact. For this purpose, it will be considered the information provided in a previous question where participants expressed their opinion about four different situations corresponding with four different cases of political corruption on a scale from 1 to 5 where 1 means "it is not serious at all" and 5 means "it is very serious" (Table 4-5).

Table 4-5 Attitude towards political corruption

Situations of political corruption
1- A politician gets money to change the established land use of a plot. 2- A politician hires a relative or close friend, regardless of his/her professional skills. 3- A politician uses his official car for private trips. 4- A politician accepts valuable presents.

Concretely, it will be used the information provided in the second item, which can be interpreted as a summary of the case of corruption explained with more detail in both scenarios.

Besides, in order to analyse if it possible to reach a higher impact on citizens' criticism towards political corruption through information focused on citizens' losses, it was presented the four hypothetical pieces of news about political corruption described in Table 4-6 to participants: two of them just providing factual information, and the other two emphasizing the economic and social losses they provoke. Then, participants were asked to choose the one which they felt as the most serious.

Table 4-6 Economic and Social consequences vs. Factual Information

Pieces of news of political corruption
1- As a consequence of the political corruption, it will not be possible to build a new hospital in the city. 2- It is necessary to increase the taxes because all losses caused by political corruption. 3-The political corruption cases have increased in the last year. 4-The Mayor of the city has been involved in a corruption case.

Experiment 3: The effect of political awareness on citizens´ attitude towards political corruption.

The purpose of this experiment is to examine whether there is a significant difference in citizens' attitude towards political corruption related to political

awareness. It has been hypothesised that citizens with higher awareness will be less tolerant towards corruption.

In order to analyse citizens's political awareness, participants were asked about two questions related to politics. Concretely, in the first question they were asked about a name of a corrupted politician or a corruption case; while in the second one they were asked about the position which Maria Dolores de Cospedal held in the Spanish Government.

Regarding the analysis of the attitude towards political corruption, it was presented the four situations corresponding with four different cases of political corruption described before (Table 4-5), and then, participants were asked about their opinion on each one on a scale anchored at 1 (not serious at all) to 5 (very serious).

Experiment 4: The effect of political leaning on citizens´ attitude towards political corruption.

In this experiment it is studied whether there is a significant difference in citizens' attitude towards political corruption depending on their political leaning. It has been hypothesised that more politically progressive citizens will be less tolerant towards corruption.

In order to find out participants' political leaning, they were asked to place themselves on a scale anchored at 1 (extreme left) to 5 (extreme right). The attitude towards political corruption, as it has been already explained, was measured with the information provided in Table 4-5.

Experiment 5: The effect of new parties' emergence on citizens´ attitude towards political corruption.

The purpose of this experiment is to investigate whether there is a significant difference in citizens' attitude towards political corruption between those citizens who support traditional and new parties. It has been hypothesised that new parties' supporters will be less tolerant towards corruption.

In order to find out participants' preferred party, they were asked to indicate the party which they felt closer to their ideas. The four main parties were presented: PP,

PSOE, UP and C's. It was also provided the option "Other Party", although even in those cases where an individual is not supporting one of the 4 main parties, he may also feel relatively closer to one of them. Once again, it was used the information provided in Table 4-5 to take into account participants' attitude towards political corruption.

Finally, it will be used the information provided in the question related to the age to investigate if the relation between this variable and preferred party drew by the Spanish CIS, i.e., new parties are supported by younger citizens than traditional parties, keeps being true in our study.

Experiment 6: The effect of political sympathy on citizens´ attitude towards political corruption.

The goal of this experiment is to examine whether there is a significant difference in citizens' attitude towards political corruption depending on the proximity they feel to the party which is being involved in corruption. It has been hypothesised that citizens will be more tolerant towards corruption when it affects to their own party.

For this purpose, firstly, it was asked participants about the corruption perceived in each of the four main Spanish parties (PP, PSOE, UP and C's) on a scale anchored at 1 (not corrupted at all) to 5 (completely corrupted).

Moreover, it was considered the information provided in the previous experiment where participants indicated the party they felt closer to their ideas to formulate a new question in which participants faced a hypothetical case of corruption where their preferred party was involved (Table 4-7).

Table 4-7 Attitude towards political corruption in their own party

Corruption in *(Preferred)* Party: Mayor may have accepted a present from a company
The anti-corruption prosecution has evidence that the politician of the *(Preferred party)* has accepted an expensive present from a company.

This situation represents the same corruption case it is summarised in the fourth item of Table 4-5, with the only difference that this time it is specified the party involved is their preferred party. Participants were asked to indicate, as they did when evaluating the corruption case without the specification of the party affected, how

serious they felt the situation was on a scale anchored at 1 (not serious at all) to 5 (very serious). It will be needed to compare both responses in order to be able to isolate the partisanship effect.

4.3 Methodology and Experiments

In this section, it will be performed the experiments needed in order to empirically test the hypotheses related to the "Real World" with the statistical program SPSS (Statistical Package for the Social Sciences) and it will be shown the results indicating if they have been or not verified.

4.3.1 Hypothesis 1: Experiments and outcomes

In hypothesis H_1 it will be tested the belief that criticism towards political corruption is higher when the country is going through an economic crisis. The statement of H_1 is as follows:

H_1 statement- Citizens' level of tolerance towards political corruption is lower when the country's economy is in crisis.

If validated, H_1 would show that a crisis represents an opportunity to impact on citizens' attitude towards political corruption and, as a consequence, it would contribute to the goal of reaching a higher quality democracy.

Experiment Description

To test this hypothesis H_1 it has been considered the following variables:

1. **Economic situation assessment**. The information used to construct this variable was provided by the CIS Data Bank. The CIS elaborates a monthly survey where participants are asked, among other questions, to ass the current economic situation. They have to place their assessment in one of the following five alternatives: "Very good"; "Good"; "Acceptable"; "Bad"; and "Very bad".
   In reference to the construction of this variable, it is specified:
   - The information available starts in January 1996, therefore, the period studied was January 1996 - September 2017.

- In order to focus on those who had a negative opinion about the economic situation, it was taken into account the percentage of participants whose assessment had been "Bad" or "Very bad".

- With the aim of simplifying the graphic information, it was calculated the mean per year of the percentage of participants whose assessment had been "Bad" or "Very bad".

2.   **Political situation assessment**. The information used to construct this variable was also provided by the CIS Data Bank. The CIS, in its monthly survey, ask participants to ass the current political situation as well. Again, they have to place their assessment in one of the following five alternatives: "Very good"; "Good"; "Acceptable"; "Bad"; and "Very bad". The specifications explained in the construction of the previous variable also applied in this case, i.e., the period studied was January 1996 - September 2017; it was considered the percentage of participants whose assessment had been "Bad" or "Very bad"; and the information was summarized by calculating annual averages.

3.   **GDP growth rate.** The information about the annual growth rate of the GDP was directly provided by the INE. It starts in 1996 and currently, the last data corresponds to the year 2016. As it was needed to compare the GDP growth rate with the following variable, *the growth rate of the concern over corruption*, and the information available of this variable starts in 2003, the period studied was 2003 - 2016.

4.   **Growth rate of the concern over corruption.** The CIS, in its monthly survey, ask participants to indicate the three principal problems of the country in a list that currently has 54 options. It was taken into account those citizens who had mentioned "corruption" as one of the main three problems. The specifications for the construction of this variable are the following:
- In order to compare this variable with the previous one, it was calculated, firstly, the mean per year of the percentage of participants who had

indicated "corruption and fraud" as one of the three main problems; then, it was calculated the growth rate.

- The "corruption" became one of the options on a regular basis in 2002, therefore, as the goal was to calculate annual growth rates, the period studied was 2003 - 2016.

5. **Evolution of the criticism's level towards political corruption.** The information to construct this variable was collected through the survey specifically designed for this thesis. Concretely, participants were asked how was their criticism' level towards political corruption since the economic crisis started. They were requested to place themselves on a scale anchored at 1 (much lower) to 5 (much higher). This variable was recoded as follows: as "Lower", when participants answered "1" or "2"; as "Equal", when they answered "3"; and as "Higher", when they answered "4" or "5".

The goal of this hypothesis is to test if citizens' level of tolerance towards political corruption depends on the country's economic context. For this purpose, it will be performed the following analysis:

1. **H_1A_1:** Bivariate correlation to find out if it is possible to establish a relationship statistically significant between citizens' *Economic situation assessment* and citizens' *Political situation assessment* throughout the period 1996-2017.

2. **H_1A_2:** Bivariate correlation to find out if it is possible to establish a relationship statistically significant between *GDP growth rate and Growth rate of the concern over corruption* throughout the period 2003-2017.

3. **H_1A_3:** A descriptive analysis of the *Evolution of the criticism's level towards political corruption* since the economic crisis started compared with how they felt before.

Statistical analysis

In this section, it will be performed the statistical analysis carried out to test the hypothesis H_1:

1. **H_1A_1: Bivariate correlation "Economic situation assessment" - "Political situation assessment".**

The hypotheses of the bivariate correlation H_1A_1 are presented in Table 4-8.

Table 4-8 Hypotheses – Bivariate correlation H_1A_1 -

Null (H_0) and Alternative (H_1) hypothesis
H_0: There is not a relationship statistically significant between those citizens with an *Economic situation assessment* negative (bad or very bad) and those with a *Political situation assessment* negative (bad or very bad) throughout the period 1996-2017.
H_1: There is a relationship statistically significant between those citizens with an *Economic situation assessment* negative (bad or very bad) and those with a *Political situation assessment* negative (bad or very bad) throughout the period 1996-2017.

In order to test the hypotheses, it will be performed the **Pearson's correlation coefficient** (Table 4-9):

Table 4-9 Pearson's correlation coefficient for H_1A_1

Pearson's correlation coefficient r	Range	Statistical significance
0.93	-1 < r < 1	0.000

Based on the results, the H_0 is rejected, i.e., there is a relationship statistically significant between those citizens with an economic situation assessment negative (bad or very bad) and those with a political situation assessment negative (bad or very bad) throughout the period 1996-2017. Considering the **r=0.93, p<0.05**, the previous statistically significant relationship is characterised as strong and positive.

2. **H_1A_2: Bivariate correlation "GDP growth rate" - "Growth rate of the concern over corruption".**

The hypotheses of the bivariate correlation H_1A_2 are presented in Table 4-10.

Table 4-10 Hypotheses – Bivariate correlation H_1A_2 -

Null (H_0) and Alternative (H_1) hypothesis
H_0: There is not a relationship statistically significant between *GDP growth rate* and *Growth* rate *of the concern over corruption* throughout the period 2003-2016.
H_1: There is a relationship statistically significant between *GDP growth rate* and *Growth* rate *of the concern over corruption* throughout the period 2003-2016.

In order to test the hypotheses, it will be performed the **Pearson's correlation coefficient** (Table 4-11):

Table 4-11 Pearson's correlation coefficient for H_5A_2

Pearson's correlation coefficient r	Range	Statistical significance
-0.56	**-1 < r < 1**	**0.039**

Based on the results, the H_0 is rejected, i.e., there is a relationship statistically significant between GDP growth rate and Growth rate of the concern over corruption throughout the period 2003-2016. Considering the **r= -0.56, p<0.05**, the previous statistically significant relationship is characterised as moderate and negative.

3.   **H_1A_3: Descriptive analysis "Evolution of the criticism's level towards political corruption".**

In Table 4-12 it is presented the frequency response when participants were asked about how was their criticism' level towards political corruption since the economic crisis started.

Table 4-12 Evolution of the criticism's level towards political corruption for H_1A_3

How is your criticism's level towards political corruption since the economic crisis started?	Frequency
Much lower	**53**
Lower	**41**
Equal	**74**
Higher	**111**
Much higher	**121**

As it is depicted, most of participants feel their criticism's level towards political corruption is higher or much higher since the economic crisis started.

Report

In this section, it will be reported the most relevant conclusions of the statistical analysis carried out in the previous section.

The first analysis it has been performed is the correlation between the assessments of political and economic situation throughout the period 1996-2017 (Figure 4-1). It is reminded that this analysis has been focused on those citizens with a negative opinion, i.e., those who assessed "bad" or "very bad" the political and economic situation.

It has been proved a relationship statistically significant, concretely, strong and positive. It means that those citizens with a negative opinion about the political situation have also a negative opinion about the economic situation. In Figure 4-1, it is graphically shown the annual evolution of citizens' percentage whit a negative opinion about the political and economic situation throughout the period 1996-2017.

Figure 4-1 Citizens with a negative assessment (%) (1996 – 2017)
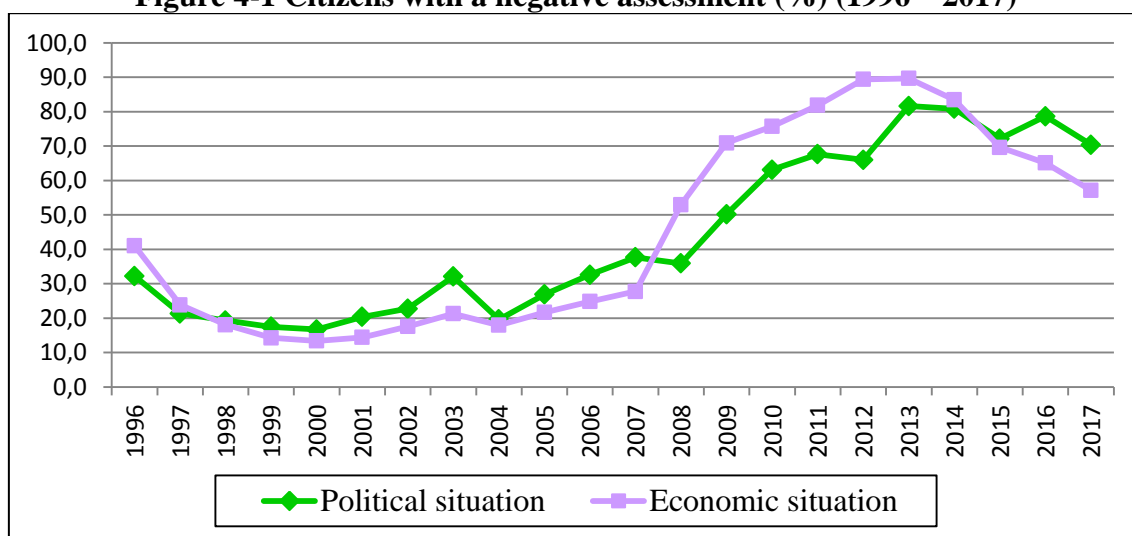
Source: CIS Data Bank

The second analysis it has been performed is the correlation between the GDP growth rate and the growth rate of the concern over corruption throughout the period 2003-2017.

It has been proved a relationship statistically significant, concretely, moderate and negative. It means that an increase in the GDP growth rate is associated with a decrease in the growth rate of the concern over corruption. In Figure 4-2, it is graphically shown the annual evolution of both variables throughout the period 2003-2016. Note- In order

to see the negative relationship between these variables, it has been represented the GDP growth rate in percentage as usually, however, the growth rate of the concern over corruption is represented in decimal. The reason is that throughout the period studied the concern over corruption reaches such high rates that it would be impossible to appreciate graphically the negative correlation between both variables.

Figure 4-2 Growth rates of concern over corruption and GDP (%) (2003 – 2017)
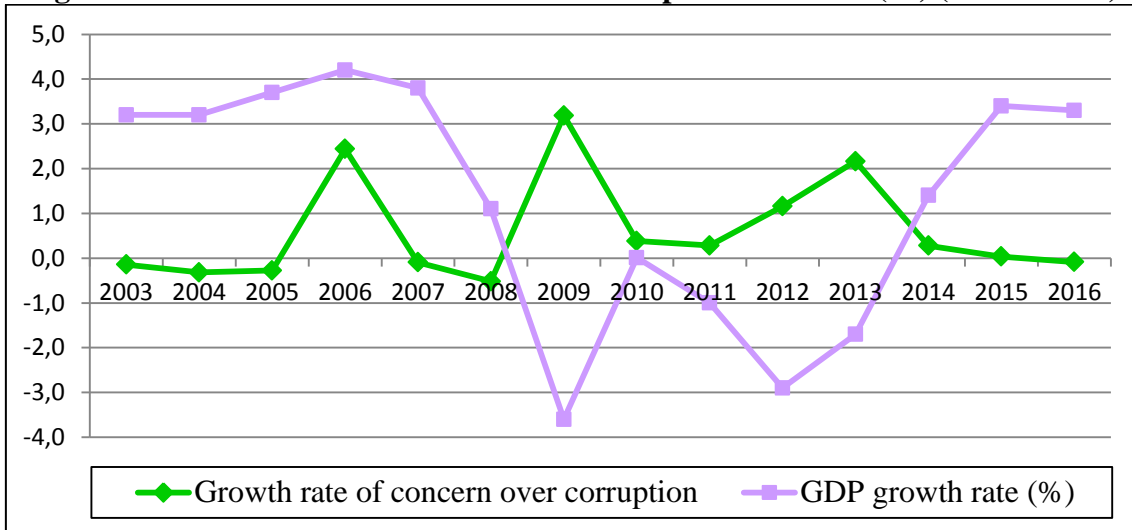
Source: CIS Data Bank and INE

Finally, focusing on the results obtained in the survey specifically designed for this thesis, it is indicated how citizens find their criticism's level towards political corruption higher since the economic crisis started. Concretely, 58% find it is higher, 18.5% equal and 23.5% lower (Figure 4-3).

Figure 4-3 Evolution of the criticism's level towards political corruption since the economic crisis started
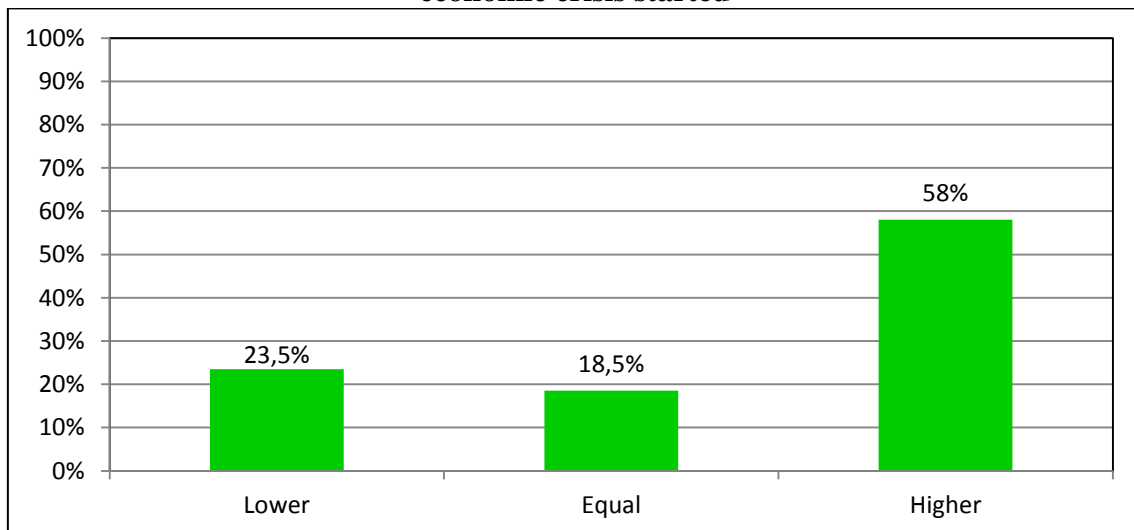
Summarising all the conclusions obtained in this section, firstly, it has been proved that there is a strong and positive correlation between citizens' economic and political assessment which indicates how citizens' attitude towards political issues are clearly affected by the economic context; secondly, it has been established a negative correlation between the GDP growth rate and the growth rate of the concern over corruption, which shows how citizens' criticism towards political corruption is greater when the country is going through an economic crisis; and finally, asking citizens directly about how is their criticism's level since the economic crisis started, the majority responds it is higher, which reinforces the previous conclusion about how an economic crisis impacts on citizens attitude towards political corruption.

As a consequence of all the conclusions summarised above, the hypothesis H_1 has been verified, i.e., citizens' level of tolerance towards political corruption is lower when the country's economy is in crisis. This finding is consistent with previous researches where it was shown how citizens' tolerance towards political corruption depends on country's economy situation, being more tolerant when it is positive (Cordero and Blais, 2017; Charron and Bågenholm, 2016; Anduiza et al., 2013; Klasnja and Tucker, 2013; Winters and Weitz-Shapiro, 2013; Zechmeister and Zizumbo-Colunga, 2013; Jerit and Barabas 2012; Weitz-Shapiro and Winters, 2010; Manzetti and Wilson, 2007; Golden, 2007; Diaz-Cayeros et al., 2000; Duch et al., 2000; Mauro, 1995).

The validation of this hypothesis would show that an economic crisis can be seen as an opportunity to increase citizens' criticism towards political corruption and, therefore, to achieve a higher quality democracy. However, to reach this goal, once the crisis is overcome, it would be necessary to keep the level of tolerance towards political corruption over the level it was before the crisis started.

4.3.2 Hypothesis 2: Experiments and outcomes

In Hypothesis H_2 it will be tested the belief that social pressure has a greater impact on citizens' attitude towards political corruption than just spreading factual information. The statement of H_2 is as follows:

H_2 statement- Among the variables which influence the citizens' attitude towards political corruption, social pressure has a higher impact than factual information.

If verified, H_2 would show that in order to increase citizens' criticism towards political corruption, the social pressure exerted by other citizens is a key factor, i.e., the attitude towards political corruption of a citizen is influenced by other citizens´ attitude towards political corruption. Besides, it would indicate how the information which emphasises the social and economic losses that political corruption provokes is more effective than just spreading factual information.

Experiment Description

To test this hypothesis H_2 it has been considered the following variables:

1. **Scenario**. It was designed the two scenarios already explained (see Table 4-4) in order to be able to analyse the attitude towards a specific political corruption case related to nepotism with and without social pressure. Therefore, this variable has two different values: social pressure and factual information. This variable has not needed any recoding; it has been worked directly with the data from the survey.

2. **Attitude towards political corruption (Nepotism) pre scenario.** The information needed for this variable was provided by the second item of the Table 4-5, where participants, before reading any of the two scenarios, evaluated the following corruption case related to nepotism "A politician hires a relative or close friend, regardless of his/her professional skills", indicating how serious they perceived it on a scale anchored at 1 (not serious at all) to 5 (very serious). It has been worked directly with the data provided by the survey without any recoding.

3. **Attitude towards political corruption (Nepotism) post scenario**. After reading one of the previous scenarios which represent the same political corruption case related to nepotism that it has been considered in the previous variable, participants were asked to indicate how serious they perceived it on a scale anchored at 1 (not serious at all) to 5 (very serious). As the previous variable, this one has not needed any recoding; it has been worked with the data from the survey directly.

4. **Differential attitude towards political corruption (Nepotism) post-pre scenario.** Considering the variable *Attitude towards political corruption (Nepotism) post scenario*, and the variable *Attitude towards political corruption (Nepotism) pre scenario*, it was constructed a new variable: *Differential attitude towards political corruption (Nepotism) post-pre scenario.* It measures the difference between the corruption perceived in a specific corruption case related to nepotism after reading the information provided in the scenario assigned, and the corruption perceived in the same specific corruption related to nepotism before the scenario was presented. This variable has not needed any recoding, it has been worked directly with the data from the survey.

    It was necessary to construct this variable because the goal was to ensure that it was being strictly measured the impact of the scenario. If it was considered just the *attitude towards political corruption post scenario*, it would not have been possible to analyse which scenario has a greater impact, as the attitude towards a political corruption case is not only affected by the scenario in which it is presented, but also by the attitude towards the political corruption case independently of the scenario.

5. **Pieces of news.** A list of four hypothetical pieces of news about political corruption was presented to participants (see Table 4-6): in the first one, corruption is directly related to a decrease in the welfare state which clearly affects citizens; in the second news, corruption is related to an increase in taxes; the third one, states that corruption increased the last year; and finally, the fourth news is about an specific case of local corruption. Participants were requested to choose the one which they considered as the most serious.

The objective of this hypothesis is to test if social pressure has a higher impact than the spread of factual information. For this purpose, it will be performed the following analysis:

1. **H$_2$A$_1$:** T-test to study if the *Differential attitude towards political corruption post-pre scenario* varies significantly between those participants who faced

the *Factual information scenario* and those who faced the *Social pressure scenario*.

2.	**H$_2$A$_2$**: A descriptive analysis of the impact that different *Pieces of news* have on the *Attitude towards political corruption*.

Statistical analysis

In this section, it will be performed the statistical analysis carried out to test the hypothesis H$_2$:

1.	**H$_2$A$_1$: T-test analysis "Differential attitude towards political corruption post-pre scenario" – "Scenario".**

The hypotheses of the T-test analysis H$_2$A$_1$ are presented in Table 4-13.

Table 4-13 Hypotheses –T-test analysis H$_2$A$_1$-

Null (H$_0$) and Alternative (H$_1$) hypothesis
H$_0$: Homogeneity of mean, i.e., the mean of the *Differential attitude towards political corruption post-pre scenario* is equal for both scenarios: *factual information and social pressure.*
H$_1$: Heterogeneity of mean, i.e., the mean of the *Differential attitude towards political corruption post-pre scenario* is not equal for both scenarios: *factual information and social pressure.*

In order to decide which statistic will be used to perform T-test analysis, the first step will be to find out if the *assumption of homoscedasticity* is met. For this purpose, it will be performed the **Levene's Test**. The null and the alternative hypotheses are shown in Table 4-14:

Table 4-14 Hypotheses - Levene's Test for H$_2$A$_1$-

Null (H$_0$) and Alternative (H$_1$) hypothesis
H$_0$: Homogeneity of variance, i.e., the variance of the *Differential attitude towards political corruption post-pre scenario* is equal for both scenarios: *factual information and social pressure.*
H$_1$: Heterogeneity of variance, i.e., the variance of the *Differential attitude towards political corruption post-pre scenario* is not equal for both scenarios: *factual information and social pressure.*

In Table 4-15 it is depicted the results of the Levene's test. As the **Levene's statistic=258, p<0.05**, the H_0 is rejected, i.e., it is not possible to assume that the variances are equal for both groups.

Table 4-15 Levene's Test for H_2A_1

Levene's Statistic	Statistical significance
258	0.000

The assumption of homoscedasticity is not met; therefore, it will be used the t statistic for the case where the variance is not equal for both groups (Table 4-16).

Table 4-16 T-test analysis H_2A_1

T-statistic	df	Mean Difference	Std. error Difference	Sig.	95% Confidence Interval of the Difference	
					Lower	Upper
9.8	260	0.54	0.055	0.000	0.43	0.65

Based on the results, the H_0 is rejected, i.e., there is a statistically significant difference in the differential attitude towards political corruption post-pre scenario between those citizens who faced the "Factual Information" scenario and those who faced the "Social Pressure" scenario **t(260)= 9.8, p<0.05**.

2. **H_2A_2: Descriptive analysis "Pieces of news".**

In Table 4-17 are presented the four pieces of news which participants faced, and the frequency in which each one was selected as the most serious.

Table 4-17 Pieces of news' impact for H_2A_2

News	Frequency
As a consequence of the political corruption, it will not be possible to build a new hospital in the city.	240
It is necessary to increase the taxes because all losses caused by political corruption.	103
The political corruption cases have increased in the last year.	26
The Mayor of the city has been involved in a corruption case.	31

As it is shown, those pieces of news where citizens' losses in welfare and economics are emphasized are found as the most serious for the vast majority of participants.

Report

In this section, it will be reported the most relevant conclusions of the statistical analysis carried out in the previous section.

Once it has been proved that there is a statistically significant difference in the differential attitude towards political corruption between citizens who face a factual information scenario and those who face a social pressure scenario, it is presented the mean of the attitude towards political corruption for each group before and after facing the scenario (Figure 4-4).

Figure 4-4 Attitude towards political corruption vs. Scenario
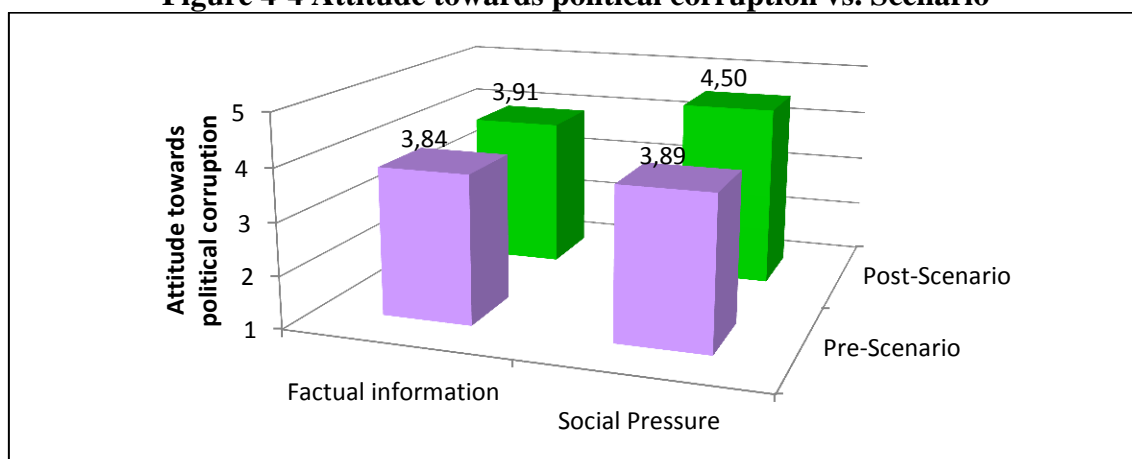
The main conclusion is that the impact of social pressure on citizens' attitude towards political corruption is higher than the factual information. Concretely, when participants are evaluating a specific case of corruption related to nepotism, it is shown how on a scale from 1 to 5 where 1 means "it is not serious at all" and 5 means "it is very serious", those participants who face the factual information scenario show practically the same attitude towards the political corruption case that they showed previously (+0.07), while those who face the social pressure scenario clearly increase their criticism towards the political corruption case (+0.61).

Analysing the pieces of news' impact proposed (Figure 4-5), the main conclusion is that the most part of citizens find most serious those pieces of news in which citizens' losses caused by political corruption are emphasized (*Local decrease in the welfare state* 60% and General tax increase 25.8%) than those in which it is being spread factual

information (*General corruption information* 6.5% and *Local case of corruption information* 7.7%).

Figure 4-5 Pieces of News' impact
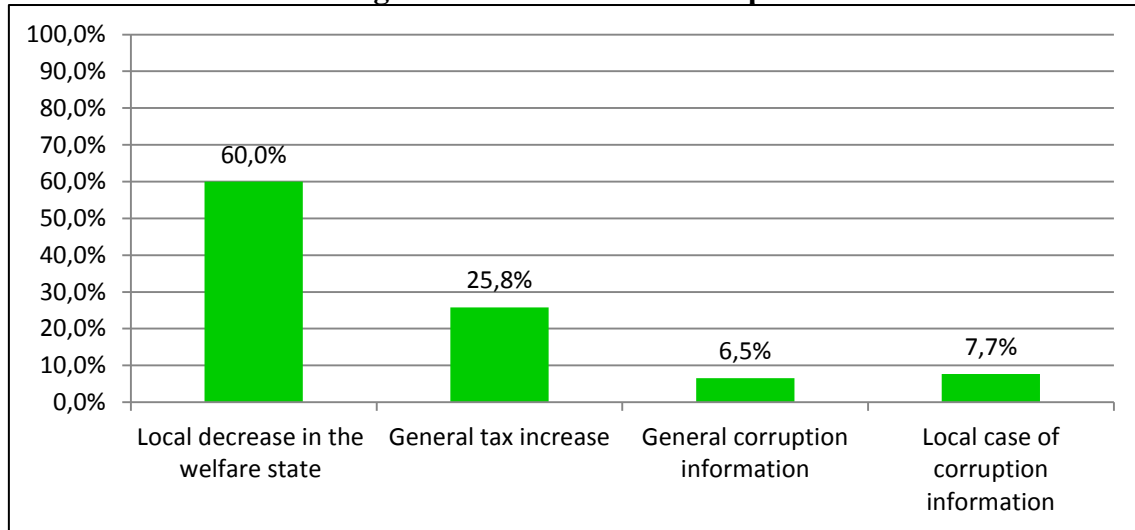
As a result of the previous findings, the hypothesis H_2 has been verified, i.e., among the variables which influence the citizens' attitude towards political corruption, social pressure has a higher impact than factual information. This result is consistent with previous researches where it was proved the impact of social pressure on mobilising citizens against the established political system and its corruption (Giraldo-Luque, 2018; Marinov and Schimmelfennig, 2015; Anduiza et al., 2014; Peña-López et al., 2014; Toret, 2013; Anduiza et al., 2012; Piñeiro-Otero and Costa-Sánchez, 2012; Vallina-Rodriguez et al., 2012; Eltantawy and Wiest, 2011; González-Bailón et al., 2011; Shirky, 2011); on political self-expression, political information seeking and on political participation (Bond et al., 2012; Gerber and Rogers, 2009; and Gerber et al., 2008). Besides, analysing the impact on citizens' attitude of the different pieces of news about political corruption, it has been found how it is greater when underlining citizens' losses in welfare and economics.

The verification of this hypothesis would indicate how, by exerting social pressure, parties, media or any citizen group can reach a greater amount of supporters against political corruption.

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4.3.3 **Hypothesis 3: Experiments and outcomes**

In Hypothesis H_3 it will be tested the belief that those citizens with higher political awareness have a lower level of tolerance. The statement of H_3 is as follows:

H_3 statement- Citizens' level of tolerance towards political corruption is lower as higher is their political awareness.

If this hypothesis was validated, it would show how important is to involve citizens in political issues in order to increase their criticism towards corruption.

Experiment Description

To test this hypothesis H_3 it has been considered the following two variables:

1. **Political awareness**. This variable involves two different questions: "Could you indicate some corrupted politician or corruption case you have heard about?" and "Could you tell me which position holds Maria Dolores de Cospedal in the current government?" This variable has been recoded as "High", when participants answered correctly both questions; as "Medium", when they answered correctly just one of the two questions; and as "Low", when they did not know any answer.

    Attitude towards political corruption. This variable was measured through a scale which contains four items related to political corruption. Participants evaluated them on a scale anchored at 1 (it is not serious at all) to 5 means (it is very serious).

    The first step was to analyse the reliability and validity of the scale. In Table 4-18 are summarised the conditions necessaries for a scale to achieve the reliability and validity required.

Table 4-18 Reliability and Validity Conditions

Reliability conditions	Cronbach's Alpha Statistic > 0.5
	Correlation between each item with total correlation > 0.5
Validity conditions	Kaiser-Meyer-Olkin (KMO) statistic > 0.5
	Bartlett test → p < 0.05
	Number of concepts measured = 1 (Just one Initial Eingenvalues > 1 + Values for each item on the Component Matrix > 0.5)

Reliability Analysis

The results of the reliability analysis are presented in Table 4-19 and Table 4-20.

Table 4-19 Reliability Statistics

Cronbach's Alpha	Range	Nº of items
0.908	0 < Cronbach's Alpha < 1	4

Table 4-20 Item-Total Statistics

Items	Corrected Item – Total Correlation	Cronbach's Alpha if Item deleted
A politician gets money to change the established land use of a plot.	**0.701**	0.920
A politician hires a relative or close friend, regardless of his/her professional skills.	**0.884**	0.847
A politician uses his official car for private trips.	**0.832**	0.873
A politician accepts valuable presents.	**0.824**	0.869

As it is shown, the Cronbach's Alpha = 0.908 > 0.5; and the correlation between each item of the scale with the total correlation is greater than 0.5; therefore, it was possible to conclude that the scale was reliable.

Validity Analysis

Regarding the validity, it was performed a Factor Analysis. The results are shown in Table 4-21, Table 4-22, Table 4-23 and Table 4-24.

Table 4-21 Kaiser-Meyer-Olkin Measure of Sampling Adequacy

KMO Statistic	Range
0.810	0 < KMO < 1

Table 4-22 Bartlett's Test of Sphericity

Aprox. Chi-Square	df	Statistical significance
1220	6	0.000

Table 4-23 Total Variance Explained

Components	Initial Eingenvalues (Total)	Extraction Sums of Squared Loadings (% of Variance)
1	3.20	79.7
2	0.44	
3	0.23	
4	0.14	

Table 4-24 Component Matrix

Items	Component
	1
A politician gets money to change the established land use of a plot.	0.940
A politician hires a relative or close friend, regardless of his/her professional skills.	0.904
A politician uses his official car for private trips.	0.901
A politician accepts valuable presents.	0.823

As it is shown, KMO = 0.810 > 0.5; Bartlett test has a p = 0.00 < 0.05; and finally, the scale is measuring just one concept: on one hand, there is just a component with an initial eingenvalue greater than 1, which is able to explain the 79.7% of the total variance; and on the other hand, the values for each

item on the component matrix are in all the cases greater than 0.5. As a consequence, it was possible to conclude that the scale was valid.

Once it was proved the reliability and validity of the scale, it was created the variable "Attitude towards political corruption" which summarises the information of this scale by considering the mean of the scores in each item for each citizen.

The aim of this hypothesis H_3 is to test if different levels of political awareness have a different impact on citizens' attitude towards corruption. For this purpose, it will be performed the following analysis:

1. **H_3A_1:** ANOVA analysis to find out if the mean of the *Attitude towards political corruption* varies significantly with the level of *Political awareness.*

Statistical analysis

In this section, it will be performed the statistical analysis carried out to test the hypothesis H_3:

1. **H_3A_1: ANOVA analysis "Attitude towards political corruption" – "Political awareness".**

The hypotheses of the ANOVA analysis H_3A_1 are presented in Table 4-25.

Table 4-25 Hypotheses -ANOVA analysis H_3A_1-

Null (H_0) and Alternative (H_1) hypothesis
H_0: Homogeneity of mean, i.e., the mean of the *Attitude towards political corruption* is equal for all groups: *low, medium and high level of awareness*.
H_1: Heterogeneity of mean, i.e., the mean of the *Attitude towards political corruption* is not equal for all groups: *low, medium and high level of awareness*.

In order to decide which statistic will be used to perform the ANOVA analysis, the first step will be to find out if the *assumption of homoscedasticity* is met. For this purpose, it will be performed the **Levene's Test**. The null and the alternative hypotheses are shown in Table 4-26:

Table 4-26 Hypotheses - Levene's Test for H_3A_1-

Null (H_0) and Alternative (H_1) hypothesis
H_0: Homogeneity of variance, i.e., the variance of the *Attitude towards political corruption* is equal for all groups: *low, medium and high level of awareness*.
H_1: Heterogeneity of variance, i.e., the variance of the *Attitude towards political corruption* is not equal for all groups: *low, medium and high level of awareness*.

In Table 4-27 it is depicted the results of the Levene's test. As the **Levene's statistic=0.10, p>0.05**, the H_0 is not rejected, i.e., it is possible to assume that the variances are equal across all the groups.

Table 4-27 Levene's Test for H_3A_1

Levene's Statistic	df1	df2	Statistical significance
0.10	2	397	**0.907**

The assumption of homoscedasticity is met; therefore, it will be used the F statistic to perform the ANOVA analysis (Table 4-28).

Table 4-28 ANOVA analysis H_3A_1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	58.7	2	29.3	40.2	**0.000**
Within Groups	290	397	0.73		
Total	348	399			

Based on the results, the H_0 is rejected, i.e., there is a statistically significant difference in the attitude towards corruption between citizens with a different level of political awareness **$F_{(2,397)}$=40.2, p<0.05.**

Once it has been proved the attitude towards political corruption varies with the level of political awareness, it will be deeply analysed in which pair of groups it is possible to establish a difference statistically significant. For this purpose, as the assumption of homoscedasticity is met and the number of groups to be compared are just three, it will be performed the **Bonferroni's Test** (Table 4-29).

Table 4-29 Bonferroni Test for H$_3$A$_1$

Political Awareness Categories		Mean Difference	Std. error	Sig.	95% Confidence Interval	
A	B	(A – B)			Lower	Upper
High	Low	1.65	0.19	**0.000**	1.20	2.10
	Medium	0.41	0.09	**0.000**	0.19	0.63
Medium	Low	1.24	0.18	**0.000**	0.80	1.68
	High	-0.41	0.09	**0.000**	-0.63	-0.19
Low	Medium	-1.24	0.18	**0.000**	-1.68	-0.80
	High	-1.65	0.19	**0.000**	-2.10	-1.20

As it is indicated, it is possible to establish differences statistically significant in the attitude towards political corruption between the group of citizens with a high level of political awareness and those with a low level of political awareness **t(397)=8.7, p<0.05**. Besides, between those with a high level and those with a medium level **t(397)=5.3, p<0.05**. Finally, it is also possible to establish differences statistically significant between the group of citizens with a medium level of political awareness and those with a low level **t(397)=10.5, p<0.05**.

The conclusion of the previous analysis is that when studying the impact of the political awareness on the attitude towards political corruption, there are differences statistically significant between the three groups of citizens considered.

Report

In this section, it will be reported the most relevant conclusions of the statistical analysis carried out in the previous section.

Once it has been proved that there is a statistically significant difference in the attitude towards political corruption between citizens with a different level of political awareness, it is presented the mean of the attitude towards political corruption for each of the three groups in Figure 4-6.

Figure 4-6 Attitude towards political corruption vs. Political awareness
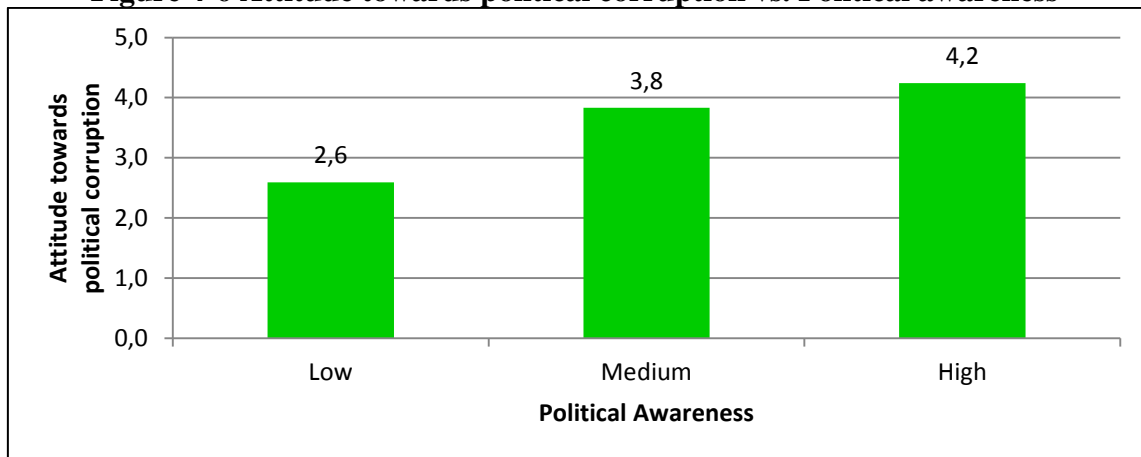
The main conclusion is that citizens are less tolerant towards political corruption as higher is their political awareness. Concretely, when participants are evaluating a set of political corruption cases, it is shown how the mean of the attitude towards political corruption on a scale from 1 to 5 where 1 means "it is not serious at all" and 5 means "it is very serious", is 2.6, for those who have a low level; 3.8, for those who have a medium level; and 4.2, for those who have a high level.

As a consequence, the hypothesis H_3 has been verified, i.e., citizens' level of tolerance towards political corruption is lower as higher is their political awareness. This conclusion is consistent with previous researches where it was proved how citizens with a different level of knowledge about politics show different levels of tolerance towards political corruption (Cordero and Blais, 2017; Anduiza et al., 2013; Weitz-Shapiro and Winters, 2010; Arceneaux, 2007; Kam, 2005).

The validation of this hypothesis would show that the attitude towards political corruption can be modified by bringing citizens into politics and, therefore, the key role of the media to achieve a higher quality democracy.

4.3.4 Hypothesis 4: Experiments and outcomes

In Hypothesis H_4 it will be tested the belief that more progressive citizens have a lower level of tolerance. The statement of H_4 is as follows:

H_4 statement- Citizens' level of tolerance towards political corruption is lower as more politically progressive they are.

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If this hypothesis was verified, it would indicate that the electorate of left parties is more sensitive towards political corruption and, as a consequence, that parties with a left political leaning would need to fight against corruption stronger than parties with a right political leaning which are less penalised by corruption. Besides, it would help to explain the electoral success of some right parties involved in corruption.

Experiment Description

To test this hypothesis H_4 it has been considered the following variables:

1. **Political leaning**. Participants were asked to indicate their political position on a scale anchored at 1 (extreme left) to 5 (extreme right). This variable has not needed any recoding, it has been worked with the data provided by the survey directly.

2. **Attitude towards political corruption.** As it has been already seen, this variable was measured through a scale with four items about political corruption which participants evaluated on a scale anchored at 1 (it is not serious at all) to 5 means (it is very serious). As it has been shown, the reliability and validity of the scale was proved.

The goal of this hypothesis H_4 is to test if different political leanings have a different impact on citizens' attitude towards political corruption. For this purpose, it will be performed the following analysis:

1. **H_4A_1:** ANOVA analysis to explore if the mean of the *Attitude towards political corruption* varies significantly with the *Political leaning*.

Statistical analysis

In this section, it will be performed the statistical analysis carried out to test the hypothesis H_4:

1. **H_4A_1: ANOVA analysis "Attitude towards political corruption" – "Political leaning".**

The hypotheses of the ANOVA analysis H_4A_1 are presented in Table 4-30.

Table 4-30 Hypotheses -ANOVA analysis H_4A_1-

Null (H_0) and Alternative (H_1) hypothesis
H_0: Homogeneity of mean, i.e., the mean of the *Attitude towards political corruption* is equal for all groups: *extreme left, left, center, right and extreme right political leaning.*
H_1: Heterogeneity of mean, i.e., the mean of the *Attitude towards political corruption* is not equal for all groups: *extreme left, left, center, right and extreme right political leaning.*

In order to decide which statistic will be used to perform the ANOVA analysis, the first step will be to find out if the *assumption of homoscedasticity* is met. For this purpose, it will be performed the **Levene's Test**. The null and the alternative hypotheses are shown in Table 4-31:

Table 4-31 Hypotheses - Levene's Test for H_3A_1-

Null (H_0) and Alternative (H_1) hypothesis
H_0: Homogeneity of variance, i.e., the variance of the *Attitude towards political corruption* is equal for all groups: *extreme left, left, center, right and extreme right political leaning.*
H_1: Heterogeneity of variance, i.e., the variance of the *Attitude towards political corruption* is not equal for all groups: *extreme left, left, center, right and extreme right political leaning.*

In Table 4-32 it is depicted the results of the Levene's test. As the **Levene's statistic=14.6, p<0.05**, the H_0 is rejected, i.e., it is not possible to assume that the variances are equal across all the groups.

Table 4-32 Levene's Test for H_4A_1

Levene's Statistic	df1	df2	Statistical significance
14.6	4	395	**0.000**

The assumption of homoscedasticity is not met; therefore, it will be used the Welch statistic to perform the ANOVA analysis (Table 4-33).

Table 4-33 ANOVA analysis H_4A_1

Welch's Statistic	df1	df2	Statistical significance
99.1	4	40.6	**0.000**

Based on the results, the H_0 is rejected, i.e., there is a statistically significant difference in the attitude towards corruption between citizens with a different political leaning **Welch's statistic=99.1, p<0.05**.

Once it has been proved the attitude towards political corruption varies with the political leaning, it will be deeply analysed in which pair of groups it is possible to establish a difference statistically significant. For this purpose, as the assumption of homoscedasticity is not met, it will be performed the **Games-Howell's Test** (Table 4-34).

Table 4-34 Games-Howell's Test for H_4A_1

Political Leaning Categories		Mean Difference	Std. error	Sig.	95% Confidence Interval	
A	B	(A – B)			Lower	Upper
Extreme Left	Left	0.64	0.06	**0.000**	0.46	0.81
	Centre	1.21	0.10	**0.000**	0.93	1.50
	Right	1.54	0.10	**0.000**	1.27	1.81
	Extreme Right	2.72	0.35	**0.001**	1.41	4.04
Left	Extreme Left	-0.64	0.06	**0.000**	-0.81	-0.46
	Centre	0.58	0.11	**0.000**	0.29	0.87
	Right	0.91	0.10	**0.000**	0.62	1.19
	Extreme Right	2.08	0.36	**0.005**	0.77	3.40
Centre	Extreme Left	-1.21	0.10	**0.000**	-1.50	-0.93
	Left	-0.58	0.11	**0.000**	-0.87	-0.29
	Right	0.33	0.13	**0.091**	-0.03	0.68
	Extreme Right	1.51	0.36	**0.026**	0.20	2.81
Right	Extreme Left	-1.54	0.10	**0.000**	-1.81	-1.27
	Left	-0.91	0.10	**0.000**	-1.19	-0.62
	Centre	-0.33	0.13	**0.091**	-0.68	0.03
	Extreme Right	1.18	0.36	**0.077**	-0.13	2.49
Extreme Right	Extreme Left	-2.72	0.35	**0.001**	-4.04	-1.41
	Left	-2.08	0.36	**0.005**	-3.40	-0.77
	Centre	-1.51	0.36	**0.026**	-2.81	-0.20
	Right	-1.18	0.36	**0.077**	-2.49	0.13

As it is indicated, it is possible to establish differences statistically significant in the attitude towards political corruption between the group of citizens with an extreme left political leaning and those with a left **t(40.6)=10.2 p<0.05**, centre **t(40.6)=12, p<0.05**, right **t(40.6)=16, p<0.05** and extreme right **t(40.6)=7.7, p<0.05** political leaning; between those citizens with a left political leaning and those with a centre **t(40.6)=5.5, p<0.05**, right **t(40.6)=8.9, p<0.05** and extreme right **t(40.6)=5.9, p<0.05** political leaning; and finally, between the group of citizens who locate themselves in the centre and those with an extreme right **t(40.6)=4.1, p<0.05** political leaning. However, it is not possible to establish differences statistically significant in the attitude towards political corruption between the group of citizens who locate themselves in the centre and those with a right **t(40.6)=2.5, p>0.05** political leaning; and neither between those citizens with a right political leaning and those with an extreme right **t(40.6)=3.3, p>0.05** political leaning.

The conclusion of the previous analysis is that when studying the impact of the political leaning on the attitude towards political corruption, among the ten possible comparisons pairs, there are differences statistically significant in eight of them.

Report

In this section, it will be reported the most relevant conclusions of the statistical analysis carried out in the previous section.

Once it has been proved that there is a statistically significant difference in the attitude towards political corruption between citizens with a different political leaning, it is presented the mean of the attitude towards political corruption for each group in Figure 4-7.

Figure 4-7 Attitude towards political corruption vs. Political leaning
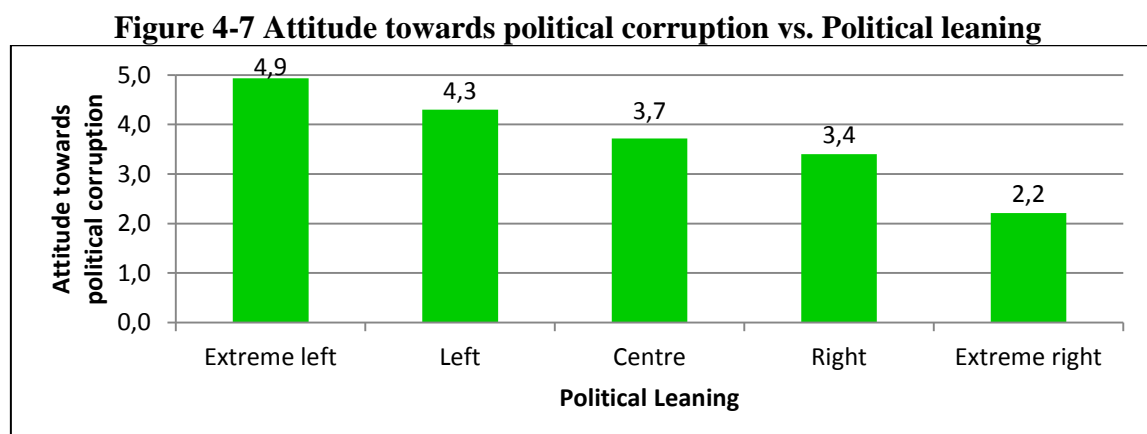
The main conclusion is that citizens are less tolerant towards political corruption as more progressive they are. Concretely, when participants are evaluating a set of political corruption cases, the mean of the attitude towards political corruption on a scale from 1 to 5 where 1 means "it is not serious at all" and 5 means "it is very serious", is 4.9, for those who identify themselves as having an extreme left political leaning; 4.3, for those who identify themselves as having a left political leaning; 3.7, for those who place themselves on the centre; 3.4, for those who identify themselves as having an right political leaning; and finally, 2.2 for those who identify themselves as having an extreme right political leaning.

As a consequence, the hypothesis H_4 has been verified, i.e., citizens' level of tolerance towards political corruption is lower as more politically progressive they are. This finding is consistent with previous researches where it was proved how left parties' supporters punish corruption more than right parties' supporters (Charron and Bågenholm, 2016; Anduiza et al., 2013; Costas-Pérez et al., 2010).

The verification of this hypothesis could be seen, at least in a short term, as a disadvantage for parties with a left political leaning, which would need to make greater efforts to fight against corruption. Moreover, this conclusion would contribute to explain the success of some right parties involved in corruption in certain electoral campaigns.

4.3.5 Hypothesis 5: Experiments and outcomes

In Hypothesis H_5 it will be tested the belief that those citizens who feel closer to new parties have a lower level of tolerance towards political corruption. The statement of H_5 is as follows:

H_5 statement- Citizens' level of tolerance towards political corruption is lower in those citizens who are supporting new parties.

If validated, it would show the effectiveness of the new parties' strategy focused on the fight against corruption.

Experiment Description

To test this hypothesis H_5 it has been considered the following variables:

1. **Preferred party**. A list with the main parties (PP, PSOE, UP and C's) and the option "Other party" was shown to participants, who were asked to choose the one which they felt closer to their ideas. This variable has not needed any recoding; it has been worked with the data from the survey directly.

2. **Preferred parties' group (New vs. Traditional).** Taking as a starting point the previous variable "preferred party", it was recoded as follows: as "New party", when participants chose UP or C's; and as "Traditional party", when they chose PP, PSOE or the option "Other party".

3. **Attitude towards political corruption.** As it has been already explained, this variable was measured through four items evaluated on a scale anchored at 1 (it is not serious at all) to 5 means (it is very serious). Besides, it was proved its reliability and validity.

4. **Age.** In order to simplify the analysis, this variable was recoded as follows: as "18-45", for participants who belonged to the "18-30" and "31-45" age ranges; and as ">45" for participants who belonged to the "45-60" and ">60" age ranges.

The objective of this hypothesis H_5 is to test if those citizens who are supporting new parties are less tolerant towards political corruption than those who are supporting traditional parties. For this purpose, it will be performed the following analysis:

1. **H_5A_1:** T-test to study if the mean of the *Attitude towards political corruption* varies significantly between *New parties' supporters* and *Traditional parties' supporters*.

2. **H_5A_2:** A crosstabs analysis to find out if it is possible to establish a relationship statistically significant between *Voters' age (18-45 vs. > 45)* and *Preferred parties' group (New vs. Traditional).*

Then, once the hypothesis will be tested, it will be analysed the previous relationships considering directly the preferred party. For this purpose, it will be performed the following analysis:

3. **H$_5$A$_3$:** ANOVA analysis to find out if the mean of the *Attitude towards political corruption* varies significantly taking into account the *Preferred party*.

4. **H$_5$A$_4$:** A crosstabs analysis to find out if it is possible to establish a relationship statistically significant between *Voters' age (18-45 vs. > 45)* and *Preferred Party*.

Statistical analysis

In this section, it will be performed the statistical analysis carried out to test the hypothesis H$_5$:

1. **H$_5$A$_1$: T-test analysis "Attitude towards political corruption" – "Preferred parties' group (New vs. Traditional)".**

The hypotheses of the T-test analysis H$_5$A$_1$ are presented in Table 4-35.

Table 4-35 Hypotheses –T-test analysis H$_5$A$_1$-

Null (H$_0$) and Alternative (H$_1$) hypothesis
H$_0$: Homogeneity of mean, i.e., the mean of the *Attitude towards political corruption* is equal for both groups: *new parties' supporters and traditional parties' supporters.*
H$_1$: Heterogeneity of mean, i.e., the mean of the *Attitude towards political corruption* is not equal for both groups: *new parties' supporters and traditional parties' supporters.*

In order to decide which statistic will be used to perform T-test analysis, the first step will be to find out if the *assumption of homoscedasticity* is met. For this purpose, it will be performed the **Levene's Test**. The null and the alternative hypotheses are shown in Table 4-36:

Table 4-36 Hypotheses - Levene's Test for H_5A_1-

Null (H_0) and Alternative (H_1) hypothesis
H_0: Homogeneity of variance, i.e., the variance of the *Attitude towards political corruption* is equal for both groups: *new parties' supporters and traditional parties' supporters.*
H_1: Heterogeneity of variance, i.e., the variance of the *Attitude towards political corruption* is not equal for both groups: *new parties' supporters and traditional parties' supporters.*

In Table 4-37 it is depicted the results of the Levene's test. As the **Levene's statistic=32.6, p<0.05**, the H_0 is rejected, i.e., it is not possible to assume that the variances are equal for both groups.

Table 4-37 Levene's Test for H_5A_1

Levene's Statistic	Statistical significance
32.6	0.000

The assumption of homoscedasticity is not met; therefore, it will be used the t statistic for the case where the variance is not equal for both groups (Table 4-38).

Table 4-38 T-test analysis H_5A_1

T-statistic	df	Mean Difference	Std. error Difference	Sig.	95% Confidence Interval of the Difference	
					Lower	Upper
-11.7	378	-0.93	0.08	**0.000**	-1.09	-0.78

Based on the results, the H_0 is rejected, i.e., there is a statistically significant difference in the attitude towards corruption between supporters of new and traditional parties **t(378)= -11.7, p<0.05**.

2. **H_5A_2: Crosstabs analysis "Voters' age (18-45 vs. > 45)" – "Preferred parties' group (New vs. Traditional)".**

The hypotheses of the Crosstabs analysis H_5A_2 are presented in Table 4-39.

Table 4-39 Hypotheses –Crosstabs analysis H_5A_2-

Null (H_0) and Alternative (H_1) hypothesis
H_0: There is not association between *Voters' age (18-45 vs. > 45)* and *Preferred parties' group (New vs. Traditional).*
H_1: There is association between *Voters' age (18-45 vs. > 45)* and *Preferred parties' group (New vs. Traditional).*

In order to test the hypotheses, it will be performed the **Chi-Squared Test** (Table 4-40):

Table 4-40 Chi-Squared Test for H$_5$A$_2$

Pearson Chi-Square	df1	Statistical significance
71.1	1	**0.000**

Based on the results, the H$_0$ is rejected, i.e., there is a statistically significant association between Voters' age (18-45 vs. > 45) and Preferred parties' group (New vs. Traditional), **χ^2 (1) = 71.1, p < 0.05.** Besides, in order to characterise the relationship, as the crosstab is 2x2, it will be performed the **Cramer's V Test** (Table 4-41).

Table 4-41 Cramer's V Test for H$_5$A$_2$

Cramer's V Statistic	Range	Statistical significance
0.421	**0 < Cramer's V < 1**	**0.000**

Considering the **Cramer's V Statistic = 0.421, p<0.05** the previous statistically significant relationship is characterised as moderate.

3. **H$_5$A$_3$: ANOVA analysis "Attitude towards political corruption" – "Preferred party".**

The hypotheses of the ANOVA analysis H$_5$A$_3$ are presented in Table 4-42.

Table 4-42 Hypotheses -ANOVA analysis H$_5$A$_3$-

Null (H$_0$) and Alternative (H$_1$) hypothesis
H$_0$: Homogeneity of mean, i.e., the mean of the *Attitude towards political corruption* is equal for all groups: supporters of PP, PSOE, UP, C's and Other party.
H$_1$: Heterogeneity of mean, i.e., the mean of the *Attitude towards political corruption* is not equal for all groups: supporters of PP, PSOE, UP, C's and Other party.

In order to decide which statistic will be used to perform the ANOVA analysis, the first step will be to find out if the *assumption of homoscedasticity* is met. For this purpose, it will be performed the **Levene's Test**. The null and the alternative hypotheses are shown in Table 4-43:

Table 4-43 Hypotheses - Levene's Test for H_5A_3-

Null (H_0) and Alternative (H_1) hypothesis
H_0: Homogeneity of variance, i.e., the variance of the *Attitude towards political corruption* is equal for all groups: supporters of PP, PSOE, UP, C's and Other party.
H_1: Heterogeneity of variance, i.e., the variance of the *Attitude towards political corruption* is not equal for all groups: supporters of PP, PSOE, UP, C's and Other party.

In Table 4-44 it is depicted the results of the Levene's test. As the **Levene's statistic=3.9, p<0.05**, the H_0 is rejected, i.e., it is not possible to assume that the variances are equal across all the groups.

Table 4-44 Levene's Test for H_5A_3

Levene's Statistic	df1	df2	Statistical significance
3.9	4	395	0.004

The assumption of homoscedasticity is not met; therefore, it will be used the Welch statistic to perform the ANOVA analysis (Table 4-45).

Table 4-45 ANOVA analysis H_5A_3

Welch's Statistic	df1	df2	Statistical significance
44.6	4	7.9	0.000

Based on the results, the H_0 is rejected, i.e., there is a statistically significant difference in the attitude towards corruption between supporters of different parties **Welch's statistic=44.6, p<0.05**.

Once it has been proved the attitude towards political corruption varies with the preferred party, it will be deeply analysed in which pair of groups it is possible to establish a difference statistically significant. For this purpose, as the assumption of homoscedasticity is not met, it will be performed the **Games-Howell's Test** (Table 4-46).

Table 4-46 Games-Howell's Test for H$_5$A$_3$

Preferred Party		Mean Difference (A – B)	Std. error	Sig.	95% Confidence Interval	
A	B				Lower	Upper
PP	PSOE	-0.92	0.11	**0.000**	-1.22	-0.62
	UP	-1.44	0.10	**0.000**	-1.71	-1.18
	C's	-1.12	0.12	**0.000**	-1.45	-0.79
	Other	-1.56	0.38	**0.290**	-9.58	6.47
PSOE	PP	0.92	0.11	**0.000**	0.62	1.22
	UP	-0.52	0.09	**0.000**	-0.77	-0.28
	C's	-0.20	0.10	**0.408**	-0.51	0.11
	Other	-0.63	0.38	**0.641**	-9.03	7.76
UP	PP	1.44	0.10	**0.000**	1.18	1.71
	PSOE	0.52	0.09	**0.000**	0.28	0.77
	C's	0.33	0.10	**0.015**	0.04	0.61
	Other	1.12	0.38	**0.996**	-9.09	8.87
C's	PP	-1.54	0.12	**0.000**	0.79	1.45
	PSOE	0.20	0.11	**0.408**	-0.11	0.51
	UP	-0.33	0.10	**0.015**	-0.61	-0.04
	Other	-0.44	0.39	**0.798**	-8.27	7.40
Other	PP	1.56	0.38	**0.290**	-6.47	9.58
	PSOE	0.63	0.38	**0.641**	-7.76	9.03
	UP	0.11	0.38	**0.996**	-8.87	9.09
	C's	0.44	0.39	**0.798**	-7.40	8.27

As it is indicated, it is possible to establish differences statistically significant in the attitude towards political corruption between PP supporters and PSOE supporters **t(7.9)= -8.5, p<0.05**, UP supporters **t(7.9)= -14.8, p<0.05**, and C's supporters **t(7.9)= -9.4, p<0.05**; between PSOE supporters and UP supporters **t(7.9)= -5.9, p<0.05**; and finally, between UP supporters and C's supporters **t(7.9)=3.2, p<0.05**. However, it is not possible to establish differences statistically significant in the attitude towards political corruption between PSOE supporters and C's supporters **t(7.9)= -1.8, p>0.05**; and between those who are supporting "other party" (a party different from the main four parties) and those who are supporting one of the main four parties, i.e., PP supporters **t(7.9)=4.1, p>0.05**, PSOE supporters **t(7.9)=1.7, p>0.05**, UP supporters **t(7.9)=0.29, p>0.05**, and C's supporters **t(7.9)=1.1, p>0.05**.

The conclusion of the previous analysis is that when studying the impact of the preferred party on the attitude towards political corruption, there are differences statistically significant only in half of the possible comparison pairs. However, focusing on the main parties, the differences are statistically significant in five of the six possible comparison pairs, concretely, in all pair of parties' supporters except between PSOE and C's supporters.

4. **H_5A_4: Crosstabs analysis "Voters' age (18-45 vs. > 45)" – "Preferred Party (PP, PSOE, UP or C's)".** *Note- In order to simplify the analysis, it will be excluded the option "Other party", which was selected just by 2 participants.*

The hypotheses of the Crosstabs analysis H_5A_4 are presented in Table 4-47.

Table 4-47 Hypotheses –Crosstabs analysis H_5A_4-

Null (H_0) and Alternative (H_1) hypothesis
H_0: There is not association between *Voters' age (18-45 vs. > 45)* and *Preferred Party (PP, PSOE, UP or C's)*.
H_1: There is association between *Voters' age (18-45 vs. > 45)* and *Preferred Party (PP, PSOE, UP or C's)*.

In order to test the hypotheses, it will be performed the **Chi-Squared Test** (Table 4-48):

Table 4-48 Chi-Squared Test for H_5A_4

Pearson Chi-Square	df1	Statistical significance
76.1	3	0.000

Based on the results, the H_0 is rejected, i.e., there is a statistically significant association between Voters' age (18-45 vs. > 45) and Preferred Party (PP, PSOE, UP or C's), χ^2 **(3) = 76.1, p < 0.05**. Besides, in order to characterise the relationship, as the crosstab is larger than 2x2, it will be performed the **Contingency Coefficient Test** (Table 4-49).

Table 4-49 Contingency Coefficient Test for H_5A_4

Contingency Coefficient Statistic C	Range	Statistical significance
0.401	0 < C < 0.707	0.000

Considering the **C = 0.401, p<0.05**, the previous statistically significant relationship is characterised as moderate.

Report

In this section, it will be reported the most relevant conclusions of the statistical analysis carried out in the previous section.

Firstly, it will be reported the results obtained when it has been proved that there is a statistically significant difference in the attitude towards political corruption between those citizens who support traditional parties and those who support new parties. In Figure 4-8 it is presented the mean of the attitude towards political corruption of each of the groups.

Figure 4-8 Attitude towards political corruption vs. Traditional/New parties' supporters
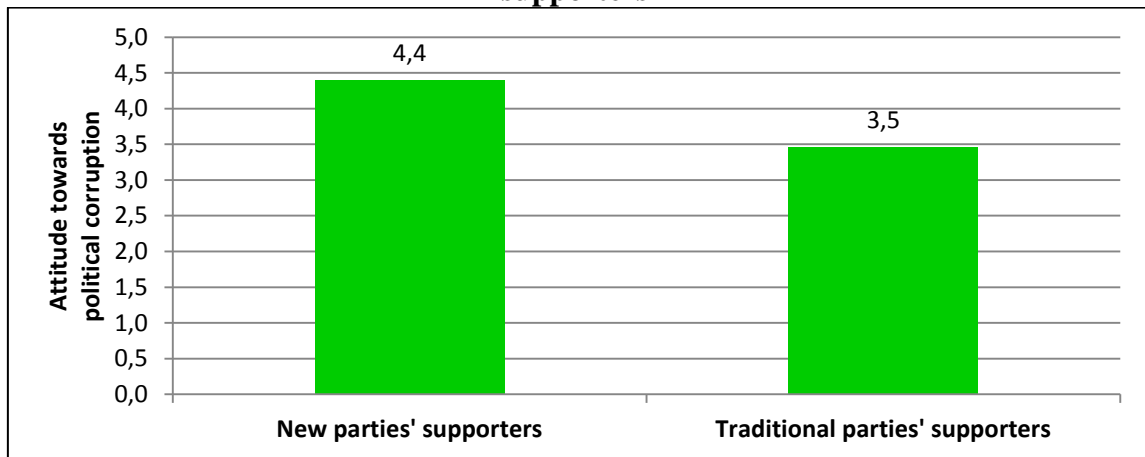
As it is depicted, new parties' supporters are less tolerant towards political corruption than traditional parties' supporters. Concretely, when participants are evaluating a set of political corruption cases on a scale from 1 to 5 where 1 means "it is not serious at all" and 5 means "it is very serious", the mean of the attitude towards political corruption is 3.46 for traditional parties' supporters and 4.40 for new parties' supporters.

Secondly, it will be reported the results obtained in when it has been demonstrated that it is possible to establish a relationship statistically significant between voters' age and preferred parties' group (Table 4-50).

Table 4-50 Voter's distribution by age and parties' group supported

	New parties' supporters	Traditional parties' supporters
18-45 years	66%	34%
> 45 years	23.9%	76.1%

As it is indicated, the 66% of younger voters prefer new parties while the 76.1% of older voters feel closer to traditional parties. This finding is according with the information provided by the CIS (Figure 1-3) where it was shown that voters between 18 and 44 years felt closer to new parties while those with more than 45 years clearly preferred traditional parties.

Thirdly, it will be reported the results obtained when it has been proved that the attitude towards political corruption varies significantly when considering directly the preferred party. In Figure 4-9 it is displayed the mean of the attitude towards political corruption for the supporters of each of the main parties.

Figure 4-9 Attitude towards political corruption vs. Preferred party
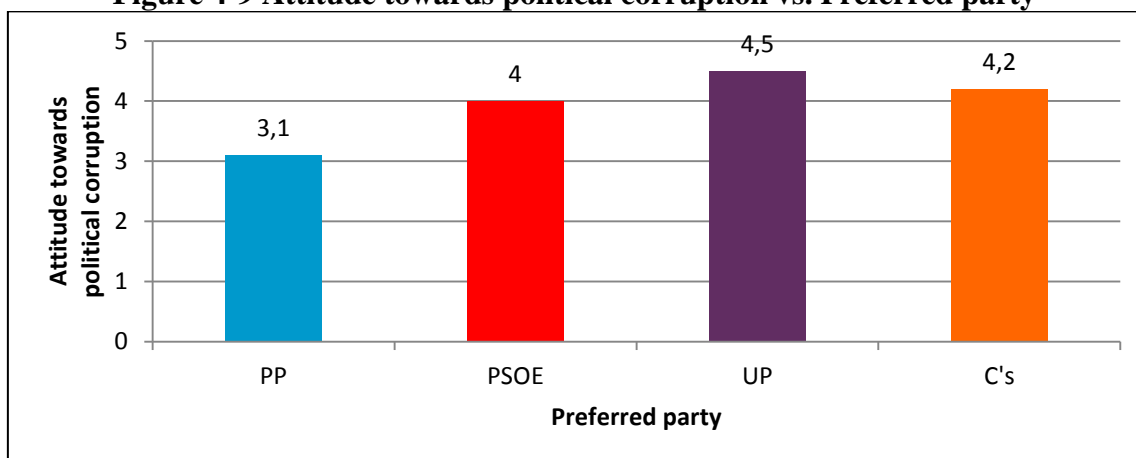
As it is seen, when participants are evaluating a set of political corruption cases on a scale from 1 to 5 where 1 means "it is not serious at all" and 5 means "it is very serious", the mean of the attitude towards political corruption is 3.1 for PP supporters, 4 for PSOE supporters, 4.5 for UP supporters and 4.2 for C's supporters.

Finally, it will be reported the results obtained in the crosstabs analysis performed in order to find out if it is possible to establish a relationship statistically significant between voters' age and preferred party. As it has been already demonstrated, there is an association statistically significant, on one hand, the most part of younger voters feel

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closer to UP (41%) and C's (25.7%); and on the other hand, the vast majority of older voters choose PP (45.2%) or PSOE (30.9%) (Table 4-51).

Table 4-51 Parties supporters' distribution by age

	PP supporters	PSOE supporters	UP supporters	C's supporters
18-45 years	17.1%	16.2%	41%	25.7%
> 45 years	45.2%	30.9%	18.1%	5.9%

Summarising the information above, it has been found that new parties' supporters are less tolerant towards political corruption and younger than those who are supporting traditional parties, therefore, the hypothesis H_5 has been verified, i.e., citizens' level of tolerance towards political corruption is lower in those citizens who are supporting new parties. This result is consistent with previous researches where it was established how the emergence of new parties represents an opportunity for citizens to punish traditional parties affected by political corruption (Cordero and Blais, 2017; Charron and Bågenholm, 2016).

The validation of this hypothesis would help to understand the new parties' emergence and success. In addition, the fact that new parties' supporters have been identified as younger than traditional parties' supporters, could be seen on one hand, as a clear advantage for new parties because traditional parties would need to attract younger voters if they want to stay in power; and on the other hand, as a hope for the democracy's quality.

4.3.6 Hypothesis 6: Experiments and outcomes

In Hypothesis H_6 it will be tested the belief that citizens' criticism towards political corruption varies depending on the political sympathy they have towards the party involved. The statement of H_6 is as follows:

H_6 statement- Citizens' level of tolerance towards political corruption is higher as higher is the political sympathy towards the party involved.

If verified, it would help to understand why political corruption is not as much penalized as it could be expected and, as a consequence, it would point out the need that

citizens show themselves against political corruption independently of the party affected in order to reach a higher quality democracy.

Experiment Description

To test this hypothesis H_6 it has been considered the following variables:

1. **Preferred party**. It has been worked directly with the data provided by the survey, where respondents indicated the party which they felt closer to their ideas. In this case, in order to simplify the analysis, it will be excluded the option "Other party", which was selected just by 2 participants.

2. **Corruption perceived in political parties (PP, PSOE, UP and C's).** In order to measure this variable, participants were asked to indicate the level of corruption they perceived in the Spanish main parties on a scale anchored at 1 (not corrupted at all) to 5 (completely corrupted). This variable has not needed any recoding, it has been worked directly with the data from the survey.

3. **Attitude towards political corruption (Receiving valuable presents) without specifying the party involved.** The information needed for this variable was provided by the fourth item of Table 4-5, where participants evaluated the corruption case "A politician accepts valuable presents" where it was not specified the party involved, on a scale anchored at 1 (not serious at all) to 5 (very serious). It has been worked directly with the data provided by the survey without any recoding.

4. **Attitude towards political corruption (Receiving valuable presents) specifying the party involved is their preferred party.** Participants faced the same corruption case related to a valuable present that it has been considered in the previous variable, but in this case, it was indicated that the party involved was their preferred party (Table 4-7). Then, they were asked to indicate how serious they perceived it on a scale anchored at 1 (not serious at all) to 5 (very serious). This variable has not needed any recoding; it has been worked with the data from the survey directly.

5. **Differential attitude towards political corruption (Receiving valuable presents) post-pre specifying the party involved.** Considering the variable *Attitude towards political corruption (Receiving valuable presents) post specifying the party involved is their preferred party*, and the variable *Attitude towards political corruption (Receiving valuable presents) pre specifying the party involved is their preferred party*, it was constructed a new variable: *Differential attitude towards political corruption (Receiving valuable presents) post-pre specifying the party involved.* It measures the difference between the corruption perceived in a specific corruption case related to a valuable present when it is specified that their preferred party is the one involved and the corruption perceived in the same specific corruption related to a valuable present when it is not specified which is the party involved. This variable has not needed any recoding, it has been worked directly with the data from the survey.

It was necessary to construct this variable because the goal was to ensure that it was being strictly measured the impact of being aware that it is their party the one which is involved. If it was considered just the *attitude towards political corruption post specifying the party involved*, it would not have been possible to analyse the impact of the preferred party, as the attitude towards a political corruption case is not only affected by the party involved, but also by the attitude towards this political corruption case independently of the corrupted party.

The aim of this hypothesis is to test if citizens' criticism towards political corruption varies significantly when it is their party the one which is being involved in corruption. For this purpose, it will be performed the following analysis:

1. **H_6A_1:** ANOVA analysis to find out if the mean of the *Corruption perceived in PP* varies significantly considering the *Preferred party*.

2. **H_6A_2:** ANOVA analysis to find out if the mean of the *Corruption perceived in PSOE* varies significantly considering the *Preferred party*.

3. **H₆A₃:** ANOVA analysis to find out if the mean of the *Corruption perceived in UP* varies significantly considering the *Preferred party*.

4. **H₆A₄:** ANOVA analysis to find out if the mean of the *Corruption perceived in C's* varies significantly considering the *Preferred party*.

5. **H₆A₅:** ANOVA analysis to find out if the mean of the *Attitude towards political corruption without specifying the party involved* in a specific corruption case related to receiving valuable presents varies significantly considering the *Preferred party*.

6. **H₆A₆:** ANOVA analysis to find out if the mean of the *Attitude towards political corruption specifying the party involved is their preferred party* in the same specific corruption case related to receiving valuable presents varies significantly considering the *Preferred party*.

7. **H₆A₇:** ANOVA analysis to find out if the *Differential attitude towards political corruption post-pre specifying the party involved* varies significantly considering the *Preferred party*.

Statistical analysis

In this section, it will be performed the statistical analysis carried out to test the hypothesis H_6:

1. **H₆A₁: ANOVA analysis "Corruption perceived in PP" – "Preferred party".**

The hypotheses of the ANOVA analysis H_6A_1 are presented in Table 4-52.

Table 4-52 Hypotheses -ANOVA analysis H₆A₁-

Null (H₀) and Alternative (H₁) hypothesis
H₀: Homogeneity of mean, i.e., the mean of the *Corruption perceived in PP* is equal for all groups: *supporters of PP, PSOE, UP and C's.*
H₁: Heterogeneity of mean, i.e., the mean of the *Corruption perceived in PP* is not equal for all groups: *supporters of PP, PSOE, UP and C's.*

In order to decide which statistic will be used to perform the ANOVA analysis, the first step will be to find out if the *assumption of homoscedasticity* is met. For this purpose, it will be performed the **Levene's Test**. The null and the alternative hypotheses are shown in Table 4-53:

Table 4-53 Hypotheses - Levene's Test for H_6A_1-

Null (H_0) and Alternative (H_1) hypothesis
H_0: Homogeneity of variance, i.e., the variance of the *Corruption perceived in PP* is equal for all groups: *supporters of PP, PSOE, UP and C's.*
H_1: Heterogeneity of variance, i.e., the variance of *Corruption perceived in PP* is not equal for all groups: *supporters of PP, PSOE, UP and C's.*

In Table 4-54 it is depicted the results of the Levene's test. As the **Levene's statistic=124, p<0.05**, the H_0 is rejected, i.e., it is not possible to assume that the variances are equal across all the groups.

Table 4-54 Levene's Test for H_6A_1

Levene's Statistic	df1	df2	Statistical significance
124	3	394	**0.000**

The assumption of homoscedasticity is not met; therefore, it will be used the Welch statistic to perform the ANOVA analysis (Table 4-55).

Table 4-55 ANOVA analysis H_6A_1

Welch's Statistic	df1	df2	Statistical significance
76.4	3	150	**0.000**

Based on the results, the H_0 is rejected, i.e., there is a statistically significant difference in the corruption perceived in PP between supporters of different parties **Welch's statistic=76.4, p<0.05**.

Once it has been proved the corruption perceived in PP varies with the preferred party, it will be deeply analysed in which pair of groups it is possible to establish a difference statistically significant. For this purpose, as the assumption of homoscedasticity is not met, it will be performed the **Games-Howell's Test** (Table 4-56).

Table 4-56 Games-Howell's Test for H_6A_1

Preferred Party		Mean Difference	Std. error	Sig.	95% Confidence Interval	
A	B	(A – B)			Lower	Upper
PP	PSOE	-1.35	0.10	**0.000**	-1.61	-1.08
	UP	-1.41	0.10	**0.000**	-1.66	-1.16
	C's	-1.22	0.11	**0.000**	-1.51	-0.94
PSOE	PP	1.35	0.10	**0.000**	1.08	1.61
	UP	-0.07	0.04	**0.384**	-0.18	0.04
	C's	0.12	0.07	**0.275**	-0.05	0.30
UP	PP	1.41	0.10	**0.000**	1.16	1.66
	PSOE	0.07	0.04	**0.384**	-0.04	0.18
	C's	0.20	0.06	**0.005**	0.05	0.34
C's	PP	1.22	0.11	**0.000**	0.94	1.51
	PSOE	-0.12	0.07	**0.275**	-0.30	0.05
	UP	-0.20	0.06	**0.005**	-0.34	-0.05

As it is indicated, it is possible to establish differences statistically significant in the corruption perceived in PP between PP supporters and PSOE supporters **t(150)= -13, p<0.05**, UP supporters **t(150)= -14.8, p<0.05**, and C's supporters **t(150)= -11.1 p<0.05**; and between UP supporters and C's supporters **t(150)=3.5, p<0.05**. However, it is not possible to establish differences statistically significant in the perception of corruption in PP between PSOE supporters and UP supporters **t(150)= -1.6, p>0.05**C's', and C's supporters **t(150)= 1.8, p>0.05**.

The conclusion of the previous analysis is that when studying the impact of the preferred party on the perception of corruption in PP, there are differences statistically significant in four of the six possible comparison pairs, concretely, in all pair of parties' supporters except between PSOE and UP supporters, and between PSOE and C's supporters.

2.   **H_6A_2: ANOVA analysis "Corruption perceived in PSOE" – "Preferred party".**

The hypotheses of the ANOVA analysis H_6A_2 are presented in Table 4-57.

Table 4-57 Hypotheses -ANOVA analysis H$_6$A$_2$-

Null (H$_0$) and Alternative (H$_1$) hypothesis
H$_0$: Homogeneity of mean, i.e., the mean of the *Corruption perceived in PSOE* is equal for all groups: *supporters of PP, PSOE, UP and C's*.
H$_1$: Heterogeneity of mean, i.e., the mean of the *Corruption perceived in PSOE* is not equal for all groups: *supporters of PP, PSOE, UP and C's*.

In order to decide which statistic will be used to perform the ANOVA analysis, the first step will be to find out if the *assumption of homoscedasticity* is met. For this purpose, it will be performed the **Levene's Test**. The null and the alternative hypotheses are shown in Table 4-58:

Table 4-58 Hypotheses - Levene's Test for H$_6$A$_2$-

Null (H$_0$) and Alternative (H$_1$) hypothesis
H$_0$: Homogeneity of variance, i.e., the variance of the *Corruption perceived in PSOE* is equal for all groups: *supporters of PP, PSOE, UP and C's*.
H$_1$: Heterogeneity of variance, i.e., the variance of *Corruption perceived in PSOE* is not equal for all groups: *supporters of PP, PSOE, UP and C's*.

In Table 4-59 it is depicted the results of the Levene's test. As the **Levene's statistic=6.1, p<0.05**, the H$_0$ is rejected, i.e., it is not possible to assume that the variances are equal across all the groups.

Table 4-59 Levene's Test for H$_6$A$_2$

Levene's Statistic	df1	df2	Statistical significance
6.1	3	394	**0.000**

The assumption of homoscedasticity is not met; therefore, it will be used the Welch statistic to perform the ANOVA analysis (Table 4-60).

Table 4-60 ANOVA analysis H$_6$A$_2$

Welch's Statistic	df1	df2	Statistical significance
80.5	3	209	**0.000**

Based on the results, the H$_0$ is rejected, i.e., there is a statistically significant difference in the corruption perceived in PSOE between supporters of different parties **Welch's statistic=80.5, p<0.05**.

Once it has been proved the corruption perceived in PSOE varies with the preferred party, it will be deeply analysed in which pair of groups it is possible to establish a difference statistically significant. For this purpose, as the assumption of homoscedasticity is not met, it will be performed the **Games-Howell's Test** (Table 4-61).

Table 4-61 Games-Howell's Test for H_6A_2

Preferred Party		Mean Difference (A – B)	Std. error	Sig.	95% Confidence Interval	
A	B				Lower	Upper
PP	PSOE	1.22	0.13	**0.000**	0.90	1.55
	UP	-0.13	0.11	**0.637**	-0.40	0.15
	C's	-0.61	0.10	**0.000**	-0.86	-0.37
PSOE	PP	-1.22	0.13	**0.000**	-1.55	-0.90
	UP	-1.35	0.13	**0.000**	-1.68	-1.02
	C's	-1.84	0.12	**0.000**	-2.15	-1.53
UP	PP	0.13	0.11	**0.637**	-0.15	0.40
	PSOE	1.35	0.13	**0.000**	1.02	1.68
	C's	-0.49	0.10	**0.000**	-0.74	-0.24
C's	PP	0.61	0.10	**0.000**	0.37	0.86
	PSOE	1.84	0.12	**0.000**	1.53	2.15
	UP	0.49	0.10	**0.000**	0.24	0.74

As it is indicated, it is possible to establish differences statistically significant in the corruption perceived in PSOE between PP supporters and PSOE supporters **t(209)= 9.7, p<0.05**, and C's supporters **t(209)= -6.4, p<0.05**; between PSOE supporters and UP supporters **t(209)= -10.7, p<0.05**, and C's supporters **t(209)= -15.6, p<0.05**; and finally, between UP supporters and C's supporters **t(209)= -5.1, p<0.05**. However, it is not possible to establish differences statistically significant in the corruption perceived in PSOE between PP supporters and UP supporters **t(209)= -1.2, p>0.05**.

The conclusion of the previous analysis is that when studying the impact of the preferred party on the perception of corruption in PSOE, there are differences statistically significant in five of the six possible comparison pairs, concretely, in all pair of parties' supporters except between PP and UP supporters.

3. **H$_6$A$_3$: ANOVA analysis "Corruption perceived in UP" – "Preferred party".**

The hypotheses of the ANOVA analysis H$_6$A$_3$ are presented in Table 4-62.

Table 4-62 Hypotheses -ANOVA analysis H$_6$A$_3$-

Null (H$_0$) and Alternative (H$_1$) hypothesis
H$_0$: Homogeneity of mean, i.e., the mean of the *Corruption perceived in UP* is equal for all groups: *supporters of PP, PSOE, UP and C's.*
H$_1$: Heterogeneity of mean, i.e., the mean of the *Corruption perceived in UP* is not equal for all groups: *supporters of PP, PSOE, UP and C's.*

In order to decide which statistic will be used to perform the ANOVA analysis, the first step will be to find out if the *assumption of homoscedasticity* is met. For this purpose, it will be performed the **Levene's Test**. The null and the alternative hypotheses are shown in Table 4-63:

Table 4-63 Hypotheses - Levene's Test for H$_6$A$_3$-

Null (H$_0$) and Alternative (H$_1$) hypothesis
H$_0$: Homogeneity of variance, i.e., the variance of the *Corruption perceived in UP* is equal for all groups: *supporters of PP, PSOE, UP and C's.*
H$_1$: Heterogeneity of variance, i.e., the variance of the *Corruption perceived in UP* is not equal for all groups: *supporters of PP, PSOE, UP and C's.*

In Table 4-64 it is depicted the results of the Levene's test. As the **Levene's statistic=19.1, p<0.05**, the H$_0$ is rejected, i.e., it is not possible to assume that the variances are equal across all the groups.

Table 4-64 Levene's Test for H$_6$A$_3$

Levene's Statistic	df1	df2	Statistical significance
19.1	3	394	**0.000**

The assumption of homoscedasticity is not met; therefore, it will be used the Welch statistic to perform the ANOVA analysis (Table 4-65).

Table 4-65 ANOVA analysis H$_6$A$_3$

Welch's Statistic	df1	df2	Statistical significance
376	3	173	**0.000**

Based on the results, the H_0 is rejected, i.e., there is a statistically significant difference in the corruption perceived in UP between supporters of different parties **Welch's statistic=376, p<0.05**.

Once it has been proved the corruption perceived in UP varies with the preferred party, it will be deeply analysed in which pair of groups it is possible to establish a difference statistically significant. For this purpose, as the assumption of homoscedasticity is not met, it will be performed the **Games-Howell's Test** (Table 4-66).

Table 4-66 Games-Howell's Test for H_6A_3

Preferred Party		Mean Difference (A – B)	Std. error	Sig.	95% Confidence Interval	
A	B				Lower	Upper
PP	PSOE	1,24	0,14	**0,000**	0,87	1,62
	UP	2,95	0,10	**0,000**	2,68	3,21
	C's	0,19	0,16	**0,649**	-0,23	0,61
PSOE	PP	-1,24	0,14	**0,000**	-1,62	-0,87
	UP	1,71	0,12	**0,000**	1,39	2,02
	C's	-1,06	0,17	**0,000**	-1,50	-0,61
UP	PP	-2,95	0,10	**0,000**	-3,21	-2,68
	PSOE	-1,71	0,12	**0,000**	-2,02	-1,39
	C's	-2,76	0,14	**0,000**	-3,13	-2,39
C's	PP	-0,19	0,16	**0,649**	-0,61	0,23
	PSOE	1,06	0,17	**0,000**	0,61	1,50
	UP	2,76	0,14	**0,000**	2,39	3,13

As it is indicated, it is possible to establish differences statistically significant in the corruption perceived in UP between PP supporters and PSOE supporters **t(173)= 8.6, p<0.05**, and UP supporters **t(173)= 28.8, p<0.05**; between PSOE supporters and UP supporters **t(173)= 14.2, p<0.05,** and C's supporters **t(173)= -6.1, p<0.05**; and finally, between UP supporters and C's supporters **t(173)= -19.7, p<0.05.** However, it is not possible to establish differences statistically significant in the corruption perceived in UP between PP supporters and C's supporters **t(173)= 1.2, p>0.05**.

The conclusion of the previous analysis is that when studying the impact of the preferred party on the perception of corruption in UP, there are differences statistically

significant in five of the six possible comparison pairs, concretely, in all pair of parties' supporters except between PP and C's supporters.

4. H_6A_4: ANOVA analysis "Corruption perceived in C's" – "Preferred party".

The hypotheses of the ANOVA analysis H_6A_4 are presented in Table 4-67.

Table 4-67 Hypotheses -ANOVA analysis H_6A_4-

Null (H_0) and Alternative (H_1) hypothesis
H_0: Homogeneity of mean, i.e., the mean of the *Corruption perceived in C's* is equal for all groups: *supporters of PP, PSOE, UP and C's.*
H_1: Heterogeneity of mean, i.e., the mean of the *Corruption perceived in C's* is not equal for all groups: *supporters of PP, PSOE, UP and C's.*

In order to decide which statistic will be used to perform the ANOVA analysis, the first step will be to find out if the *assumption of homoscedasticity* is met. For this purpose, it will be performed the **Levene's Test**. The null and the alternative hypotheses are shown in Table 4-68:

Table 4-68 Hypotheses - Levene's Test for H_6A_4-

Null (H_0) and Alternative (H_1) hypothesis
H_0: Homogeneity of variance, i.e., the variance of the *Corruption perceived in C's* is equal for all groups: *supporters of PP, PSOE, UP and C's.*
H_1: Heterogeneity of variance, i.e., the variance of *Corruption perceived in C's* is not equal for all groups: *supporters of PP, PSOE, UP and C's.*

In Table 4-69 it is depicted the results of the Levene's test. As the **Levene's statistic=2.4, p>0.05**, the H_0 is not rejected, i.e., it is possible to assume that the variances are equal across all the groups.

Table 4-69 Levene's Test for H_6A_4

Levene's Statistic	df1	df2	Statistical significance
2.4	3	394	**0.066**

The assumption of homoscedasticity is met; therefore, it will be used the F statistic to perform the ANOVA analysis (Table 4-70).

Table 4-70 ANOVA analysis H_6A_4

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	224	3	74.7	68.2	**0.000**
Within Groups	432	394	1.10		
Total	656	397			

Based on the results, the H_0 is rejected, i.e., there is a statistically significant difference in the perception of corruption in C's between supporters of different parties **F($3,394$)=68.2, p<0.05.**

Once it has been proved the corruption perceived in C's varies with the preferred party, it will be deeply analysed in which pair of groups it is possible to establish a difference statistically significant. For this purpose, as the assumption of homoscedasticity is met and the number of groups to be compared are just four, it will be performed the **Bonferroni's Test** (Table 4-71).

Table 4-71 Bonferroni Test for H_6A_4

Preferred Party		Mean Difference (A – B)	Std. error	Sig.	95% Confidence Interval	
A	B				Lower	Upper
PP	PSOE	-0,27	0,14	**0,368**	-0,66	0,11
	UP	-0,77	0,13	**0,000**	-1,12	-0,41
	C's	1,51	0,16	**0,000**	1,08	1,93
PSOE	PP	0,27	0,14	**0,368**	-0,11	0,66
	UP	-0,50	0,15	**0,004**	-0,88	-0,11
	C's	1,78	0,17	**0,000**	1,33	2,23
UP	PP	0,77	0,13	**0,000**	0,41	1,12
	PSOE	0,50	0,15	**0,004**	0,11	0,88
	C's	2,27	0,16	**0,000**	1,85	2,70
C's	PP	-1,51	0,16	**0,000**	-1,93	-1,08
	PSOE	-1,78	0,17	**0,000**	-2,23	-1,33
	UP	-2,27	0,16	**0,000**	-2,70	-1,85

As it is indicated, it is possible to establish differences statistically significant in the corruption perceived in C's between PP supporters and UP supporters **t(394)= -5.7, p<0.05**, and C's supporters **t(394)= 9.4, p<0.05**; between PSOE supporters and UP supporters **t(394)= -3.4, p<0.05**, and C's supporters **t(394)= 10.5, p<0.05**; and finally,

between UP supporters and C's supporters **t(394)= 14.1, p<0.05**. However, it is not possible to establish differences statistically significant in the corruption perceived in C's between PP supporters and PSOE supporters **t(394)= -1.9, p>0.05**.

The conclusion of the previous analysis is that when studying the impact of the preferred party on the perception of corruption in C's, there are differences statistically significant in five of the six possible comparison pairs, concretely, in all pair of parties' supporters except between PP and PSOE supporters.

5. **H_6A_5: ANOVA analysis "Attitude towards political corruption in a specific corruption case" – "Preferred party".**

The hypotheses of the ANOVA analysis H_6A_5 are presented in Table 4-72.

Table 4-72 Hypotheses -ANOVA analysis H_6A_5-

Null (H_0) and Alternative (H_1) hypothesis
H_0: Homogeneity of mean, i.e., the mean of the *Attitude towards political corruption in a specific corruption case* is equal for all groups: *supporters of PP, PSOE, UP and C's*.
H_1: Heterogeneity of mean, i.e., the mean of the *Attitude towards political corruption in a specific corruption case* is not equal for all groups: *supporters of PP, PSOE, UP and C's*.

In order to decide which statistic will be used to perform the ANOVA analysis, the first step will be to find out if the *assumption of homoscedasticity* is met. For this purpose, it will be performed the **Levene's Test**. The null and the alternative hypotheses are shown in Table 4-73:

Table 4-73 Hypotheses - Levene's Test for H_6A_5-

Null (H_0) and Alternative (H_1) hypothesis
H_0: Homogeneity of variance, i.e., the variance of the *Attitude towards political corruption in a specific corruption case* is equal for all groups: *supporters of PP, PSOE, UP and C's*.
H_1: Heterogeneity of variance, i.e., the variance of the *Attitude towards political corruption in a specific corruption case* is not equal for all groups: *supporters of PP, PSOE, UP and C's*.

In Table 4-74 it is depicted the results of the Levene's test. As the **Levene's statistic=4.9, p<0.05**, the H_0 is rejected, i.e., it is not possible to assume that the variances are equal across all the groups.

Table 4-74 Levene's Test for H_6A_5

Levene's Statistic	df1	df2	Statistical significance
4.9	3	394	**0.003**

The assumption of homoscedasticity is not met; therefore, it will be used the Welch statistic to perform the ANOVA analysis (Table 4-75).

Table 4-75 ANOVA analysis H_6A_5

Welch's Statistic	df1	df2	Statistical significance
74.6	3	187	**0.000**

Based on the results, the H_0 is rejected, i.e., there is a statistically significant difference in the attitude towards political corruption in a specific corruption case between supporters of different parties **Welch's statistic=74.6, p<0.05**.

Once it has been proved the attitude towards political corruption in a specific corruption case varies with the preferred party, it will be deeply analysed in which pair of groups it is possible to establish a difference statistically significant. For this purpose, as the assumption of homoscedasticity is not met, it will be performed the **Games-Howell's Test** (Table 4-76).

Table 4-76 Games-Howell's Test for H_6A_5

Preferred Party		Mean Difference (A − B)	Std. error	Sig.	95% Confidence Interval	
A	B				Lower	Upper
PP	PSOE	-1,25	0,13	0,000	-1,58	-0,91
	UP	-1,68	0,11	0,000	-1,96	-1,39
	C's	-1,27	0,15	0,000	-1,65	-0,88
PSOE	PP	1,25	0,13	0,000	0,91	1,58
	UP	-0,43	0,10	0,000	-0,69	-0,17
	C's	-0,02	0,14	0,999	-0,39	0,35
UP	PP	1,68	0,11	0,000	1,39	1,96
	PSOE	0,43	0,10	0,000	0,17	0,69
	C's	0,41	0,13	0,008	0,08	0,74
C's	PP	1,27	0,15	0,000	0,88	1,65
	PSOE	0,02	0,14	0,999	-0,35	0,39
	UP	-0,41	0,13	0,008	-0,74	-0,08

As it is indicated, it is possible to establish differences statistically significant in the attitude towards political corruption in a specific corruption case between PP supporters and PSOE supporters **t(187)= -9.7, p<0.05**, UP supporters **t(187)= -15, p<0.05**, and C's supporters **t(187)= -8.5, p<0.05**; between PSOE supporters and UP supporters **t(187)= -4.3, p<0.05**; and finally, between UP supporters and C's supporters **t(187)= 3.3, p<0.05.** However, it is not possible to establish differences statistically significant in the attitude towards political corruption in a specific corruption case between PSOE supporters and C's supporters **t(187)= -0.14, p>0.05**.

The conclusion of the previous analysis is that when studying the impact of the preferred party on the attitude towards political corruption in a specific corruption case, there are differences statistically significant in five of the six possible comparison pairs, concretely, in all pair of parties' supporters except between PSOE and C's supporters.

6. **H_6A_6: ANOVA analysis "Attitude towards political corruption in a specific corruption case in which the preferred party is involved" – "Preferred party".**

The hypotheses of the ANOVA analysis H_6A_6 are presented in Table 4-77.

Table 4-77 Hypotheses -ANOVA analysis H_6A_6-

Null (H_0) and Alternative (H_1) hypothesis
H_0: Homogeneity of mean, i.e., the mean of the *Attitude towards political corruption in a specific corruption case in which the preferred party is involved* is equal for all groups: *supporters of PP, PSOE, UP and C's.*
H_1: Heterogeneity of mean, i.e., the mean of the *Attitude towards political corruption in a specific corruption case in which the preferred party is involved* is not equal for all groups: *supporters of PP, PSOE, UP and C's.*

In order to decide which statistic will be used to perform the ANOVA analysis, the first step will be to find out if the *assumption of homoscedasticity* is met. For this purpose, it will be performed the **Levene's Test**. The null and the alternative hypotheses are shown in Table 4-78:

Table 4-78 Hypotheses - Levene's Test for H_6A_6-

Null (H_0) and Alternative (H_1) hypothesis
H_0: Homogeneity of variance, i.e., the variance of the *Attitude towards political corruption in a specific corruption case in which the preferred party is involved* is equal for all groups: *supporters of PP, PSOE, UP and C's*.
H_1: Heterogeneity of variance, i.e., the variance of the *Attitude towards political corruption in a specific corruption case in which the preferred party is involved* is not equal for all groups: *supporters of PP, PSOE, UP and C's*.

In Table 4-79 it is depicted the results of the Levene's test. As the **Levene's statistic=3.98, p<0.05**, the H_0 is rejected, i.e., it is not possible to assume that the variances are equal across all the groups.

Table 4-79 Levene's Test for H_6A_6

Levene's Statistic	df1	df2	Statistical significance
4	3	394	**0.008**

The assumption of homoscedasticity is not met; therefore, it will be used the Welch statistic to perform the ANOVA analysis (Table 4-80).

Table 4-80 ANOVA analysis H_6A_6

Welch's Statistic	df1	df2	Statistical significance
78.7	3	189	**0.000**

Based on the results, the H_0 is rejected, i.e., there is a statistically significant difference in the attitude towards political corruption in a specific corruption case in which the preferred party is involved between supporters of different parties **Welch's statistic=78.7, p<0.05**.

Once it has been proved the attitude towards political corruption in a specific corruption case in which the preferred party is involved varies with the preferred party, it will be deeply analysed in which pair of groups it is possible to establish a difference statistically significant. For this purpose, as the assumption of homoscedasticity is not met, it will be performed the **Games-Howell's Test** (Table 4-81).

Table 4-81 Games-Howell's Test for H$_6$A$_6$

Preferred Party		Mean Difference (A − B)	Std. error	Sig.	95% Confidence Interval	
A	B				Lower	Upper
PP	PSOE	-0,95	0,16	0,000	-1,35	-0,55
	UP	-2,01	0,13	0,000	-2,36	-1,67
	C's	-1,47	0,18	0,000	-1,94	-0,99
PSOE	PP	0,95	0,16	0,000	0,55	1,35
	UP	-1,06	0,14	0,000	-1,42	-0,70
	C's	-0,52	0,19	0,032	-1,00	-0,03
UP	PP	2,01	0,13	0,000	1,67	2,36
	PSOE	1,06	0,14	0,000	0,70	1,42
	C's	0,54	0,17	0,009	0,11	0,98
C's	PP	1,47	0,18	0,000	0,99	1,94
	PSOE	0,52	0,19	0,032	0,03	1,00
	UP	-0,54	0,17	0,009	-0,98	-0,11

As it is indicated, it is possible to establish differences statistically significant in the attitude towards political corruption in a specific corruption case in which the preferred party is involved between PP supporters and PSOE supporters **t(189)= -6.1, p<0.05**, UP supporters **t(189)= -15.1, p<0.05**, and C's supporters **t(189)= -8, p<0.05**; between PSOE supporters and UP supporters **t(189)= -7.7, p<0.05**, and C's supporters **t(189)= -2.8, p<0.05**; and finally, between UP supporters and C's supporters **t(189)= 3.3, p<0.05**.

The conclusion of the previous analysis is that when studying the impact of the preferred party on the attitude towards political corruption in a specific corruption case in which the preferred party is involved, there are differences statistically significant between all the pair of parties' supporters.

7. **H$_6$A$_7$: ANOVA analysis "Differential attitude towards political corruption post-pre specifying the party involved" – "Preferred party".**

The hypotheses of the ANOVA analysis H$_6$A$_7$ are presented in Table **4-82**.

Table 4-82 Hypotheses -ANOVA analysis H$_6$A$_7$-

Null (H$_0$) and Alternative (H$_1$) hypothesis
H$_0$: Homogeneity of mean, i.e., the mean of the *Differential attitude towards political corruption post-pre specifying the party involved* is equal for all groups: *supporters of PP, PSOE, UP and C's.*
H$_1$: Heterogeneity of mean, i.e., the mean of the *Differential attitude towards political corruption post-pre specifying the party involved* is not equal for all groups: *supporters of PP, PSOE, UP and C's.*

In order to decide which statistic will be used to perform the ANOVA analysis, the first step will be to find out if the *assumption of homoscedasticity* is met. For this purpose, it will be performed the **Levene's Test**. The null and the alternative hypotheses are shown in Table 4-83:

Table 4-83 Hypotheses - Levene's Test for H$_6$A$_7$-

Null (H$_0$) and Alternative (H$_1$) hypothesis
H$_0$: Homogeneity of variance, i.e., the variance of the *Differential attitude towards political corruption post-pre specifying the party involved* is equal for all groups: *supporters of PP, PSOE, UP and C's.*
H$_1$: Heterogeneity of variance, i.e., the variance of the *Differential attitude towards political corruption post-pre specifying the party involved* is not equal for all groups: *supporters of PP, PSOE, UP and C's.*

In Table 4-84 it is depicted the results of the Levene's test. As the **Levene's statistic=4.7, p<0.05**, the H$_0$ is rejected, i.e., it is not possible to assume that the variances are equal across all the groups.

Table 4-84 Levene's Test for H$_6$A$_7$

Levene's Statistic	df1	df2	Statistical significance
4.7	3	394	**0.003**

The assumption of homoscedasticity is not met; therefore, it will be used the Welch statistic to perform the ANOVA analysis (Table 4-85).

Table 4-85 ANOVA analysis H$_6$A$_7$

Welch's Statistic	df1	df2	Statistical significance
12.9	3	197	**0.000**

Based on the results, the H_0 is rejected, i.e., there is a statistically significant difference in the differential attitude towards political corruption post-pre specifying the party involved between supporters of different parties **Welch's statistic=12.9, p<0.05**.

Once it has been proved the differential attitude towards political corruption post-pre specifying the party involved varies with the preferred party, it will be deeply analysed in which pair of groups it is possible to establish a difference statistically significant. For this purpose, as the assumption of homoscedasticity is not met, it will be performed the **Games-Howell's Test** (Table 4-86).

Table 4-86 Games-Howell's Test for H_6A_7

Preferred Party		Mean Difference (A – B)	Std. error	Sig.	95% Confidence Interval	
A	B				Lower	Upper
PP	PSOE	0,29	0,11	**0,054**	0,00	0,59
	UP	-0,34	0,09	**0,002**	-0,58	-0,09
	C's	-0,20	0,11	**0,253**	-0,49	0,08
PSOE	PP	-0,29	0,11	**0,054**	-0,59	0,00
	UP	-0,63	0,11	**0,000**	-0,91	-0,35
	C's	-0,50	0,12	**0,000**	-0,81	-0,18
UP	PP	0,34	0,09	**0,002**	0,09	0,58
	PSOE	0,63	0,11	**0,000**	0,35	0,91
	C's	0,13	0,10	**0,540**	-0,13	0,40
C's	PP	0,20	0,11	**0,253**	-0,08	0,49
	PSOE	0,50	0,12	**0,000**	0,18	0,81
	UP	-0,13	0,10	**0,540**	-0,40	0,13

As it is indicated, it is possible to establish differences statistically significant in the differential attitude towards political corruption post-pre specifying the party involved between PP supporters and UP supporters **t(197)= -3.6, p<0.05**; and also between PSOE supporters and UP supporters **t(197)= -5.9, p<0.05**, and C's supporters **t(197)= -4.1, p<0.05**. However, it is not possible to establish differences statistically significant in the differential attitude towards political corruption post-pre specifying the party involved between PP supporters and PSOE supporters **t(197)= 2.6, p>0.05**, and C's supporters **t(197)= -8.5, p>0.05**; and neither between UP supporters and C's supporters **t(197)= 1.3, p>0.05**.

The conclusion of the previous analysis is that when studying the impact of the preferred party on the differential attitude towards political corruption post-pre specifying the party involved, there are differences statistically significant just in three of the six possible comparison pairs, concretely, between PP supporters and UP supporters, and between PSOE supporters and the supporters of UP and C's.

Report

In this section, it will be reported the most relevant conclusions of the statistical analysis carried out in the previous section.

Firstly, it will be reported the results obtained in the four ANOVA analysis of the corruption perceived in PP, PSOE, UP and C's in relation with the preferred party, which were performed in order to find out if the corruption perceived in each party varies significantly depending on the party that citizens feel closer to their ideas. As it has been already proved, for all the parties, there is a statistically significant difference in the perception of corruption between citizens with a different preferred party. In Table 4-87 it is presented the mean of corruption perceived in each party for the supporters of each of the main parties.

Table 4-87 Corruption perceived in each party considering the preferred party

	PP supporters	PSOE supporters	UP supporters	C's supporters	Mean
PP	**3.6**	4.9	5	4.8	**4.5**
PSOE	4	**2.8**	4.1	4.6	**3.9**
UP	4.3	3.0	**1.3**	4.1	**3.1**
C's	3	3.3	3.8	**1.5**	**3.1**

The main conclusion is that party's supporters perceive less corruption in their party than other parties' supporters. Classifying citizens by the party they feel closer and comparing their perception of corruption in each party, it is shown how in all the cases party supporters perceive their party as being less corrupted than those who feel closer to other parties, and these differences are significant. Concretely, on a scale from 1 to 5 where 1 means "not corrupted at all" and 5 means "completely corrupted", PP is perceived by their supporters as 3.6 while the mean is 4.5; PSOE supporters perceive their party as 2.8 and the mean is 3.9; UP is perceived by their supporters as 1.3 while

the mean is 3.1; and finally, C's supporters perceive their party as 1.5 and the mean is also 3.1.

It is remarkable how even if citizens perceive PP as the most corrupted party in Spain, this party won the last General Elections of June 2016 and has remained in the government until June 2018, when a sentence where it was condemned for corruption led to a wide agreement among several parties of the opposition which allowed PSOE to win a no-confidence motion. Besides, it is interesting how the supporters of all parties perceive their preferred party as the least corrupted except PP supporters who consider C's less corrupted than their own party. Finally, it is also underlined the fact that new parties which have broken into the political scene emphasizing the fight against corruption are perceived as less corrupted than traditional parties.

Then, in Table 4-88 it will be reported the results obtained in the following three analyses: ANOVA analysis of the attitude towards political corruption without specifying the party involved considering the supporters of each party; ANOVA analysis of the attitude towards political corruption specifying the party involved considering the supporters of each party; ANOVA analysis of the Differential attitude towards political corruption post-pre specifying the party involved considering the supporters of each party.

Table 4-88 Attitude towards corruption perceived in a specific case of corruption

	PP supporters	PSOE supporters	UP supporters	C's supporters	Mean
Pre-Specifying	2.95	4.2	4.63	4.22	3.95
Post-Specifying	2.36	3.32	4.38	3.83	3.43
Difference	**-0.59**	**-0.88**	**-0.25**	**-0.38**	**-0.52**

Firstly, it is depicted how when the party involved in a specific case of corruption is not specified, PP supporters are the most tolerant while UP supporters are the least. Concretely, when participants are evaluating the corruption case "A politician accepts valuable presents" on a scale from 1 to 5 where 1 means "not serious at all" and 5 means "very serious", the mean of the attitude towards political corruption is 2.95 for PP supporters and 4.63 for UP supporters. Besides, according with the analysis performed in the previous section, where it has been proved that the differences are statistically significant between all pair of parties' supporters except between PSOE and

C's supporters, it is seen how the mean of the attitude towards corruption without specifying the party involved for these groups of supporters are practically the same, 4.20 and 4.22 respectively.

Secondly, when citizens are asked about the same specific case of corruption with the only difference that it appears their party as the one which is being involved, the conclusion is the same: PP supporters are the most tolerant while UP supporters are the least tolerant. In this case, it has been proved that the differences are statistically significant between all pair of parties' supporters, and accordingly, it is seen how the means are quite different, concretely: 2.36 for PP supporters, 3.32 for PSOE supporters, 4.38 for UP supporters, and 3.83 for C's supporters.

Finally, focusing on the differences between when it is not specified the party and when it is, it is found that even if the supporters of all the parties tend to downplay the importance of the corruption case when it is specified that their party is the one which is being involved, new parties' supporters are those who less minimize the corruption when it affects to their own party. Concretely, the differences are -0.59 for PP supporters, -0.88 for PSOE supporters; -0.25 for UP supporters; and -0.38 for C's supporters.

Summarizing all the information above, it has been found on one hand, how citizens' general perception about the level of corruption in the main parties varies depending on how close they feel to the party, being in all the cases party's supporters those who perceive less corruption in their party than other parties' supporters; and on the other hand, how citizens' level of tolerance towards an specific case of corruption also varies depending on which party is being involved, downplaying it when it is their party the one which is being affected. As a consequence, the hypothesis H_6 has been verified, i.e., citizens' level of tolerance towards political corruption is higher as higher is the political sympathy towards the party involved. This conclusion is consistent with previous researches where it was proved that citizens' level of tolerance towards political corruption depends on which is the party involved in the corruption case, being more tolerant when the corruption case affects to the party they are supporting (Cordero and Blais, 2017; Ecker et al., 2016; Anduiza et al., 2013).

The verification of this hypothesis would contribute to explain why political corruption is not as much penalized as it could be expected. It interferes with the well-functioning of the political, economic and social system and, therefore, it clearly plays against the goal of reaching a higher quality democracy. In order to change it, it would be necessary citizens to show themselves against political corruption independently of the party which is being involved.

4.4 Analysis of results

The main objective of this thesis is to shed light on the puzzle of why political corruption does not seem to have the electoral consequences it could be expected and, even more important, to find out key factors to develop better strategies in order to encourage citizens to be less tolerant towards political corruption and, therefore, to achieve a higher quality democracy.

For this purpose, this chapter has been focused on the hypothesis related to what it has been defined as "Real World". The goal has been the analysis of the role played in the attitude towards political corruption by the economic context, social pressure, political awareness, political leaning, the new parties' emergence and political sympathy. For this purpose, on one hand, it has been used data provided by two independent entities: CIS and INE; and on the other hand, it has been designed a specific survey in which participants faced questions related to each of the previous variables. In this section, it will be summarised the main conclusions obtained when analysing the impact of each of the variables on the attitude towards political corruption.

Firstly, when analysing the effect of the economic context on citizens´ attitude towards political corruption, it has been found that citizens' level of tolerance towards political corruption is lower when the country's economy is in crisis (H_1). It has been established on one hand, a positive and strong relationship between the negative assessments of political and economic situation, which shows how citizens' attitude towards political issues are clearly affected by the economic context; and on the other hand, a negative correlation between the GDP growth rate and the growth rate of the concern over corruption, which proves how citizens' criticism towards political corruption is greater when the country is going through an economic crisis. Besides, accordingly with the previous finding, when asking citizens directly about their

criticism's level towards political corruption since the economic crisis started, most of them respond it is higher, reinforcing the previous conclusion about the impact that an economic crisis has on citizens' attitude towards political corruption. These findings are consistent with previous researches where it was established that citizens are less tolerant towards political corruption when the country's economy is in crisis (Cordero and Blais, 2017; Charron and Bågenholm, 2016; Anduiza et al., 2013; Klasnja and Tucker, 2013; Winters and Weitz-Shapiro, 2013; Zechmeister and Zizumbo-Colunga, 2013; Jerit and Barabas, 2012; Weitz-Shapiro and Winters, 2010; Manzetti and Wilson, 2007; Golden, 2007; Diaz-Cayeros et al., 2000; Duch et al., 2000; Mauro, 1995).

As a consequence, an economic crisis could be seen as an opportunity to increase citizens' criticism towards political corruption. However, once the crisis is overcome, it would be necessary to keep it over the level before the crisis started in order to reach a higher quality democracy.

Secondly, when examining the effect of social pressure on citizens´ attitude towards political corruption, it has been found how among the variables which influence the citizens' attitude towards political corruption, social pressure has a higher impact than factual information (H_2). It has been proved on one hand, how those citizens who face a case of political corruption in which other citizens´ reactions against it are emphasized, become less tolerant than those who face a scenario in which they are being informed through factual information exclusively; and on the other hand, how the piece of news which have a higher impact on the attitude towards political corruption are those in which it is underlined the social and economic losses it provokes rather than other in which the information about corruption is provided without being related with any social or economic consequence. As a result, it has been concluded that exerting social pressure based on other citizens´ reactions towards political corruption or emphasizing citizens' losses in welfare and economics, is a better strategy to impact on citizens' attitude towards political corruption than just providing factual information. These findings are consistent with previous researches where it was demonstrated the effectiveness of social pressure in mobilising citizens against the established political system and its corruption (Giraldo-Luque, 2018; Marinov and Schimmelfennig, 2015; Anduiza et al., 2014; Peña-López et al., 2014; Toret, 2013; Anduiza et al., 2012; Piñeiro-Otero and Costa-Sánchez, 2012; Vallina-Rodriguez et al., 2012; Eltantawy and

Wiest, 2011; González-Bailón et al., 2011; Shirky, 2011); in political self-expression, political information seeking and political participation (Bond et al., 2012; Gerber and Rogers, 2009; and Gerber et al., 2008).

As a consequence of the effectiveness of social pressure on the attitude towards political corruption, it could be expected that if a political party, a media or any citizen group managed to mobilize a part of society against political corruption, the effect of social pressure would attract new supporters, which would contribute to achieve a higher quality democracy.

Thirdly, when studying the effect of political awareness on citizens´ attitude towards political corruption, it has been found that citizens' level of tolerance is lower as higher is their political awareness (H_3). Based on citizens' responses on questions about politics, citizens have been classified into three different groups according to their level of political awareness, and it has been demonstrated that as higher it is, citizens are less tolerant. These findings are consistent with previous researches where it was shown that citizens with a different level of knowledge about politics show different levels of tolerance towards political corruption (Cordero and Blais, 2017; Anduiza et al., 2013; Weitz-Shapiro and Winters, 2010; Arceneaux, 2007; Kam, 2005). It was established how an increase in the level of corruption perceived by citizens plays against the electoral results of corrupt politicians (Cordero and Blais, 2017; Fernández-Vázquez et al., 2016; Anduiza et al., 2013; Costas-Pérez et al., 2010; Figueiredo et al., 2010; Weitz-Shapiro and Winters, 2010; Chang and Kerr, 2009; Ferraz and Finan, 2008; Tavits, 2007; Gerring and Thacker, 2005; Adserá et al., 2003; Treisman, 2000; Fackler and Lin, 1995; Rundquist et al., 1977).

The previous conclusion would prove that the attitude towards political corruption can be modified by bringing citizens into politics and, therefore, that involving citizens in political issues would also contribute to achieve a higher quality democracy. As a consequence, this conclusion would also emphasize the crucial role played by the media.

Fourthly, when analysing the effect of political leaning on citizens´ attitude towards political corruption, it has been found that citizens' level of tolerance towards political corruption is lower as more politically progressive they are (H_4). When asking citizens

about their political leaning, it has been shown how those who proclaim to be more progressive are less tolerant towards political corruption than those who identify themselves as being more conservative. This conclusion is consistent with previous researches where it was found the key role played by political leaning, being left parties' supporters those who punish corruption more than right parties' supporters (Charron and Bågenholm, 2016; Anduiza et al., 2013; Costas-Pérez et al., 2010).

Political parties should consider the result obtained when they are designing their communication policy to face a corruption case. Besides, attending this result, left parties would need to make greater efforts to fight against corruption, not only implementing strictly measurements to avoid it, but also expelling of their parties those politicians who are involved in a case of political corruption. However, downplay corruption would be less harmful for those parties with a right political leaning. This finding, at least in a short term, could be seen as a disadvantage for parties with a left political leaning, as they would be stronger penalized in contrast with right parties, which have an electorate less sensitive towards political corruption. Finally, this finding would contribute to explain the success of some right parties in certain electoral campaigns in despite of being clearly involved in corruption.

Fifthly, when examining the effect of new parties' emergence on citizens´ attitude towards political corruption, it has been found how citizens' level of tolerance towards political corruption is lower in those citizens who are supporting new parties (H_5). Citizens who declare to feel closer to the emerging parties UP and C's are less tolerant than those who indicate to feel closer to the traditional parties PP and PSOE. This finding is consistent on one hand, with previous researches where it was established how the emergence of new parties represents an opportunity for citizens to punish traditional parties affected by political corruption (Cordero and Blais, 2017; Charron and Bågenholm, 2016); and on the other hand, with those in which it was identified the fight against corruption as a key factor to explain the new parties success (Bågenholm and Charron, 2014; Hanley and Sikk, 2014; Bågenholm, 2013; Sikk, 2012; Bélanger, 2004). Besides, there is also consistency with other researchers who demonstrated that corruption benefits new parties pushing voters away not only from the party which is in the government, but also from all the traditional parties (Engler, 2015; Pop-Eleches, 2010; Mainwaring et al., 2009). In addition, when evaluating deeply the results, they are

internally consistent with those obtained when analysing the political leaning impact. On one side, among traditional parties' supporters, those who are supporting the left party PSOE are less tolerant than those who are supporting the right party PP; and on the other side, among the new parties' supporters, it is found the same pattern, i.e., those who are supporting the left party UP are less tolerant than those who are supporting the right party C's.

Moreover, when investigating if it was possible to characterise these groups taking into account their age, it has been concluded, according with the data provided by the CIS, that those who prefer new parties can be characterised as younger than the traditional parties' supporters.

The fact that new parties' supporters are less tolerant towards political corruption would be the key factor to explain the new parties' emergence and success, as they have broken into the political scene emphasizing they are anti-corruption parties. Besides, the fact that their supporters have been identified as being younger than traditional parties' supporters would suppose in a medium and long term a clear advantage, as traditional parties would need to attract younger voters if they want to stay in power. In addition, the fact that younger voters are less tolerant would show a positive evolution of the citizens' attitude towards political corruption which could be interpreted as a hope for the democracy's quality.

Sixthly, when studying the effect of political sympathy on citizens´ attitude towards political corruption it has been found that citizens' level of tolerance towards political corruption is higher as higher is the sympathy towards the party involved (H_6). On one hand, it has been seen how citizens' perception of corruption in their preferred party is lower than the corruption perceived by other parties' supporters; and on the other hand, how when citizens are facing a specific case of political corruption, they definitely downplay corruption if it is their party the one which is being affected. These findings are consistent with previous researches where it was shown that citizens' level of tolerance towards political corruption depends on which was the party involved in the corruption case, being more tolerant when it affects their preferred party (Cordero and Blais, 2017; Ecker et al., 2016; Anduiza et al., 2013). Besides, it is also consistent with other researchers who demonstrated that voters' sympathy towards a party reduces the impact of corruption on the electoral results of a corrupt politician (Cordero and Blais,

2017; Charron and Bågenholm, 2016; Welch and Hibbing, 1997; Peters and Welch, 1980). Moreover, evaluating deeply the results, they are internally consistent with those obtained when analysing both, the political leaning's impact and the emergence of new parties' impact, as UP supporters, the new party identified as being progressive, are those who not only have the least tolerance towards political corruption, but also who least downplay corruption when it affects to their own party.

The previous findings would clearly contribute to explain why political corruption is not as much penalized as it could be expected. Parties' supporters not only have lower perception of corruption in their party, but also when it is presented a specific case of corruption in their preferred party tend to minimize it. As a consequence, citizens' attitude towards political corruption in their preferred party would play against to the well-functioning of the political, economic and social system. In order to achieve a higher quality democracy, it would be necessary citizens to be aware of the importance to fight against political corruption independently of the party affected, even being more demanding when it is their preferred party the one which is being involved.

4.5 Conclusions

The main goal of this chapter has been to test the hypotheses related to the real world in order to analyse the impact of the economic context, social pressure, political awareness, political leaning, the new parties' emergence and political sympathy, on citizens' attitude towards political corruption. In the following lines, it will be briefly summarised the main conclusions of the experiments conducted to test each of the hypotheses.

Firstly, when analysing the impact of the economic context on citizens´ attitude towards political corruption, it has been found that citizen's criticism towards political corruption is higher when the country is in a context of economic crisis (H_1).

Secondly, when examining the impact of social pressure on citizens´ attitude towards political corruption, it has been showed how among the variables which influence citizens' attitude towards political corruption, social pressure has a higher impact than factual information, i.e., how it is possible to reach a greater impact

emphasizing other citizens' reactions against political corruption and focusing on citizens' losses rather than just providing factual information (H_2).

Thirdly, when studying the impact of political awareness on citizens´ attitude towards political corruption, it has been proved that higher levels of political awareness increase citizens' criticism towards political corruption (H_3).

Fourthly, when analysing the impact of political leaning on citizens´ attitude towards political corruption, it has been established that progressive citizens and conservative citizens show different level of criticism towards political corruption, being less tolerant those who identify themselves as being politically more progressive (H_4).

Fifthly, when examining the impact of the new parties' emergence on citizens´ attitude towards political corruption, it has been found out how there are differences between supporters of new and traditional parties, being those who feel closer to new parties less tolerant towards political corruption (H_5). Besides, new parties' supporters have been characterised as being younger than traditional parties' supporters.

Finally, when studying the impact of political sympathy on citizens´ attitude towards political corruption, it has been concluded that citizens' criticism towards political corruption varies depending on the sympathy they feel towards the party which is being affected, being more tolerant when it is their preferred party the one involved (H_6).

Chapter 5. **Political debate in the Online World: Experiments and analysis**

5.1 Introduction

The second part of the thesis is focused on the analysis of the conversations about politics in the online world. Online social networks have become hugely important in recent years, with information on every conceivable topic flowing continuously between people around the world. Their impact on citizens' attitude and behaviour has been proved in a multitude of domains. Focusing on the topic of this thesis, it has been considered especially interesting to analyse what is being said about politics and the interaction and influence of actors in this debate.

In the previous chapter, it has been seen that political leaning, the emergence of new parties and political sympathy play a key role to find out substantial differences in the attitude towards political corruption among citizens. The goal of this chapter is to analyse if the relationships established can be proved in the online world. For this purpose, it has been selected the social network Twitter. There are a variety of reasons for this choice. Firstly, this social network is completely open, which allows to collect all messages ("tweets") related to a determinant hashtag. Secondly, Twitter is increasingly considered by scholars as a political platform, where politicians, media professionals and citizens engage in a personal type of political communication (Murthy, 2015; Ekman and Widholm, 2014; Aragón et al., 2013). Finally, Twitter has been successfully investigated through social network analysis in a wide variety of political researches in which it has been proved its usefulness as a platform to spread propaganda and generate political debate during the electoral campaigns (Jennings et al., 2017; Aragón et al., 2013), as a mobilizing platform for social movements (Vallina-Rodriguez et al., 2012), and as a predictor of electoral outcomes (Tumasjan et al., 2010).

In particular, Siegel (2018), Aragón et al. (2013) and Bruns and Burgess (2011) proved that the use of Twittter increases during political debates; Jennings et al. (2017) found how Twitter showed, in real time, not only the salience of political issues, but also the successes or failures of public sphere arguments; Vallina-Rodriguez et al. (2012) demonstrated the crucial role played by Twitter on the birth and development of the Spanish Movimiento 15M (15M Movement), allowing citizens to channel their

outrage (Anduiza et al., 2014), spreading the call for protests (Piñeiro-Otero and Costa-Sánchez, 2012; González-Bailón et al., 2011), facilitating the sharing of information and a better coordination and giving their members a sense of collective identity (Peña-López et al., 2014); and Congosto et al. (2011) and Tumasjan et al. (2010) proved its capacity to predict electoral outcomes in the Catalan Elections of 2010 and the German General Elections of 2009 respectively.

In this chapter, it will be presented the design and outcomes of the experiments which test the hypotheses H_7 H_8 and H_9 relating to the "Virtual World" described in Chapter 3. For the reader's convenience, these are reproduced in Table 5-1.

Table 5-1 Hypotheses related to the virtual world

Hypotheses	
Virtual World	H_7- In the online debate about politics held on Twitter, users' level of tolerance towards political corruption is lower in progressive users.
	H_8- In the online debate about politics held on Twitter, users' level of tolerance towards political corruption is lower in those users who are supporting new parties.
	H_9- In the online debate about politics held on Twitter, users' level of tolerance towards political corruption is higher as higher is the political sympathy towards the party involved.

Firstly, it will be investigated if in the debate about politics held on Twitter, progressive and conservative users show different attitude towards political corruption. Secondly, it will be studied if there is any difference in the level of tolerance towards political corruption showed on Twitter between those citizens who are supporting new and traditional parties. Finally, it will be analysed if users' criticism towards political corruption on Twitter varies depending on the political sympathy they feel towards the party which is being involved.

The structure of the rest of the chapter is as follows: in section 5.2 it will be explained the construction and usage of the dataset and the procedures for each of the experiments conducted. In section 5.3 it will be tested the hypotheses, presenting the methodology followed and describing the main results and analysis. In section 5.4, it will be reported the analysis of the results obtained. Finally, in section 5.5 it will be summarised the main conclusions.

5.2 Datasets

For the purpose of testing the hypotheses related to the "Virtual World", it was analysed the political debate during the pre-campaign of the last Spanish General Elections of June 2016.

In the following lines, it will be briefly contextualised the Spanish political situation of the last years, which has contributed to the growth of the use of Twitter as a platform for political debates, focusing on the period in which the Twitter dataset was collected.

Since 2008, Spain is going through an economic, social and political crisis in which the traditional parties PSOE and PP have been involved in corruption. In 2011, the political debate moved onto blogs and online social networks as Facebook and Twitter (Vallina-Rodriguez et al., 2012) managed to channel the collective indignation (Anduiza et al., 2014). It was born the collective "¡Democracia Real, Ya!" (Real Democracy, Now!), which led to the "Movimiento 15M" (15M Movement) and massive protests against the established situation on May 2011, the so-called Spanish revolution.

There is a wide agreement among scholars in pointing out the key role played by the online social networks, especially by Twitter. Piñeiro-Otero and Costa-Sánchez (2012) and González-Bailón et al. (2011) underlined that social networks were crucial to generate and spread the call for protests. Peña-López et al. (2014) emphasised how the interaction between the physical and the virtual world was essential for this movement to succeed, feeding both each other with information, coordination and a sense of collective identity. Aragón et al. (2013) concluded that political use of Twitter in Spain increased considerably since the Spanish protests in May 2011.

In November 2011, PP won the General Elections reaching the outright majority. Since the beginning of its mandate, this party has been involved in a multitude of corruption scandals as the so-called "Gürtel case", "Barcenas' papers", "Púnica operation" and "Brugal case". Spanish society has been aware and worried about political corruption and many Spaniards have been actively participating in demonstrations (Cordero and Blais, 2017; Robles-Egea and Delgado-Fernandez, 2014). In this context, Podemos and C's broke into the national political scene claiming to be the solution to regenerate a democracy strongly affected by political corruption. Their

irruption ended with the traditional bipartisanship in the General Elections of December 2015 and also in the repeated General Elections of June 2016.

PP has remained in the government until June 2018, when a sentence that condemned this party for corruption led to a wide agreement among several parties of the opposition which allowed PSOE to win a no-confidence motion. Its mandates have been plagued with scandals of corruption which are still in trial and have been constantly on the focus of the media, also during the pre-campaign of June 2016 when the Twitter dataset was collected. At that time, the vast majority of Spanish society was aware and worried about corruption. Concretely, following the CIS[36], in June 2016, the 44.6% of the population mentioned corruption as one of the main Spanish problems, becoming the second greatest concern for Spaniards after unemployment.

In this period, citizens have been increasingly worried and interested in political issues and, as a consequence, they have been continuously and deeply analysed in newspapers, radio and TV. Concretely, Spanish TV has lived a political revolution. It has appeared a multitude of programs in which politicians and journalists debate about political issues usually focused on scandals of corruption. Besides, these programs propose their audience hashtags which bring to their viewers the opportunity to express their own opinion in Twitter. It has definitely contributed to involve citizens on the online political debate. In fact, during all these years in general and also when the dataset was collected in particular, political hashtags, especially those related to political corruption, have become trending topics daily, i.e., corruption scandals have been the topics that have generated a greater debate on Twitter.

Focusing on the period in which the dataset was collected, it was chose the pre-campaign because once the campaign started the voting intention polls became daily and Twitter was widely used to diffuse their results, becoming these tweets the most popular messages in the network. Concretely, in order to build datasets of sufficient size, it was collected through the Twitter API tweets from the 2nd to the 13th of June 2016 containing the following hashtags related to each of the main parties: #PP, #PSOE, #Podemos and #Ciudadanos. It was selected the acronyms for traditional parties while the full name for new parties because it is the way in which they are commonly referred.

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[36] CIS June 2016

This process yielded a dataset of 38449 tweets, which allows to discern different types of conversations and users, and to identify messages/users which are clearly regarded as being more important than others.

In the following subsections, it will be considered in detail the two principal aspects of the datasets that are relevant in testing the hypotheses, i.e., the structure and content and the tweet authorship.

5.2.1 Dataset Analysis: Structure and Content

The information and opinions expressed about politics have two principal paths of action on Twitter: provoke some reaction or be ignored. When the information or opinion provoke some reaction, users react whether replying or mentioning another users using the "replies to" and "mentions" conventions; or directly republishing him using the "retweet" convention. In these cases it will be inferred that those users have a certain degree of influence (Berger and Strathearn, 2013); otherwise, when they are ignored, it will be concluded those information or opinion does not spread online influence.

The distribution of tweets of the dataset is depicted in Table 5-2. Original tweets refer to those tweets which are published by users who are not mentioning, replying or retweeting other users, while mentions, replies and retweets correspond with the three possible user's reactions explained above when the information and opinions about politics provoke some reaction on Twitter.

Table 5-2 Distribution of tweets

Original Tweets	Mentions	Replies to	Retweets	Total
6332	2834	841	28163	**38170**

The relevant messages for the purpose of this thesis are those which show user's reactions, i.e., mentions, replies and retweets. In Figure 5-1 it is presented the distribution of the three types of users' reactions.

Figure 5-1 Distribution of users' reactions on Twitter
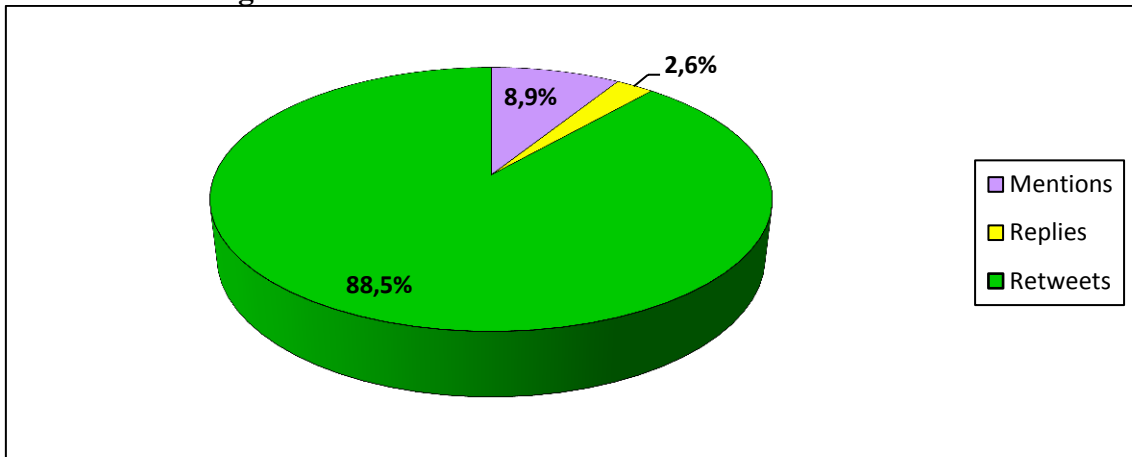
As it is indicated, retweets are clearly the most common option used by users to react on Twitter to the opinions and information about politics (88.5%). The vast majority of users choose to directly republish other users' messages, which represents the quickest way to spread information. As a consequence, this part of the thesis will be focused on the analysis of the tweets with the highest rate of diffusion, i.e., on the most popular retweets which contain the information that is being disseminated most through the network. It is noted that "messages with the highest rate of diffusion" concretely refers to tweets which were retweeted 20 or more times.

For this purpose, after removing the duplicate tweets, firstly, it was identified the retweets of the dataset by the "RT" convention at the beginning of the tweet. Secondly, the conversational connections were extracted and converted into a network using the NodeXL Social Network Analysis Software[37]. The analysis performed by NodeXL led to clusters in which nodes represent users and edges the connections between them. The connections "**A → B**" means that user A is retweeting an original tweet created by B. Thirdly, as this part of the thesis is focused on the analysis of the tweets with the highest rate of diffusion, it was extracted those tweets which were retweeted 20 or more times. This process yielded a dataset of 9645 retweets.

Finally, following Jennings et al. (2017), these tweets were examined manually in order to determine which were related to political corruption. In order to provide the reader with a better understanding of this classification, it will be illustrated with a couple of examples:

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[37] http://nodexl.codeplex.com/

- On 09/06/2016 at 1:50pm, a user retweeted the following tweet: "#EnCampañaARV al #PSOE Andalucia le crecen los imputados. La mano derecha de Manuel Chaves" (#InCampaignARV the number of accused of the Andalusian #PSOE is increasing. Manuel Chaves' right arm), which was classified as related to political corruption.

- On 07/06/2016 at 4:33pm, a user retweeted the following tweet: "Proponemos bajar el IVA cultural, tienen que saber que el #PP voto en contra…" (We propose to lower the cultural VAT, you have to know that the #PP voted against ...) which was conversely classified as not related to political corruption.

5.2.2 Dataset Analysis: Tweet Authorship

As the hypotheses to be tested are concerned with users' political preferences, in order to identify them, it was necessary to perform a detailed analysis of the Twitter account of each user: their tweets, their websites, and the information provided in their profiles. Following Jennings et al. (2017), these analyses were performed manually.

The first classification (**C1**) was done considering the user's political leaning. It was distinguished between those users with a left political leaning and those with a right political leaning.

Then, by analysing deeply the tweets related to political issues published by users, it was assigned the party which seemed to be closer to their ideas (**C2**). In this classification, it was considered the following options which represent the main parties: PP, PSOE, UP and C's.

These processes yielded a dataset of 2192 retweets related to political corruption and classified by the political leaning and the preferred party of their authors.

In the following Table 5-3 and 5-4 it is shown four examples of users' classification. As mentioned, this classification was constructed analysing the information provided in the users' accounts, specially, taking into account their profiles and key tweets about politics.

Table 5-3 Examples of Retweet Authors Classification

PP SUPPORTER	
Profile's user	Madridista de corazón y no de ocasión, amante del Real Madrid, de la música y sobre todo de mi país. En defensa de la unidad y valores de España (Real supporter of Real Madrid, not occasionally. Lover of Real Madrid, music and especially my country. In defence of the unity and values of Spain)
Dataset's Retweet	Corrupción #PSOE Canarias enchufa 1,2millones a familiares, #Cs #podemos, pediréis la dimisión de #SanchezT5 algún día? (Corruption #PSOE Canarias gives 1.2 million to relatives, #Cs #Podemos, will you ask for the resignation of # SanchezT5 someday?)
Key Tweet	@Albiol_XG Como muchos miércoles en el mercadillo de #Badalona esta vez con @marianorajoy saludando a los vecinos y a los comerciantes #LaSoluciónEsPP (@Albiol_XG Like many Wednesdays at the #Badalona market this time with @marianorajoy greeting neighbours and merchants #TheSolutionIsPP)
C1	Right
C2	PP
PSOE SUPPORTER	
Profile's user	Mujer, maestra, feminista, jubilada activa, solidaria, comprometida con la igualdad, vocal consejo andaluz, participación de las mujeres (Woman, teacher, feminist, retired active, supportive, committed to equality, Andalusian council vocal, participation of women)
Dataset's Retweet	A juicio varios miembros del #PP de Lugo por llevar a ancianos en sillas de ruedas a votar (Several members of Lugo's #PP go to trial because they have taken elderly people in wheelchairs to vote)
Key Tweet	Si antes no quiso Pablo ahora hará que se agache y volverá a reírse. Orgullosa de ser del PSOE (If Pablo did not want before, now he will make him bend over and he will laugh again. Proud to be a PSOE supporter)
C1	Left
C2	PSOE

Table 5-4 Examples of Retweet Authors Classification (Continuation)

	UP SUPPORTER
Profile's user	La esperanza tiene dos hijas: la ira, para indignarse por la realidad, y el valor para enfrentar esa realidad e intentar cambiarla (Hope has two daughters: anger, to be outraged by reality, and the courage to face that reality and try to change it)
Dataset's Retweet	En un país decente sería un escándalo, menos en la España del #PP de Gürtel, Púnica, Rato... (In a decent country it would be a scandal, but not in the Spain of the #PP of Gürtel, Púnica, Rato...)
Key Tweet	Quien paga manda, y nosotros queremos que mandes tú. Por eso no pedimos un euro a los bancos y te pedimos el préstamo a ti. Apoya la campaña de @CatEnComu_Podem aquí ☞ http://microcreditos.podemos.info #AhoraEntrasTú (Who pays decides, and we want you to decide. That's why we do not ask the banks for a euro and we ask you for the loan. Support the campaign of @CatEnComu_Podem here ☞ http://microcreditos.podemos.info # NowYouEnter)
C1	Left
C2	UP
	C's SUPPORTER
Profile's user	40 años. Afiliado y defensor de proyecto C'S desde 2012. Grupo Ciudadanos, Diputación Provincial de León. #TiempodeAcuerdo #TiempodeCambio (40 years. Affiliate and supporter of C's' project since 2012. Ciudadanos Group, Provincial Council of León. #TimeofAgreement #TimeofChange)
Dataset's Retweet	La Asamblea venezolana investigará la financiación del Chavismo a #Podemos (The Assembly of Venezuela will investigate the financing of Chavismo to #Podemos)
Key Tweet	Este sábado 16 de diciembre, te esperamos en nuestra mesa informativa en la Plaza de Roger de Flor, 12 (San Isidro), acompañando a nuestr@s vecin@s. #CsxMadrid (This Saturday, December 16, we are waiting for you at our information table in the Plaza de Roger de Flor, 12 (San Isidro), accompanying our neighbours. #CsxMadrid)
C1	Right
C2	C's

5.2.3 **Procedures**

Experiment 7: The effect of political leaning on users´ attitude towards political corruption in the online debate.

In this experiment it is studied the online debate about politics held on Twitter to detect whether there is a significant difference in the attitude towards political corruption between users with a left and right political leaning. It has been hypothesised that politically progressive users will be less tolerant towards corruption.

This chapter is focused on the messages most retweeted against political corruption. Therefore, once extracted the retweets with the highest rate of diffusion related to political corruption following the process already explained, the goal was to determine the authors' political leaning. For this purpose, it was exhaustively examined their accounts and classified following the **C1** criteria explained in the previous section into users with a left or right political leaning.

Experiment 8: The effect of new parties' emergence on users' attitude towards political corruption in the online debate.

The goal of this experiment is to investigate the online debate about politics held on Twitter to analyse whether there is a significant difference in the attitude towards political corruption between users who support new and traditional parties. It has been hypothesised that new party supporters will be less tolerant towards corruption.

For this purpose, it was used the dataset of the previous experiment, i.e., the retweets with the highest rate of diffusion related to political corruption. To find out authors' preferred party, it was deeply analysed their accounts focusing on their tweets about politics. Then, following the **C2** criteria explained above, they were classified as being closer to one of the following main parties: PP, PSOE, UP and C's. Finally, in order to be able to test H_8 they were regrouped into two groups: new parties' supporters, when they were supporting UP or C's; and traditional parties' supporters, when they were supporting PP or PSOE.

Experiment 9: The effect of political sympathy on users' attitude towards political corruption in the online debate.

The goal of this experiment is to examine the online debate about politics held on Twitter to discover whether there is a significant difference in users' attitude towards political corruption when it affects to the party they feel closer to their ideas compared with when it is other party the one involved. Concretely, it is believed that it is not possible to establish any difference between party supporters when the online debate about political corruption involves their own party, i.e., it is expected that parties' supporters will focus their reports on corruption mainly on any other party but not their preferred party. As a consequence, it has been hypothesised that citizens will be more tolerant towards corruption when it affects to their own party.

For this purpose, it was also used the dataset containing those retweets related to political corruption with the highest rate of diffusion. In this case, it was directly applied **C2** criteria stated in the previous section. The focus of this experiment was on those retweets where party's supporters were reporting political corruption on their preferred party.

5.3 Methodology and Experiments

In this section, it will be performed the experiments needed in order to empirically test the hypotheses related to the "Virtual World" with the statistical program SPSS and it will be presented the results indicating if they have been or not verified.

5.3.1 Hypothesis 7: Experiments and outcomes

In Hypothesis H_7 it will be tested the belief that in the online conversations about politics, progressive users have a lower level of tolerance. The statement of H_7 is as follows:

H_7- In the online debate about politics held on Twitter, users' level of tolerance towards political corruption is lower in progressive users.

If this hypothesis was validated, it would show that the results obtained in the study of the "Real world" are consistent when analysing the online debate about political corruption held on Twitter. As a consequence, parties with a left political leaning would

need to fight against corruption stronger than parties with a right political leaning which are less penalised by corruption.

Experiment Description

To test this hypothesis H_7 it has been considered the following variables:

1. **Users' political leaning**. Users retweeting those messages about political corruption with the highest rate of diffusion were classified into two categories according the **C1** criteria stated before: Left parties' supporters vs. Right parties' supporters.

2. **Parties' political leaning**. Messages about political corruption with the highest rate of diffusion were classified by the party which was being involved in the corruption reported on Twitter: PP, PSOE, UP and C's. Then, they were regrouped into two groups as follows: "Left parties", when the party reported was PSOE or UP; and "Right parties", when the party reported was PP or C's.

The goal of this hypothesis H_7 is to test if different political leanings have a different impact on users' attitude towards political corruption in the online debate held on Twitter. For this purpose, it will be performed the following analysis:

1. **H_7A_1:** A descriptive analysis of the *Users' political leaning* of those users who are spreading the most retweeted messages about political corruption.

2. **H_7A_2:** A descriptive analysis of the *Parties' political leaning* of those parties involved in the corruption most reported on Twitter.

3. **H_7A_3:** A crosstabs analysis to find out if it is possible to establish a relationship statistically significant between *Users' political leaning* of those users who are spreading the most retweeted messages about political corruption and *Parties' political leaning* of those parties involved in the corruption most reported on Twitter.

Statistical analysis

In this section, it will be performed the statistical analysis carried out to test the hypothesis H_7:

1. H_7A_1: Descriptive analysis "Users' political leaning".

In Table 5-5 it is presented the frequency of the political leaning of those users who are spreading the most retweeted messages about political corruption.

Table 5-5 User's Political Leaning for H_7A_1

Political Leaning	Frequency
Left	**1790**
Right	**402**

As it is depicted, the vast majority of the users who are spreading the most retweeted messages about political corruption are classified as having a left political leaning.

2. H_7A_2: Descriptive analysis "Parties' political leaning".

In Table 5-6 it is presented the frequency of the political leaning of those parties involved in the corruption most reported on Twitter.

Table 5-6 Parties' Political Leaning for H_7A_2

Political Leaning	Frequency
Left	**717**
Right	**1475**

As it is seen, the corruption most reported on Twitter involves mainly traditional parties with a right political leaning.

3. H_7A_3: Crosstabs analysis "Users' political leaning (Left vs. Right)" and "Parties' political leaning (Left vs. Right)".

The hypotheses of the Crosstabs analysis H_7A_3 are presented in Table 5-7.

Table 5-7 Hypotheses –Crosstabs analysis H₇A₃-

Null (H₀) and Alternative (H₁) hypothesis
H₀: There is not association between *Users' political leaning (Left vs. Right)* of those users who are spreading the most retweeted messages about political corruption and *Parties' political leaning (Left vs. Right)* of those parties involved in the corruption most reported on Twitter.
H₁: There is association between *Users' political leaning (Left vs. Right)* of those users who are spreading the most retweeted messages about political corruption and *Parties' political leaning (Left vs. Right)* of those parties involved in the corruption most reported on Twitter.

In order to test the hypotheses, it will be performed the **Chi-Squared Test** (Table 5-8):

Table 5-8 Chi-Squared Test for H₇A₃

Pearson Chi-Square	df1	Statistical significance
1013	1	**0.000**

Based on the results, the H_0 is rejected, i.e., when analysing the online conversations about political corruption held on Twitter there is a statistically significant association between Users' political leaning (Left vs. Right) of those users who are spreading the most retweeted messages about political corruption and Parties' political leaning of those parties involved in the corruption most reported on Twitter (Left vs. Right), χ^2 **(1) = 1013, p < 0.05**. Besides, in order to characterise the relationship, as the crosstab is 2x2, it will be performed the **Cramer's V Test** (Table 5-9).

Table 5-9 Cramer's V Test for H₇A₃

| Cramer's V Statistic	Range	Statistical significance
0.680	**0 < Cramer's V < 1**	**0.000**

Considering the **Cramer's V Statistic = 0.680, p<0.05**, the previous statistically significant relationship is characterised as moderate-strong.

Report

In this section, it will be reported the most relevant conclusions of the statistical analysis carried out in the previous section.

Firstly, in Figure 5-2 it is indicated how the vast majority of the users who are diffusing the most retweeted messages against political corruption on Twitter have a left political leaning (81.7%).

Figure 5-2 Political leaning of users who are spreading the most retweeted messages against political corruption on Twitter
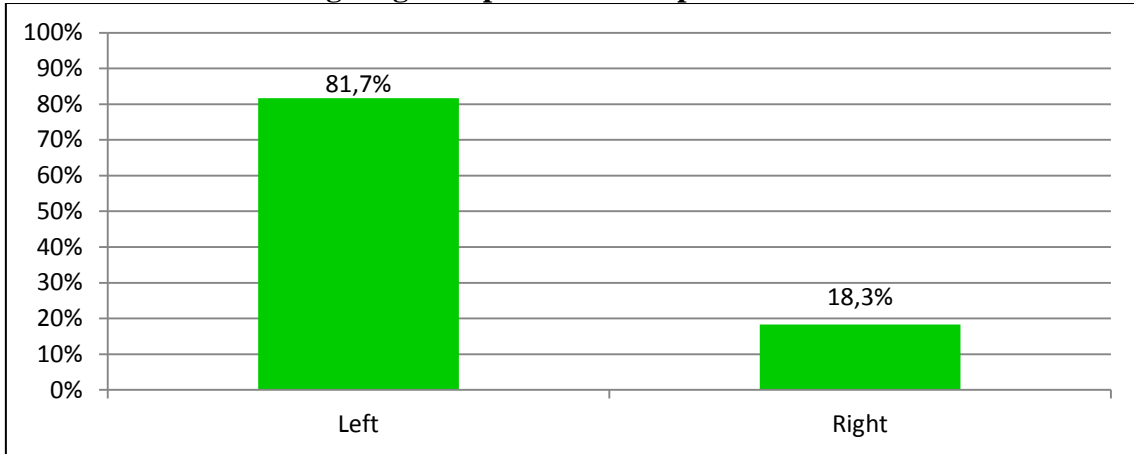
When analysing the political leaning of those parties which are being involved in the corruption most reported on Twitter, it is found how right parties are more reported than left parties, 67.3% and 37.2% respectively (Figure 5-3).

Figure 5-3 Political leaning of parties most reported on corruption in Twitter
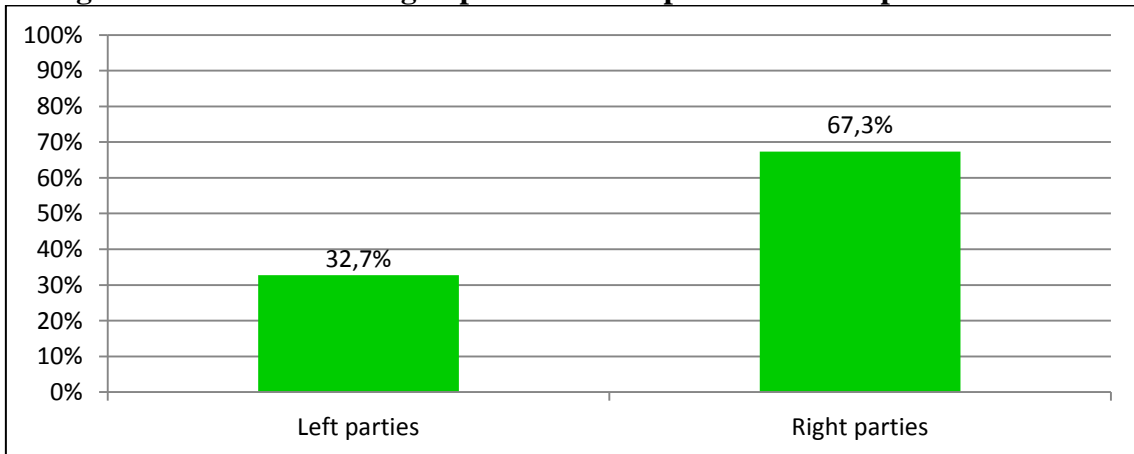
Finally, it will be reported the results obtained when it has been proved that there is a relationship statistically significant between the political leaning of those users who are spreading the political corruption most diffused on Twitter and the political leaning of the parties which are being reported (Table 5-10).

Table 5-10 Users' reports distribution by political leaning of the party reported

	Left parties	Right parties
Reports of left parties' supporters	17.6%	**82.4%**
Reports of right parties' supporters	**100%**	0%

Considering the messages about political corruption with the highest rate of diffusion on Twitter, it is depicted how left parties' supporters are reporting mostly corruption in right parties (82.4%) while right parties' supporters are exclusively reporting corruption in left parties (100%).

Summarising the information above, it has been found on one hand, how progressive users are those who most actively display against political corruption on the online debate held on Twitter; and on the other hand, how right parties are those which are being most reported. Besides, when analysing the relationship between users' political leaning who are reporting political corruption and parties' political leaning which are being reported, it has been proved a statistically significant difference, as expected, left parties' supporters report mainly right parties while right parties' supporters report left parties.

As a consequence of the previous results, the hypothesis H_7 has been verified, i.e., in the online debate about politics held on Twitter, users' level of tolerance towards political corruption is lower in progressive users.

This result is internally consistent with the analysis of the "Real World", i.e., the electorate of left parties is more sensitive towards political corruption and progressive users are those who most actively show themselves against corruption on Twitter. Besides, it is also externally consistent with previous researches where it was found on one hand, that left voters tend to punish corruption cases more than right voters (Charron and Bågenholm, 2016; Anduiza et al., 2013; Costas-Pérez et al., 2010); and on the other hand, how specifically in the political debate held on Twitter, Spanish users who actively participate in the online political conversations held on Twitter against the established system and its corruption have mainly a left political leaning (Peña-López et al., 2014; Anduiza et al., 2012).

The verification of this hypothesis could be seen as a left parties' disadvantage, as they would need to make greater efforts to fight against corruption because their electorate is more sensitive than right parties' supporters; but also as a left parties' advantage, as they are clearly dominating the online debate about politics and, as it has been proved, social media is a powerful tool to spread social pressure.

5.3.2 Hypothesis 8: Experiments and outcomes

In Hypothesis H_8 it will be tested the belief that in the online conversations about politics, new parties' supporters have a lower level of tolerance towards political corruption. The statement of H_8 is as follows:

H_8 statement- In the online debate about politics held on Twitter, users' level of tolerance towards political corruption is lower in those users who are supporting new parties.

If this hypothesis was verified, it would also show that the results obtained in the study of the "Real World" are consistent when analysing the online debate about political corruption held on Twitter. As a consequence, the effectiveness of the new parties' strategy focused on the fight against corruption would be confirmed.

Experiment Description

To test this hypothesis H_8 it has been considered the following variables:

1. **Users' preferred parties' group (New vs. Traditional)**. Users retweeting those messages about political corruption with the highest rate of diffusion were classified into four categories according the **C2** criteria stated previously: PP, PSOE, UP and C's. Then, they were regrouped into two groups as follows: "New parties' supporters", when users were assigned as being closer to UP or C's; and "Traditional parties' supporters", when they were assigned as being closer to PP or PSOE.

2. **Parties' group (New vs. Traditional)**. Messages about political corruption with the highest rate of diffusion were classified by the party which was being involved in the corruption reported on Twitter: PP, PSOE, UP and C's. Then, they were regrouped into two groups as follows: "New party",

when the party reported was UP or C's; and "Traditional party", when the party reported was PP or PSOE.

The aim of this hypothesis H_8 is to test if there is any difference between supporters of new and traditional parties regarding their tolerance towards political corruption in the online debate held on Twitter. For this purpose, it will be performed the following analysis:

1.   **H_8A_1:** A descriptive analysis of the *Users' preferred parties' group (New vs. Traditional)* of those users who are spreading the most retweeted messages about political corruption.

2.   **H_8A_2:** A descriptive analysis of the *Parties' group (New vs. Traditional)* of those parties involved in the corruption most reported on Twitter.

3.   **H_8A_3:** A crosstabs analysis to find out if it is possible to establish a relationship statistically significant between *Users' preferred parties' group (New vs. Traditional)* of those users who are spreading the most retweeted messages about political corruption and *Parties' group (New vs. Traditional)* of those parties involved in the corruption most reported on Twitter.

Statistical analysis

In this section, it will be performed the statistical analysis carried out to test the hypothesis H_8:

1.   **H_8A_1: Descriptive analysis "Users' preferred parties' group (New vs. Traditional)".**

In Table 5-11 it is presented the frequency of the users' preferred parties' group (New vs. Traditional) of those users who are spreading the most retweeted messages about political corruption.

Table 5-11 User's preferred parties' group for H_8A_1

Parties' group	Frequency
New	1783
Traditional	409

As it is indicated, the vast majority of the users who are spreading the most retweeted messages about political corruption are classified as closer to a new party.

2. H_8A_2: Descriptive analysis "Parties' group (New vs. Traditional)".

In Table 5-12 it is presented the frequency of the Parties' group (New vs. Traditional) of those parties involved in the corruption most reported on Twitter.

Table 5-12 Parties' group for H_8A_2

Parties' group	Frequency
New	**599**
Traditional	**1593**

As it is seen, the corruption most reported on Twitter involves mainly traditional parties.

3. H_8A_3: Crosstabs analysis "Users' preferred parties' group (New vs. Traditional)" and "Parties' group (New vs. Traditional)".

The hypotheses of the Crosstabs analysis H_8A_3 are presented in Table 5-13.

Table 5-13 Hypotheses –Crosstabs analysis H_8A_3-

Null (H_0) and Alternative (H_1) hypothesis
H_0: There is not association between *Users' preferred parties' group (New vs. Traditional)* of those users who are spreading the most retweeted messages about political corruption and *Parties' group (New vs. Traditional)* of those parties involved in the corruption most reported on Twitter.
H_1: There is association between *Users' preferred parties' group (New vs. Traditional)* of those users who are spreading the most retweeted messages about political corruption and *Parties' group (New vs. Traditional)* of those parties involved in the corruption most reported on Twitter.

In order to test the hypotheses, it will be performed the **Chi-Squared Test** (Table 5-14):

Table 5-14 Chi-Squared Test for H_8A_3

Pearson Chi-Square	df1	Statistical significance
177.3	1	**0.000**

Based on the results, the H_0 is rejected, i.e., when analysing the online conversations about political corruption held on Twitter there is a statistically

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significant association between Users' preferred parties' group (New vs. Traditional) of those users who are spreading the most retweeted messages about political corruption and Parties' group (New vs. Traditional) of those parties involved in the corruption most reported on Twitter, $\chi^2 (1) = 177.3, p < 0.05.$ Besides, in order to characterise the relationship, as the crosstab is 2x2, it will be performed the **Cramer's V Test** (Table 5-15).

Table 5-15 Cramer's V Test for H_8A_3

Cramer's V Statistic	Range	Statistical significance
0.284	0 < Cramer's V < 1	0.000

Considering the **Cramer's V Statistic = 0.284, p<0.05**, the previous statistically significant relationship is characterised as moderate.

Report

In this section it will be reported the most relevant conclusions of the statistical analysis carried out in the previous section.

Firstly, in Figure 5-4 it is depicted how the vast majority of users who are diffusing the most retweeted messages against political corruption on Twitter are new parties' supporters (81.3%).

Figure 5-4 Preferred parties' group of users who are spreading the most retweeted messages against political corruption on Twitter
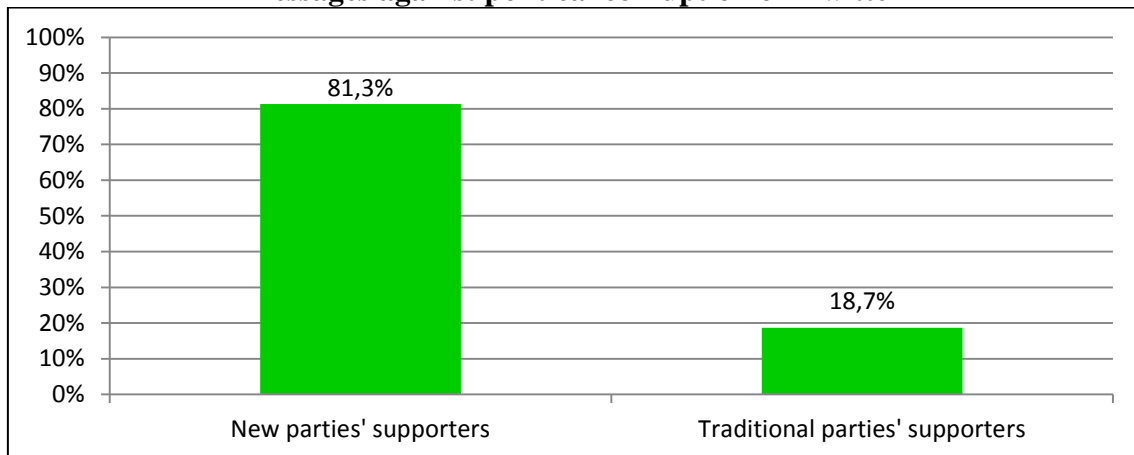
When analysing the parties' group of those parties which are being involved in the corruption most reported on Twitter it is found how traditional parties are more reported than new parties, 72.7% and 27.3% respectively (Figure 5-5).
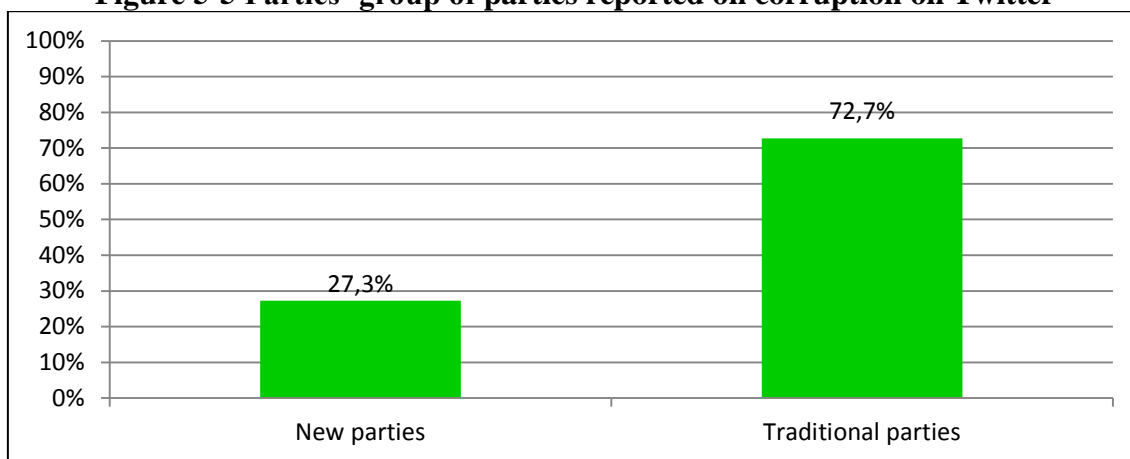
Figure 5-5 Parties' group of parties reported on corruption on Twitter

Finally, it will be reported the results obtained when it has been proved that there is a relationship statistically significant between the preferred parties' group of those users who are spreading the political corruption most diffused on Twitter and the parties' group of the parties which are being reported (Table 5-16).

Table 5-16 Users' reports distribution by parties' group

	New parties	Traditional parties
Reports of new parties' supporters	21.3%	**78.7%**
Reports of traditional parties' supporters	**53.8%**	46.2%

Considering the messages about political corruption with the highest rate of diffusion on Twitter, it is indicated how new parties' supporters are reporting mostly corruption in traditional parties (78.7%) while traditional parties' supporters are slightly reporting more corruption in new parties than in traditional parties, 53.8% and 46.2% respectively.

Summarising the information above, it has been found on one hand, how new parties' supporters are those who most actively display against political corruption on the online debate held on Twitter; and on the other hand, how traditional parties are those which are being most reported. Besides, when analysing the relationship between

the preferred parties' group of the users who are reporting political corruption and the parties' group of the parties which are being reported, it has been proved a statistically significant difference, new parties' supporters are reporting corruption mainly on traditional parties while traditional parties' supporters on both group of parties, although emphasizing a little bit more the corruption on new parties.

As a result of the previous findings, the hypothesis H_8 has been verified, i.e., in the online debate about politics held on Twitter, users' level of tolerance towards political corruption is lower in those users who are supporting new parties. This conclusion is internally consistent with the analysis of the "Real World", i.e., the electorate of new parties is more sensitive towards political corruption and new parties' supporters are those who most actively show themselves against corruption on Twitter. Besides it is also externally consistent with previous researches where it was established on one hand, how the emergence of new parties represents an opportunity for citizens to punish traditional parties affected by political corruption (Cordero and Blais, 2017; Charron and Bågenholm, 2016); and on the other hand, how specifically in the political debate held on Twitter, before the emergence of the new party Podemos, the vast majority of Spanish users in the online political conversations held on Twitter against the economic, social and political crisis did not feel represented for the traditional parties strongly affected by corruption and, were demanding alternative political actors to represent their interests (Vallina-Rodriguez et al., 2012).

The validation of this hypothesis could be seen as a new parties' advantage, as they are clearly dominating the online debate about politics and, as it has been proved, social media is a powerful tool to spread social pressure.

5.3.3 Hypothesis 9: Experiments and outcomes

In hypothesis H_9 it will be tested the belief that in the online conversations about politics, users' criticism towards political corruption varies depending on the political sympathy they have towards the party involved. The statement of H_9 is as follows:

H_9 statement- In the online debate about politics held on Twitter, users' level of tolerance towards political corruption is higher as higher is the political sympathy towards the party involved.

If validated, it would show once again that the results obtained in the study of the "Real world" are also in this case consistent when analysing the online debate about political corruption held on Twitter, i.e., that the attitude towards political corruption varies depending on the users' proximity to the party which is being affected, which would contribute to understand why corruption is not punished as much as it could be expected.

Experiment Description

To test this hypothesis H_9 it has been considered the following variables:

1. **Users' preferred party**. Users retweeting those messages about political corruption with the highest rate of diffusion were classified into four categories according the **C2** criteria stated previously: PP, PSOE, UP and C's. This variable has not needed any recoding.

2. **Party reported on corruption**. Messages about political corruption with the highest rate of diffusion were classified by the party which was being involved in the corruption reported on Twitter: PP, PSOE, UP and C's. This variable has not needed any recoding.

The objective of this hypothesis H_9 is to test if users' attitude towards political corruption varies when corruption affects to their own party in the online debate held on Twitter. For this purpose, it will be performed the following analysis:

1. **H_9A_1:** A descriptive analysis of the *Users' preferred party* of those users who are spreading the most retweeted messages about political corruption.

2. **H_9A_2:** A descriptive analysis of the *Parties reported on corruption* in the corruption most reported on Twitter.

3. **H_9A_3:** A crosstabs analysis to find out if it is possible to establish a relationship statistically significant between *Users' preferred party* of those users who are spreading the most retweeted messages about political corruption and *Parties reported on corruption* in the corruption most reported on Twitter.

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Statistical analysis

In this section, it will be performed the statistical analysis carried out to test the hypothesis H_9:

1.   **H_9A_1: Descriptive analysis "Users' preferred party".**

In Table 5-17 it is presented the frequency of the preferred party of those users who are spreading the most retweeted messages about political corruption.

Table 5-17 User's Preferred Party H_9A_1

Parties	Frequency
PP	305
PSOE	104
UP	1686
C's	97

As it is seen, UP supporters are clearly dominating the online debate about political corruption.

2.   **H_9A_2: Descriptive analysis "Parties reported on corruption".**

In Table 5-18 it is presented the frequency of the parties involved in the corruption most reported on Twitter.

Table 5-18 Parties for H_9A_2

Parties	Frequency
PP	1193
PSOE	400
UP	317
C's	282

As it is depicted, the party most reported on Twitter as being involved in political corruption is PP.

3.   **H_9A_3: Crosstabs analysis "Users' preferred party (PP, PSOE, UP and C's)" and "Parties reported on corruption (PP, PSOE, UP and C's)".**

The hypotheses of the Crosstabs analysis H_9A_3 are presented in Table 5-19.

Table 5-19 Hypotheses –Crosstabs analysis H$_9$A$_3$-

Null (H$_0$) and Alternative (H$_1$) hypothesis
H$_0$: There is not association between *Users' preferred party (PP, PSOE, UP and C's)* of those users who are spreading the most retweeted messages about political corruption and *Parties reported on corruption (PP, PSOE, UP and C's)* in the corruption most reported on Twitter.
H$_1$: There is association between *Users' preferred party (PP, PSOE, UP and C's)* of those users who are spreading the most retweeted messages about political corruption and *Parties reported on corruption (PP, PSOE, UP and C's)* in the corruption most reported on Twitter.

In order to test the hypotheses, it will be performed the **Chi-Squared Test** (Table 5-20):

Table 5-20 Chi-Squared Test for H$_9$A$_3$

Pearson Chi-Square	df1	Statistical significance
1682	9	**0.000**

Based on the results, the H$_0$ is rejected, i.e., when analysing the online conversations about political corruption held on Twitter there is a statistically significant association between Users' preferred party (PP, PSOE, UP and C's) of those users who are spreading the most retweeted messages about political corruption and Parties reported on corruption (PP, PSOE, UP and C's) in the corruption most reported on Twitter, χ^2 **(9) = 1682, p < 0.05.** Besides, in order to characterise the relationship, as the crosstab is larger than 2x2, it will be performed the **Contingency Coefficient Test** (Table 5-21).

Table 5-21 Contingency Coefficient Test for H$_9$A$_3$

| Contingency Coefficient Statistic C	Range	Statistical significance
0.659	**0 < C < 0.87**	**0.000**

Considering the **C = 0.659, p<0.05**, the previous statistically significant relationship is characterised as moderate.

Report

In this section, it will be reported the most relevant conclusions of the statistical analysis carried out in the previous section.

Firstly, in Figure 5-6 it is indicated how the vast majority of the users who are diffusing the most retweeted messages against political corruption on Twitter are UP supporters (76.9%). In second position it is found PP supporters (13.9%), while PSOE and C's supporters are those least active in the online debate.

Figure 5-6 Preferred party of users who are spreading the most retweeted messages against political corruption on Twitter
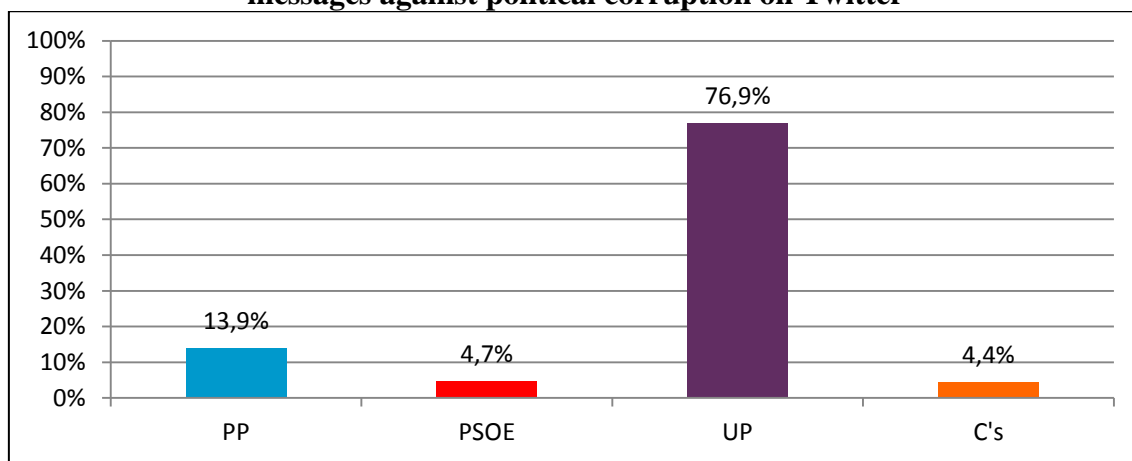
These results are especially useful as they allow to deepen the analysis carried out previously. Being true that new parties' supporters are those who most actively show their criticism towards political corruption in the online debate held on Twitter, the distribution of the users who are spreading the messages about political corruption with the highest rate of diffusion by their preferred party, indicates that the previous conclusion is held exclusively by UP supporters, in fact, C's supporters are the least active in the online debate.

This conclusion could be relativized considering the followings:

1. **Parties' support** (Figure 1-2). As higher it is, without taking into account any other consideration, it would be expected a higher presence of online supporters on Twitter. This consideration would especially play against C's, as it is the party with the least support.

2. **Twitter users' age**. Twitter has a relatively young audience and PP and PSOE supporters tend to be older that UP and C's supporters (Figure 1-3). This consideration would play against traditional parties.

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However, in order to simplify, as the results obtained show clear evidence about which is the dominant profile on the online debate about political corruption held on Twitter, it will not be taken into account the considerations above.

Focusing on the parties involved in the corruption most reported on Twitter, in Figure 5-7 it is found how PP (54.4%) is the party most reported while UP (14.5%) is the least.

Figure 5-7 Parties reported on corruption on Twitter
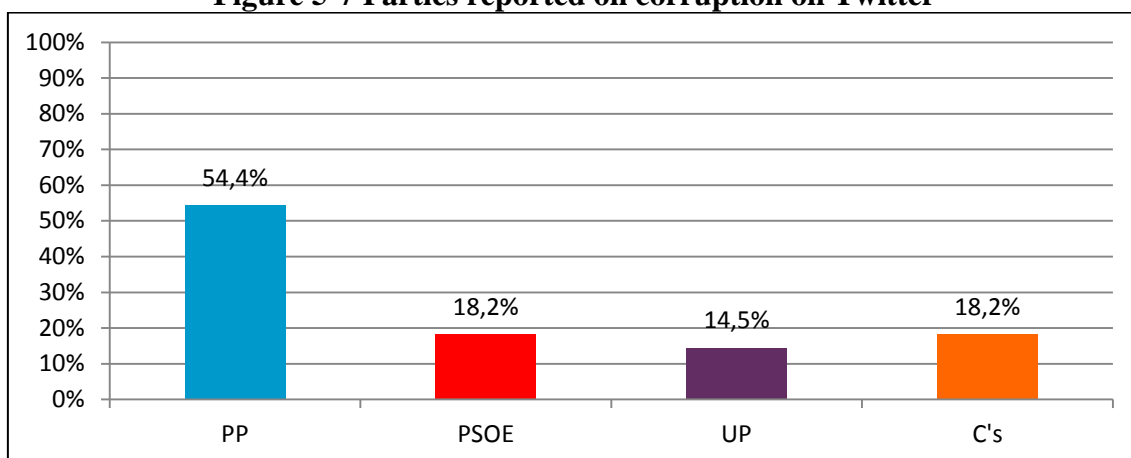
Finally, it will be reported the results obtained when it has been proved that there is a relationship statistically significant between the preferred party of those users who are spreading the political corruption most diffused on Twitter and the parties which are being reported (Table 5-22).

Table 5-22 Users' reports distribution by party reported

	PP	PSOE	UP	C's
PP supporters	**0%**	38.4%	61.6%	0%
PSOE supporters	69.2%	**0%**	30.8%	0%
UP supporters	66.5%	16.8%	**0%**	16.7%
C's supporters	0%	0%	100%	**0%**

The most relevant conclusion when analysing the messages about corruption with the highest diffusion on Twitter is that there is not a case where a party's supporter is displaying against the corruption on his own party. As it is highlighted the main diagonal of the table is 0% in all the cases.

Deeply analysing, it is found how PP supporters report corruption on parties with a left political leaning, especially on the new party UP (61.6%), but also on the traditional party PSOE (38.4%); PSOE supporters mainly on the traditional party with a right political leaning PP (69.2%), but also on UP (30.8%); UP supporters display against corruption in the rest of the parties, but especially on PP (66.5%); and finally, C's supporters focus their reports on corruption exclusively on UP (100%).

Summarising the information above, it has been found that UP' supporters are those who most actively display against political corruption on the online debate held on Twitter while PP is the party most reported on corruption. Then, when analysing the relationship between users' preferred party and the party they are reporting on corruption, it has been shown that there is no a case where a party's supporter report corruption on his own party. Besides, it has been found that: PP and C's supporters report corruption mainly on UP while PSOE and UP supporters mainly on PP. It would indicate how in the online debate about political corruption held on Twitter users' political leaning plays a stronger role than users' preferred parties' group (new vs. traditional).

As a consequence of the previous findings, the hypothesis H_9 has been verified, i.e., in the online debate about politics held on Twitter, users' level of tolerance towards political corruption is higher as higher is the political sympathy towards the party involved. This result is internally consistent with the analysis of the "Real World", i.e., parties' supporters downplay corruption and do not report it on Twitter when it is their preferred party the one which is being involved. Besides, it is also externally consistent with previous researches where it was proved on one hand, that citizens' level of tolerance towards political corruption depends on which is the party involved in the corruption case, being more tolerant when the corruption case affects to the party they are supporting (Cordero and Blais, 2017; Ecker et al., 2016; Anduiza et al., 2013); and on the other hand, how in the Spanish political Twittersphere, there is a high probability to find clusters of users engaged in a political conversation having the same political preferences.

The verification of this hypothesis would contribute to explain why political corruption is not as much penalized as it could be expected. Besides, taking into account that social media has been identified as a powerful tool to spread social pressure, the

fact that UP supporters are those users who clearly dominate the online debate could be seen as an advantage for UP.

5.4 Analysis of results

The main objective of this thesis is to shed light on the puzzle of why political corruption does not seem to have the electoral consequences it could be expected, and even more important, to find out key factors to develop better strategies in order to encourage citizens to be less tolerant towards political corruption, and therefore, to achieve a higher quality democracy.

For this purpose, this chapter has been focused on the hypothesis related to what it has been defined as "Virtual World". Online social networks have become hugely important in recent years, and their impact on citizens' attitudes and behaviour related to politics has been widely studied (Marinov and Schimmelfennig, 2015; Bond et al., 2012; Shirky, 2011). As a consequence, it has been considered especially interesting to analyse the online conversations about political corruption and the interaction and influence of actors in this debate. In the previous chapter, it has been shown that political leaning, the emergence of new parties and political sympathy towards a party play a key role to find out substantial differences in citizens' attitude towards political corruption. The goal of this chapter has been to analyse if the relationships established could be proved also in the online world. For this purpose, it has been selected the social network Twitter because of a variety of reasons. This social network is completely open, which allows to collect all messages ("tweets") related to a determinant hashtag. Besides, it is increasingly considered by scholars as a political platform, where politicians, media professionals and citizens engage in a personal type of political communication (Murthy, 2015; Ekman and Widholm, 2014; Aragón et al., 2013). Finally, it has been proved its usefulness as a platform to spread propaganda and generate political debate during the electoral campaigns (Jennings et al., 2017; Aragón et al., 2013), as a mobilizing platform for social movements (Vallina-Rodriguez et al., 2012), and as a predictor of electoral outcomes (Tumasjan et al., 2010).

Firstly, when analysing the effect of political leaning on users' attitude towards political corruption in the online debate about politics held on Twitter, it has been found that users' level of tolerance towards political corruption is lower in progressive users

(H$_7$). Analysing the messages about political corruption with the highest rate of diffusion, it has been seen on one hand, that the majority of users who are displaying against political corruption have a left political leaning; and on the other hand, that right parties are those which are being more reported. Moreover, when analysing the relationship between users' political leaning who are reporting political corruption and political leaning of those parties which are being involved in the corruption most reported, it has been established a statistically significant difference, left parties' supporters report mainly right parties while right parties' supporters report left parties.

These results are not only internally consistent, i.e., the results obtained when analysing the online debate about political corruption held on Twitter are consistent with those obtained in the previous chapter through the personal interviews, but also externally consistent with previous researches where it was found on one hand, that voters with a left political leaning tend to punish corruption cases more than voters with a right political leaning (Charron and Bågenholm, 2016; Anduiza et al., 2013; Costas-Pérez et al., 2010); and on the other hand, how, when analysing the political debate held on Twitter, Spaniards actively participating in the online political conversations against the established system and its corruption have mainly a left political leaning (Peña-López et al., 2014; Anduiza et al., 2012).

On one side, these findings could be seen as a left parties' disadvantage as they would need to make greater efforts to fight against corruption, not only implementing strictly measurements to avoid it, but also expelling of their parties those politicians who are involved in a case of political corruption. However, downplay corruption would be less harmful for those parties with a right political leaning. On the other side, these findings could be seen as a left parties' advantage, as they are clearly dominating the online debate about politics and, as it has been proved, social media is a powerful tool to spread social pressure. In addition, this finding contributes to explain the success of right parties in certain electoral campaigns, in despite of being clearly involved in corruption.

Secondly, when analysing the effect of new parties' emergence on users' attitude towards political corruption in the online debate about politics held on Twitter, it has been shown how users' level of tolerance towards political corruption is lower in those users who are supporting new parties (H$_8$). Analysing the messages about political

corruption with the highest rate of diffusion on Twitter, it has been shown on one hand, that new parties' supporters are those who most actively display against political corruption; and on the other hand, that traditional parties are those which are being more reported. Moreover, when analysing the relationship between users' preferred parties' group who are reporting political corruption and parties' group which are being reported, it has been established a statistically significant difference, new parties' supporters report corruption mainly on traditional parties while traditional parties' supporters on both group of parties, although a little bit more on new parties.

These results are also not only internally consistent, but also externally consistent with previous researches where it was found on one hand, that the emergence of new parties represents an opportunity for citizens to punish traditional parties affected by political corruption (Cordero and Blais, 2017; Charron and Bågenholm, 2016); and on the other hand, how when analysing the political debate held on Twitter before the emergence of the new party Podemos, Spaniards actively participating in the online political conversations against the economic, social and political crisis did not feel represented for the traditional parties strongly affected by corruption and, were demanding alternative political actors to represent their interests (Vallina-Rodriguez et al., 2012).

The fact that new parties' supporters are clearly dominating the online debate about politics could be seen as a new parties' advantage, as it has been proved how social media is a powerful tool to spread social pressure. In addition, the fact that new parties' supporters are less tolerant towards political corruption could be seen as one of the key factors to explain the new parties' emergence and success.

Thirdly, when analysing the effect of political sympathy on users' attitude towards political corruption in the online debate about politics held on Twitter, it has been established that users' level of tolerance towards political corruption is higher as higher is the political sympathy towards the party involved (H_9). Analysing the messages about political corruption with the highest rate of diffusion on Twitter, it has been seen on one hand, that UP' supporters are those who most actively display against political corruption, which taking into account that social media has been identified as a powerful tool to spread social pressure could be seen as a UP' advantage; and on the other hand, that PP is the party most reported.

Moreover, when analysing the relationship between users' preferred party who are reporting political corruption and parties which are being reported, it has been established a statistically significant differences. On one side, it has been shown that PP and C's supporters report corruption mainly on UP while PSOE and UP supporters mainly on PP. It would indicate how users' political leaning plays a stronger role than users' preferred parties' group (new vs. traditional) when studying their impact on the attitude towards political corruption in the online debate about political corruption held on Twitter. On the other side, it has been found how all the parties' supporters report corruption exclusively on other parties, i.e., there is not a case where a party's supporter displays against the corruption on his own party.

This result is once again not only internally consistent, but also externally consistent with previous researches where it was proved on one hand, that voters' political sympathy towards a party plays a key role on their attitude towards a specific case of political corruption being more tolerant when the corruption case affects to their preferred party (Cordero and Blais, 2017; Ecker et al., 2016; Anduiza et al., 2013); and on the other hand, how, when analysing the Spanish political debate held on Twitter, there is a high probability to find clusters of users engaged in a political conversation having the same political preferences.

The political sympathy impact on the attitude towards political corruption would contribute to explain why political corruption is not as much penalized as expected. Users' attitude towards political corruption in their preferred party plays clearly against to the well-functioning of the political, economic and social system. It would be necessary a society disapproving political corruption independently of the party affected in order to reach a higher quality democracy.

5.5 Conclusions

The main goal of this chapter has been to test the hypotheses related to the virtual world in order to analyse the role played by political leaning, new parties' emergence and political sympathy, on citizens' attitude towards political corruption in the online debate held on Twitter. It is especially interesting to analyse if the relationships established in the previous chapter related to the real world can be proved also in the

online world. In the following lines, it will be briefly summarised the main conclusions of the experiments conducted to test each of the hypotheses.

Firstly, when analysing the effect of political leaning on users' attitude towards political corruption in the online debate about politics held on Twitter, it has been demonstrated that users' level of tolerance towards political corruption is lower in progressive users (H_7).

Secondly, when analysing the effect of new parties' emergence on users' attitude towards political corruption in the online debate about politics held on Twitter, it has been proved how users' level of tolerance towards political corruption is lower in those users who are supporting new parties (H_8).

Thirdly, when analysing the effect of political sympathy on users' attitude towards political corruption in the online debate about politics held on Twitter, it has been concluded that users' level of tolerance towards political corruption is higher as higher is the political sympathy towards the party involved (H_9).

Chapter 6. **Conclusions**

The main topic of this thesis is the analysis of citizens' attitude towards political corruption. Political corruption is severely damaging the quality of the democracy, and in recent years, it has become one of the biggest citizens' concerns.

Political parties need the citizens' confidence to obtain a greater representation, therefore, it should be expected that in order to prove their honesty, they were the first to react against their own corruption, recognising it and expelling those members who have been involved. However, even if during the electoral campaigns, political parties commit themselves to fight against corruption, once the legislature starts, they tend to emphasize the others parties' corruption while downplay or even ignore their own corruption.

It could be theorised that those parties who do not react against corruption as they should, will suffer a considerable loss of support, nevertheless, the evidence proves that this theory cannot be generalised. Although it seems that a vast majority of citizens are strongly against political corruption, there are several electoral processes in which corrupted politicians keep being re-elected.

The goal of this thesis is to shed light on the puzzle of why political corruption does not seem to have the electoral consequences it would be expected, and even more important, to find out key factors to develop better strategies in order to encourage citizens to be less tolerant towards political corruption, and therefore, to achieve a higher quality democracy.

For this purpose, it has been identified those factors which have a greater impact on citizens' attitude towards political corruption and it has been set out the nine hypotheses of the model related to each of them. The studies conducted to test these hypotheses spanned both, real world (H_1-H_6), where it has been analysed the information obtained in the personals interviews; and virtual world (H_7-H_9), where it has been analysed the online debate about political corruption held on Twitter.

The objective of the hypotheses related to the real world (H_1-H_6) has been to analyse the role played in the attitude towards political corruption by the economic context, social pressure, political awareness, political leaning, the new parties'

emergence and political sympathy. For this purpose, on one hand, it has been used data provided by the independent entities CIS and INE; and on the other hand, it has been designed a specific survey in which participants faced questions related to each of the previous variables. The objective of the hypotheses related to the virtual world (H_7-H_9) has been to demonstrate if the relationships established when studying the impact of political leaning, the emergence of new parties and the political sympathy towards a party in the real world, could be proved also in the virtual world. For this purpose, it has been analysed the online debate about political corruption held on Twitter. In the following lines, it will be summarised the main conclusions obtained when analysing the impact of each of the variables on the attitude towards political corruption.

Regarding the effect of the economic context on citizens´ attitude towards political corruption, in agreement with previous results (Cordero and Blais, 2017; Charron and Bågenholm, 2016; Anduiza et al., 2013; Klasnja and Tucker, 2013; Winters and Weitz-Shapiro, 2013; Zechmeister and Zizumbo-Colunga, 2013; Jerit and Barabas, 2012; Weitz-Shapiro and Winters, 2010; Manzetti and Wilson, 2007; Golden, 2007; Diaz-Cayeros et al., 2000; Duch et al., 2000; Mauro, 1995), it has been demonstrated how citizens' tolerance towards political corruption depends on the country's economic situation, being lower when it is going through a crisis. It has been established on one hand, a positive and strong relationship between the negative assessments of political and economic situation, which would show how citizens' attitude towards political issues are clearly affected by the economic context; and on the other hand, a negative correlation between the GDP growth rate and the growth rate of the concern over corruption, which would prove how citizens' criticism towards political corruption is greater when the country is going through an economic crisis. Besides, analysing the information provided by the personal interviews, it has been found that the majority find itself less tolerant towards political corruption since the economic crisis started. As a consequence, an economic crisis could be seen as an opportunity to increase citizens' criticism towards political corruption. However, once the crisis is overcome, it would be necessary to keep it over the level before the crisis started in order to reach a higher quality democracy.

Related to the effect of social pressure on citizens´ attitude towards political corruption, it has been proved their effectiveness to reach a higher impact than factual

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information. This finding is consistent with previous researches where it was already demonstrated the effectiveness of social pressure in mobilising citizens against the established political system and its corruption (Giraldo-Luque, 2018; Marinov and Schimmelfennig, 2015; Anduiza et al., 2014; Peña-López et al., 2014; Toret, 2013; Anduiza et al., 2012; Piñeiro-Otero and Costa-Sánchez, 2012; Vallina-Rodriguez et al., 2012; Eltantawy and Wiest, 2011; González-Bailón et al., 2011; Shirky, 2011); in political self-expression, political information seeking and political participation (Bond et al., 2012; Gerber and Rogers, 2009; and Gerber et al., 2008). Concretely, in this thesis, it has been established on one hand, how those citizens who face a case of political corruption in which other citizens´ reactions against it are emphasized, become less tolerant than those who face a scenario in which they are being informed through factual information exclusively; and on the other hand, how the pieces of news which have a higher impact on the attitude towards political corruption are those in which it is underlined citizens' losses in welfare and economics rather than other in which the information about corruption is provided without being related with any social or economic consequence. As a result, if a political party, a media or any citizen group managed to mobilize a part of society against political corruption, the impact of social pressure would attract new supporters and, therefore, it would contribute to achieve a higher quality democracy.

In reference to the effect of political awareness on citizens´ attitude towards political corruption, in agreement with previous researches (Cordero and Blais, 2017; Anduiza et al., 2013; Weitz-Shapiro and Winters, 2010; Arceneaux, 2007; Kam, 2005), it has been found how as higher it is, as lower is their tolerance towards political corruption. This finding would indicate that the attitude towards political corruption could be modified by bringing citizens into politics and, therefore, involving citizens in political issues would also contribute to achieve a higher quality democracy.

Regarding the effect of political leaning on citizens' attitude towards political corruption, it has been shown how as more progressive citizens are, as lower is their tolerance towards political corruption. This conclusion is externally consistent with previous researches where it was found how left voters tend to punish corruption cases more than right voters (Charron and Bågenholm, 2016; Anduiza et al., 2013; Costas-Pérez et al., 2010).

Moving to the virtual world analysis, it has been found that in the online debate about politics held on Twitter, politically progressive users are also less tolerant towards corruption than those users who support right parties. Concretely, when analysing the messages about political corruption with the highest rate of diffusion on Twitter, it has been seen on one hand, that the majority of users who are displaying against political corruption have a left political leaning; and on the other hand, that right parties are those which are being more reported. Moreover, when analysing the relationship between users' political leaning who are reporting political corruption and parties' political leaning which are being reported, it has been established a statistically significant difference, left parties' supporters report mainly right parties while right parties' supporters report left parties. Therefore, there is an internal consistency between the results obtained with the analysis of the online debate about political corruption held on Twitter and those obtained when analysing the real world through the personal interviews. Besides, there is also an external consistency with previous researches where it was proved how, when analysing the political debate held on Twitter, Spaniards actively participating in the online political conversations against the established system and its corruption, have mainly a left political leaning (Peña-López et al., 2014; Anduiza et al., 2012).

These results would indicate that left parties should be more carefully when designing their communication policy to face a corruption case. Besides, they would probably need to make greater efforts to fight against corruption, not only implementing strictly measurements to avoid it, but also expelling of their parties those politicians who are involved in a case of political corruption. Therefore, at least in a short term, this finding would play against parties with a left political leaning, as they would be more penalized than right parties, which have an electorate less sensitive towards political corruption. However, the fact that users with a left political leaning are those who dominate the online debate about political corruption could be seen as a left parties' strength, as social media has been identified as a powerful tool to spread social pressure. Finally, the higher level of tolerance towards political corruption of conservative citizens would contribute to explain the success of right parties in certain electoral campaigns, in despite of being clearly involved in corruption.

Related to the effect of new parties' emergence on citizens´ attitude towards political corruption, it has been demonstrated how new party' supporters are less tolerant towards political corruption than traditional parties' supporters. In previous researches, it was proved that the emergence of new parties represents an opportunity for citizens to punish traditional parties affected by political corruption (Cordero and Blais, 2017; Charron and Bågenholm, 2016); how corruption benefits new parties pushing voters away not only from the party which is in the government, but also from all the traditional parties (Engler, 2015; Pop-Eleches, 2010; Mainwaring et al., 2009); and the effectiveness of focusing the new parties' message on the fight against corruption in order to succeed (Bågenholm and Charron, 2014; Hanley and Sikk, 2014; Bågenholm, 2013; Sikk, 2012; Bélanger, 2004). Accordingly with these findings, in this thesis it has been found how citizens who declare to feel closer to the emerging parties UP and C's are less tolerant towards political corruption than those who indicate they feel closer to the traditional parties PP and PSOE. Besides, evaluating deeply the results, they are internally consistent with those obtained when analysing the political leaning impact: among traditional parties' supporters, those who are supporting the left party PSOE are less tolerant than those who are supporting the right party PP; and among the new parties' supporters, UP supporters are less tolerant than C's supporters. Finally, according with the data provided by the CIS, in this thesis new parties' supporters have been also characterised as being younger than traditional parties' supporters. It would play against traditional parties in a medium and long term, as they would need to attract younger voters if they want to stay in power. In addition, the fact that younger voters are less tolerant would show a positive evolution of the citizens' attitude towards political corruption which could be interpreted as a hope for the democracy's quality.

Moving to the virtual world analysis, it has been found that in the online debate about politics held on Twitter, users closer to new parties are also less tolerant towards political corruption than those users closer to traditional parties. Concretely, when analysing the messages about political corruption with the highest rate of diffusion on Twitter, it has been shown on one hand, that new parties' supporters are those who most actively display against political corruption which could be seen as a new parties' strength, as social media has been identified as a powerful tool to spread social pressure; and on the other hand, that traditional parties are those which are being more reported.

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Moreover, when analysing the relationship between users' preferred parties' group who are reporting political corruption and parties' group which are being reported, it has been established a statistically significant difference, new parties' supporters report corruption mainly on traditional parties while traditional parties' supporters on both group of parties, although a little bit more on new parties. Therefore, there is also an internal consistency between the results obtained with the analysis of the online debate about political corruption held on Twitter and those obtained when analysing the real world through the personal interviews, and all of them would contribute to understand the new parties' emergence and success. Besides, there is also an external consistency with previous researches where it was established how, when analysing the political debate held on Twitter before the emergence of the new party Podemos, Spaniards actively participating in the online political conversations against the economic, social and political crisis did not feel represented for the traditional parties strongly affected by corruption and, were demanding alternative political actors to represent their interests (Vallina-Rodriguez et al., 2012).

Finally, when analysing the effect of political sympathy on citizens´ attitude towards political corruption, it has been seen how as higher is citizens' sympathy towards the party involved in corruption, as higher is their tolerance. This finding is consistent with previous researches where it was found how citizens' level of tolerance towards political corruption depends on which was the party involved in the corruption case, being more tolerant when the corruption case affects to the party they are supporting (Cordero and Blais, 2017; Ecker et al., 2016; Anduiza et al., 2013), and also with other researches where it was proved that voters' sympathy towards a party reduces the impact of corruption on the electoral results of a corrupt politician (Cordero and Blais, 2017; Charron and Bågenholm, 2016; Welch and Hibbing, 1997; Peters and Welch, 1980). Concretely, in this thesis, it has been established on one hand, how citizens' perception of corruption in their preferred party is lower than the corruption perceived by other parties' supporters; and on the other hand, how when citizens are facing a specific scandal of corruption, they definitely downplay corruption if it is their party the one which is being affected. Besides, evaluating deeply the results, they are internally consistent with those obtained when analysing both, the political leaning's impact and the emergence of new parties' impact, as UP supporters, the new party identified as being progressive, are those who not only have the least tolerance towards

political corruption, but also who least downplay corruption when it affects to their own party.

Moving to the virtual world analysis, it has been found that in the online debate about politics held on Twitter, users' tolerance towards political corruption is also higher as higher is the sympathy towards the party involved. Concretely, when analysing the messages about political corruption with the highest rate of diffusion on Twitter, it has been shown on one hand, that UP' supporters are those who most actively display against political corruption, which taking into account that social media has been identified as a powerful tool to spread social pressure could be seen as a UP' advantage; and on the other hand, that PP is the most reported party. Moreover, when analysing the relationship between users' preferred party who are reporting political corruption and parties which are being reported, it has been established a statistically significant differences. On one side, it has been shown that PP and C's supporters report corruption mainly on UP while PSOE and UP supporters mainly on PP. It would indicate how users' political leaning plays a stronger role than users' preferred parties' group (new vs. traditional) when studying their impact on the attitude towards political corruption in the online debate about political corruption held on Twitter. On the other side, it has been found how all the parties' supporters report corruption exclusively on other parties, i.e., there is not a case where a party's supporter displays against the corruption on his own party. Therefore, there is once again an internal consistency between the results obtained with the analysis of the online debate about political corruption held on Twitter and those obtained when analysing the real world through the personal interviews. Besides, there is also an external consistency with previous researches where it was concluded how, when analysing the Spanish political debate held on Twitter, there is a high probability to find clusters of users engaged in a political conversation having the same political preferences.

The previous findings would clearly contribute to understand why political corruption is not as much penalized as it could be expected. Parties' supporters not only have lower perception of corruption in their party, but also when it is presented a specific case of corruption they tend to minimize and even ignore it in the online debate. Therefore, citizens' attitude towards political corruption in their preferred party would play against to the well-functioning of the political, economic and social system. It

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would be necessary citizens to be intolerant towards all political corruption independently the party involved in order to achieve a higher quality democracy.

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